HUMBLE INDEPENDENT SCHOOL DISTRICT

CSP# 2026-08

CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS

3603 W LAKE HOUSTON PKWY,
KINGWOOD, TX 77339



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PROPOSED 2 ADDITIONS - A GYMNASIUM/DANCE STUDIO
AT FIRE BUILDING #2 AND A BAND HALL AT FIRE
BUILDING #1. ALTERATION TO EXISTING BUILDING TO
INCLUDE NEW EXTERIOR WINDOWS.

PROJECT DESCRIPTION

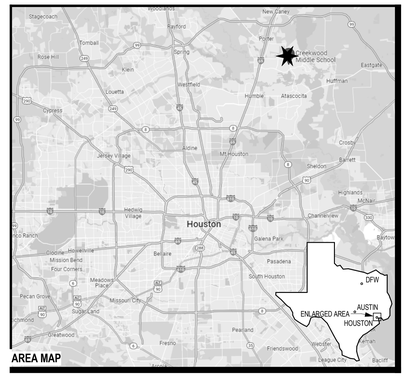
INDEPENDENT PRICING 1: ADDITIONAL PARKING. REF. SHT. AS1.01 (PLAN SOUTH, ADJ. TO SOCCER AND FOR EXPANSION OF MAIN PARKING FROM SANDY FORKS DRIVE).

INDEPENDENT PRICING

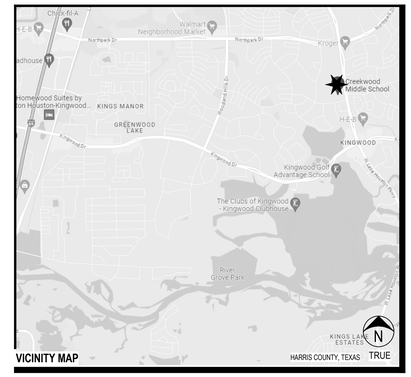
AB	ANCHOR BOLT
AC	AIR CONDITIONER
ACC	ACCESSIBLE
ACMU	ARCHITECTURAL CONCRETE MASONRY UNIT
ADA	AMERICANS WITH DISABILITIES ACT / ADA STANDARDS FOR ACCESSIBLE DESIGN (LATEST VERSION)
ADDN'L	ADDITIONAL
ADJ	ADJUSTABLE
ADH	ADHESIVE/ADHERE
ADMIN	ADMINISTRATION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AG	AGRICULTURE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
ALUM	ALUMINUM
AP	ACOUSTICAL PANELS
AP	ASSISTANT PRINCIPAL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
B	BEYOND
B/B	BACK TO BACK
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOD	BOTTOM OF DECK
BOM	BOTTOM OF MASONRY
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BP	BASE, PORCELAIN TILE
BR	BASE, RUBBER
BRES	BASE, RESINOUS INTEGRAL
BRG	BEARING
BRK	BRICK
BRV	BASE, RUBBER VENTED
BTC	BASE, TILE CERAMIC
BTZP	BASE, TERRAZZO PRECAST
BS	BOTH SIDES
BTWN	BETWEEN
BW	BOTH WAYS
BWD	BASE, WOOD
C/C	CENTER TO CENTER
CAB	CABINET
CCD	COILING COUNTER DOOR
CCPS	CERAMIC CLADDING PANEL SYSTEM
CDW	CUSTOM DIGITAL WALLCOVERINGS
CDAP	CUSTOM DIGITALLY PRINTED ACOUSTIC PANEL
CFMF	COLD-FORMED METAL FRAMING
CH	CHANNEL
CI	CONTINUOUS INSULATION
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTRD	CENTERED
CO	CLEAN OUT/CASED OPENING
COL	COLUMN
CONC	CONCRETE
CONF	CONFIGURATIONS / CONFERENCE
CONN(S)	CONNECTION(S)
CONT	CONTINUOUS
COORD	COORDINATE
COP	CONCRETE (POLISHED)
CORR	CORRIDOR
COS	CONCRETE SEALED
CPT	CARPET, SHEET
CPY	CANOPY
CR	CLASSROOM
CS	CAST STONE
CSM	CONCRETE STONE MASONRY
CU	CONDENSING UNIT
CUST	CUSTODIAN
CT	CARPET, TILED
CTE	CAREER TRAINING ED
CTRL	CONTROL
CW	CURTAIN WALL
CWF	CUSTOM WINDOW FILM
DBL	DOUBLE
DET	DETAIL
DH	DOOR HARDWARE
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWR	DRAWER
EA	EACH
EBWS	EPOXY BASED WALL SYSTEM
ED	EDUCATION
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENGR	ENGINEER
EPNT	EPOXY PAINT
EQ	EQUAL (EQUALLY)
EQUIP	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EXTNG	EXTINGUISHER
F/F	FACE TO FACE
FC	FURRING CHANNEL
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER (SURFACE MOUNT)
FEC	FIRE EXTINGUISHER CABINET (SEMI-RECESSED)
FFE	FINISHED FLOOR ELEVATION
FHC	FIRE HOSE CABINET (SEMI-RECESSED)
FIN	FINISH(ED)
FIN FLR	FINISHED FLOOR
FL	FLUSH (FLUSHED)
FLR	FLOOR
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM FIBERGLASS REINFORCED PANELING
FRT	FIRE RETARDANT TREATED
FRTW	FIRE RETARDANT TREATED WOOD
FTG	FOOTING
FV	FIELD VERIFY
GA	GAGE OR GAUGE
GALV	GALVANIZED
GB	GRAB BAR / GRADE BEAM
GEN	GENERAL
GFRC	GLASS FIBER REINFORCED CONCRETE
GRF	GROUND FACE CMU (BURNISHED)
GUT	GUTTER
GYM	GYMNASIUM
GYP	GYPSUM
HB	HOSE BIB
HDWD	HARD WOOD
HM	HOLLOW METAL
HO	HOLD OPEN
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING, VENTILATION, & A/C
ICF	INSULATED CONCRETE FORMS / INSULATED CONCRETE FORMING
IDF	INTERMEDIATE DISTRIBUTION FRAME
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
JST(S)	JOIST(S)
L	ANGLE
LAB	LABORATORY
LAV	LAVATORY
LEPC	LOCAL EMERGENCY PLANNING COMMITTEE
LONG	LONGITUDINAL
LVT	LUXURY VINYL TILE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MCM	METAL COMPOSITE MATERIAL
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MEZZ	MEZZANINE
MFG	MANUFACTURER
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MP	METAL WALL PANELS
MPF	MULTI-PURPOSE FACILITY
MSK	MOP SINK
MS	METAL SOFFIT
MSL	MEAN SEA LEVEL
MTL	METAL
NB	NO BASE
NF	NO FINISH
NIC	NOT IN CONTRACT
NO	NUMBER
NS	NATURAL STONE
NTS	NOT TO SCALE
OC	ON CENTER
OCC	OCCUPANTS / OCCUPANCY
OCEW	ON CENTER EACH WAY
OCD	OVERHEAD COILING DOOR
OCG	OVERHEAD COILING GRILLE
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OHD	OVERHEAD
OPP	OPPOSITE
OS	OVERFLOW SCUPPER
P/C	PRECAST CONCRETE
PEMB	PRE-ENGINEERED METAL BUILDING
PERIM	PERIMETER
PERP	PERPENDICULAR
PLA	PLATE / PLASTER
PL	PLASTIC LAMINATE
PLP	PLASTIC LAMINATE PANEL SYSTEM
PNT	PAINT
PR	PRACTICE ROOM
PREFIN	PREFINISHED
PREP	PREPARATION
PROJ	PROJECTION
PS	PROJECTION SCREEN
PT	POINT
PW	PLYWOOD
QTZ	QUARTZ SURFACING
R	RISER
RAD	RADIUS
RAFF	RESILIENT ATHLETIC FLUID FLOORING
RAFP	RESILIENT ATHLETIC FLOORING POLYURETHANE
RAFS	RUBBER FLOORING SHEET
RAFV	RESILIENT ATHLETIC FLOORING VINYL
L	ANGLE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCING
RES	RESINOUS
REQD	REQUIRED
RM	ROOM
RO	ROUGH OPENING
RR	RESTROOM
RT	RUBBER TILE
RTR	RUBBER TREADS AND RISERS
RTU	ROOFTOP UNIT
SB	SPLASH BLOCK
SCHED	SCHEDULE
SEC	SECURITY
SECT	SECTION
SF	STOREFRONT / SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SP	SPLASH PAN (METAL)
SPEC	SPECIFICATIONS
SPF	SPLIT-FACE CONCRETE MASONRY UNIT
SPS	SOLID POLYMER SURFACE
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
STD	STANDARD
STL	STEEL
STN	STAIN
STOR	STORAGE
STRUCT	STRUCTURE
SVT	SOLID VINYL TILE
SYMM	SYMMETRICAL
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TAS	TEXAS ACCESSIBILITY STANDARDS (LATEST VERSION)
TB	TACK BOARD
TC	TILE, CERAMIC
TH	THRESHOLD
TLT	TOILET
TOB	TOP OF BEAM
TOC	TOP OF CURB
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOSF	TOP OF METAL STUD FRAMING
TOW	TOP OF WALL
TPC	TILE, PORCELAIN
TQ	TILE, QUARRY
TR	TREATED
TRAN	TRANSVERSE / TRANSPARENT
TRIM	METAL FLASHINGS AND COPINGS
TS	TACKABLE SURFACE
TYP	TYPICAL
TZ	TERRAZZO
TZP	TERRAZZO, PRECAST STAIR TREADS AND RISERS
TZT	TERRAZZO TILE
U	URINAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UP	UPHOLSTERY
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VSF	VINYL SHEET FLOORING
W/	WITH
W/IN	WITHIN
W/O	WITHOUT
WASH	WASH STATION
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER / WALL HYDRANT
WMP	WOOD (MAPLE) STRIP AND PLANK FLOORING
WMS	MASONITE WOOD FLOORING
WOM	WALK-OFF MAT
WOT	WALK-OFF TILE
WP	WORKPOINT
WT	WEIGHT
WWF	WELDED WIRE MESH (FABRIC)
XB	X-BRACING
>=	LARGER THAN OR EQUAL TO
<=	LESS THAN OR EQUAL TO

(NOT ALL ABBREVIATIONS MAY BE USED)

ABBREVIATIONS



AREA MAP



VICINITY MAP

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Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

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STATE OF TEXAS
10/24/2025

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GENERAL DATA

PACKAGE | VOLUME

Job No. 1821-13-01
Drawn By: CS
Date: 04.02.2025
Sheet No. 100% QC
G1.02

10/28/2025 5:32:02 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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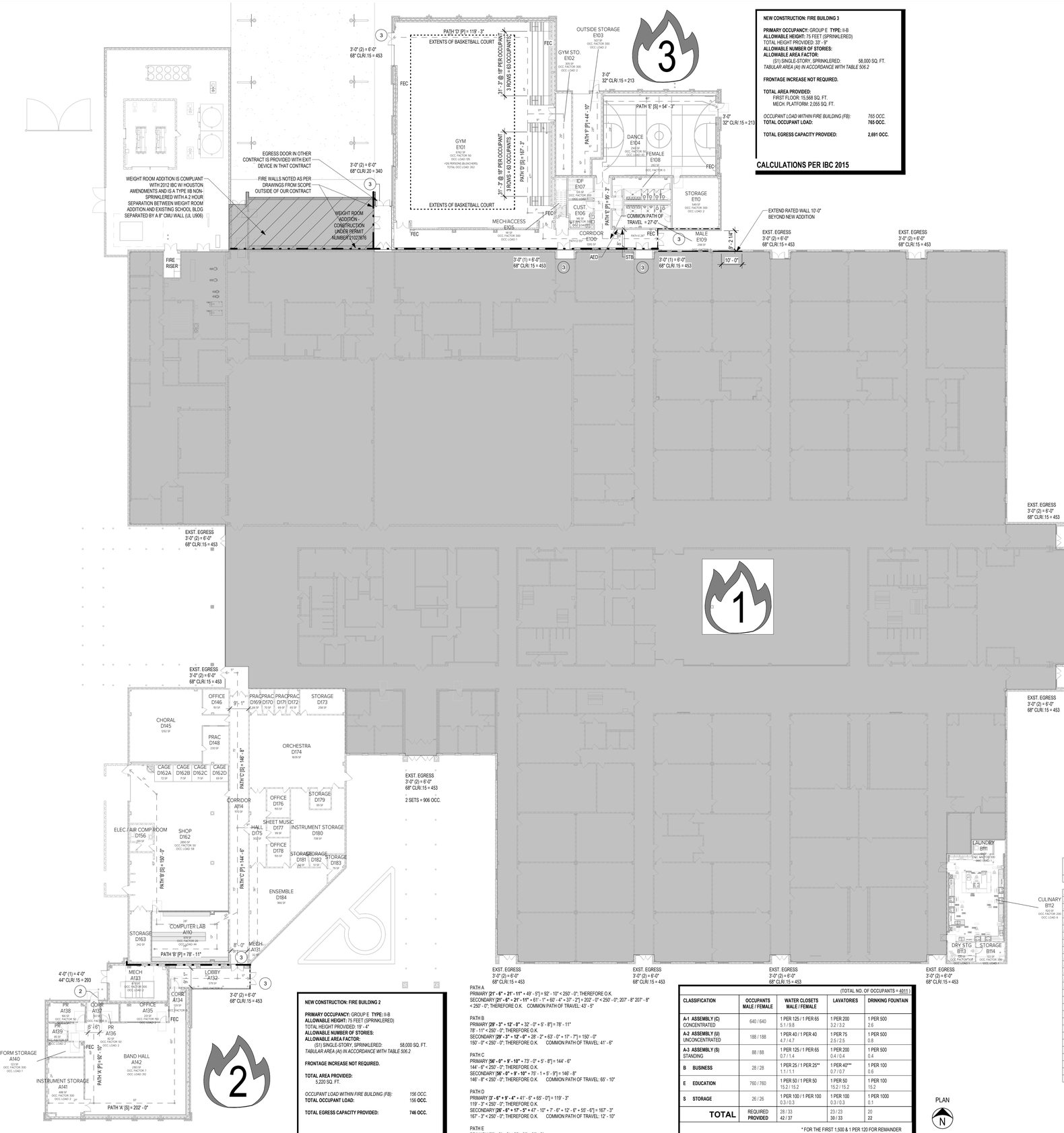

1 CODE ANALYSIS PLAN
1" = 20'-0"

2 CODE ANALYSIS PLAN - MECHANICAL PLATFORM PLAN
1/8" = 1'-0"

NEW CONSTRUCTION: FIRE BUILDING 3

PRIMARY OCCUPANCY: GROUP E **TYPE:** II-B
ALLOWABLE HEIGHT: 75 FEET (SPRINKLERED)
TOTAL HEIGHT PROVIDED: 33' - 9"
ALLOWABLE NUMBER OF STORIES:
ALLOWABLE AREA FACTOR:
(S1) SINGLE-STORY, SPRINKLERED: 58,000 SQ. FT.
TABULAR AREA (Aі) IN ACCORDANCE WITH TABLE 506.2

FRONTAGE INCREASE NOT REQUIRED.

TOTAL AREA PROVIDED:
FIRST FLOOR: 15,568 SQ. FT.
MECH. PLATFORM: 2,055 SQ. FT.

OCCUPANT LOAD WITHIN FIRE BUILDING (FB): *765 OCC.*
TOTAL OCCUPANT LOAD: **765 OCC.**

TOTAL EGRESS CAPACITY PROVIDED: **2,691 OCC.**

CALCULATIONS PER IBC 2015

NEW CONSTRUCTION: FIRE BUILDING 2

PRIMARY OCCUPANCY: GROUP E **TYPE:** II-B
ALLOWABLE HEIGHT: 75 FEET (SPRINKLERED)
TOTAL HEIGHT PROVIDED: 19' - 4"
ALLOWABLE NUMBER OF STORIES:
ALLOWABLE AREA FACTOR:
(S1) SINGLE-STORY, SPRINKLERED: 58,000 SQ. FT.
TABULAR AREA (Aі) IN ACCORDANCE WITH TABLE 506.2

FRONTAGE INCREASE NOT REQUIRED.

TOTAL AREA PROVIDED:
5,220 SQ. FT.

OCCUPANT LOAD WITHIN FIRE BUILDING (FB): *156 OCC.*
TOTAL OCCUPANT LOAD: **156 OCC.**

TOTAL EGRESS CAPACITY PROVIDED: **746 OCC.**

CALCULATIONS PER IBC 2015

PATH A
PRIMARY **[21' - 6" + 21' - 11" + 49' - 5"]** = 92' - 10" < 250' - 0"; THEREFORE O.K.
SECONDARY **[21' - 6" + 21' - 11"** + 61' - 1" + 60' - 4" + 37' - 2"] = 202' - 0" < 250' - 0"; 207' - 8" 207' - 8" < 250' - 0"; THEREFORE O.K. COMMON PATH OF TRAVEL: 43' - 5"

PATH B
PRIMARY **[29' - 3" + 12' - 0"** + 32' - 0" + 5' - 8"] = 78' - 11"
78' - 11" < 250' - 0"; THEREFORE O.K.
SECONDARY **[29' - 3" + 12' - 0" +** 28' - 2" + 63' - 0" + 17' - 7"] = 150' - 0"
150' - 0" < 250' - 0"; THEREFORE O.K. COMMON PATH OF TRAVEL: 41' - 6"

PATH C
PRIMARY **[56' - 0" + 9' - 10"** + 73' - 0" + 5' - 8"] = 144' - 6"
144' - 6" < 250' - 0"; THEREFORE O.K.
SECONDARY **[56' - 0" + 9' - 10"** + 75' - 1 + 5' - 9"] = 146' - 8"
146' - 8" < 250' - 0"; THEREFORE O.K. COMMON PATH OF TRAVEL: 65' - 10"

PATH D
PRIMARY **[3' - 6" + 9' - 4"** + 41' - 6" + 65' - 0"] = 119' - 3"
119' - 3" < 250' - 0"; THEREFORE O.K.
SECONDARY **[26' - 6" + 17' - 5"** + 47' - 10" + 7' - 6" + 12' - 6" + 55' - 6"] = 167' - 3"
167' - 3" < 250' - 0"; THEREFORE O.K. COMMON PATH OF TRAVEL: 12' - 10"

PATH E
PRIMARY [29' - 6" + 2" + 26' - 9"] = 58' - 3"
95' - 3" < 250' - 0"; THEREFORE O.K.
SECONDARY [40' - 6" + 7' - 9"] = 54' - 3" < 250' - 0"; THEREFORE O.K.
NO COMMON PATH OF TRAVEL

PATH F
PRIMARY [10' + 6' + 28' - 10"] = 44' - 10"
44' - 10" < 250' - 0"; THEREFORE O.K.

(TOTAL NO. OF OCCUPANTS = 4011)

CLASSIFICATION	OCCUPANTS MALE / FEMALE	WATER CLOSETS MALE / FEMALE	LAVATORIES	DRINKING FOUNTAIN
A-1 ASSEMBLY (C) CONCENTRATED	640 / 640	1 PER 125 / 1 PER 65 5.1 / 9.8	1 PER 200 3.2 / 3.2	1 PER 500 2.6
A-2 ASSEMBLY (U) UNCONCENTRATED	188 / 188	1 PER 40 / 1 PER 40 4.7 / 4.7	1 PER 75 2.5 / 2.5	1 PER 500 0.8
A-3 ASSEMBLY (S) STANDING	88 / 88	1 PER 125 / 1 PER 65 0.7 / 1.4	1 PER 200 0.4 / 0.4	1 PER 500 0.4
B BUSINESS	28 / 28	1 PER 25 / 1 PER 25** 1.1 / 1.1	1 PER 40*** 0.7 / 0.7	1 PER 100 0.6
E EDUCATION	760 / 760	1 PER 50 / 1 PER 50 15.2 / 15.2	1 PER 50 15.2 / 15.2	1 PER 100 15.2
S STORAGE	26 / 26	1 PER 100 / 1 PER 100 0.3 / 0.3	1 PER 100 0.3 / 0.3	1 PER 1000 0.1
TOTAL	REQUIRED **PROVIDED**	28 / 33 **42 / 37**	23 / 23 **30 / 33**	20 **22**

* FOR THE FIRST 1,500 & 1 PER 120 FOR REMAINDER EXCEEDING 1,500
** FOR THE FIRST 50 & 1 PER 50 FOR THE REMAINDER EXCEEDING 50
*** FOR THE FIRST 80 & 1 PER 80 FOR THE REMAINDER EXCEEDING 80

PLUMBING FIXTURE REQUIREMENTS

1) FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS SHALL BE LABELED NOT LESS THAN 30'-0" O.C. HORIZONTALLY IN ACCESSIBLE, CONCEALED FLOOR, FLOOR/CEILING OR ATTIC SPACES. LABELING SHALL CONSIST OF 3" HIGH RED STENCILED LETTERING STATING, "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS."

2) FIRE WALLS SHALL BE LABELED NOT LESS THAN 30'-0" O.C. HORIZONTALLY IN ACCESSIBLE, CONCEALED FLOOR, FLOOR/CEILING, OR ATTIC SPACES. LABELING SHALL CONSIST OF 3" HIGH RED STENCILED LETTERING STATING, "FIRE WALL - PROTECT ALL OPENINGS - MAY NOT BE STABLE AFTER FIRE EXPOSURE."

SMOKE & FIRE BARRIER MARKINGS

COUNTY: HARRIS
CLIMATE ZONE: 2A*

THE I.E.C.C. ESTABLISHES THE REQUIREMENTS FOR INSULATING THE BUILDING. THE MINIMUM REQUIREMENTS THAT ARE ACCEPTABLE (FOR STANDARD OCCUPIED BUILDINGS) ARE: ROOF= R-25c, MASS WALLS= R-5.7c, MTL FRAMED= R-13 + 5ci, METAL BUILDINGS= R-19 + 11LS & CRAWL SPACES= R-30

ENERGY CODE R VALUES

EGRESS (SPRINKLERED) - EXISTING BLDG

PAIR OF 3'-0" DOOR (68" CLR) AT 0.15" / OCCUPANT = 453 OCC.
12 INSTANCES 5436 OCCUPANTS

EGRESS (SPRINKLERED) - PROPOSED BLDGS

PAIR OF 3'-0" DOOR (68" CLR) AT 0.15" / OCCUPANT = 453 OCC.
5 INSTANCES 2265 OCCUPANTS

4'-0" DOOR (44" CLR) AT 0.15" / OCCUPANT = 283 OCCUPANTS

3'-0" DOOR (32" CLR) AT 0.15" / OCCUPAT = 213 OCCUPANTS

TOTAL 8197 OCCUPANTS

EGRESS FACTORS LEGEND

RF SURVEY - EMERGENCY RESPONDER RADIO COVERAGE

CONTRACTOR IS REQUIRED TO PROVIDE AN RF SURVEY AS DESCRIBED IN SPECIFICATION SECTION **26 5500 - RF SURVEY** AND TAKE ADDITIONAL STEPS (IF NECESSARY) TO ENSURE ERRC MEETS CODE MINIMUMS.

RF SURVEY - ERRC

EXISTING BUILDING/RENOVATIONS: FIRE BUILDING 1
IEBC LEVEL 2 RENOVATION

PRIMARY OCCUPANCY: GROUP E **TYPE:** II-B
ALLOWABLE HEIGHT: 55 FEET (NON-SPRINKLERED)
TOTAL HEIGHT PROVIDED: 26' - 9"
ALLOWABLE NUMBER OF STORIES:
ALLOWABLE AREA FACTOR:
(NS) NON-SPRINKLERED: 14,500 SQ. FT.
TABULAR AREA (Aі) IN ACCORDANCE WITH TABLE 506.2

TOTAL FRONTAGE INCREASE ALLOWED: 7,250 SQ. FT.
If = 100 x [F/P - 0.25] x W/30 **(IBC 2015, EQ. 5-5)**
F = 143' *P = 185'* *W = 29.7'*
100 x [1434/1897 - 0.25] x 29.7/30
100 x [0.507] x 0.99
If = 50% (0.50)

TOTAL AREA ALLOWED: 65,250 SQ. FT.
SINGLE-OCCUPANCY, ONE-STORY
Aa = At + (NS x If) **(IBC 2015, EQ. 5-1)**
At = 58,000sf *If = 50%*
Aa = 58,000 + (14,500 x 50%)

TOTAL AREA PROVIDED:
FIRST FLOOR: 139,723 SQ. FT. (EXISTING NON-CONFORMING)

OCCUPANT LOAD (PER HPW FORM CE-1131)
TEA OCCUPANT LOAD: *1,101 OCC.*
ASSIGNED SCHOOL STAFF: *165 OCC.*
ACTUAL OCCUPANT LOAD: **1,266 OCC.**

CALCULATIONS PER IBC 2015

THE EMERGENCY ACCESS LOCK BOX(ES) SHALL BE AS SPECIFIED. REFER TO SPECIFICATIONS SECTION 10 4400. BOTTOM ELEVATION OF BOX SHALL BE 6'-0" ABOVE GROUND LEVEL (VERIFY WITH FIRE MARSHAL)

FIREMAN'S EMERGENCY LOCK BOX(ES)

1 HR. FIRE PARTITION
1 HR. FIRE BARRIER
2 HR. FIRE BARRIER
2 HR. FIRE WALL

WALLS SHALL MEET ALL CODE REQUIREMENTS FOR RATED CONSTRUCTION. WINDOW ASSEMBLIES SHALL COMPLY WITH IBC AND BE U.L. LABELED. DOORS SHALL HAVE CLOSERS, BE U.L. LABELED, AND RATED AS SCHEDULED.

FIRE RATED CONSTRUCTION LEGEND

1) THIS CODE ANALYSIS PLAN IS PROVIDED AS A TOOL FOR VIEWING THE OVERALL CODE COMPLIANCE FOR THE ENTIRE FACILITY. WHILE STATED U.L. RATINGS REQUIRED THROUGH WALLS MUST BE MET, ALL CONTRACTORS MUST CONSTRUCT THIS FACILITY FROM THE MATERIALS AND IN THE DIMENSIONS DESCRIBED IN THE CONSTRUCTION DOCUMENTS. ANY APPARENT CONFLICT SHALL BE RESOLVED WITH THE ARCHITECT.

2) FIRE RATED WALLS NOT DESIGNED TO EXTEND ABOVE ROOF LEVEL SHALL EXTEND TO THE ROOF DECK WITH U.L. APPROVED CLOSURE TO THE DECK U.N.O.

3) ALL PENETRATIONS OF FIRE RATED WALLS SHALL BE CLOSED WITH CODE APPROVED METHODS AND MATERIALS TO MAINTAIN THE SPECIFIED RATING, INCLUDING FIRE TREATED BLOCKING / PLYWD.

4) REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR FIRE AND SMOKE DAMPERS.

5) REFER TO G3 SHEETS FOR TYP WALL CONSTRUCTION DETAILS.

6) SQUARE FOOT (SF) AREAS INDICATED ARE FOR CODE ANALYSIS ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AREAS FOR CONSTRUCTION PURPOSES.

CODE ANALYSIS PLAN NOTES

INFORMATION PROVIDED FOR CODE COMPLIANCE EVALUATION; NOT TO BE USED FOR BIDDING PURPOSES.

1) PROJECT IDENTIFICATION
A) OWNER: HUMBLE I.S.D.
B) PROJECT NAME: CREEKWOOD MIDDLE SCHOOL
C) PHYSICAL ADDRESS: 3603 W. LAKE HOUSTON PKWY, KINGWOOD, TEXAS 77339

2) STUDENT CAPACITY
A) EXISTING STUDENT CAPACITY: 1,200
B) NEW ADDED STUDENT CAPACITY: 0
C) TOTAL STUDENT CAPACITY: 1,200
D) GRADES SERVED: 6TH - 8TH

3) FACULTY & STAFF: 150 (ESTIMATED)

4) APPLICABLE CODES AS PER CITY OF HOUSTON
A) INTERNATIONAL BUILDING CODE (IBC) 2015
B) UNIFORM PLUMBING CODE 2015
C) UNIFORM MECHANICAL CODE 2015
D) NATIONAL ELECTRICAL CODE (NEC) 2023
E) INTERNATIONAL FIRE CODE 2015
F) ELIMINATION OF ARCHITECTURAL BARRIERS ACT, TEXAS DEPT. OF LICENSING AND REGULATION
G) INTERNATIONAL ENERGY CONSERVATION CODE 2015
H) INTERNATIONAL EXISTING BUILDING CODE 2015
J) LOCAL/CITY OF HOUSTON AMENDMENTS

5) OCCUPANCY CLASSIFICATION
A) OCCUPANCY: GROUP E
B) SEPARATED USES: NONE
C) INCIDENTAL USE AREAS: RATED PER TABLE 509
D) ACCESSORY OCCUPANCIES

6) TYPE OF CONSTRUCTION / FIRE-RESISTIVE REQUIREMENTS
A) CONSTRUCTION TYPE: II-B

TABLE 601

BUILDING ELEMENT	TYPE II B
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS EXTERIOR	0
BEARING WALLS INTERIOR	0
NON-BEARING WALLS & PARTITIONS (EXTERIOR)	0
NON-BEARING WALLS & PARTITIONS (INTERIOR)	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION & SECONDARY MEMBERS	0

7) FIRE-PROTECTION SYSTEMS
A) AUTOMATIC SPRINKLER SYSTEM: WILL BE ADDED TO BOTH ADDITIONS AND EXISTING BUILDING.
B) PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED PER INTERNATIONAL FIRE CODE
C) FIRE ALARM PROVIDED: YES
D) EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM PROVIDED: WILL BE ADDED FOR BOTH ADDITIONS AND EXISTING BUILDING.

8) EXIT REQUIREMENTS
A) TRAVEL DISTANCES
1) ALLOWED, SPRINKLERED BUILDING:
TO EXIT FROM WITHIN A SPACE FOR OCCUPANCY LOAD GREATER THAN 50 = 250 FT.
TO EXIT FROM WITHIN BUILDING = 250 FT.
COMMON PATH OF EGRESS TRAVEL = 75 FT.
2) ACTUAL - REFER TO PLAN FOR PATHS & DISTANCE

9) TOTAL BUILDING AREA: 160,751

BUILDING DESIGN CRITERIA

EGRESS (SPRINKLERED)

1. 3'-0" DOOR (32" CLR) AT 0.15" / OCCUPANT = 213 OCCUPANTS
2. 4'-0" DOOR (44" CLR) AT 0.15"/OCCUPANT = 293 OCCUPANTS
3. PAIR OF 3'-0" DOOR (68" CLR) AT 0.15" / OCCUPANT = 453 OCCUPANTS
4. STAIRS (62" CLR) AT 0.2"/OCCUPANT = 310 OCCUPANTS

EGRESS FACTORS LEGEND

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

Number	Name	Area	Occupancy	OCC.FACTOR
A110	COMPUTER LAB	878.49 SF	EDUCATIONAL - SHOP	50
A114	CORRIDOR	1169.66 SF	CIRCULATION	0
A131	MECH	31.83 SF	MECHANICAL	300
A132	LOBBY	378.84 SF	CIRCULATION	0
A133	MECH	474.71 SF	MECHANICAL	300
A134	CORR	128.91 SF	CIRCULATION	0
A135	OFFICE	291.17 SF	BUSINESS	100
A136	PR	81.54 SF	CLASSROOM	20
A137	CORR	60.45 SF	CIRCULATION	0
A138	PR	166.38 SF	CLASSROOM	20
A139	PR	84.60 SF	CLASSROOM	20
A140	UNIFORM STORAGE	122.56 SF	STORAGE	300
A141	INSTRUMENT STORAGE	487.92 SF	STORAGE	300
A142	BAND HALL	2182.68 SF	ASSEMBLY - NOT FIXED	15
D145	CHORAL	1291.71 SF	ASSEMBLY - NOT FIXED	15
D146	OFFICE	150.69 SF	BUSINESS	100
D148	PRAC	230.02 SF	READING	50
D156	ELEC / AIR COMP ROOM	130.50 SF	MECHANICAL	300
D162	SHOP	2889.86 SF	EDUCATIONAL - SHOP	50
D162A	CAGE	71.59 SF	STORAGE	300
D162B	CAGE	71.47 SF	STORAGE	300
D162C	CAGE	71.47 SF	STORAGE	300
D162D	CAGE	69.34 SF	STORAGE	300
D163	STORAGE	241.95 SF	STORAGE	300
D169	PRAC	65.98 SF	READING	50
D170	PRAC	69.74 SF	READING	50
D171	PRAC	69.36 SF	READING	50

MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT

Number	Name	Area	Occupancy	OCC.FACTOR
D172	PRAC	65.31 SF	READING	50
D173	STORAGE	258.14 SF	STORAGE	300
D174	ORCHESTRA	1609.33 SF	ASSEMBLY - NOT FIXED	15
D175	HALL	302.26 SF	CIRCULATION	0
D176	OFFICE	154.95 SF	BUSINESS	100
D177	SHEET MUSIC	99.45 SF	READING	50
D178	OFFICE	154.78 SF	BUSINESS	100
D179	STORAGE	99.11 SF	STORAGE	300
D180	INSTRUMENT STORAGE	707.69 SF	STORAGE	300
D181	STORAGE	50.21 SF	STORAGE	300
D182	STORAGE	51.14 SF	STORAGE	300
D184	ENSEMBLE	966.32 SF	ASSEMBLY - NOT-FIXED	15
E100	CORRIDOR	1395.24 SF	CIRCULATION	0
E101	GYM	6742.42 SF	EXCERCISE ROOM	50
E104	DANCE	2143.22 SF	EXCERCISE ROOM	50
E105	MECH/ACCESS	140.71 SF	MECHANICAL	300
E106	CUST.	145.62 SF	EQUIPMENT	300
E107	IDF	126.42 SF	EQUIPMENT	300
E108	FEMALE	291.88 SF	RESTROOM	0
E109	MALE	297.90 SF	RESTROOM	0
E110	STORAGE	549.31 SF	STORAGE	300

KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project: CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT SUSAN F. WISH 24614 STATE OF TEXAS
10/24/2025

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CODE ANALYSIS PLAN

Job No.	Sheet No.
1821-13-01	G2.01
Drawn By: CS	100% QC
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01 - CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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EXTERIOR WALL TYPE TAGS

W200 — WALL ASSEMBLY IN SECTION VIEW

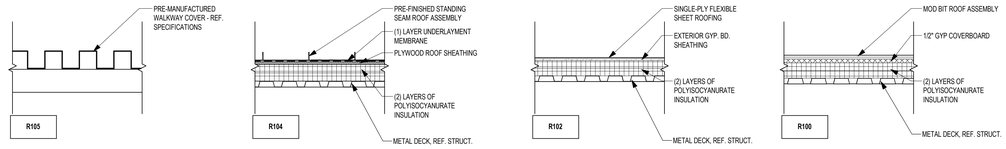
LETTER INDICATES EXTERIOR WALL

NUMBER INDICATES BACKUP CONSTRUCTION AS FOLLOWS:
- **100** - CFMF
- **200** - CMU
- **300** - N/A
- **400** - N/A

EXTERIOR WALL TYPE LEGEND

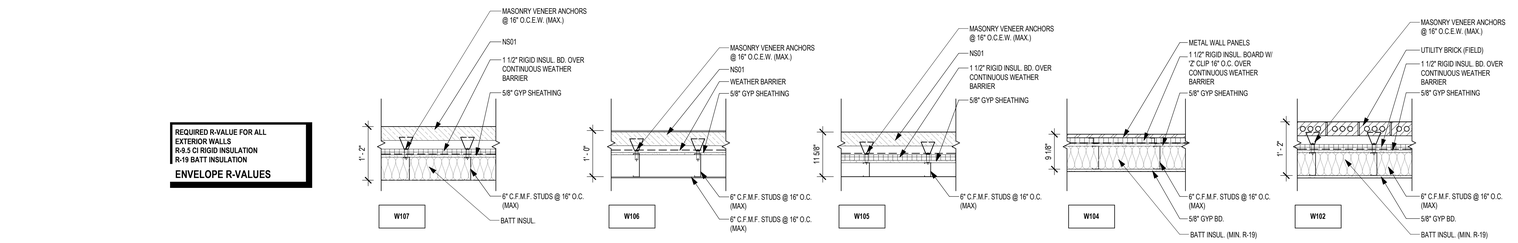
REQUIRED R-VALUE FOR ALL ROOFING CONDITIONS EXCEPT R105
(2) LAYERS OF R-25 C.I.

ENVELOPE R-VALUES



REQUIRED R-VALUE FOR ALL EXTERIOR WALLS
R-9.5 CI RIGID INSULATION
R-19 BATT INSULATION

ENVELOPE R-VALUES



Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISH
TX 24614
STATE OF TEXAS
10/24/2025

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EXTERIOR WALL & ROOF TYPES

Job No.	Sheet No.
1821-13-01	100% DC
Drawn By: CS	G3.01
Date: 04.02.2025	

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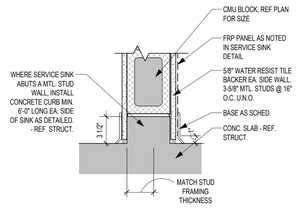
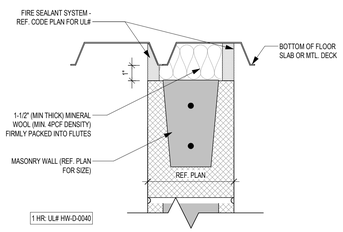
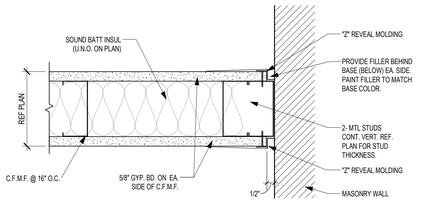


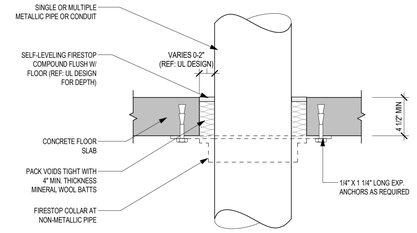
14 TYPICAL CURB DETAIL
1 1/2" = 1'-0"



13 FIRE / SOUND RATED CXN OF WALL PARALLEL TO DECK
3" = 1'-0"

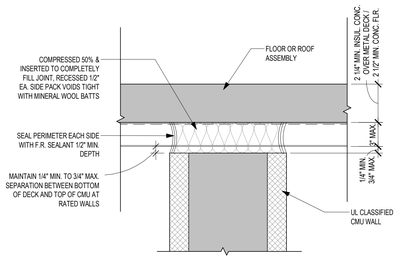


12 TYP DETAIL OF MTL STUD PARTITION TO CMU
3" = 1'-0"



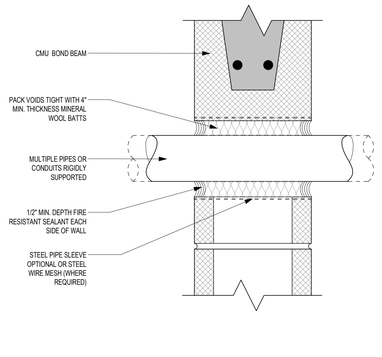
UL# - C-AJ-1149
UL# - C-AJ-1421
UL# - CA-J-2109
UL# - CA-J-2271
UL# - F-A-5032

11 PIPE PENETRATION DETAIL
3" = 1'-0"



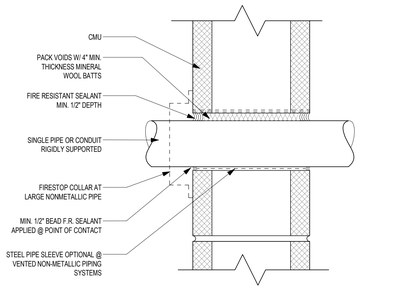
UL# - HW-D-0081

10 CLOSURE DETAIL
3" = 1'-0"



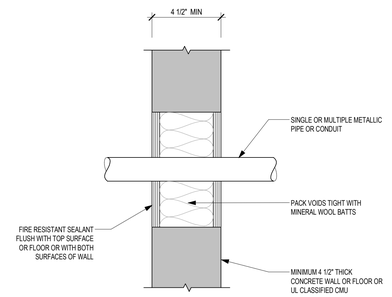
UL# C-AJ-8143
UL# C-AJ-8148

9 MULTIPLE PIPE PENETRATION
3" = 1'-0"



UL# - CA-J-1380
UL# - CA-J-1421
UL# - C-AJ-1453
UL# - CA-J-2109

8 SINGLE PIPE PENETRATION
3" = 1'-0"



7 PIPE PENETRATION DETAIL
3" = 1'-0"

PARTITION TYPE TAGS

A3 | D

WALL ASSEMBLY'N PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

- D — WALL TO DECK / STRUCTURE
- C — WALL TO 6" (MIN.) ABOVE CEILING
- FR — FIRE RATED WALL TO DECK / STRUCTURE
- AD — ACOUSTICAL WALL TO DECK / STRUCTURE
- AC — ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
- AR — ACOUSTICAL RATED WALL TO DECK / STRUCTURE
- GD — GYP WALL ABOVE TO DECK / STRUCTURE
- SR — SMOKE RESISTANT PARTITION

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF OR CMU
- 6 - 6" CFMF OR 5 5/8" CMU OR 6" CORE ICF
- 8 - 8" CFMF OR 7 5/8" CMU OR 8" CORE ICF
- 10 - 9 5/8" CMU OR 10" CORE ICF
- 12 - 11 5/8" CMU OR 12" CORE ICF

WALL / PARTITION NOTES:

1) ALL INTERIOR WALL/PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

2) **UNTAGGED WALL/PARTITIONS AND COLUMN FURRINGS** SHOULD BE ASSUMED TO BE **"TYPICAL"** FOR BIDDING PURPOSES. THE "TYPICAL" **GYP BOARD WALL/PARTITION** IS TYPE **H4**, ACOUSTICAL, TO 6" ABOVE CEILING, AND THE "TYPICAL" GYP BOARD **COLUMN FURRING** AND CHASES IS **M4**, NON-ACOUSTICAL, TO 6" ABOVE CEILING U.N.O. THE "TYPICAL" **MASONRY WALL/PARTITION** IS TYPE **A8**, NON-ACOUSTICAL AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS **A6**, NON-ACOUSTICAL. CMU IS TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

3) WALL TYPES IDENTIFIED AS CMU MAY INCLUDE ACMU. FLOOR PLAN HATCH PATTERNS WILL DIFFERENTIATE REGULAR SMOOTH FACE CMU FROM ARCHITECTURAL CMU. FINISH PLANS AND SCHEDULES WILL IDENTIFY ACMU SELECTIONS (GROUND FACE, SPLIT FACE, ETC.) AND IDENTIFY WHICH SIDE OF A SINGLE WYTHE ACMU WALL IS THE FINISH SIDE.

4) WALL/PARTITION TYPES IDENTIFIED AS INCLUDING VENEER MAY INCLUDE BRICK, STONE, OR ACMU. FLOOR PLAN HATCH PATTERNS WILL DIFFERENTIATE REGULAR SMOOTH FACE CMU, BRICK, STONE, OR ARCHITECTURAL CMU. FINISH PLANS AND SCHEDULES WILL IDENTIFY ACMU SELECTIONS (GROUND FACE, SPLIT FACE, ETC.)

5) WALL/PARTITIONS INDICATED BY TAG "GYP WALL ABOVE TO DECK" SHALL BE CONSTRUCTED OF THE SPECIFIED WALL TYPE TO ONE FULL COURSE (MIN.) ABOVE THE CEILING, BRACED, AND AN H4 (OR M4) WALL/PARTITION (H6 OR M6 WHERE REQUIRED BY UNBRACED HEIGHT) SHALL BE BUILT FROM THE TOP OF WALL TO DECK. WALL/PARTITIONS INDICATED BY TAG "ACOUSTICAL GYP WALL ABOVE TO DECK" SHALL BE CONSTRUCTED OF THE SPECIFIED WALL TYPE TO A ONE FULL COURSE (MIN.) ABOVE THE CEILING, BRACED, AND AN H4 (OR M4) WALL/PARTITION (H6 OR M6 WHERE REQUIRED BY UNBRACED HEIGHT) WITH BATT INSULATION SHALL BE BUILT FROM THE TOP OF WALL TO DECK. WHERE INDICATED BY THE FIRE CODE PLAN TO BE FIRE RATED, ALL CONNECTIONS SHALL MEET RATING REQUIREMENTS.

6) FIRE-RATED WALL/PARTITIONS ARE INDICATED ON THE FIRE CODE PLANS ON THE G2 SHEETS. ALL GYP BOARD IN A RATED ASSEMBLY MUST BE 5/8" TYPE "X" AND CONSTRUCTION MUST MATCH THE ASSIGNED UL NUMBER. REFERENCE THE TYPE SCHEDULES ON THIS SHEET FOR UL NUMBERS WHERE APPLICABLE. SUBSTITUTE UL ASSEMBLIES MAY BE PRESENTED FOR THE CONSIDERATION OF THE ARCHITECT , BUT MUST NOT BE USED UNLESS APPROVED IN WRITING. PARTITIONS NOT IDENTIFIED AS RATED SHALL BE BUILT WITH STANDARD GYP BOARD.

7) WHERE FIRE-RATED MASONRY WALL/PARTITIONS ARE INDICATED TO EXTEND TO DECK, ANY VENEER OR ACMU MAY TERMINATE ABOVE CEILING LEVEL. THE CMU WALL/PARTITION SHALL EXTEND TO DECK WITH REGULAR CMU OF SAME THICKNESS AS THE CMU (OR ACMU) IN THE WALL ASSEMBLY.

8A) ALL ACOUSTICAL GYP BD WALL/PARTITIONS REQUIRE HIGHER QUALITY CONSTRUCTION AND SHALL BE FULL HEIGHT SOUND ATTENUATING BATT INSULATION. IN ORDER TO ACHEIVE THE INDICATED STC RATING, ALL WALL/PARTITIONS ARE TO HAVE ALL PIN HOLES & VOIDS, PIPES, DUCTS, CONDUITS, ETC ACOUSTICALLY FILLED ON BOTH SIDES. ALL WALL BOXES ON BOTH SIDES OF WALL/PARTITION ARE TO HAVE ACOUSTICAL PUTTY PADS ON THE INTERIOR SIDE AS DETAILED. BOTH SIDES OF WALL/PARTITION SHALL BE SEALED TIGHT TO DECK AS DETAILED. THE FLOOR TRACK SHALL BE SET ON AN ACOUSTICAL ISOLATOR PAD.

8B) ALL ACOUSTICAL CMU WALL/PARTITIONS REQUIRE A HIGHER QUALITY CONSTRUCTION, SHALL BE NORMAL WEIGHT CMU BLOCK, EXTEND TO DECK AND HAVE FULL HEAD JOINTS. ALL PENETRATIONS SHALL BE ACOUSTICALLY SEALED ON BOTH SIDES OF WALL. MORTAR JOINTS TO BE FILLED W/ NO PIN HOLES OR VOIDS. HEAD OF WALL SHALL BE SEALED TIGHT TO DECK AS DETAILED.

9) ALL COLD FORM METAL FRAMING ARE SUBJECT TO THE DESIGN OF A QUALIFIED STRUCTURAL ENGINEER. FINAL DETERMINATION OF GAUGE AND DIMENSIONS OF FRAMING WILL BE DETERMINED BY STRUCTURAL DESIGN. ENGINEERS RECOMMENDATIONS WHICH WOULD SIGNIFICANTLY IMPACT WALL THICKNESS MUST BE COORDINATED WITH THE ARCHITECT FOR ALIGNMENT PRIOR TO CONSTRUCTION.

10) REFER TO TYPICAL INTERIOR WALL/PARTITION BRACING DETAILS FOR ADDITIONAL INFORMATION REGARDING FLOOR AND DECK CONNECTIONS. FIRE-RATED WALLS SHALL USE FIRE STOPPING SEALANTS OR ASSEMBLIES WHERE THE WALL/PARTITION ABUTS THE DECK, INCLUDING MINERAL WOOL INSULATION WHERE APPLICABLE. NON-RATED PARTITIONS SHALL USE ACOUSTICAL SEALANTS AND INSULATION WHERE THE WALL/PARTITION ABUTS THE DECK.

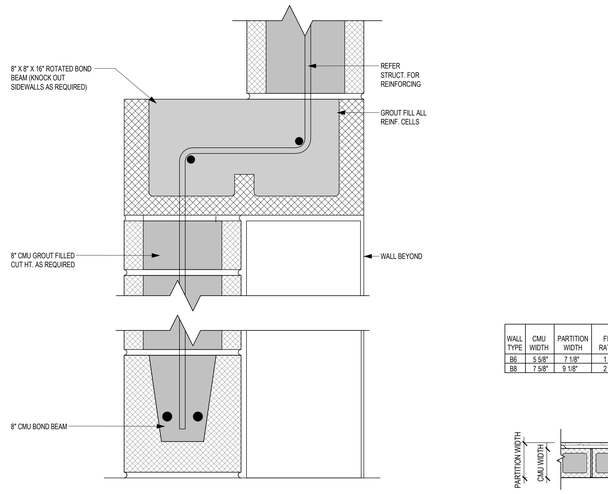
11) FOR ANY DISCREPANCY BETWEEN WALL/PARTITION TYPES AND WALL SECTIONS, WALL SECTION SHALL SUPERCEDE.

12) NOT ALL WALL/PARTITION TYPES SHOWN WILL BE USED IN EVERY PROJECT.

INTERIOR PARTITION TYPE LEGEND

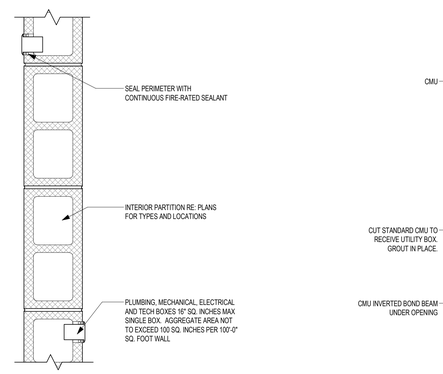
1. PENETRATION DETAILS 4 THROUGH 9 ARE FOR CONDUIT, PIPE, DUCT, ETC. PENETRATIONS THROUGH FIRE RATED FLOORS AND PARTITIONS AND ARE GENERIC IN NATURE. THE CONTRACTOR IS REQUIRED TO SUBMIT FOR APPROVAL TO THE ARCHITECT, DETAILS SPECIFIC TO THE SEALANT AND FIRE-PROOFING MATERIAL MANUFACTURER'S TESTED AND APPROVED SYSTEMS INCLUDING SPECIFIC TEST DATA.
2. CLOSURE DETAILS 10 AND 11 ARE TYPICAL CLOSURE DETAILS FOR ALL FULL-HEIGHT FIRE RATED AND NON-FIRE-RATED PARTITIONS (REFER PARTITION TYPES).
3. DETAILS AND U.L. DESIGN NUMBERS SHOWN ARE REPRESENTATIVE OF THE MOST TYPICAL CONDITIONS ONLY AND OTHER ASSEMBLIES MAY BE REQUIRED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SELECT, SUBMIT AND INSTALL U.L. DESIGNS THAT ARE APPROPRIATE FOR ANY GIVEN CONDITION TO ACHIEVE THE REQUIRED FIRE-RESISTIVE RATING .

WALL PENETRATION NOTES



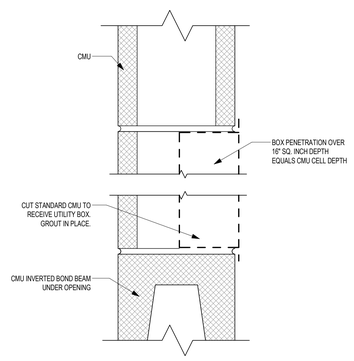
UL# U905

4 DEEP BOX PENETRATION
3" = 1'-0"



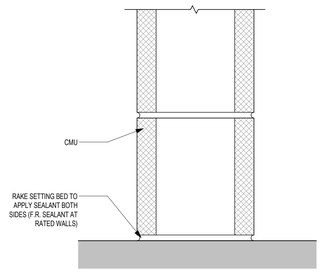
UL# - U905

3 BOX PENETRATION - PLAN DTL
1 1/2" = 1'-0"



UL# - U905

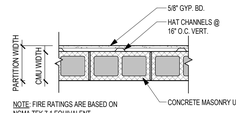
2 BOX PENETRATION DETAIL
3" = 1'-0"



UL# - U905

1 CLOSURE DETAIL
3" = 1'-0"

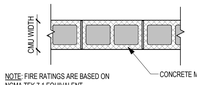
WALL TYPE	CMU WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
B6	5 5/8"	7 1/8"	1 HR	U906	45	50
B8	7 5/8"	9 1/8"	2 HR	U905	47	54



NOTE: FIRE RATINGS ARE BASED ON NCMA TEK 7.1 EQUIVALENT THICKNESS CALCULATIONS FOR LIGHT WEIGHT CMU OF EXPANDED CLAY, SHALE, OR SLATE.

B — **GYP. BD. FURRING ON CMU**

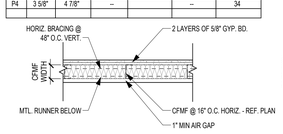
WALL TYPE	CMU WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
A6	5 5/8"	5 5/8"	1 HR	U906	45	50
A8	7 5/8"	7 5/8"	2 HR	U905	47	54



NOTE: FIRE RATINGS ARE BASED ON NCMA TEK 7.1 EQUIVALENT THICKNESS CALCULATIONS FOR LIGHT WEIGHT CMU OF EXPANDED CLAY, SHALE, OR SLATE.

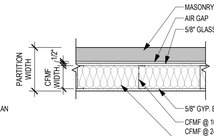
A — **SINGLE-WYTHE CMU**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
P4	3 5/8"	4 7/8"	--		--	34



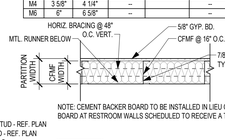
P — **(2 LAYERS) GYP. BD. FURRING ON CFMF**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
N4	3 5/8"	5"	1-2 HR	REF. IBC 721.1(2): 15-2.4	40	44
N6	6"	11 3/8"	1-2 HR	REF. IBC 721.1(2): 15-1.10	40	44



N — **MASONRY VENEER ON CFMF**

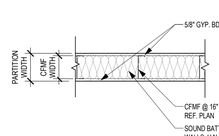
WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
M1	7/8"	1 1/2"	--		--	34
M2	1 5/8"	2 1/4"	--		--	34
M3	2 1/2"	3 1/8"	--		--	34
M4	3 5/8"	4 1/4"	--		--	34
M6	6"	6 5/8"	--		--	34



NOTE: CEMENT BACKER BOARD TO BE INSTALLED IN LIEU OF GYPSUM BOARD AT RESTROOM WALLS SCHEDULED TO RECEIVE A TILE FINISH.

M — **GYP. BD. FURRING ON CFMF**

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING NO SOUND ATTENUATION	STC RATING WITH SOUND ATTENUATION
H6	6"	7 1/4"	--	U419; U465	40	44



H — **GYP. BD. ON CFMF**

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

REGISTERED ARCHITECT — SUSAN F. WIDA — TX 24614 — STATE OF TEXAS — 10/24/2025

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INTERIOR PARTITION TYPES

Job No.	Sheet No.
1821-13-01	100% QC G3.02
Drawn By: CS	
Date: 04.02.2025	

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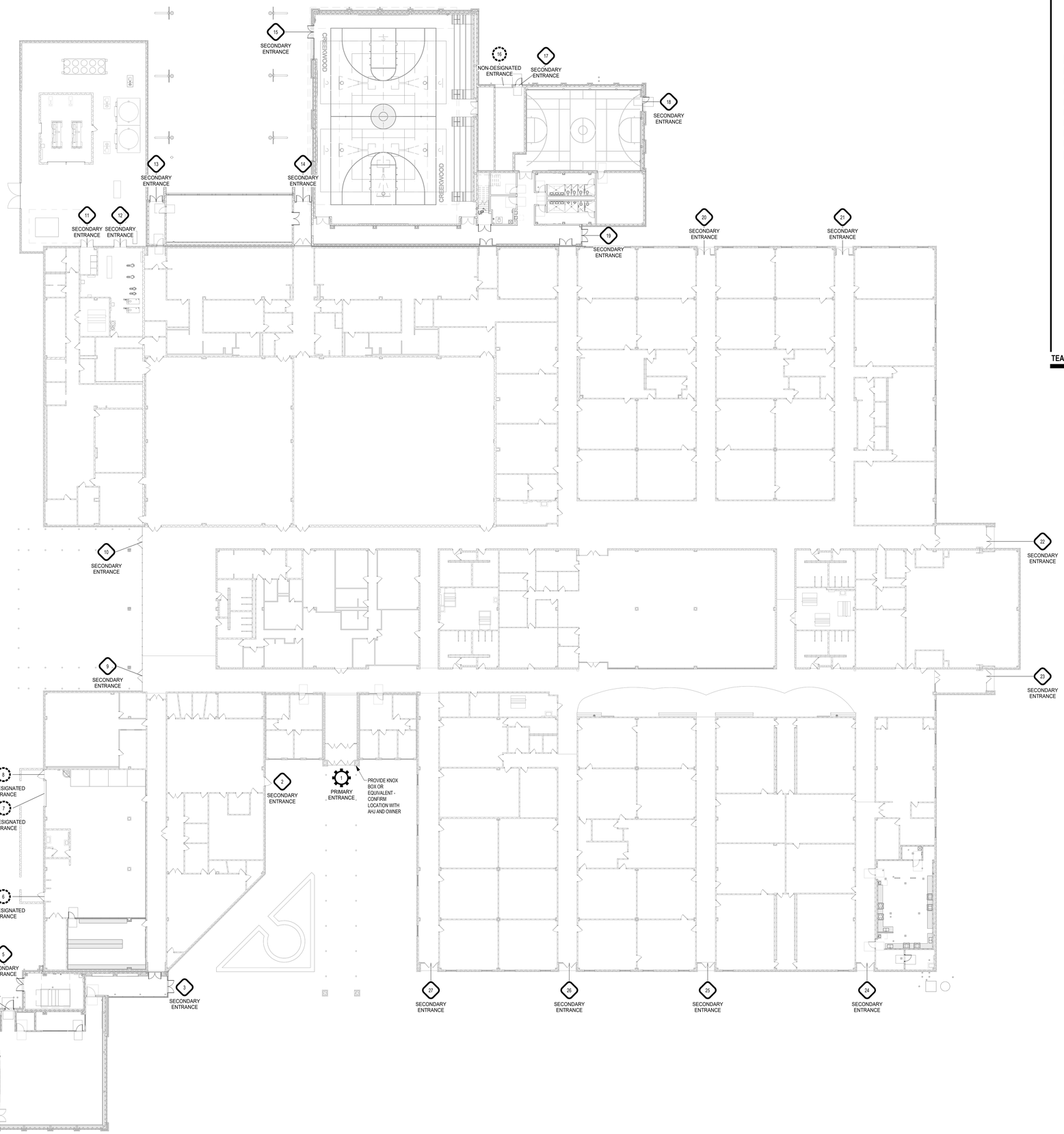
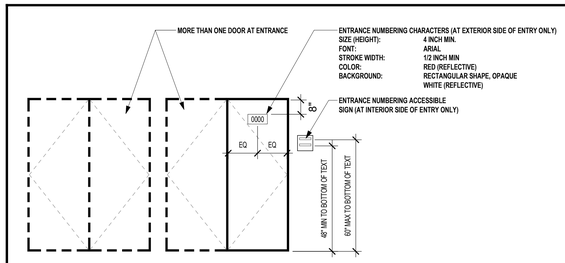


1 TEA ENTRANCE PLAN - FF1
1" = 20'-0"



ENTRANCE DOOR ELEVATION

NOTES

1. ENTRANCE NUMBERING CHARACTERS SHALL BE ALPHA-NUMERIC AND PER A CAMPUS-WIDE SEQUENCING SYSTEM
2. THE DESIGNATED MAIN PRIMARY ENTRANCE SHALL BE FIRST IN ALPHA-NUMERIC SEQUENCING, BUT IS THE ONLY ENTRANCE NOT REQUIRED TO ACTUALLY DISPLAY NUMBERING SEQUENCE ON EXTERIOR SIDE OF ENTRANCE
3. NUMBERING OF ENTRANCES SHALL START AT THE DESIGNATED MAIN PRIMARY ENTRANCE AND CONTINUE IN CLOCKWISE DIRECTION THROUGHOUT
4. EACH ENTRANCE LOCATION SHALL HAVE ALPHA-NUMERIC CHARACTERS AT EXTERIOR SIDE ONLY OF SUCH ENTRANCE
5. AT EXTERIOR SIDE ONLY OF EACH ENTRANCE LOCATION, ENTRANCE NUMBERING CHARACTERS SHALL C OMPLY WITH IFC 505, AND BE VINYL, PERMANENTLY AFFIXED
6. AT EXTERIOR SIDE ONLY OF EACH ENTRANCE LOCATION, DEPENDING UPON DOOR TYPE, AFFIX NUMBERING CHARACTERS ON GLAZING OR DOOR MATERIAL IN LOCATION AS INDICATED
7. AT INTERIOR SIDE ONLY OF EACH ENTRANCE LOCATION, PROVIDE ENTRANCE NUMBERING BY ACCESSIBLE SIGNAGE; SUCH INTERIOR ALPHA-NUMERIC NUMBERING SEQUENCE SHALL MATCH ALPHA-NUMERIC NUMBERING SEQUENCE OF EXTERIOR OF SAME ENTRANCE LOCATION; ACCESSIBILITY OF SUCH SIGNAGE SHALL BE PER ALL APPLICABLE ACCESSIBILITY REQUIREMENTS
8. AT EACH ENTRANCE LOCATION WITH MULTIPLE DOORS AND/OR MULTIPLE DOOR LEAFS, ALPHA-NUMERIC NUMBERING CHARACTERS SHALL BE APPLIED ON APPROACHING RIGHT-HAND SIDE DOOR ONLY AT EXTERIOR SIDE OF SUCH ENTRANCE
9. AT EACH ENTRANCE LOCATION WITH MULTIPLE DOORS AND/OR MULTIPLE DOOR LEAFS, ENTRANCE NUMBERING ACCESSIBLE SIGNAGE SHALL BE PROVIDED IN LOCATION PER ALL APPLICABLE ACCESSIBILITY REQUIREMENTS AT INTERIOR SIDE ONLY OF SUCH ENTRANCE

TEA ENTRANCE LEGEND

INSTRUCTIONAL CAPACITY

METHOD

- ■ MAXIMUM INSTRUCTIONAL CAPACITY (QUANTITATIVE METHOD)
- ☐ ADJUSTED MAXIMUM INSTRUCTIONAL CAPACITY (QUALITATIVE METHOD)

LEVEL OF FLEXIBILITY	ELEMENTARY SCHOOL (ES) PRE-K - GRADE 6	MIDDLE SCHOOL (MS) GRADE 6 - GRADE 8	HIGH SCHOOL (HS) GRADE 9 - GRADE 12
☐ FLEXIBILITY LEVEL 1 (L1)	☐ 36 SF	☐ 32 SF	☐ 32 SF
■ FLEXIBILITY LEVEL 2 (L2)	☐ 36 SF	■ 32 SF	☐ 32 SF
☐ FLEXIBILITY LEVEL 3 (L3)	☐ 42 SF	☐ 36 SF	☐ 36 SF
☐ FLEXIBILITY LEVEL 4 (L4)	☐ 42 SF	☐ 36 SF	☐ 36 SF

INSTRUCTIONAL CAPACITY

1,250 STUDENTS X 32 SF PER STUDENT = 40,000 SF (AGGREGATE) REQUIRED

48,101 SF (AGGREGATE) PROVIDED = 1,504 ACTUAL CAPACITY PROVIDED

STAFF CAPACITY

1,504 ACTUAL INSTRUCTIONAL CAPACITY PROVIDED x 0.10 (10 PERCENT) = 151 STAFF*

*ESTIMATED

TEA ENTRANCE TAGS

- XXXX PRIMARY ENTRANCE — MAIN ENTRANCE TO AN INSTRUCTIONAL FACILITY THAT IS CLOSEST TO OR DIRECTLY CONNECTED TO THE RECEPTION AREA; **OR** ANY EXTERIOR DOOR THE SCHOOL DISTRICT INTENDS TO ALLOW VISITORS TO USE TO ENTER THE FACILITY DURING SCHOOL HOURS EITHER THROUGH POLICY OR PRACTICE; **OR** ANY EXTERIOR DOOR THE SCHOOL DISTRICT INTENDS TO ALLOW TO REMAIN UNLOCKED DURING SCHOOL HOURS
- XXXX SECONDARY ENTRANCE — ANY EXTERIOR DOOR THAT IS NOT ONE OF THE FOLLOWING: A PRIMARY ENTRANCE; A NON-DESIGNATED ENTRANCE
- XXXX NON-DESIGNATED ENTRANCE — A DOOR THAT IS NOT OPERABLE FROM THE EXTERIOR AND IS DESIGNED TO ONLY ALLOW FOR EMERGENCY EGRESS

TEA ENTRANCE LEGEND

Revision / Date

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CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT — SUSAN F. WISH — TX 24614 — STATE OF TEXAS
10/24/2025

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TEA COMPLIANCE PLAN

Job No.	Sheet No.
1821-13-01	100% QC G4.01
Drawn By: Author	
Date: 04.02.2025	

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DIVISION 3 - CONCRETE

CONCRETE FINISHING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
COS	CONCRETE, SEALED			CLEAR						

DIVISION 4 - MASONRY

UNIT MASONRY

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
BRK01	BRICK UNIT MASONRY	ACME BRICK COMPANY		FLASH MANGANESE VELOUR	UTILITY				FIELD BRICK	CHRIS PELTON CPELTON@BRICK.COM 832.948.3312
BRK02	BRICK UNIT MASONRY	ACME BRICK COMPANY		AMERICANA	UTILITY				ACCENT BRICK	CHRIS PELTON CPELTON@BRICK.COM 832.948.3312

STONE

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
NS01	NATURAL STONE	ACME BRICK COMPANY		LUEDERS BUFF						CHRIS PELTON CPELTON@BRICK.COM 832.948.3312
INS01	NATURAL STONE	ACME BRICK COMPANY	THINSET STONE	LUEDERS BUFF					DISPLAY CASE SURROUNDS AT BAND HALL LOBBY	CHRIS PELTON CPELTON@BRICK.COM 832.948.3312

DIVISION 5 - METALS

METAL FABRICATIONS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	METAL RAILINGS & HANDRAILS			PNT02					@ MECHANICAL PLATFORM	

DIVISION 6 - WOOD-PLASTICS

FIBERGLASS REINFORCED PANELING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
FRP01	FIBERGLASS REINFORCED PANELING	PANOLAM SURFACE SYSTEMS		SILVER FRP					AT MOP SINKS REF DETAIL ON A9 SHEETS FOR EXTENTS	

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING AND SIDING PANELS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
MP01	METAL SOFFITS	PAC CLAD	PVDF WOOD GRAIN SERIES	COPPER						

FLASHING AND SHEET METAL

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	DOWNSPOUTS			MATCH PAC CLAD SLATE GRAY						
	GUTTERS			MATCH PAC CLAD SLATE GRAY						
	METAL FLASHING, COPING, & TRIM			MATCH PAC CLAD SLATE GRAY						

DIVISION 8 - OPENINGS

DOORS AND FRAMES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	ALUMINUM DOORS & FRAMES			CLEAR ANODIZED ALUM						
	ALUMINUM WINDOWS			CLEAR ANODIZED ALUM						
	COILING DOORS & GRILLES			PAINT TO MATCH CLEAR ANODIZED ALUM FRAMES						
HM	HOLLOW METAL DOORS & FRAMES			PAINT TO MATCH CLEAR ANODIZED ALUM FRAMES						
	LOUVERS			CLEAR ANODIZED ALUM						
SC	SOLID CORE DOORS	WILSONART		PINNACLE WALNUT 7992		38 FINE VELVET TEXTURE FINISH				
	VISBLE DOOR HARDWARE			CLEAR ANODIZED ALUM						

DIVISION 9 - FINISHES

TILING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
BTP01	BASE, TILE, PORCEAIN	DALTILE	DELEGATE	LIGHT GREY DL26	6"x12"	MATTE		RESTROOM WALL BASE		
	GROUT	MAPEI		TIMBERWOLF 104						
TC01	TILE, CERAMIC	DALTILE	COLOR WHEEL LINEAR	ARTIC WHITE RECTANGLE 0190	6"x18"	GLOSSY	STACK BOND	CULINARY WALLS		
TM01	TILE, MOSAIC	DALTILE	DELEGATE	OFF WHITE DL25	RANDOM LINEAR	MATTE		RESTROOM ACCENT		
	GROUT	MAPEI		ALABASTER 01						
TM02	TILE, MOSAIC	DALTILE	DELEGATE	LIGHT GREY DL26	RANDOM LINEAR	MATTE		RESTROOM ACCENT		
	GROUT	MAPEI		TIMBERWOLF 104						
TP01	TILE, PORCELAIN	CROSSVILLE	BASALT	SILICA	12"x24"	UNPOLISHED	STACK BOND	CORRIDOR WALLS		
	GROUT	MAPEI		BISCUIT 14						
TP02	TILE, PORCELAIN	CROSSVILLE	BASALT	MAFIC	12"x24"	UNPOLISHED	STACK BOND	CORRIDOR WALLS		
	GROUT	MAPEI		GRAY 09						
TP03	TILE, PORCELAIN	DALTILE	DELEGATE	OFF WHITE DL25	12"X24"	MATTE	STACK BOND	RESTROOM WALLS		
	GROUT	MAPEI		ALABASTER 01						
TP04	TILE, PORCELAIN	DALTILE	DELEGATE	LIGHT GREY DL26	12"X24"	MATTE	STACK BOND	RESTROOM FLOORS		
	GROUT	MAPEI		TIMBERWOLF 104						
TP05	TILE, PORCELAIN	DALTILE	SADDLE BROOK	FARMHOUSE				BAND HALL LOBBY, BAND HALL & ATHLETIC CORRIDOR FLOOR		
GROUT	GROUT	MAPEI		MOCHA 42						
TQ01	TILE, QUARRY	DALTILE		TBD						

CEILINGS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
L1	ACOUSTICAL CEILING TILE	CERTAINTEED		WHITE, U.N.O.	24"x24"					
L4	ACOUSTICAL CEILING TILE	CERTAINTEED		WHITE, U.N.O.	24"x24"			CULINARY		
L6	ACOUSTICAL CEILING TILE	CERTAINTEED		WHITE, U.N.O.				BAND HALL		

WOOD FLOORING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
WMP								DANCE & GYM FLOORS	SEE FINISH PLAN FOR ADDITIONAL INFORMATION	

RESILIENT FLOORING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
BR01	BASE, RUBBER	TARKETT	WALL BASE - RUBBER	CANYON	4" HIGH					

CARPETING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
CPT01	CARPET, SHEET	TARKETT	TUNDRA FLOWER	NEW FRONTIER				OFFICES		

WALL FINISHES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
CDW01	CUSTOM DIGITAL WALLCOVERING	MDC DIGITAL WALLCOVERINGS	SUBSTRATE TO BE SUEDE					GYM LOBBY	REFER TO DWGS FOR LOCATIONS; REQUEST ARTWORK FROM ARCHITECT	

ACOUSTIC TREATMENT

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
AP01	ACOUSTICAL PANELS	DESIGNTEX	GAMUT	MIST						
AP02	ACOUSTICAL PANELS	DESIGNTEX	GAMUT	PEBBLE						
AP03	ACOUSTICAL PANELS	DESIGNTEX	LOUNGE	MALLARD 3162-504						

PAINTING AND COATING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
PNT01	PAINT	SHERWIN WILLIAMS		SHOJI WHITE 7042		EGGSHELL				
PNT02	PAINT	SHERWIN WILLIAMS		FELTED WOOL 9171		EGGSHELL				
PNT03	PAINT	SHERWIN WILLIAMS		GREENBELT 6927		EGGSHELL				
PNT04	PAINT	SHERWIN WILLIAMS		URBANE BRONZE 7048		EGGSHELL				
PNT05	PAINT	SHERWIN WILLIAMS		IRON ORE 7069				EXPOSED CEILING IN BAND HALL AND DANCE		

DIVISION 10 - SPECIALTIES

INFORMATION SPECIALTIES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	DISPLAY CASES	THE TABLET AND TICKET CO.	900DC	CLEAR ANODIZED						
	DISPLAY CASE TACKABLE SURFACE	CLARIDGE	CLARIDGE CORK	SMOKE 1111						
	EXTERIOR SIGNAGE			COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	INTERIOR SIGNAGE			COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	BACKGROUND			COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	ACCENT STRIPE			COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	LETTERS			COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
MB	MARKER BOARD FRAMES			CLEAR ANODIZED						
TB	TACKBOARD FRAMES			CLEAR ANODIZED						
	TACK BOARD CORK	CLARIDGE	CLARIDGE CORK	SMOKE 1111						

INTERIOR SPECIALTIES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	CUBICLE CURTAIN	MAHARAM	SEMBLANCE	PLANK 283730-001						
	TOILET PARTITIONS	ASI		MOCHA 9212						

EXTERIOR SPECIALTIES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	PRE-MANUFACTURED CANOPIES			MATCH PAC CLAD SLATE GRAY						

ATHLETIC EQUIPMENT

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
	SCOREBOARDS			COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						

	WALL PADDING	PORTER	CLASS A	GRAY						

DIVISION 12 - FURNISHINGS

WINDOW TREATMENTS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
	SHADES	MECHOSHADE	3% OPEN	COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						

ARCHITECTURAL CASEWORK

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
PL01	PLASTIC LAMINATE	WILSONART		PINNACLE WALNUT 7992		38 FINE VELVET TEXTURE FINISH				

MULTIPLE SEATING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
	TELESCOPING BLEACHERS	HUSSEY SEATING		COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

SUSAN F. WISH
REGISTERED ARCHITECT
TX 24614
STATE OF TEXAS
10/24/2025

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SCHEDULE OF MATERIALS AND COLORS

Job No. 1821-13-01	Sheet No. 100% QC G5.01
Drawn By: Author	
Date: 04.02.2025	

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CIVIL SITEWORK PLANS
FOR
HUMBLE ISD
CREEKWOOD MIDDLE SCHOOL ADDITION

3603 W LAKE HOUSTON PKWY
KINGWOOD, TX 77339

INDEX OF SHEETS	
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C0.2	SURVEY (2 OF 4)
C0.3	SURVEY (3 OF 4)
C0.4	SURVEY (4 OF 4)
C0.5	PLAT
C1.0	GENERAL NOTES
C2.0	DEMOLITION PLAN (1 OF 2)
C2.1	DEMOLITION PLAN (2 OF 2)
C3.0	EROSION CONTROL PLAN (1 OF 2)
C3.1	EROSION CONTROL PLAN (2 OF 2)
C3.2	EROSION CONTROL DETAILS
C4.0	DIMENSION CONTROL AND PAVING PLAN (1 OF 2)
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C5.0	GRADING PLAN (1 OF 2)
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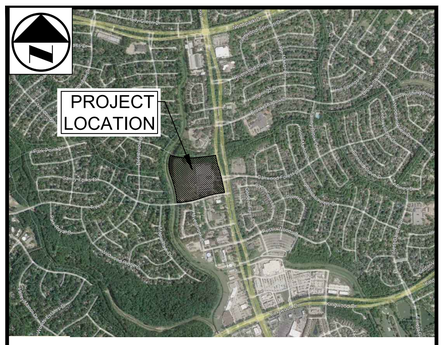
C9.4	CONSTRUCTION DETAILS (5 OF 5)
C9.5	SPORTS DETAILS



LOCATION MAP
N.T.S.



VICINITY MAP
N.T.S.

KEY MAP: 297X **ZIP CODE: 77339**

HARRIS COUNTY, TEXAS

AS PART OF THE BASE BID FOR THIS PROJECT, CONTRACTOR SHALL ADHERE TO THE PROJECT GEOTECHNICAL REPORT FOR ALL RECOMMENDATIONS FOR BOTH MATERIALS AND PRACTICE OF INSTALLATION GIVEN IN THE PROJECT GEOTECHNICAL REPORT FOR EARTHWORK, SITE SUBGRADE PREPARATION, BUILDING PAD SUBGRADE PREPARATION, PAVING, AND WET/SOFT SOILS CONDITIONS ALONG WITH ANY OTHER SECTIONS PROVIDED IN THE REPORT.

TITLE: HUMBLE ISD CREEKWOOD MIDDLE SCHOOL ADDITIONS
BY: TERRACON CONSULTANTS, INC.
DATED: JULY 20, 2023

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

COH ILMS NUMBER: 23122998

REFERENCE BENCHMARKS
BENCHMARK - Elevation = 69.96. MAGNAIL SET IN CONCRETE WEST OF CONCRETE DRIVEWAY. APPROXIMATELY 48' EAST OF LIGHT POLE AND 27' WEST OF STMH #10114.
TEMPORARY BENCHMARK - Elevation = 71.26. 1/2" IRON ROD SET IN GROUND SOUTH OF SANDY FORKS DR. APPROXIMATELY 69' SOUTHEAST OF FIRE HYDRANT AND 82' SOUTHWEST OF TREE #2286.
TEMPORARY BENCHMARK - Elevation = 71.40. SQUARE SET IN CONCRETE SOUTH OF SANDY FORKS DR. APPROXIMATELY 27' WEST OF FIBER OPTICS CABLE BOX AND 88' SOUTHWEST OF FIRE HYDRANT.

OWNER:
HUMBLE INDEPENDENT SCHOOL DISTRICT
10203 BIRCHRIDGE DRIVE
HUMBLE, TX 77338
CONTACT: (281) 641-1000

SURVEYOR:
GOODWIN-LASITER-STRONG
16090 S. CHESTNUT, SUITE 202
LUFKIN, TX 75901
CONTACT: (936) 637-4900

PREPARED BY:
Kimley»Horn
11700 Katy Freeway, Suite 800
Houston, Texas 77079
Tel. No. (281) 597-9300
Certificate of Authorization F-928
Contact: RASHARD HARRIS, P.E.

811 Know what's **below.** **Call** before you dig.

CAUTION!!

EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Kimley»Horn
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11700 KATY FREEWAY, SUITE 800, HOUSTON, TX 77079
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TBPE / FIRM REGISTRATION # F-928

01/17/2025
STATE OF TEXAS
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COVER SHEET

Job. No.	Sheet No.
1821-13-01	C0.0
Drawn By: CSH	
Date: 01/17/2025	

Plotted By:Harris, Rashard Sheet Set:Humble ISD Creekwood MS Layout:C0.0 January 16, 2025 09:27:36am K:\HOU_Civil\066017068-Huckabee - Humble ISD Creekwood MS\CAD\MS\CAD\PlanSheets\C-Cover.dwg
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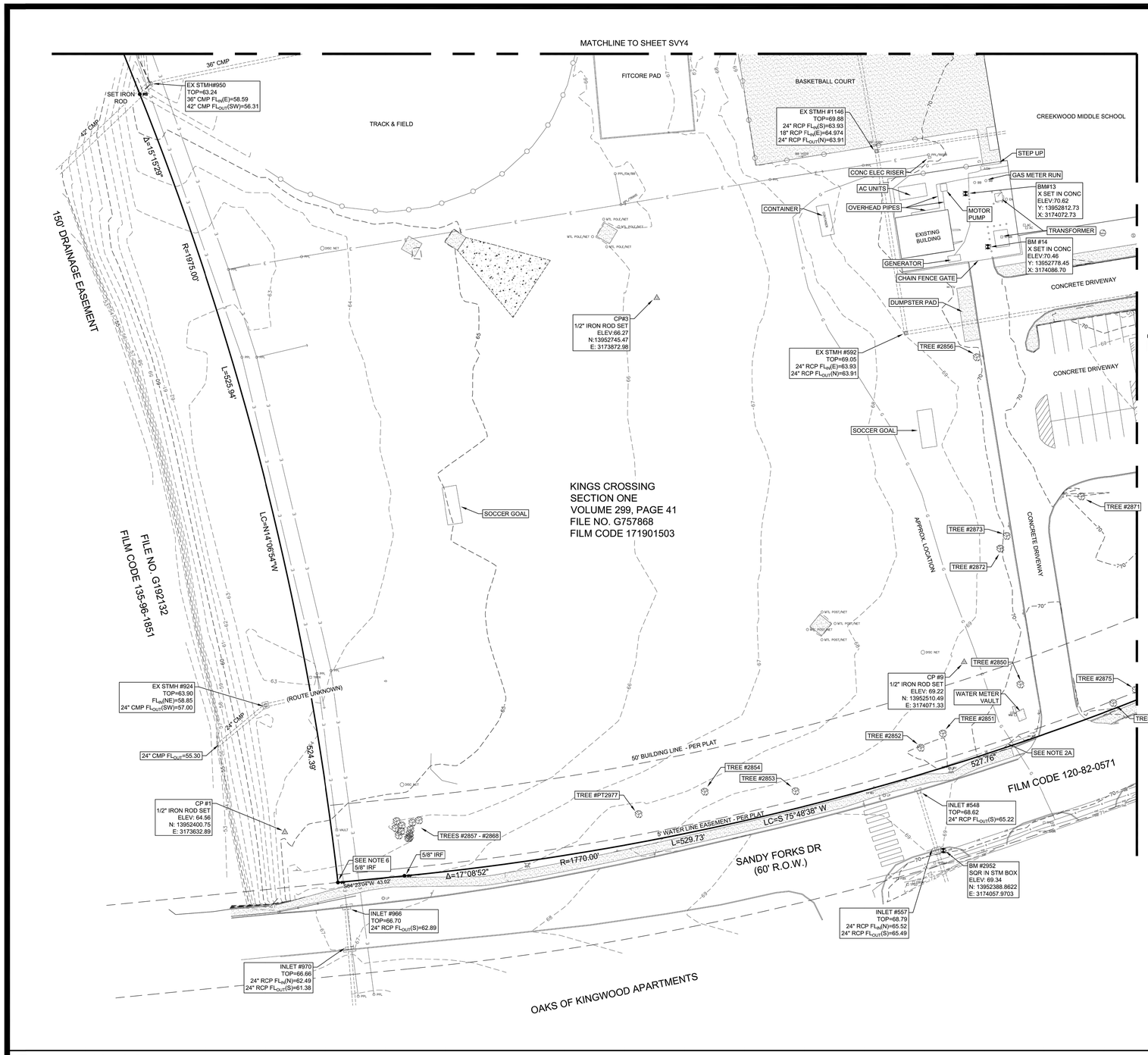

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #1	1/2" IRON ROD SET IN GROUND EAST OF CREEK. APPROXIMATELY 25' NORTH OF SIGN AND 34' WEST OF ELECTRICAL BOX.	N:13952400.75' E:3173632.89' Z: 64.56'
CP #3	1/2" IRON ROD SET IN GROUND NORTH OF SOCCER FIELD. APPROXIMATELY 73' EAST OF EDGE OF GRAVEL AND 46' SOUTHEAST OF METAL POLE.	N:13952746.47' E:3173872.98' Z: 66.27'
CP #9	1/2" IRON ROD SET IN GROUND NORTH OF SANDY FORKS DR. APPROXIMATELY 27' EAST OF DISC GOLD NET AND 39' WEST OF TREE 2850.	N:13952510.49' E:3174071.33' Z: 69.22'
BM #13	X SET IN CONCRETE EAST OF MOTOR PUMP. APPROXIMATELY 15' NORTHEAST OF NORTHEAST CORNER OF BUILDING AND 9' SOUTHWEST OF BREAKER BOX ON 4" METAL POLE.	N:13952812.74' E:3174072.74' Z: 70.62'
BM #14	X SET IN CONCRETE NEAR AC UNITS AND TRANSFORMER. APPROXIMATELY 8' NORTHWEST OF WALL CORNER AND 5' WEST OF TRANSFORMER.	N:13952778.45' E:3174086.70' Z: 70.46'

Notes:

1. Boundary information is based on the Kings Crossing, Section 1, Plat. This does not represent a boundary survey and the information shown heron is provided for informational purposes only.
2. Utilities shown hereon are based upon an 811 call (Ticket No. 2356182520), visible observations, and information provided by the district. Electrical/telephone utilities were not flagged / marked at the time of survey.
2A. Plans prepared by MDRW architects, circa 1979, define various subsurface utility routes. This survey is not able to confirm all locations / routes shown thereon.
3. Elevations are based on Harris County Flood control monument 070240 (NAVD 88).
4. Coordinates are NAD 83 surface values (a combined scale factor of 1.00005633 has been applied).
5. Title information was not provided at the time of survey. Easements, setbacks, reserves and other information shown are based on the referenced subdivision plat. Real property interests conveyed or established after plat recording are unknown.
6. Bearings are based upon an internal bearing reference between a 5/8" iron rod found at the SW corner & a 5/8" iron rod found in the Western R.O.W. of W. Lake Houston Parkway (Located N13°57'46"W 487.22' from the SE corner) using a bearing of N51°19'13"E.

Creekwood Middle School Tree Survey

Tag ID	Species	Caliper (IN)	Comment
2801	Loblolly Pine (Pinus taeda)	10.5	
2802	Live Oak (Quercus virginiana)	22.5	
2803	Loblolly Pine (Pinus taeda)	14.5	
2804	Loblolly Pine (Pinus taeda)	22	
2805	Loblolly Pine (Pinus taeda)	21	
2806	Loblolly Pine (Pinus taeda)	14	
2807	Pin Oak (Quercus palustis)	27	
2808	Loblolly Pine (Pinus taeda)	20.5	
2809	Loblolly Pine (Pinus taeda)	20	
2810	Loblolly Pine (Pinus taeda)	18.5	
2811	Pin Oak (Quercus palustis)	22.5	
2812	Live Oak (Quercus virginiana)	11.5	
2813	Loblolly Pine (Pinus taeda)	20.5	
2814	Loblolly Pine (Pinus taeda)	20.5	
2815	Loblolly Pine (Pinus taeda)	20	
2816	Loblolly Pine (Pinus taeda)	14.5	
2817	Loblolly Pine (Pinus taeda)	18.5	
2818	Cedar Elm (Ulmus elata)	19.5	
2819	Pin Oak (Quercus palustis)	29	
2820	Pin Oak (Quercus palustis)	28	
2821	Post Oak (Quercus stellata)	25	
2822	Water Oak (Quercus nigra)	30.5	
2823	Pin Oak (Quercus palustis)	30.5	
2824	Loblolly Pine (Pinus taeda)	27	
2825	Live Oak (Quercus virginiana)	18.5	
2827	Loblolly Pine (Pinus taeda)	16	
2830	Live Oak (Quercus virginiana)	5	
2831	Loblolly Pine (Pinus taeda)	5	
2832	Loblolly Pine (Pinus taeda)	17	
2833	Loblolly Pine (Pinus taeda)	12	
2834	Loblolly Pine (Pinus taeda)	16	
2835	Loblolly Pine (Pinus taeda)	20	
2836	Loblolly Pine (Pinus taeda)	17.5	
2837	Loblolly Pine (Pinus taeda)	9	
2838	Loblolly Pine (Pinus taeda)	19	
2839	Loblolly Pine (Pinus taeda)	9.5	
2840	Loblolly Pine (Pinus taeda)	19	
2841	Loblolly Pine (Pinus taeda)	20.5	
2842	Loblolly Pine (Pinus taeda)	19	
2843	Live Oak (Quercus virginiana)	5	
2844	Loblolly Pine (Pinus taeda)	24.5	
2845	Pin Oak (Quercus palustis)	24	
2846	Live Oak (Quercus virginiana)	35	
2847	Red Bud (Cercis canadensis)	10	
2848	Live Oak (Quercus virginiana)	12	
2850	Pin Oak (Quercus palustis)	25.5	
2851	Pin Oak (Quercus palustis)	26.5	
2852	Pin Oak (Quercus palustis)	22	
2853	Pin Oak (Quercus palustis)	25	
2854	Water Oak (Quercus nigra)	25.5	
2856	Live Oak (Quercus virginiana)	12	
2857	Sweet Gum (Liquidambar styraciflua)	12	
2858	Water Oak (Quercus nigra)	10	
2859	Sweet Gum (Liquidambar styraciflua)	2	
2860	Sweet Gum (Liquidambar styraciflua)	8	
2861	Sweet Gum (Liquidambar styraciflua)	6	
2862	Sweet Gum (Liquidambar styraciflua)	10	
2863	Sweet Gum (Liquidambar styraciflua)	3	
2864	Sweet Gum (Liquidambar styraciflua)	2	
2865	Sweet Gum (Liquidambar styraciflua)	2	
2866	Water Oak (Quercus nigra)	10	
2867	Loblolly Pine (Pinus taeda)	3	
2868	Loblolly Pine (Pinus taeda)	4	
2869	Loblolly Pine (Pinus taeda)	16.5	
2870	Live Oak (Quercus virginiana)	18	
2871	Live Oak (Quercus virginiana)	16	
2872	Loblolly Pine (Pinus taeda)	12	
2873	Loblolly Pine (Pinus taeda)	18	
2874	Live Oak (Quercus virginiana)	17	
2875	Loblolly Pine (Pinus taeda)	8	
2876	Farkleberry (Vaccinium arboreum)	6	
2877	Loblolly Pine (Pinus taeda)	25	
2878	Loblolly Pine (Pinus taeda)	9.5	
2879	Live Oak (Quercus virginiana)	6	
2880	White Oak (Quercus alba)	25	
2881	Water Oak (Quercus nigra)	13	
2882	Sweet Gum (Liquidambar styraciflua)	17	
2883	Loblolly Pine (Pinus taeda)	18	
2884	Loblolly Pine (Pinus taeda)	25	
2885	Loblolly Pine (Pinus taeda)	15	
2886	Live Oak (Quercus virginiana)	14	
2887	Loblolly Pine (Pinus taeda)	28	
2888	Shumard Oak (Quercus shumardii)	12	
PT2977	Water Oak (Quercus nigra)	28	

Topographical Survey

1" = 30' - 0" | 1

REVISIONS					
	DATE	1	2	3	4
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DRAWN BY: CW | APPV'D BY: KR | ISSUED: 4/26/23

T.B.P.E.L.S FIRM NO. F-413
T.B.A.E. FIRM NO. BR 3851
T.B.P.E.L.S FIRM NO. 101103600
T.B.P.E.L.S FIRM NO. 101103601

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2700 POST OAK BLVD. STE. 1000 HOUSTON, TEXAS 77056 · (713) 877-8900
455 HICK ROAD STE. 107 · TYLER, TEXAS 75703 · (903) 581-3800

Revision / Date

Project:

CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Creekwood Middle School
J.W. Asbury Survey, A-91
Harris County, Texas
Topographical Survey

JOB NUMBER 219107

SHEET NO. SVY1

Kimley»Horn
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11700 KATY FREEWAY, SUITE 800, HOUSTON, TX 77079
PHONE: 281-558-8700
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01/17/2025

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SURVEY (1 OF 4)

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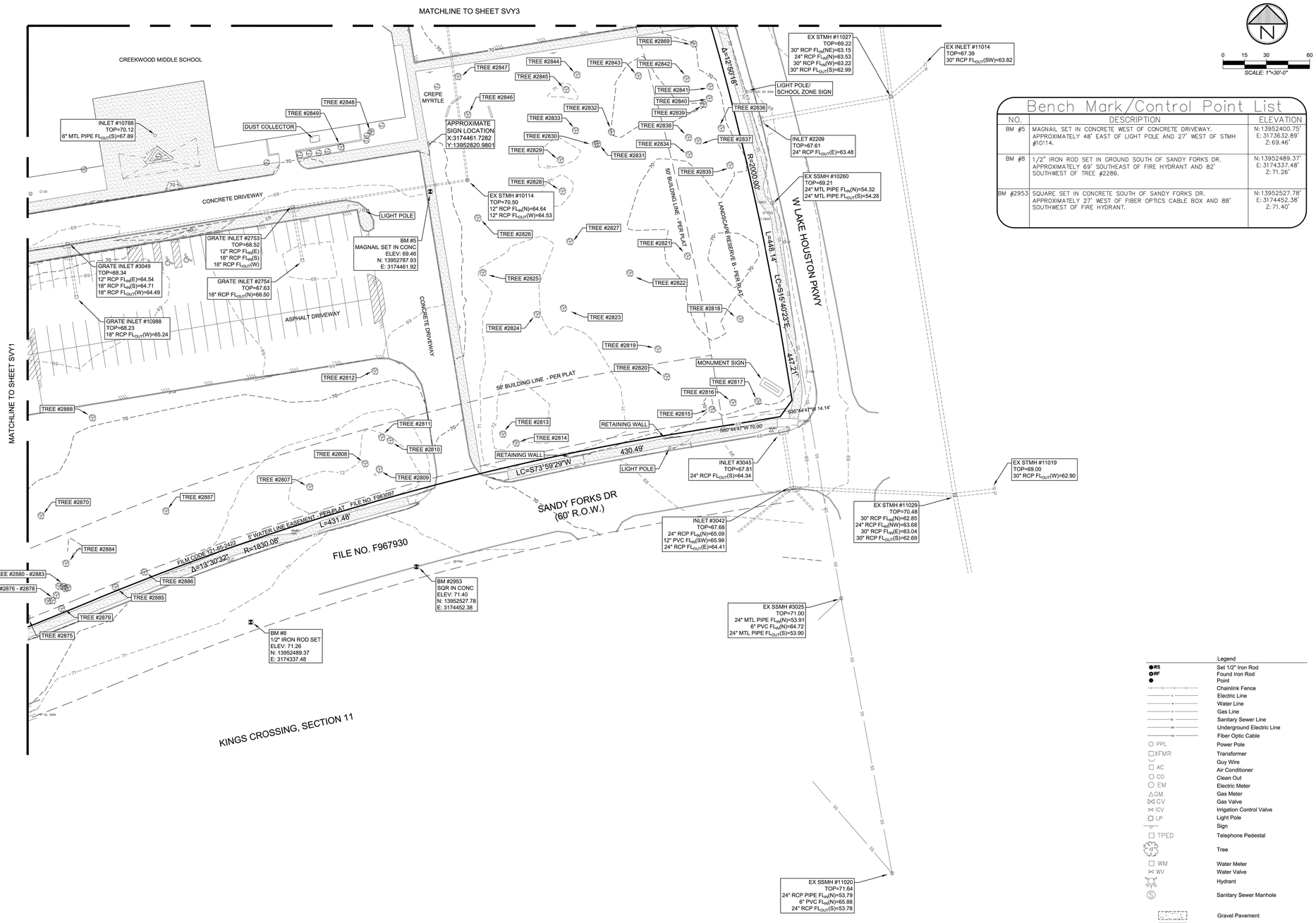

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
BM #5	MAGNAIL SET IN CONCRETE WEST OF CONCRETE DRIVEWAY. APPROXIMATELY 48' EAST OF LIGHT POLE AND 27' WEST OF STMH #10114.	N: 13952400.75' E: 3173632.89' Z: 69.46'
BM #8	1/2" IRON ROD SET IN GROUND SOUTH OF SANDY FORKS DR. APPROXIMATELY 69' SOUTHEAST OF FIRE HYDRANT AND 82' SOUTHWEST OF TREE #2286.	N: 13952489.37' E: 3174337.48' Z: 71.26'
BM #2953	SQUARE SET IN CONCRETE SOUTH OF SANDY FORKS DR. APPROXIMATELY 27' WEST OF FIBER OPTICS CABLE BOX AND 88' SOUTHWEST OF FIRE HYDRANT.	N: 13952527.78' E: 3174452.38' Z: 71.40'

Legend

●IRS	Set 1/2" Iron Rod
○IRF	Found Iron Rod
●	Point
	Chainlink Fence
	Electric Line
	Water Line
	Gas Line
	Sanitary Sewer Line
	Underground Electric Line
	Fiber Optic Cable
PPL	Power Pole
XFMR	Transformer
	Guy Wire
AC	Air Conditioner
CO	Clean Out
EM	Electric Meter
GM	Gas Meter
GV	Gas Valve
ICV	Irrigation Control Valve
LP	Light Pole
	Sign
TPED	Telephone Pedestal
	Tree
WM	Water Meter
WV	Water Valve
	Hydrant
S	Sanitary Sewer Manhole
	Gravel Pavement
	Concrete Pavement

REVISIONS					
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CW	KR	4/26/23

T.B.P.E.L.S FIRM NO. F-413
T.B.A.E. FIRM NO. BR 281
T.B.P.E.L.S FIRM NO. 10115900
T.B.P.E.L.S FIRM NO. 10119300

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1980 POST OAK BLVD. STE. 1900 HOUSTON, TEXAS 77056 (832) 615-4800
455 RICH ROAD B.E. 1-D7 TROY, NEW YORK 12180 (518) 591-3800

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Creekwood Middle School
J.W. Asbury Survey, A-91
Harris County, Texas
Topographical Survey

JOB NUMBER
219107

SHEET NO.
SVY2

Topographical Survey — 1" = 30' - 0" — 1

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TBPE FIRM REGISTRATION # 928

01/17/2025
STATE OF TEXAS
RASHARD D. HARRIS
142467
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Job. No.	Sheet No.
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Drawn By: CSH	
Date: 01/17/2025	

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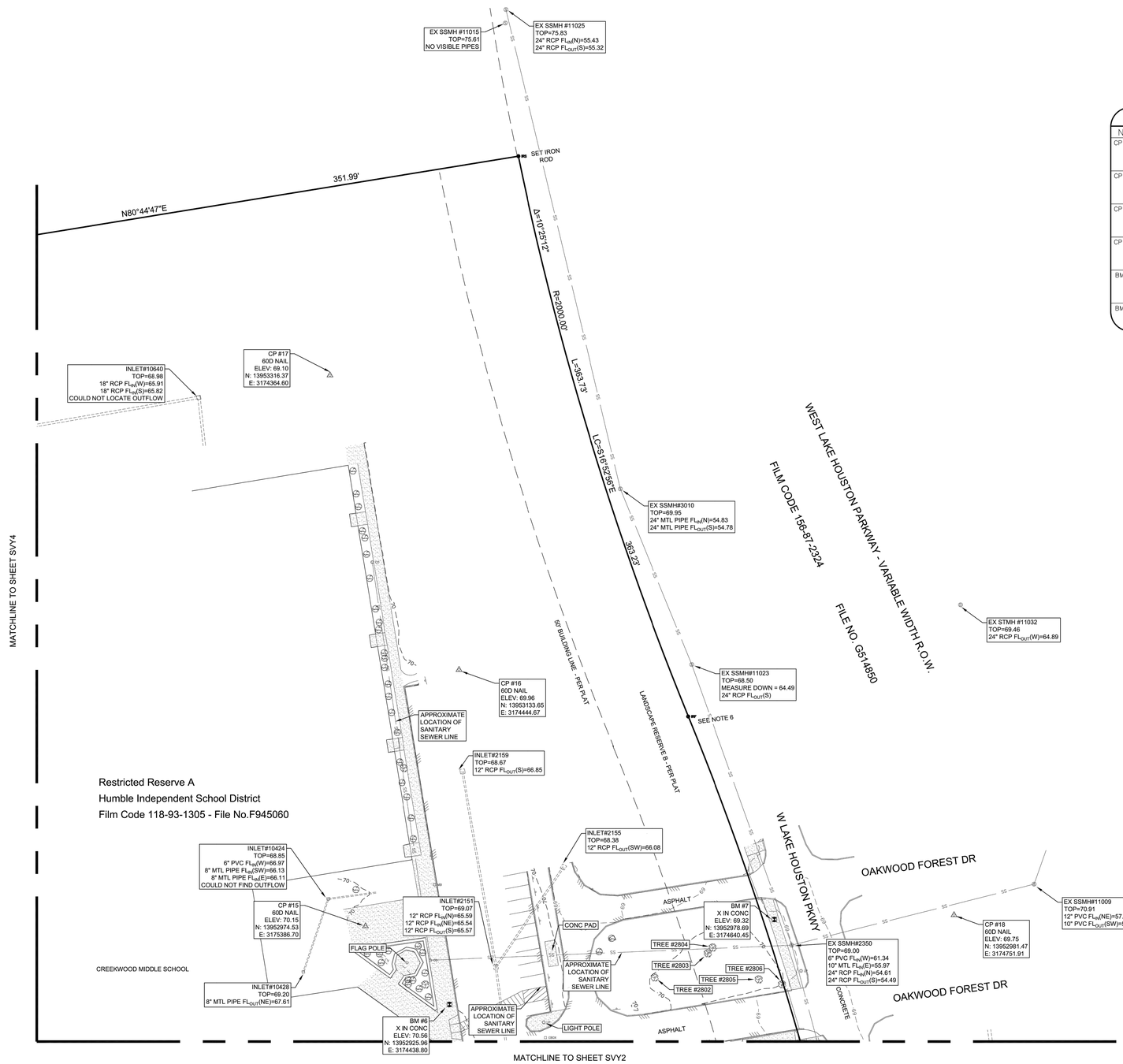

0 15 30 60

SCALE: 1"=30'-0"

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #15	60D NAIL SET IN CONCRETE IN COURTYARD, APPROXIMATELY 34' NORTHWEST OF FLAG POLE AND 29' SOUTHEAST OF INLET #10424.	N: 13952974.53' E: 3174386.70' Z: 70.15'
CP #16	60D NAIL SET NORTH OF PARKING LOT, APPROXIMATELY 62' NORTH OF INLET #2159 AND 137' NORTHWEST OF INLET #2155.	N: 13953133.65' E: 3174444.67' Z: 69.96'
CP #17	60D NAIL SET WEST OF WEST LAKE HOUSTON PARKWAY, APPROXIMATELY 82' EAST OF INLET #10640 AND 194' NORTHWEST OF SSMH #3010.	N: 13953316.37' E: 3174364.60' Z: 69.10'
CP #18	60D NAIL SET EAST OF WEST LAKE HOUSTON PARKWAY AND BETWEEN OAKWOOD FOREST DRIVE, APPROXIMATELY 53' WEST OF SSMH #11009 AND 102' EAST OF SSMH #2350.	N: 13952981.47' E: 3174751.91' Z: 69.75'
BM #6	X SET IN CONCRETE WEST OF PARKING LOT, APPROXIMATELY 19' SOUTHEAST OF TREE #2801 AND 35' SOUTHWEST OF INLET #2151.	N: 13952925.96' E: 3174438.80' Z: 70.56'
BM #7	X SET IN CONCRETE SIDEWALK WEST OF WEST LAKE HOUSTON PARKWAY, APPROXIMATELY 19' NORTHWEST OF SSMH #2350 AND 14' SOUTH OF FIRE LANE SIGN.	N: 13952978.69' E: 3174640.45' Z: 69.32'

REVISIONS

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CW	KR	4/26/23

T.B.P.E.L.S FIRM NO. F-413
T.B.A.E. FIRM NO. BR 281
T.B.P.E.L.S FIRM NO. 10115900
T.B.P.E.L.S FIRM NO. 10115900

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455 E. RICH ROAD STE. 107 TYLER, TX 75703 - (903) 581-3800

Creekwood Middle School
J.W. Asbury Survey, A-91
Harris County, Texas
Topographical Survey

JOB NUMBER 219107

SHEET NO.
SVY3

Topographical Survey — 1" = 30' - 0" — 1

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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Job. No.	Sheet No.
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Drawn By: CSH	
Date: 01/17/2025	

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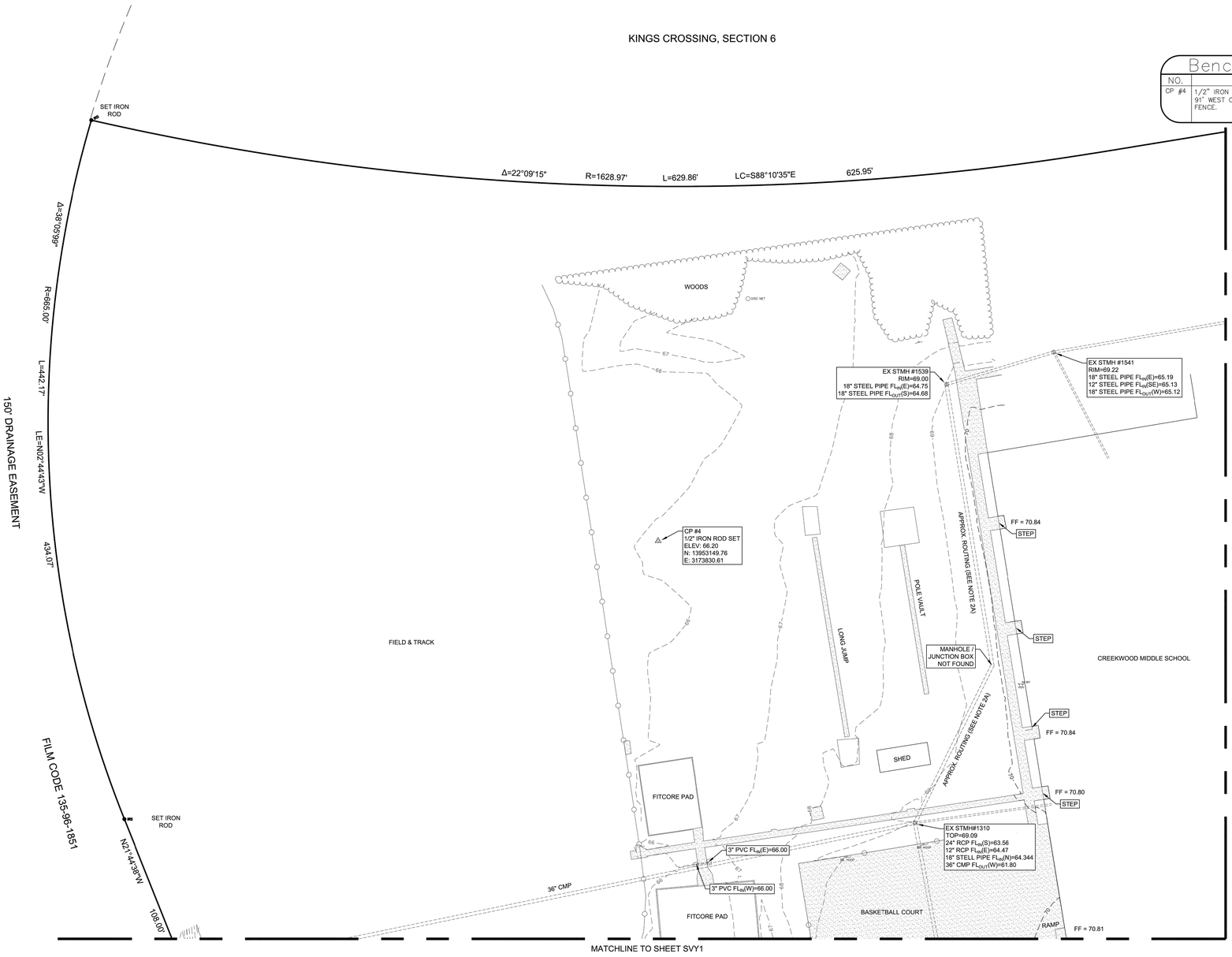
KINGS CROSSING, SECTION 6

0 15 30 60
SCALE: 1"=30'-0"

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #4	1/2" IRON ROD SET IN GROUND WEST OF TRACK. APPROXIMATELY 91' WEST OF LONG JUMP PIT AND 48' EAST OF TRACK AND FIELD FENCE.	N:13953149.76' E:3173830.61' Z:66.20'



REVISIONS						
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CW	KR	4/26/23

T.B.P.E.L.S FIRM NO. F-413
T.B.A.E. FIRM NO. BR 281
T.B.P.E.L.S FIRM NO. 10115900
T.B.P.E.L.S FIRM NO. 10115900

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Creekwood Middle School
J.W. Asbury Survey, A-91
Harris County, Texas
Topographical Survey

JOB NUMBER
219107

SHEET NO.
SVY4

Topographical Survey | 1" = 30' - 0" | 1

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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Job. No.	Sheet No.
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Date: 01/17/2025	

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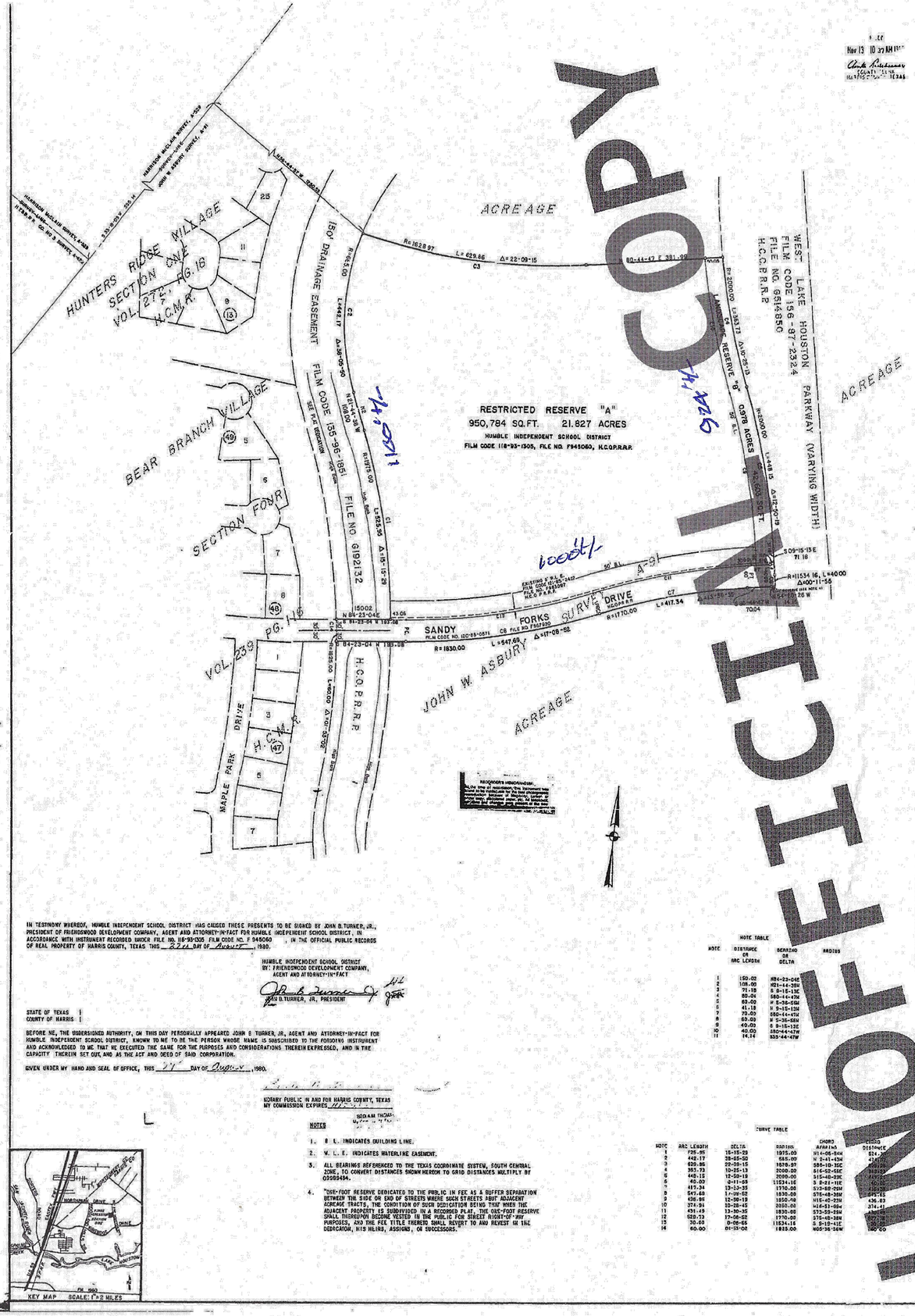

IN TESTIMONY WHEREOF, HUMBLE INDEPENDENT SCHOOL DISTRICT HAS CAUSED THESE PRESENTS TO BE SIGNED BY JOHN B.TURNER,JR., PRESIDENT OF FRIENDSWOOD DEVELOPMENT COMPANY, AGENT AND ATTORNEY-IN-FACT FOR HUMBLE INDEPENDENT SCHOOL DISTRICT, IN ACCORDANCE WITH INSTRUMENT RECORDED UNDER FILE NO. 118-93-1305 FILM CODE NO. F 945060 , IN THE OFFICIAL PUBLIC RECORDS OF REAL PROPERTY OF HARRIS COUNTY, TEXAS THIS 22nd DAY OF August ,1980.

HUMBLE INDEPENDENT SCHOOL DISTRICT
BY: FRIENDSWOOD DEVELOPMENT COMPANY,
AGENT AND ATTORNEY-IN-FACT

JOHN B.TURNER, JR, PRESIDENT

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED JOHN B TURNER, JR, AGENT AND ATTORNEY-IN-FACT FOR HUMBLE INDEPENDENT SCHOOL DISTRICT, KNOWN TO ME TO BE THE PERSON WHOSE NAME IS SUBSCRIBED TO THE FORGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN SET OUT, AND AS THE ACT AND DEED OF SAID CORPORATION.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS 27 DAY OF August ,1980.

NOTARY PUBLIC IN AND FOR HARRIS COUNTY, TEXAS
MY COMMISSION EXPIRES 11-...

NOTES

1. B. L. INDICATES BUILDING LINE.
2. W. L. E. INDICATES WATERLINE EASEMENT.
3. ALL BEARINGS REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE, TO CONVERT DISTANCES SHOWN HEREON TO GRID DISTANCES MULTIPLY BY 0.99986494.
4. "ONE-FOOT RESERVE DEDICATED TO THE PUBLIC IN FEE AS A BUFFER SEPARATION BETWEEN THE SIDE OR END OF STREETS WHERE SUCH STREETS ABUT ADJACENT ACREAGE TRACTS, THE CONDITION OF SUCH DEDICATION BEING THAT WHEN THE ADJACENT PROPERTY IS SUBDIVIDED IN A RECORDED PLAT, THE ONE-FOOT RESERVE SHALL THEREUPON BECOME VESTED IN THE PUBLIC FOR STREET RIGHT-OF-WAY PURPOSES, AND THE FEE TITLE THERETO SHALL REVERT TO AND REVEST IN THE DEDICATOR, HIS HEIRS, ASSIGNS, OR SUCCESSORS."

RECORDER'S MEMORANDUM:
At the time of recordation this instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blockouts, additions and changes were present at the time the instrument was filed and recorded.

OFFICE OF
ANITA RODENHEAVER,
COUNTY CLERK, HARRIS COUNTY, TEXAS
MAP RECORDS OF COUNTY CLERK
VOL. 299 PAGE 41
KINGS CROSSING SECTION ONE
THIS IS PAGE 1 OF 1 PAGES

HOTE TABLE

NOTE	DISTANCE OR ARC LENGTH	BEARING OR DELTA	RADIUS
1	150.02	N84-23-04E	
2	108.00	N21-44-38W	
3	71.18	S 9-15-13E	
4	80.04	S80-44-47W	
5	60.00	N 9-36-56W	
6	41.18	N 9-15-13W	
7	70.00	S80-44-47W	
8	60.03	N 9-36-56W	
9	40.00	S 9-15-13E	
10	40.00	S80-44-47W	
11	14.14	S35-44-47W	

CURVE TABLE

NOTE	ARC LENGTH	DELTA	RADIUS	CHORD BEARING	CHORD DISTANCE
1	725.95	16-15-23	1975.00	N14-06-54W	724.00
2	448.17	38-58-52	685.00	N 2-41-43W	439.67
3	620.86	22-09-15	1678.97	S88-10-35E	616.99
4	383.73	10-35-19	2050.00	S16-52-55E	383.19
5	448.12	12-30-19	2050.00	S15-40-23E	447.29
6	40.03	0-11-59	11534.16	S 9-21-11E	40.03
7	417.34	13-33-35	1770.00	S13-58-09W	416.45
8	547.68	17-39-52	1830.00	S15-48-35W	545.65
9	436.86	12-39-19	1850.00	N15-40-23W	436.03
10	374.91	10-35-45	2050.00	N16-53-08W	374.41
11	451.49	13-36-35	1830.00	S73-55-59W	450.38
12	520.13	17-56-02	1770.00	S75-48-38W	518.14
13	30.00	0-58-05	11534.16	S 9-15-11E	30.00
14	60.00	01-53-02	1825.00	N05-36-36W	60.00

G757866

STATE OF TEXAS
COUNTY OF HARRIS

WE, JOHN B. TURNER, JR., AND B. P. PIERCE, PRESIDENT AND SECRETARY RESPECTIVELY OF THE FRIENDSWOOD DEVELOPMENT COMPANY, ACTING HEREIN FOR ITSELF AND FOR KING RANCH, INC, AND FOR HUMBLE INDEPENDENT SCHOOL DISTRICT, OWNERS OF THE 24.510 ACRE TRACT DESCRIBED IN THE ABOVE AND FOREGOING MAP OF KINGS CROSSING, SECTION ONE, DO HEREBY MAKE AND ESTABLISH SAID SUBDIVISION AND DEVELOPMENT PLAN OF SAID PROPERTY ACCORDING TO ALL NOTES, DEDICATIONS, RESTRICTIONS AND NOTATIONS ON SAID MAPS OR PLAT AND HEREBY DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAINS, EASEMENTS, AND PUBLIC PLACES SHOWN THEREON, FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED; AND DO HEREBY BIND OURSELVES, OUR SUCCESSORS AND ASSIGNS TO WARRANT AND FOREVER DEFEND THE TITLE TO THE LAND SO DEDICATED.

FURTHER, WE DO HEREBY DEDICATE FOR PUBLIC UTILITY PURPOSES AN UNOBSTRUCTED AERIAL EASEMENT FIVE (5) FEET IN WIDTH FROM A PLANE TWENTY (20) FEET ABOVE THE GROUND LEVEL UPWARD, LOCATED ADJACENT TO ALL PUBLIC UTILITY EASEMENTS SHOWN HEREON.

FURTHER, WE DO HEREBY DECLARE THAT ALL PARCELS OF LAND DESIGNATED AS LOTS ON THIS PLAT ARE ORIGINALLY INTENDED FOR THE CONSTRUCTION OF RESIDENTIAL DWELLING UNITS THEREON AND SHALL BE RESTRICTED FOR SAME UNDER THE TERMS AND CONDITIONS OF SUCH RESTRICTIONS FILED SEPARATELY.

FURTHER, WE DO HEREBY COVENANT AND AGREE THAT ALL OF THE PROPERTY WITHIN THE BOUNDARIES OF THIS PLAT SHALL BE RESTRICTED TO PREVENT THE DRAINAGE OF ANY SEPTIC TANKS INTO ANY PUBLIC OR PRIVATE STREET, ROAD OR ALLEY OR ANY DRAINAGE DITCH, EITHER DIRECTLY OR INDIRECTLY.

FURTHER, WE DO HEREBY DEDICATE TO THE PUBLIC A STRIP OF LAND FIFTEEN (15) FEET WIDE ON EACH SIDE OF THE CENTER LINE OF ANY AND ALL BAYOUS, CREEKS, GULLIES, RAVINES, DRAWS, SLOUGHS, OR OTHER NATURAL DRAINAGE COURSES LOCATED IN SAID PLAT, AS EASEMENTS FOR DRAINAGE PURPOSES, GIVING THE CITY OF HOUSTON, HARRIS COUNTY OR ANY OTHER GOVERNMENTAL AGENCY THE RIGHT TO ENTER UPON SAID EASEMENT AT ANY AND ALL TIMES FOR THE PURPOSE OF CONSTRUCTING AND MAINTENANCE OF DRAINAGE FACILITIES AND STRUCTURES.

FURTHER, WE DO HEREBY COVENANT AND AGREE THAT ALL OF THE PROPERTY WITHIN THE BOUNDARIES OF THIS PLAT AND ADJACENT TO ANY DRAINAGE EASEMENT, DITCH, GULLY, CREEK OR NATURAL DRAINAGE WAY SHALL HEREBY BE RESTRICTED TO KEEP SUCH DRAINAGE WAYS AND EASEMENTS CLEAR OF FENCES, BUILDINGS, PLANTING, AND OTHER OBSTRUCTIONS TO THE OPERATIONS AND MAINTENANCE OF THE DRAINAGE FACILITY AND THAT SUCH ABUTTING PROPERTY SHALL NOT BE PERMITTED TO DRAIN DIRECTLY INTO THIS EASEMENT EXCEPT BY MEANS OF AN APPROVED DRAINAGE STRUCTURE.

FURTHER, WE DO HEREBY CERTIFY THAT WE ARE THE OWNERS OF ALL PROPERTY IMMEDIATELY ADJACENT TO THE BOUNDARIES OF THE ABOVE AND FOREGOING PLAT OF KINGS CROSSING, SECTION ONE WHERE BUILDING SETBACK LINES OR PUBLIC UTILITY EASEMENTS ARE TO BE ESTABLISHED OUTSIDE THE BOUNDARIES OF THE ABOVE AND FOREGOING PLAT AND DO HEREBY MAKE AND ESTABLISH ALL BUILDING SETBACK LINES AND DEDICATE TO THE USE OF THE PUBLIC FOREVER ALL PUBLIC UTILITY EASEMENTS SHOWN IN SAID ADJACENT ACREAGE.

FURTHER, WE, FRIENDSWOOD DEVELOPMENT COMPANY AND KING RANCH, INC., HAVE COMPLIED WITH OR WILL COMPLY WITH THE EXISTING HARRIS COUNTY ROAD LAW, SECTION 31-C AS AMENDED BY CHAPTER 614, ACTS OF 1973, 63RD LEGISLATURE AND ALL OTHER REGULATIONS HERETO ON FILE WITH THE HARRIS COUNTY ENGINEER AND ADOPTED BY THE COMMISSIONERS' COURT OF HARRIS COUNTY.

IN TESTIMONY WHEREOF, THE FRIENDSWOOD DEVELOPMENT COMPANY, ACTING HEREIN FOR ITSELF AND FOR KING RANCH, INC., HAS CAUSED THESE PRESENT TO BE SIGNED BY JOHN B. TURNER, JR., ITS PRESIDENT, THEREUNTO AUTHORIZED, ATTESTED BY ITS SECRETARY, B. P. PIERCE AND ITS CORPORATE SEAL HEREUNTO AFFIXED THIS 24th DAY OF August, 1980.

FRIENDSWOOD DEVELOPMENT COMPANY - ACTING HEREIN FOR ITSELF AND FOR KING RANCH, INC. - OWNERS

ATTEST: B. P. PIERCE, SECRETARY

BY: JOHN B. TURNER, JR., PRESIDENT

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED JOHN B. TURNER, JR., PRESIDENT AND B. P. PIERCE, SECRETARY OF THE FRIENDSWOOD DEVELOPMENT COMPANY, KNOWN TO ME TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FORE-GOING INSTRUMENTS, AND EACH ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN AND HEREIN SET OUT, AND AS THE ACT AND DEED OF SAID CORPORATION, WHICH CORPORATION ACTED THEREIN IN THE CAPACITIES THEREIN STATED.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS ... DAY OF ..., 1980.

BECKA W. THOMAS
NOTARY PUBLIC IN AND FOR HARRIS COUNTY, TEXAS
MY COMMISSION EXPIRES ...

I, PERRY GALE, AN AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY CERTIFY THAT THE ABOVE SUBDIVISION IS TRUE AND CORRECT AND WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND; THAT ALL BOUNDARY CORNERS, ANGLE POINTS, POINTS OF CURVATURE AND OTHER POINTS OF REFERENCE HAVE BEEN MARKED WITH 5/8 INCH RODS AND A LENGTH OF NOT LESS THAN THREE (3) FEET; AND THAT THE PLAT BOUNDARY CORNERS HAVE BEEN TIED TO THE NEAREST SURVEY CORNER AND HAS NOT BEEN TIED INTO THE OFFICIAL CITY OF HOUSTON SURVEY SYSTEM IN COMPLIANCE WITH ORDINANCE NO. 69-1978 BECAUSE A CITY SURVEY MARKER HAS NOT BEEN ESTABLISHED WITHIN 2,000 FEET OF THIS PROPERTY; AND THAT THIS PLAT CORRECTLY REPRESENTS THAT SURVEY MADE BY ME.

PERRY GALE - REGISTERED PUBLIC SURVEYOR
TEXAS REGISTRATION NO. 976

THIS IS TO CERTIFY THAT THE CITY PLANNING COMMISSION OF THE CITY OF HOUSTON, TEXAS HAS APPROVED THIS PLAT AND SUBDIVISION OF KINGS CROSSING, SECTION ONE IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF HOUSTON AS SHOWN HEREON AND AUTHORIZED THE RECORDING OF THIS PLAT THIS 7th DAY OF October, 1980.

ATTEST: ROBIN C. JONES, SECRETARY

BY: BURDETTE KEELAND, VICE CHAIRMAN

I, RICHARD P. DOSS, COUNTY ENGINEER OF HARRIS COUNTY, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH ALL OF THE EXISTING RULES AND REGULATIONS OF THIS OFFICE AS ADOPTED BY THE HARRIS COUNTY COMMISSIONERS' COURT; AND FURTHER, THAT IT COMPLIES OR WILL COMPLY WITH ALL THE LAWS INCLUDED IN THE HARRIS COUNTY ROAD LAW, ALSO INCLUDING SECTION 31-C AS AMENDED BY CHAPTER 614, ACTS OF 1973, 63RD LEGISLATURE.

RICHARD P. DOSS, COUNTY ENGINEER

I, JAMES B. GREEN, DIRECTOR OF HARRIS COUNTY FLOOD CONTROL DISTRICT, HARRIS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH REQUIREMENTS FOR INTERNAL SUBDIVISION DRAINAGE AS ADOPTED BY COMMISSIONERS' COURT; HOWEVER, NO CERTIFICATION IS HEREBY GIVEN AS TO THE EFFECT OF DRAINAGE FROM THIS SUBDIVISION ON THE INTERCEPTING DRAINAGE ARTERY OR PARENT STREAM OR ON ANY OTHER AREA OR SUBDIVISION WITHIN THE WATERSHED.

JAMES B. GREEN, DIRECTOR

APPROVED BY THE COMMISSIONERS' COURT OF HARRIS COUNTY, TEXAS, THIS 4th DAY OF November, 1980.

COMMISSIONER, PRECINCT 1
TOM BASS

COMMISSIONER, PRECINCT 2
JIM FONTENO

COUNTY JUDGE
JON S. LINDSAY

COMMISSIONER, PRECINCT 3
R. Y. ECKELS

COMMISSIONER, PRECINCT 4
E. A. LYON JR.

I, ANITA RODENHEAVER, CLERK OF THE COUNTY COURT OF HARRIS COUNTY, TEXAS DO HEREBY CERTIFY THAT THE WITHIN INSTRUMENT WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR REGISTRATION IN MY OFFICE ON November 13, 1980 AT 10:03 O'CLOCK, A .M., AND DULY RECORDED ON November 20, 1980 AT 9:00 O'CLOCK, A .M., IN VOL. 265, PAGE 41 OF RECORD OF MAPS FOR SAID COUNTY.

WITNESS MY HAND AND SEAL OF OFFICE AT HOUSTON, THE DAY AND DATE LAST ABOVE WRITTEN.

ANITA RODENHEAVER, CLERK
COUNTY COURT, HARRIS COUNTY, TEXAS

THIS CERTIFICATE IS VALID ONLY AS TO THE INSTRUMENT ON WHICH THE ORIGINAL SIGNATURE ... DEPUTY IS AFFIXED AND ONLY THEN TO THE EXTENT THAT SUCH INSTRUMENT IS NOT ALTERED OR CHANGED AFTER RECORDING.

KINGS CROSSING
SECTION ONE

A SUBDIVISION OF 24.510 ACRES IN THE
JOHN W. ASBURY SURVEY, A-91
HARRIS COUNTY, TEXAS

2 RESERVES
SCALE: 1" = 100'

1 BLOCK
AUGUST, 1980

OWNER
HUMBLE INDEPENDENT SCHOOL DISTRICT
FRIENDSWOOD DEVELOPMENT COMPANY
KING RANCH, INC.

FRIENDSWOOD DEVELOPMENT COMPANY
JOHN B. TURNER, JR. PRESIDENT
B.P. PIERCE, SECRETARY

ACTING FOR ITSELF AND FOR
KING RANCH, INC.

TURNER, COLLIE & BRADEN, INC.
CONSULTING ENGINEERS
AUSTIN DALLAS FORT ARTHUR EL PASO HOUSTON

JOB NO 2975-010

WILLIAMS & CRAWFORD, INC.
CITY PLANNING CONSULTANTS
HOUSTON

Date
Revision /

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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PLAT

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KIMLEY HORN GENERAL NOTES

OVERALL:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST, IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED.
2. THE CONTRACTOR SHALL COMPLY WITH CITY (OR TOWN) "GENERAL NOTES" FOR CONSTRUCTION, IF EXISTING AND REQUIRED BY THE CITY. FOR INSTANCES WHERE THEY CONFLICT WITH THESE KIMLEY HORN GENERAL NOTES, THEN THE MORE RESTRICTIVE SHALL APPLY.
3. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
5. THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS.
6. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY
7. IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY AT THEIR OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR TO THE OWNER AND ENGINEER FOR REVIEW.
8. CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND STAKING.
9. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS. PROPERTY LINES AND CORNERS SHALL BE HELD AS THE HORIZONTAL CONTROL.
10. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
11. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL INCLUDE CONTINGENCY BUDGET FOR ALL UTILITY RELOCATIONS.
13. CONTRACTOR SHALL CALL TEXAS 811 AN ADEQUATE AMOUNT OF TIME PRIOR TO COMMENCING CONSTRUCTION OR ANY EXCAVATION.
14. CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
15. THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE AND INCOMPLETE. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO VERIFY THE PRESENCE, LOCATION, ELEVATION, DEPTH, AND DIMENSION OF EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
16. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, ADJUSTING EXISTING MANHOLES TO MATCH PROPOSED GRADE, RELOCATING EXISTING POLES AND GUY WIRES THAT ARE LOCATED IN PROPOSED DRIVEWAYS, ADJUSTING THE HORIZONTAL OR VERTICAL ALIGNMENT OF EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE PROPOSED GRADE OR CROSSING WITH A PROPOSED UTILITY, AND ANY OTHERS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL INCLUDE CONTINGENCY BUDGET FOR ALL UTILITY RELOCATIONS.
17. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINE, AND UTILITY POLE ADJUSTMENTS NEEDED.
18. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE PROPOSED DEVELOPMENT. CONTRACTOR SHALL INCLUDE CONTINGENCY BUDGET FOR ALL UTILITY RELOCATIONS.
19. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTORS' FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
20. BRACING OF UTILITY POLES MAY BE REQUIRED BY THE UTILITY COMPANIES WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING OF POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE PAY ITEM.
21. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES.
22. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION.
23. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
24. ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 14 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE
25. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES.
26. CONTRACTOR SHALL ARRANGE FOR REQUIRED THIRD PARTY INSPECTIONS.
27. CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
28. ALL SYMBOLS SHOWN ON THESE PLANS (E.G. FIRE HYDRANT, METERS, VALVES, INLETS, ETC. ...) ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE JURISDICTIONAL INSPECTOR.
29. THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. REFERENCE THE BUILDING PLANS (E.G. ARCHITECTURAL, STRUCTURAL, MEP) FOR AREAS WITHIN 5-FEET OF THE BUILDING AND WITHIN THE BUILDING FOOTPRINT.
30. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS.
31. THE PROPOSED BUILDING FOOTPRINT(S) SHOWN IN THESE PLANS WAS PROVIDED TO KIMLEY-HORN AND ASSOCIATES, INC. (KHA) BY THE PROJECT ARCHITECT AT THE TIME THESE PLANS WERE PREPARED. IT MAY NOT BE THE FINAL CORRECT VERSION BECAUSE THE BUILDING DESIGN WAS ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THE BUILDING FOOTPRINT WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO LAYOUT. DIMENSIONS AND/OR COORDINATES SHOWN ON THESE PLANS WERE BASED ON THE ABOVE STATED ARCHITECTURAL FOOTPRINT, AND ARE THEREFORE A PRELIMINARY LOCATION OF THE BUILDING. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY WHAT PART OF THE BUILDING THE ARCHITECT'S FOOTPRINT REPRESENTS (E.G. SLAB, OUTSIDE WALL, MASONRY LEDGE, ETC., ...) AND TO CONFIRM ITS FINAL POSITION ON THE SITE BASED ON THE FINAL ARCHITECTURAL FOOTPRINT, CIVIL DIMENSION CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO KHA IMMEDIATELY.
32. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
33. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL SELECT AND PAY FOR THIRD PARTY MATERIAL TESTING.
34. ALL COPIES OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER/ ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
35. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
36. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
37. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
38. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER.
39. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO: FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC... TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
40. ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
41. THE CONTRACTOR SHALL SALVAGE ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC... THAT ARE TO BE RELOCATED DURING CONSTRUCTION.
42. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
43. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
44. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.
45. SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
46. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS.
47. SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
48. CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
49. LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES.
50. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
51. TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING.
52. CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING.
53. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY OFFICIALS, INCLUDING BUILDING OFFICIAL, ENGINEERING INSPECTOR, AND FIRE MARSHALL TO LEARN OF ANY REQUIREMENTS.
54. CONTRACTOR IS RESPONSIBLE FOR PREPARATION, SUBMITTAL, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN.
55. CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
56. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.
57. CONTRACTOR SHALL KEEP THE CONSTRUCTION SITE SECURE FROM TRESPASSERS AT ALL TIMES.

EROSION CONTROL:

1. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE LAND DISTURBANCE.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000".
3. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE.
4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPS), AND FOR UPDATING THE EROSION CONTROL PLAN DURING CONSTRUCTION AS FIELD CONDITIONS CHANGE.
6. CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE.
7. AS STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER APPROVED DETAILS.
8. THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED.
9. CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL DEVICES NEEDED DUE TO PROJECT PHASING.
10. CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND MODIFICATIONS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
11. OFF-SITE SOIL BORROW, SPOIL, AND STORAGE AREAS (IF APPLICABLE) ARE CONSIDERED AS PART OF THE PROJECT SITE AND MUST ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMP'S TO CONTROL EROSION AND SEDIMENTATION AND THE ESTABLISHMENT OF PERMANENT GROUND COVER ON DISTURBED AREAS PRIOR TO FINAL APPROVAL OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP AND EROSION CONTROL PLAN TO INCLUDE BMPS FOR ANY OFF-SITE THAT ARE NOT ANTICIPATED OR SHOWN ON THE EROSION CONTROL PLAN.
12. ALL STAGING, STOCKPILES, SPOIL, AND STORAGE SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. PROTECTIVE MEASURES SHALL BE PROVIDED IF NEEDED TO ACCOMPLISH THIS REQUIREMENT, SUCH AS COVERING OR ENCIRCLING THE AREA WITH AN APPROPRIATE BARRIER.
13. CONTRACTORS SHALL INSPECT ALL EROSION CONTROL DEVICES, BMPS, DISTURBED AREAS, AND VEHICLE ENTRY AND EXIT AREAS WEEKLY AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS OF 0.5 INCHES OR GREATER, AND KEEP A RECORD OF THIS INSPECTION IN THE SWPPP BOOKLET IF APPLICABLE, TO VERIFY THAT THE DEVICES AND EROSION CONTROL PLAN ARE FUNCTIONING PROPERLY.
14. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE WITH CITY SPECIFICATIONS. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC USES THE STABILIZED ENTRANCE AT ALL TIMES FOR ALL INGRESS/EGRESS.
15. SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING AND FLOWING OF SEDIMENT AND DIRT ONTO OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE REMOVED IMMEDIATELY.
16. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM THE AFFECTED OFF-SITE ROADWAYS THAT ARE A RESULT OF THE CONSTRUCTION, AS REQUESTED BY OWNER AND CITY. AT A MINIMUM, THIS SHOULD OCCUR ONCE PER DAY FOR THE OFF-SITE ROADWAYS.
17. WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO EXITING THE SITE, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP BMP.
18. CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 ACRES, PER TCEQ AND CITY STANDARDS. IF NO ENGINEERING DESIGN HAS BEEN PROVIDED FOR A SEDIMENTATION BASIN ON THESE PLANS, THEN THE CONTRACTOR SHALL COORDINATE WITH AN APPROPRIATE DESIGN TO BE PROVIDED.
19. ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FROM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR.
20. WHEN SEDIMENT OR DIRT HAS CLOGGED THE CONSTRUCTION ENTRANCE VOID SPACES BETWEEN STONES OR DIRT IS BEING TRACKED ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH-DOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL SEDIMENTATION. PERIODIC RE-GRADING OR NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE.
21. TEMPORARY SEDIMENT CONTROLS FOR SEDIMENT DISTURBATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST DISTURBANCE OF ANY AREA, UNLESS ADDITIONAL CONSTRUCTION IN THE AREA IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.
22. CONTRACTOR SHALL FOLLOW GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION, ALWAYS CLEANING UP DIRT, LOOSE MATERIAL, AND TRASH ASSOCIATED WITH CONSTRUCTION PROCESSES.
23. UPON COMPLETION OF FINE GRADING, ALL SURFACES OF DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. STABILIZATION IS ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PAVEMENT, OR A UNIFORM EXPERIENCED VEGETATIVE COVER.
24. AT THE CONCLUSION OF THE PROJECT, ALL INLETS, DRAIN PIPE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE CONSTRUCTION SHALL BE DREDGED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS.

STORM WATER DISCHARGE AUTHORIZATION:

1. CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR 150000.
3. THE CONTRACTOR SHALL PREPARE AND SUBMIT OPERATORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZING ELECTRONIC SUBMITTAL, PRIOR TO COMMENCING CONSTRUCTION. ALL PRIMARY OPERATORS SHALL PROVIDE A COPY OF THE SIGNED NOI TO THE OPERATOR OF ANY MS4 (TYPICALLY THE CITY) RECEIVING DISCHARGE FROM THE SITE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED BY THE TCEQ AND EPA (E.G. NOI)
5. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN THE REQUIRED CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP.
6. A COPY OF THE NOTICE OF INTENT, INCLUDING NOI, NOT, AND NOTICE OF TERMINATION, AND ANY REVISIONS, SHALL BE SUBMITTED TO THE CITY BY THE CONTRACTOR AND SHALL BE RETAINED ON-SITE DURING CONSTRUCTION.
7. A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TCEQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY STRUCTURES, A TRANSFER OF OPERATIONAL CONTROL HAS OCCURRED, OR THE OPERATOR HAS OBTAINED ALTERNATIVE AUTHORIZATION UNDER A DIFFERENT PERMIT. A COPY OF THE NOT SHALL BE PROVIDED TO THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM THE SITE.

DEMOLITION:

1. KHA IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THIS DEMOLITION PLAN. THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE KNOWN OBJECTS ON THE SUBJECT TRACT THAT ARE TO BE DEMOLISHED AND REMOVED FROM THE SITE.
2. KHA DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON SURVEY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOWS ALL IMPROVEMENTS AND UTILITIES, THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN ACCURATELY, OR THAT THE UTILITIES SHOWN CAN BE REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ITS OWN SITE RECONNAISSANCE TO SCOPE WORK AND TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND PROCESS FOR THE REMOVAL OF THEIR FACILITIES.
3. THIS PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CONTRACTOR, NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO LEAVE THE SITE IN A STATE SUITABLE FOR CONSTRUCTION AND TO BE COMPATIBLE WITH THE PROPOSED DEVELOPMENT. REMOVAL OR PRESERVATION OF IMPROVEMENTS, UTILITIES, ETC. TO ACCOMPLISH THIS GOAL ARE THE RESPONSIBILITY OF THE CONTRACTOR.
4. CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLLOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND IMPLEMENTING THE DEMOLITION PLAN:
   a. ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNER. (IF REQUIRED)
   b. ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER.
   c. GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
   d. OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE.
5. CONTRACTOR SHALL CONTACT THE OWNER TO VERIFY WHETHER ADDITIONAL REPORTS OR AMENDMENTS TO THE ABOVE CITED REPORTS HAVE BEEN PREPARED AND TO OBTAIN/REVIEW/AND COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO STARTING ANY WORK ON THE SITE.
6. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE SITE AND THE DISPOSAL OF THE DEMOLISHED MATERIALS OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW THE SITE, DETERMINE THE APPLICABLE REGULATIONS, RECEIVE THE REQUIRED PERMITS AND AUTHORIZATIONS, AND COMPLY.
7. KHA DOES NOT REPRESENT THAT THE DRAWINGS AND SURVEYS REFERENCED ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE SHOWING ALL ITEMS THAT WILL NEED TO BE DEMOLISHED AND REMOVED.
8. SURFACE PAVEMENT INDICATED MAY OVERLAY OTHER HIDDEN STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT, FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED.

GRADING:

1. THE CONTRACTOR AND GRADING

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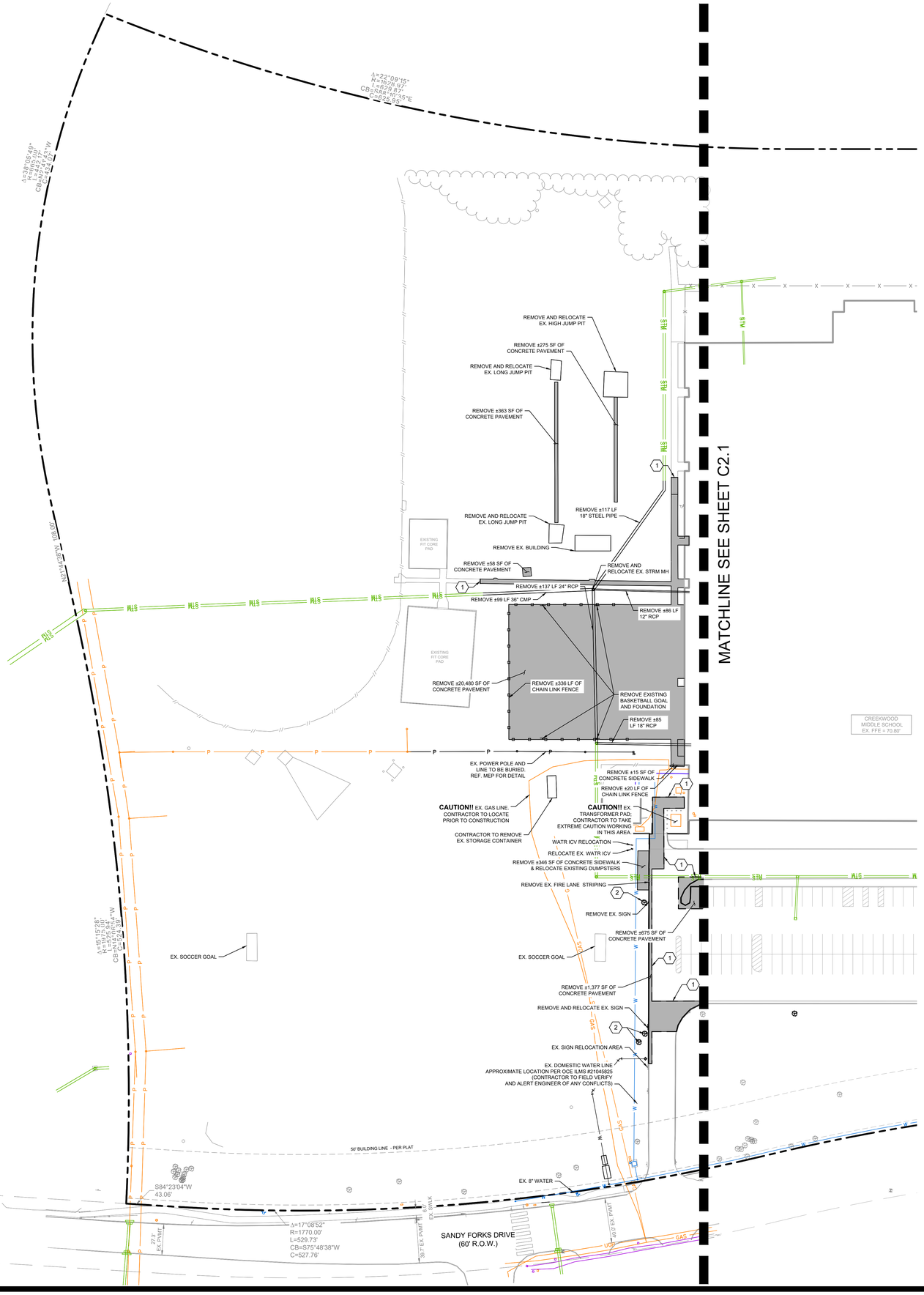

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND	
	PROPERTY LINE
	EXISTING PAVEMENT, CURB, SIDEWALK AND INTERIOR LANDSCAPE ISLANDS TO BE REMOVED. CONTRACTOR TO REMOVE FULL DEPTH OF PAVEMENT.
	PROP. SAWCUT LINE

KEYED NOTES	
1	CONTRACTOR TO SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO EXPOSE REINFORCING.
2	EXISTING TREE TO BE REMOVED.

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

2. LOCATIONS OF PUBLIC AND PRIVATE UTILITIES SHOWN ARE APPROXIMATE AND MAY NOT BE COMPLETE. CONTRACTOR SHALL CALL 713-223-4567 AT LEAST 48 HOURS PRIOR TO COMMENCING DEMOLITION OR CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL CONTACT ANY OTHER UTILITY COMPANIES WHO DO NOT SUBSCRIBE TO THE TEXAS ONE CALL PROGRAM FOR LINE MARKINGS. THE CONTRACTOR BEAR SOLE RESPONSIBILITY FOR VERIFYING LOCATIONS OF EXISTING UTILITIES, SHOWN OR NOT SHOWN, AND FOR ANY DAMAGES DONE TO THESE FACILITIES.

3. ALL EXISTING UTILITIES SHOWN ARE LOCATED ACCORDING TO THE INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME THE DRAWINGS ARE PREPARED AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR THE ENGINEER. GUARANTEE IS NOT MADE THAT ALL EXISTING UNDERGROUND UTILITIES ARE SHOWN OR THAT THE LOCATION OF THOSE SHOWN ARE ACCURATE. FINDING THE ACTUAL LOCATION OF ANY EXISTING UTILITIES IS THE CONTRACTORS RESPONSIBILITY AND SHALL BE DONE BEFORE HE COMMENCES ANY WORK, IN THE VICINITY. FURTHERMORE, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL DAMAGE DUE TO THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES, NOR FOR TEMPORARY BRACING AND SHORING OF SAME. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.

4. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE OWNER AND NOTIFICATION TO THE ENGINEER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE OWNER AND ENGINEER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.

5. CONTRACTOR MUST PROTECT THE PUBLIC AT ALL TIMES WITH FENCING, BARRICADES, ENCLOSURES, ETC., TO THE BEST PRACTICES AND APPROVED BY THE OWNER.

6. PRIOR TO DEMOLITION OCCURRING, ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED PER THE PLANS.

7. DAMAGE TO ALL EXISTING CONDITIONS TO REMAIN WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

8. ALL DEMOLITION WORK OR CONSTRUCTION VEHICLE TRAFFIC WITHIN 10 FEET OF THE CANOPY OF ANY TREE TO BE SAVED SHALL BE CLOSELY COORDINATED WITH TREE PRESERVATION ACTIVITIES.

9. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS FOR EXCAVATION AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.

10. CONTRACTOR TO REMOVE FULL DEPTH OF PAVEMENT (ASPHALT AND CONCRETE). REFERENCE SURVEY FOR LIMITS OF PAVEMENT.

11. CONTRACTOR TO EPOXY ALL EXPOSED REBAR.

12. CONTRACTOR IS RESPONSIBLE FOR MANAGING STORM WATER RUNOFF WITHIN THE PROJECT AREA DURING CONSTRUCTION, INCLUDING PROVIDING MEASURES FOR TEMPORARY CONVEYANCE OF FLOW WHICH MAY CONSIST OF DIVERSION SWALES OR PUMPING OF WATER TO EXISTING STORM OUTFALL LOCATIONS FROM PROJECT AREA TO MATCH EXISTING DRAINAGE PATTERNS PER THE EXISTING CONDITIONS DRAINAGE AREA MAP.

13. CONTRACTOR SHALL SUBMIT A SEQUENCING/PHASING PLAN FOR THE PROPOSED STORM SEWER MODIFICATIONS IN THE SCOPE OF THIS PROJECT TO KIMLEY-HORN FOR REVIEW PRIOR TO COMMENCING CONSTRUCTION. THE STORM SEWER SEQUENCING/PHASING PLAN SHALL INCLUDE THE PROPOSED MEASURES TO BE IMPLEMENTED BY CONTRACTOR FOR MANAGING STORM WATER RUNOFF WITHIN THE PROJECT AREA DURING CONSTRUCTION TO ENSURE RUNOFF IS ROUTED TO MATCH THE EXISTING DRAINAGE PATTERNS.

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CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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DEMOLITION PLAN (1 OF 2)

Job. No.	Sheet No.
1821-13-01	C2.0
Drawn By: CSH	
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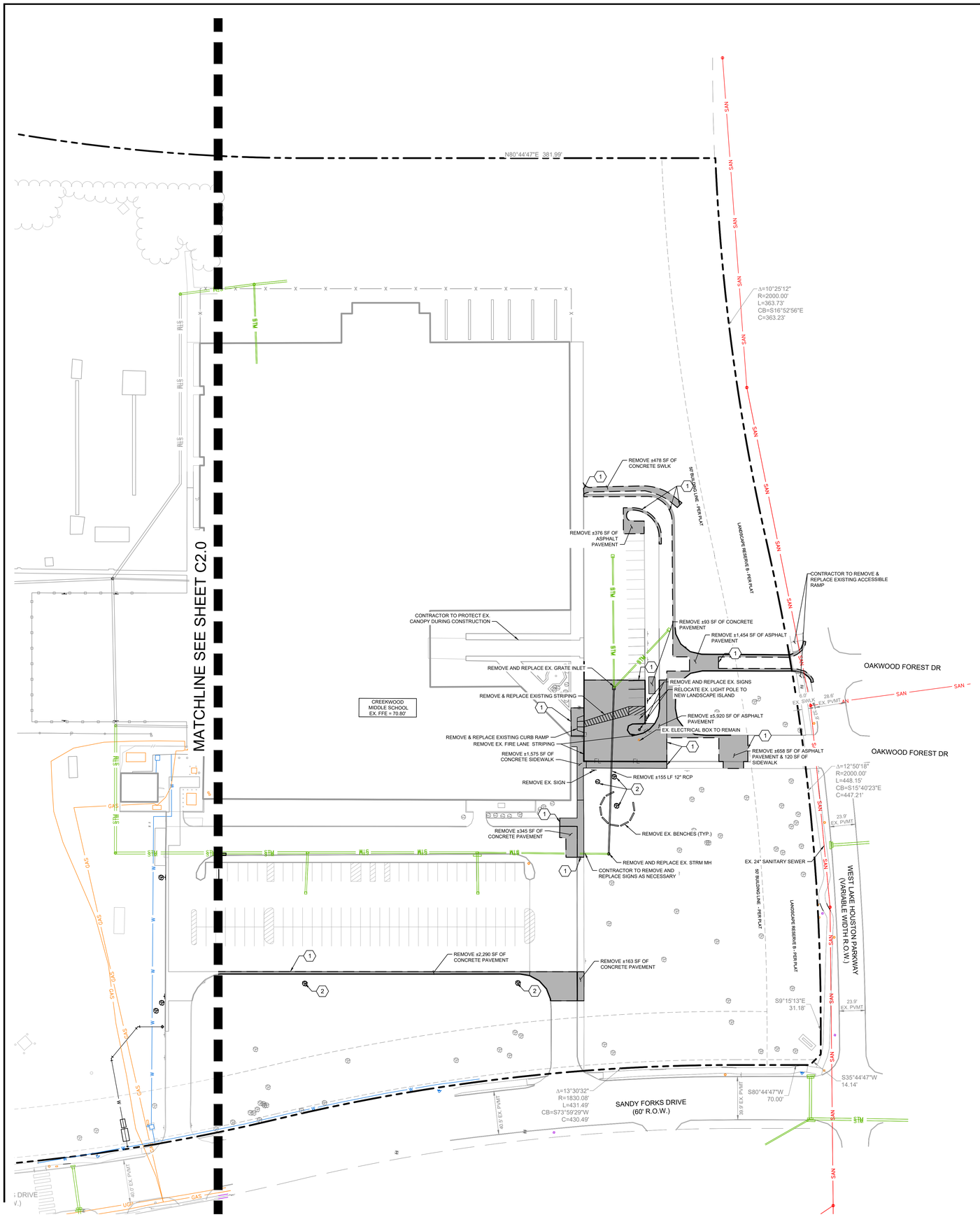

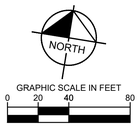

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DEMOLITION PLAN
(2 OF 2)

Job. No.	Sheet No.
1821-13-01	C2.1
Drawn By: CSH	
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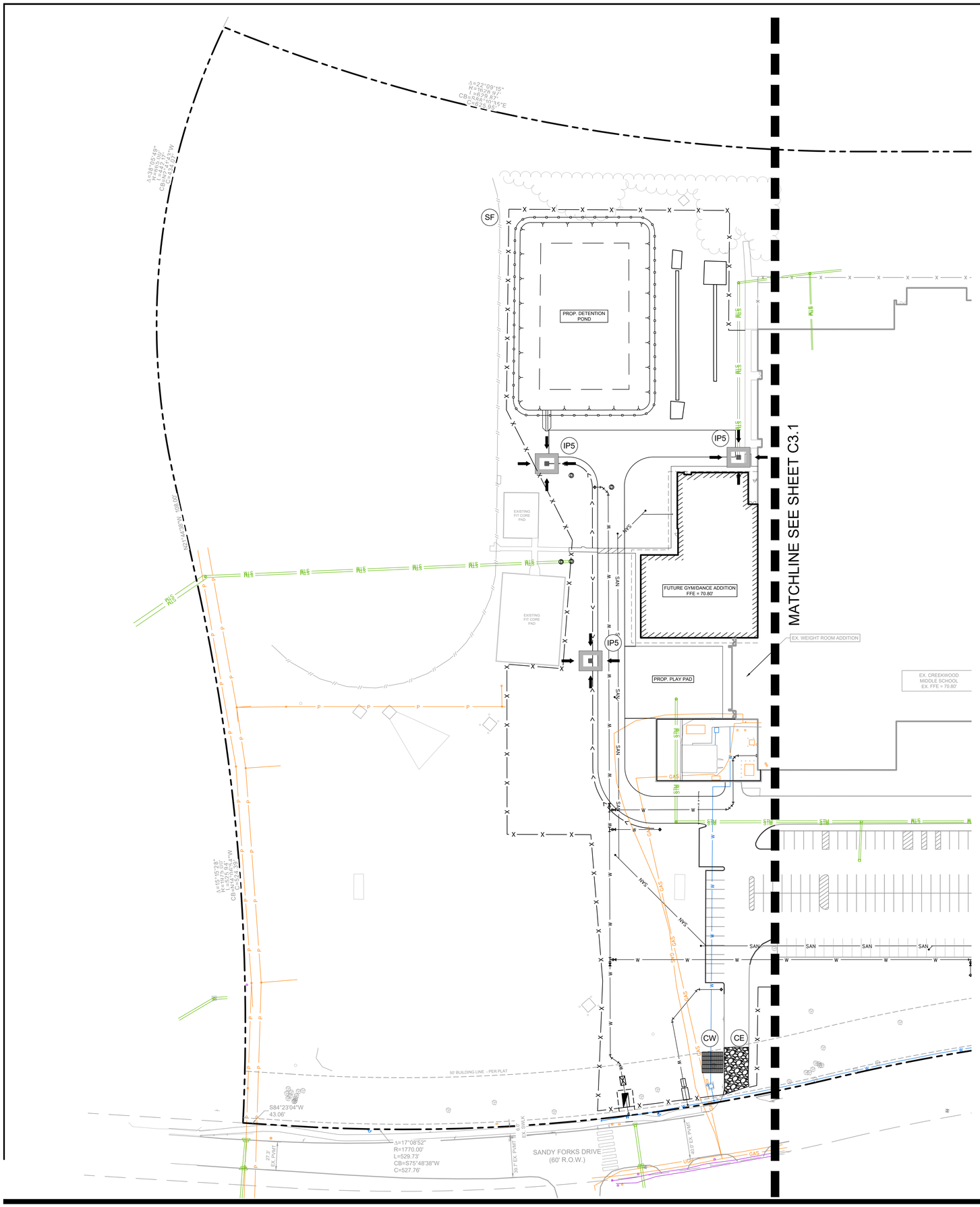

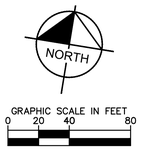

GRAPHIC SCALE IN FEET
0 20 40 80

EROSION CONTROL NOTES

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2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THIS SITE MAP.

3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS.

4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING AND SITE PAVING..

5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.

6. SANITARY SEWER EFFLUENT IS DISPOSED OF VIA AN ONSITE SEWER SYSTEM CONNECTED TO A MUNICIPAL SEWER SYSTEM.

7. CONTRACTOR TO PROVIDE INLET PROTECTION IN PUBLIC ROW ONLY DURING EARTH MOVING ACTIVITIES. CONTRACTOR TO ENSURE PONDING DOES NOT OCCUR IN PUBLIC ROW OR ON ADJACENT PROPERTIES AT ANY TIME DURING CONSTRUCTION.

8. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, THE CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PARKING LOT CONSTRUCTION.

9. CONTRACTOR SHALL PROVIDE INLET PROTECTION FOR ANY AFFECTED INLETS DOWNSTREAM OF THE PROPOSED IMPROVEMENTS, IF NEEDED.

10. THE NATURE OF THIS SITE'S CONSTRUCTION CONSISTS OF CLEARING & SITE PREPARATION, EARTHWORK, PAVING AND LANDSCAPING.

11. SEDIMENTATION BASIN: NEITHER A TEMPORARY NOR PERMANENT SEDIMENTATION BASIN HAS BEEN PROVIDED ON THIS SITE BECAUSE THE SITE IS LESS THAN 10 ACRES IN AREA.

12. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING AND LANDSCAPING.

13. DISTURBED PORTIONS OF SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE OPDES PERMIT. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF STABILIZATION.

14. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP/SITE MAP TO INCLUDE BMP'S FOR ANY OFF-SITE MATERIAL WASTE, BORROW OR EQUIPMENT STORAGE AREAS.

15. CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF NOI, NOT, POSTING OF SITE NOTICES, AND ANY ADDITIONAL INFORMATION OR SUBMITTALS REQUIRED BY TCEQ, EPA, OR LOCAL JURISDICTION.

16. CONTRACTOR TO MAINTAIN NO MORE THAN 10 ACRES OF DRAINAGE TO ANY SINGLE OUTFALL LOCATION DURING CONSTRUCTION.

LEGEND

138	EXISTING CONTOUR ELEVATIONS
138	PROPOSED CONTOUR ELEVATIONS
EROSION DETAILS	
IP5	FILTER SACK INLET PROTECTION (SEE DETAIL C3.2)
IP10	CURB INLET PROTECTION (SEE DETAIL C3.2)
SF	SILT FENCE (SEE DETAIL C3.2)
CE	CONSTRUCTION ENTRANCE (SEE DETAIL C3.2)
CW	CONCRETE WASHOUT (SEE DETAIL C3.2)
	PROJECTED FLOW DIRECTION

SWPPP NOTE

ANY OFF-SITE STAGING AREA UTILIZED BY THE OPERATOR OF THIS SITE MUST BE INCLUDED IN THE SWPPP NARRATIVE PLAN AND TO SWPPP SITE PLAN AS REQUIRED BY THE TPDES TEXAS GENERAL PERMIT TXR150000 (SECTION F). ANY SUCH AREA INCLUDED IN THE SWPPP WILL BE TREATED BY THE OPERATOR AS ANY OTHER PART OF THE CONSTRUCTION ACTIVITY FOR THE PURPOSES OF STORM WATER POLLUTION PREVENTION.

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EROSION CONTROL PLAN (1 OF 2)

Job. No. 1821-13-01	Sheet No. C3.0
Drawn By: CSH	
Date: 01/17/2025	

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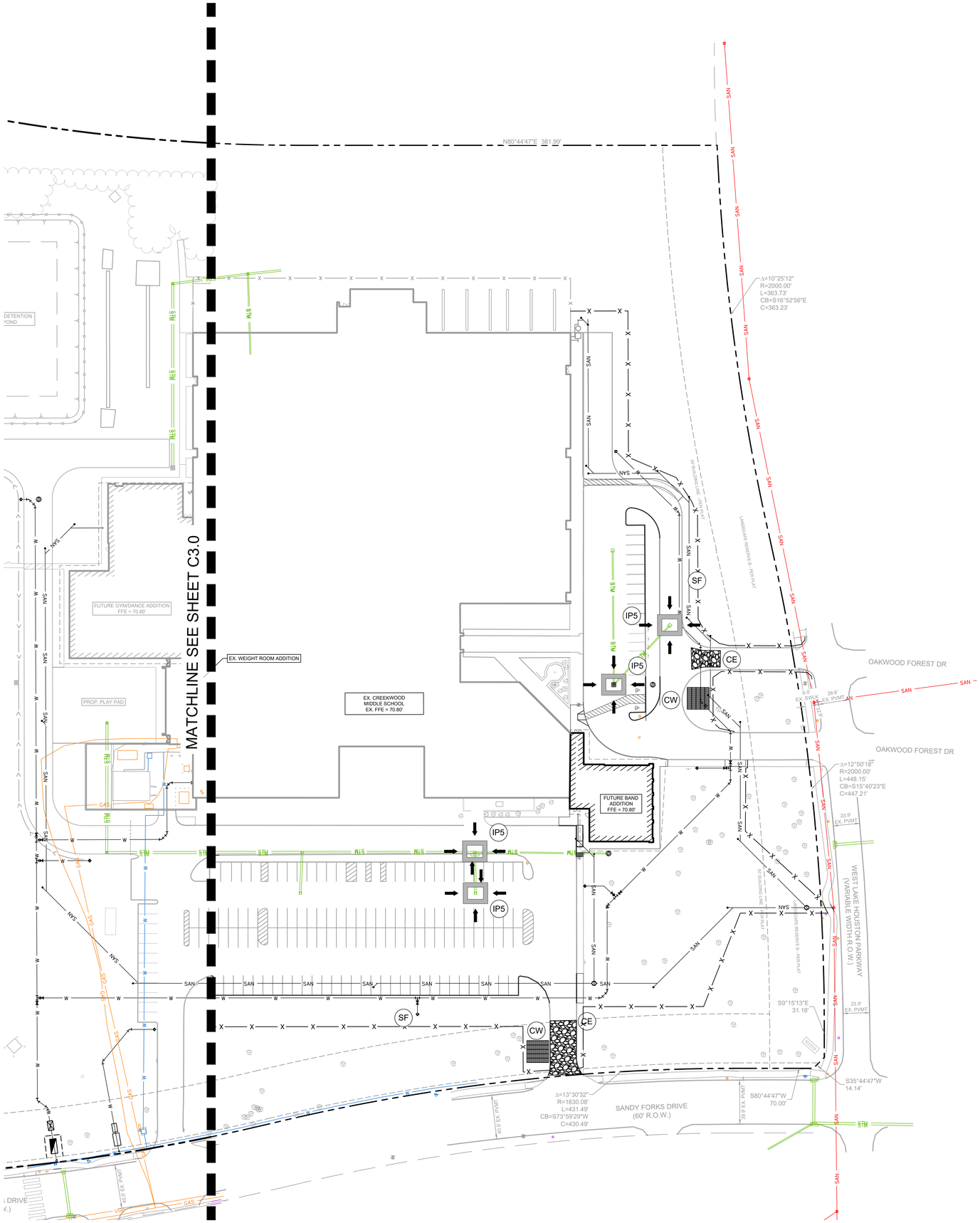

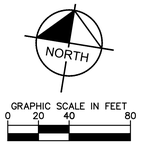

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EROSION CONTROL PLAN (2 OF 2)

Job. No. 1821-13-01	Sheet No. C3.1
Drawn By: CSH	
Date: 01/17/2025	

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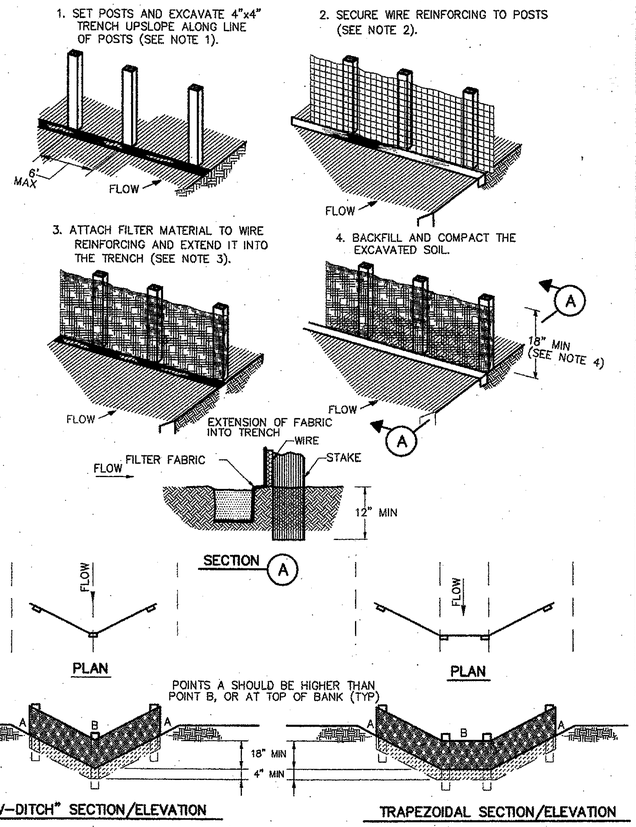
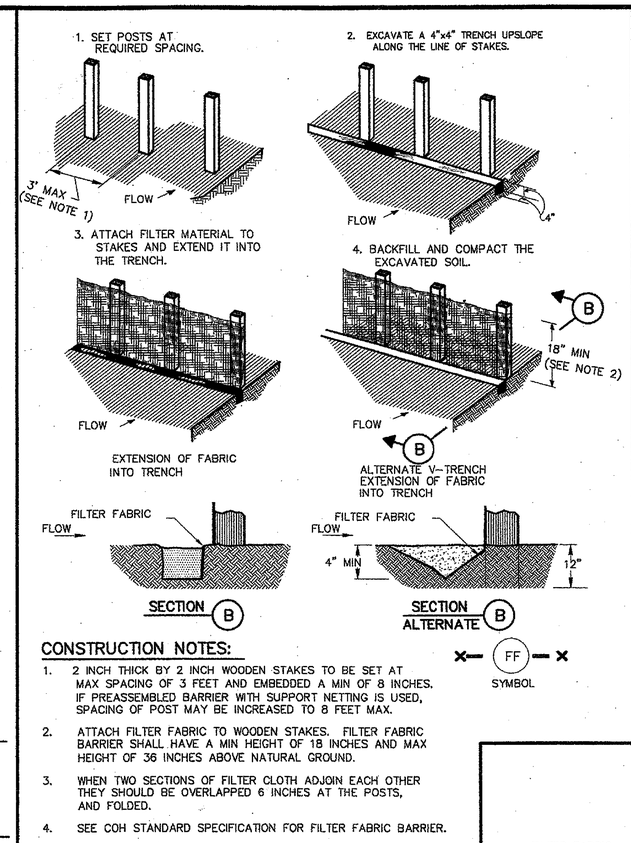


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

REINFORCED FILTER FABRIC BARRIER

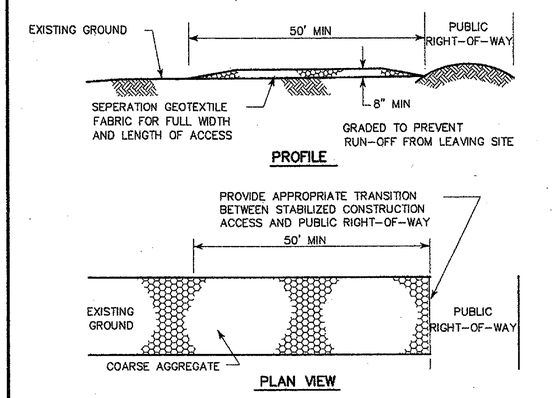


CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

SYMBOL

FILTER FABRIC BARRIER

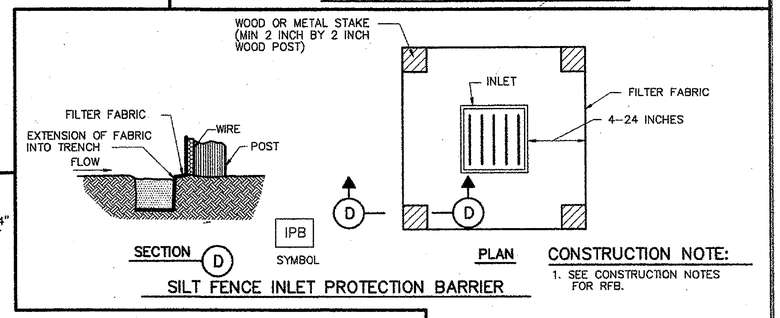


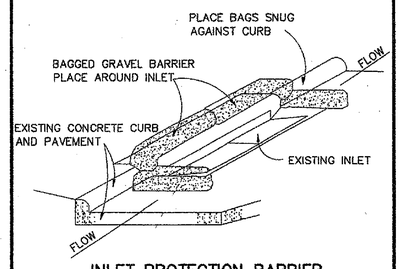
CONSTRUCTION NOTES:

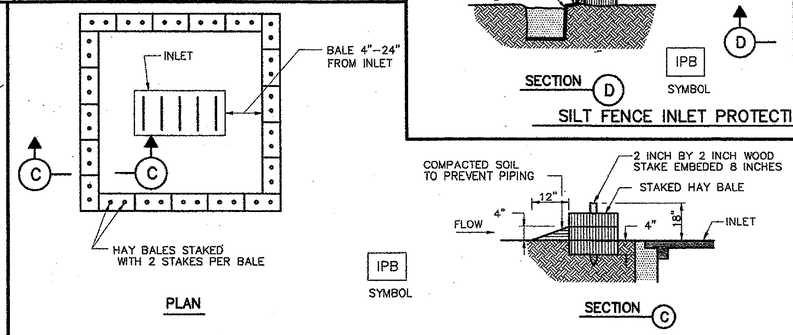
1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

SC
SYMBOL

STABILIZED CONSTRUCTION ACCESS







CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS

(NOT TO SCALE)

APPROVED	APPROVED
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010	DWG NO: 01571-01

CDH

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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EROSION CONTROL DETAILS

Job. No. 182113-01	Sheet No. C3.2
Drawn By: CSH	
Date: 01/17/2025	

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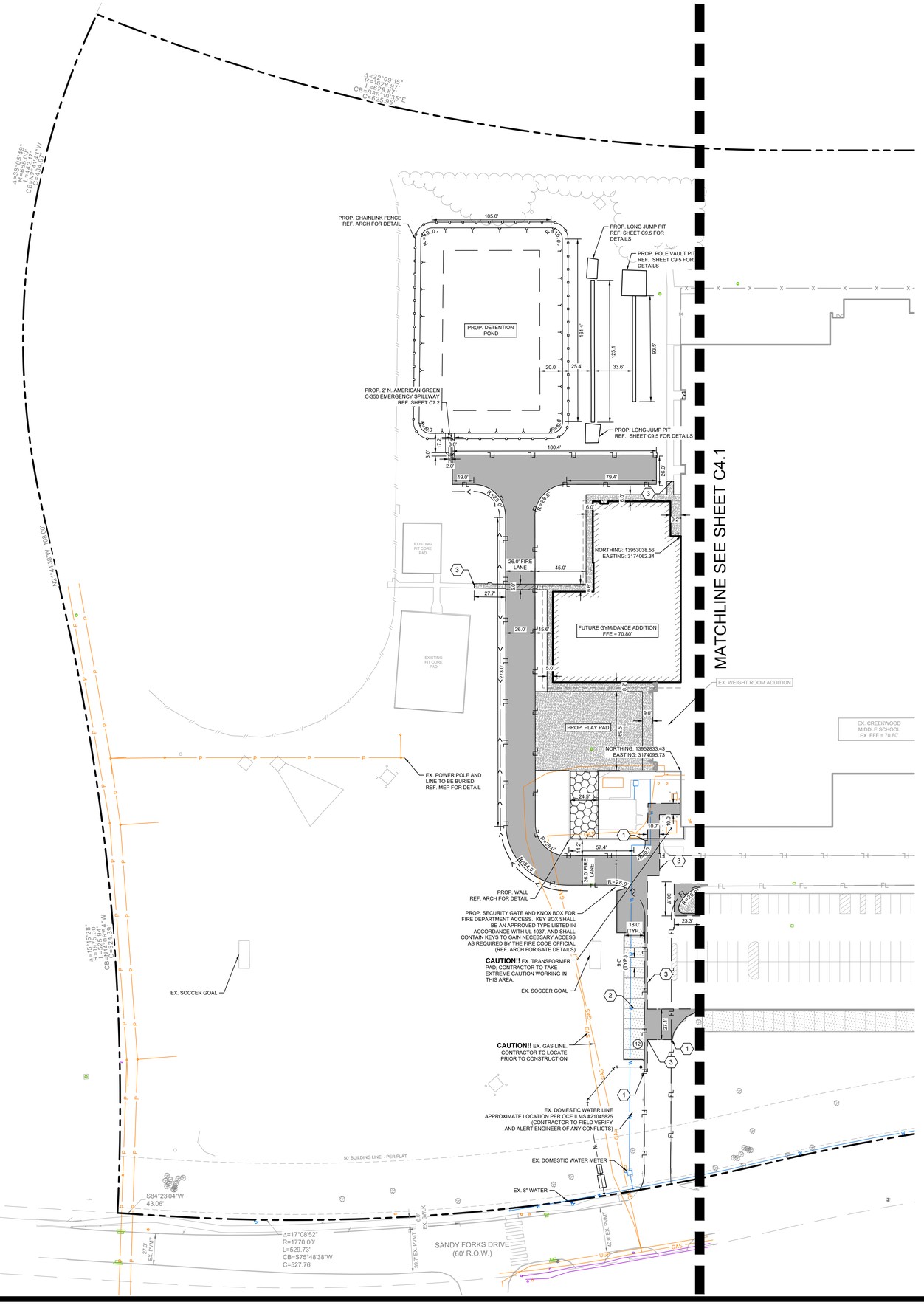

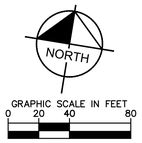

LEGEND	
	PROPERTY LINE
FL	FIRE LANE STRIPING
4	PARKING COUNT
	CURB RAMP NOT IN PUBLIC ROW
	ACCESSIBILITY SPACE
PAVING MATERIAL LEGEND	
	SIDEWALK CONCRETE (13,151 SQ. FT.)
	5" CONCRETE PAVEMENT (7,006 SQ. FT.)
	7" CONCRETE PAVEMENT (22,558 SQ. FT.)
	ASPHALT PAVEMENT (5,641 SQ. FT.)
	CONTRACTOR TO MATCH EX. CONCRETE PAVEMENT THICKNESS (1,457 SQ. FT.)

KEYED NOTES	
1	PROPOSED 6" CURB. TIE INTO EXISTING CURB.
2	PARKING LOT STRIPING; 4" SOLID STRIPE (TO MATCH EXISTING)
3	PROPOSED SAWCUT/MATCH EXISTING PAVEMENT LINE
4	PROPOSED ACCESSIBLE RAMP
5	PROPOSED ACCESSIBLE HC PARKING STALL WITH ACCESSIBLE PARKING SYMBOL AND SIGN

GENERAL NOTES

1. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

2. ALL RADII 2' UNLESS OTHERWISE NOTED.

3. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING POLES AND FIXTURES AND ELECTRICAL PLAN PRIOR TO PLACING PAVEMENT.

4. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

5. SIDEWALKS TO HAVE A 5% MAXIMUM RUNNING SLOPE AND A 2% MAXIMUM CROSS SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.

6. FIELD VERIFY ADA GRADES PRIOR TO PLACING PAVEMENT. CONTRACTOR SHALL CONSTRUCT ALL ACCESSIBLE ROUTES IN ACCORDANCE WITH ADA STANDARDS AND TAS.

7. CONTRACTOR SHALL BUDGET FOR ACCESSIBLE STALL STRIPING, FIRE LANE STRIPING, DIRECTIONAL ARROWS, ETC.

8. SITE LIGHTING IS BY OTHERS. REF. SITE LIGHTING PLANS FOR LOCATIONS AND DETAILS PRIOR TO PLACING PAVEMENT.

9. REF. BUILDING PLANS FOR ALL EXTERIOR STAIR DETAILS.

10. CONTRACTOR TO ADJUST EXISTING SANITARY SEWER MANHOLES, STORM SEWER MANHOLES, ELECTRICAL MANHOLES, FIRE HYDRANTS, VALVE BOXES, WATER METERS, ETC. TO MATCH PROPOSED FINISHED GRADES IF NECESSARY.

NORTHING/EASTING COORDINATES NOTE

THE NORTHING/EASTING COORDINATE POINTS PROVIDED ON THIS PLAN ARE PLAN COORDINATES. CONTRACTOR IS RESPONSIBLE FOR TYING THE PLAN COORDINATES PROVIDED ON THIS PLAN TO THE HORIZONTAL SURVEY CONTROL SYSTEM USED IN THE SURVEY/STAKING OF THE SUBJECT SITE. PLAN COORDINATES ARE PROVIDED ON CERTAIN PROPERTY CORNERS SO THE TIE-IN OF THE PLAN COORDINATES TO THE HORIZONTAL SURVEY CONTROL SYSTEM CAN BE VERIFIED AT THOSE FIXED LOCATIONS.

Know what's **below.**
Call before you dig.

CAUTION!!

EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Kimley»Horn
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01/17/2025

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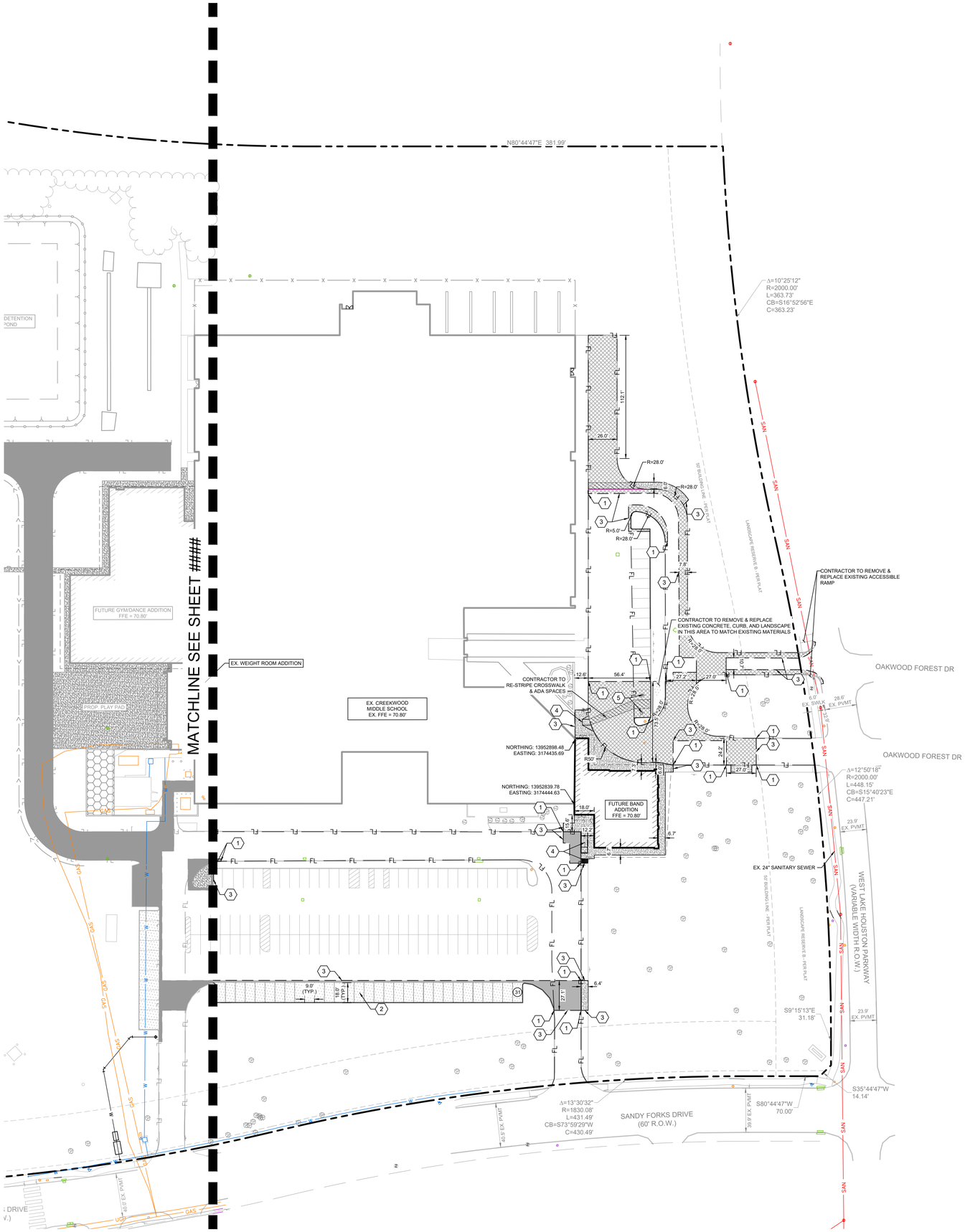

NORTH

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND	
	PROPERTY LINE
FL	FIRE LANE STRIPING
4	PARKING COUNT
	CURB RAMP NOT IN PUBLIC ROW
	ACCESSIBILITY SPACE
PAVING MATERIAL LEGEND	
	SIDEWALK CONCRETE (13,151 SQ. FT.)
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	CONTRACTOR TO MATCH EX. CONCRETE PAVEMENT THICKNESS (1,457 SQ. FT.)

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2	PARKING LOT STRIPING; 4" SOLID STRIPE (TO MATCH EXISTING)
3	PROPOSED SAWCUT/MATCH EXISTING PAVEMENT LINE
4	PROPOSED ACCESSIBLE RAMP
5	PROPOSED ACCESSIBLE HC PARKING STALL WITH ACCESSIBLE PARKING SYMBOL AND SIGN

GENERAL NOTES

1. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

2. ALL RADII 2' UNLESS OTHERWISE NOTED.

3. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING POLES AND FIXTURES AND ELECTRICAL PLAN PRIOR TO PLACING PAVEMENT.

4. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

5. SIDEWALKS TO HAVE A 5% MAXIMUM RUNNING SLOPE AND A 2% MAXIMUM CROSS SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.

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Revision / Date

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CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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DIMENSION CONTROL AND PAVING PLAN (2 OF 2)

Job. No. 182143-01	Sheet No. C4.1
Drawn By: CSH	
Date: 01/17/2025	

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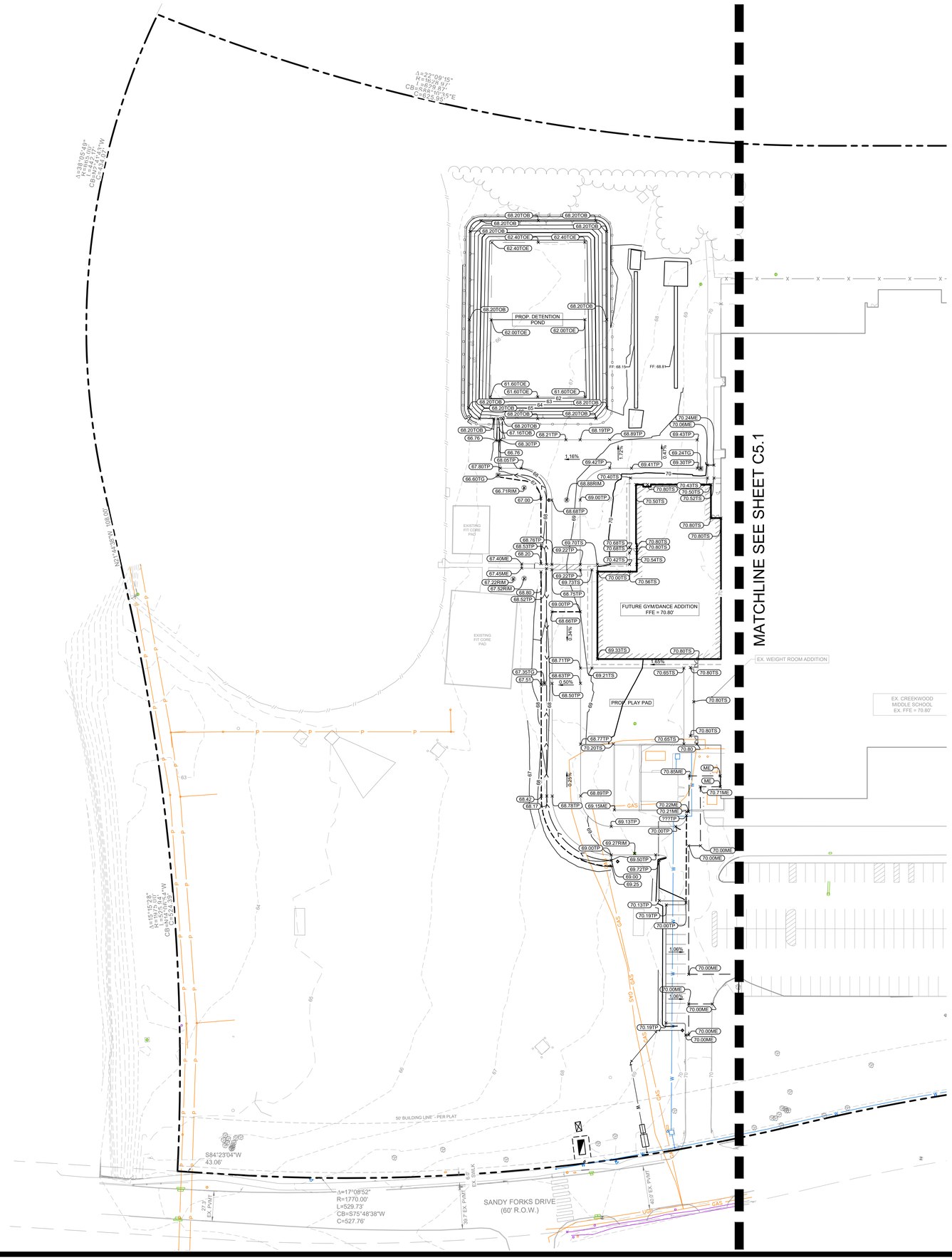



LEGEND	
130	PROPOSED CONTOURS
130	EXISTING CONTOURS
129.75	PROPOSED SPOT ELEVATION
129.33ME	MATCH EXISTING GRADE
129.55TG	TOP OF GRATE INLET
129.55TW	TOP OF WALL
129.55BW	BOTTOM OF WALL
129.55TC	TOP OF CURB
129.55TS	TOP OF SIDEWALK
	HIGH POINT
	PROPOSED STORM INLET
	PROPOSED SWALE
	PROPOSED CURB INLET
	PROPOSED SAWCUT LINE

GENERAL NOTES

1. ALL SPOT ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

2. ALL SIDEWALKS AND ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSWALKS SHALL CONFORM TO ALL APPLICABLE AMERICANS WITH DISABILITIES ACT STANDARDS AND THE TEXAS ACCESSIBILITY STANDARDS. IF ANY DISCREPANCY IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO POURING ANY PAVEMENT.

3. ALL SIDEWALKS AND ACCESSIBLE ROUTS, INCLUDING DRIVEWAY CROSSWALKS, SHALL NOT EXCEED A RUNNING SLOPE OF 5% (1:20) WITHOUT A RAMP, AND SHALL NOT EXCEED A 2% CROSS SLOPE (1:50).

4. THE ACCESSIBLE PARKING AND PASSENGER LOADING AREAS SHALL NOT EXCEED A SLOPE OF 2% (1:50) IN ANY DIRECTION.

5. ALL EXISTING APPURTENANCES ONSITE SHALL BE ADJUSTED TO PROPOSED GRADE AS APPLICABLE.

6. CONTRACTOR SHALL REFERENCE GEOTECHNICAL REPORT FOR BUILDING PAD LIMITS AND PREPARATION REQUIREMENTS.

7. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING IN ALL AREAS. CONTRACTOR SHALL NOTIFY THE ENGINEER IN THE EVENT OF ANY DISCREPANCY PRIOR TO COMMENCEMENT OF CONSTRUCTION.

8. CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN.

REFER TO BUILDING PLANS FOR DETAILS OF RETAINING WALLS, STAIRS, RAMPS AND EXPOSED FOUNDATIONS INCLUDING VEHICULAR AND PEDESTRIAN BARRIER/RAILING.

AS PART OF THE BASE BID FOR THIS PROJECT, CONTRACTOR SHALL ADHERE TO THE PROJECT GEOTECHNICAL REPORT FOR ALL RECOMMENDATIONS FOR BOTH MATERIALS AND PRACTICE OF INSTALLATION GIVEN IN THE PROJECT GEOTECHNICAL REPORT FOR EARTHWORK, SITE SUBGRADE PREPARATION, BUILDING PAD SUBGRADE PREPARATION, PAVING, AND WET/SOFT SOILS CONDITIONS ALONG WITH ANY OTHER SECTIONS PROVIDED IN THE REPORT.

TITLE: HUMBLE ISD CREEKDWOOD MIDDLE SCHOOL ADDITIONS
BY: TERRACON
DATED: JULY 20, 2023

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

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CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
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KINGWOOD, TX

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01/17/2025

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GRADING PLAN (1 OF 2)

Job. No. 192143-01	Sheet No. C5.0
Drawn By: CSH	
Date: 01/17/2025	

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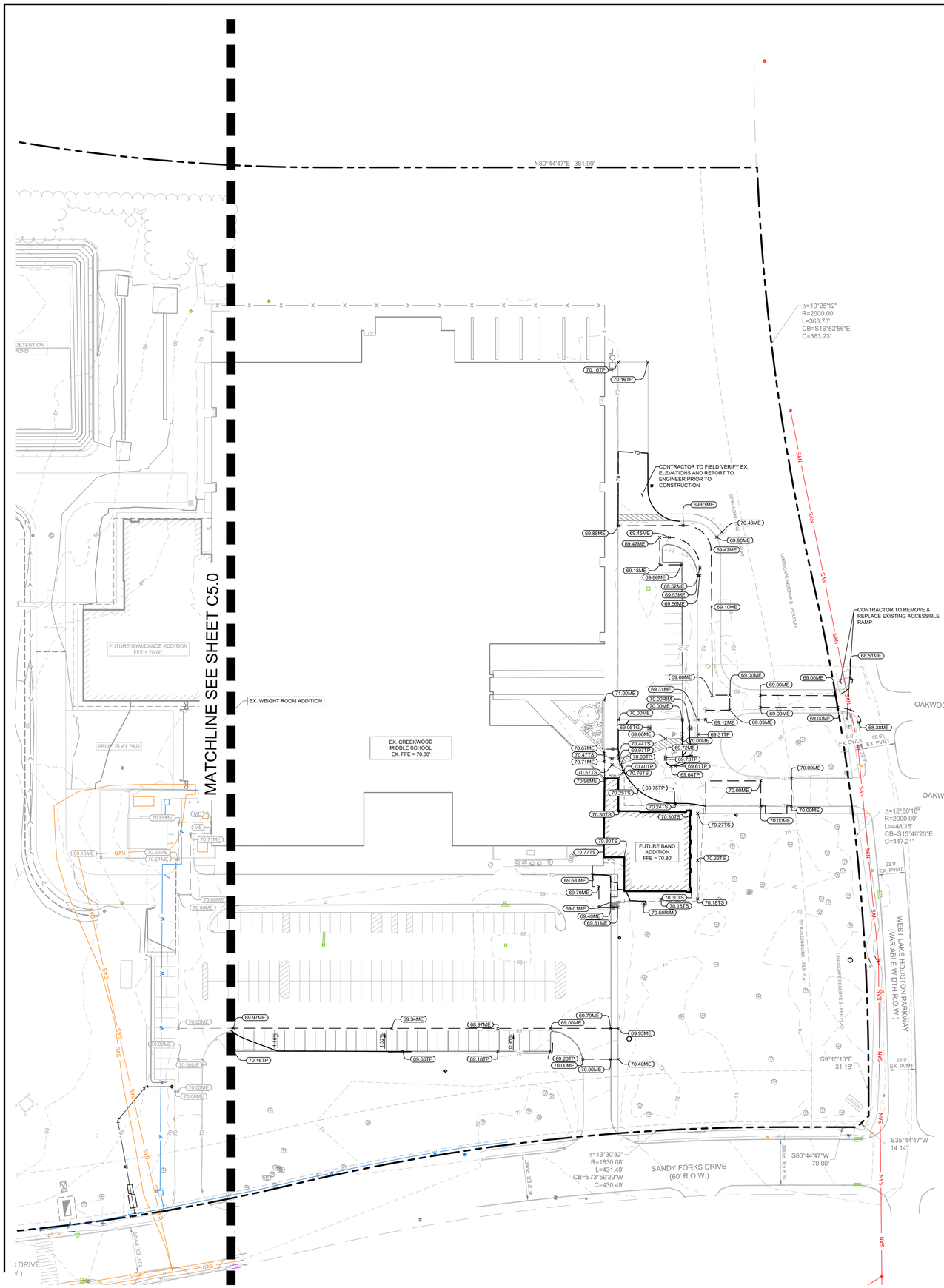



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	HIGH POINT
	PROPOSED STORM INLET
	PROPOSED SWALE
	PROPOSED CURB INLET
	PROPOSED SAWCUT LINE

GENERAL NOTES

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2. ALL SIDEWALKS AND ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSWALKS SHALL CONFORM TO ALL APPLICABLE AMERICANS WITH DISABILITIES ACT STANDARDS AND THE TEXAS ACCESSIBILITY STANDARDS. IF ANY DISCREPANCY IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO POURING ANY PAVEMENT.

3. ALL SIDEWALKS AND ACCESSIBLE ROUTS, INCLUDING DRIVEWAY CROSSWALKS, SHALL NOT EXCEED A RUNNING SLOPE OF 5% (1:20) WITHOUT A RAMP, AND SHALL NOT EXCEED A 2% CROSS SLOPE (1:50).

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5. ALL EXISTING APPURTENANCES ONSITE SHALL BE ADJUSTED TO PROPOSED GRADE AS APPLICABLE.

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8. CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN.

REFER TO BUILDING PLANS FOR DETAILS OF RETAINING WALLS, STAIRS, RAMPS AND EXPOSED FOUNDATIONS INCLUDING VEHICULAR AND PEDESTRIAN BARRIER/RAILING.

AS PART OF THE BASE BID FOR THIS PROJECT, CONTRACTOR SHALL ADHERE TO THE PROJECT GEOTECHNICAL REPORT FOR ALL RECOMMENDATIONS FOR BOTH MATERIALS AND PRACTICE OF INSTALLATION GIVEN IN THE PROJECT GEOTECHNICAL REPORT FOR EARTHWORK, SITE SUBGRADE PREPARATION, BUILDING PAD SUBGRADE PREPARATION, PAVING, AND WET/SOFT SOILS CONDITIONS ALONG WITH ANY OTHER SECTIONS PROVIDED IN THE REPORT.

TITLE: HUMBLE ISD CREEKDWOOD MIDDLE SCHOOL ADDITIONS
BY: TERRACON
DATED: JULY 20, 2023

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

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GRADING PLAN
(2 OF 2)

Job. No.	Sheet No.
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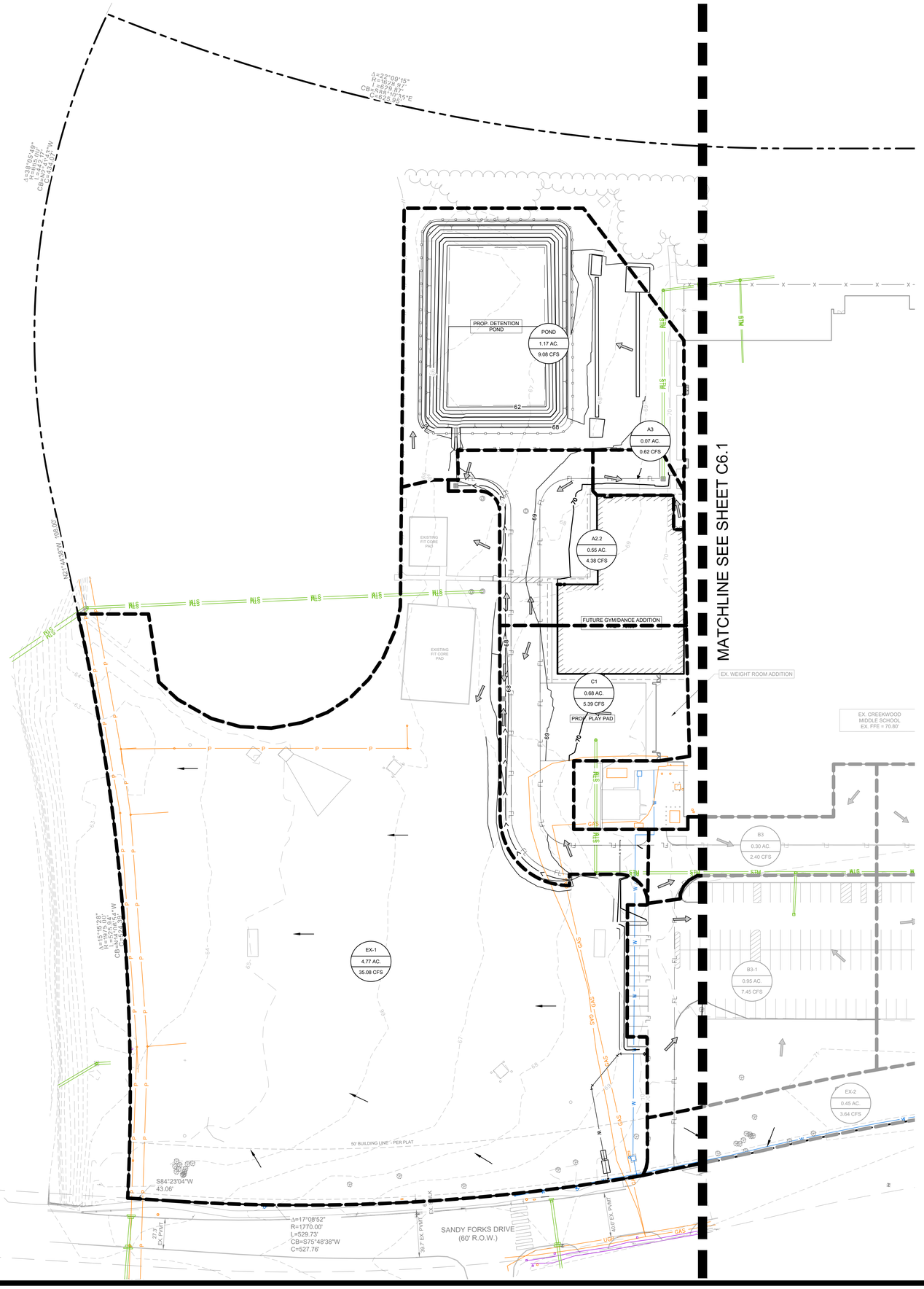

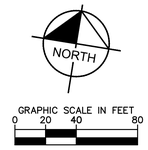

LEGEND

- A1.1 / 0.11 / 0.68 — DRAINAGE AREA NUMBER; DRAINAGE AREA (ACRES); FLOW (CFS) 100-YR
- 46 — EXISTING CONTOUR ELEVATIONS
- 46 — PROPOSED CONTOUR ELEVATIONS
- DRAINAGE AREA
- 100-YR EVENT FLOW PATH
- OFF-SITE DRAINAGE

DRAINAGE AREA TABLE

DRAINAGE AREA	RUNOFF COEFFICENT "C"	T_c (min.)	RAINFALL INTENSITY I_2 (in/hr)	RAINFALL INTENSITY I_{100} (in/hr)	AREA (ac)	TOTAL FLOW Q_2 (cfs)	TOTAL FLOW Q_{100} (cfs)
A2.2	0.800	23.997	3.733	7.97	0.55	1.64	4.38
A3	0.800	21.316	3.971	8.45	0.07	0.23	0.62
B3	0.800	23.069	3.812	8.13	0.30	0.90	2.40
B3-1	0.800	24.912	3.660	7.83	0.95	2.78	7.45
B4	0.800	23.468	3.778	8.06	0.39	1.18	3.14
B4-1	0.800	24.771	3.671	7.85	0.88	2.57	6.88
B7	0.800	23.623	3.765	8.04	0.43	1.30	3.47
B7-1	0.800	23.374	3.786	8.08	0.37	1.11	2.95
B7-2	0.800	23.408	3.783	8.07	0.37	1.13	3.02
C1	0.800	24.344	3.705	7.92	0.68	2.02	5.39
EX-1	0.800	28.165	3.424	7.36	4.77	13.05	35.08
EX-2	0.800	23.702	3.758	8.02	0.45	1.36	3.64
EX-3	0.800	24.972	3.655	7.82	0.98	2.88	7.70
EX-4	0.800	23.099	3.809	8.13	0.30	0.92	2.45
POND	0.800	25.278	3.631	7.77	1.17	3.39	9.08

CAUTION!!

EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

811 Know what's below. Call before you dig.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Kimley»Horn
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01/17/2025
STATE OF TEXAS
RASHARD D. HARRIS
142467
LICENSED
PROFESSIONAL ENGINEER

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800.687.1229

PROPOSED DRAINAGE AREA MAP (1 OF 2)

Job. No.	Sheet No.
1821-13-01	C6.0
Drawn By: CSH	
Date: 01/17/2025	

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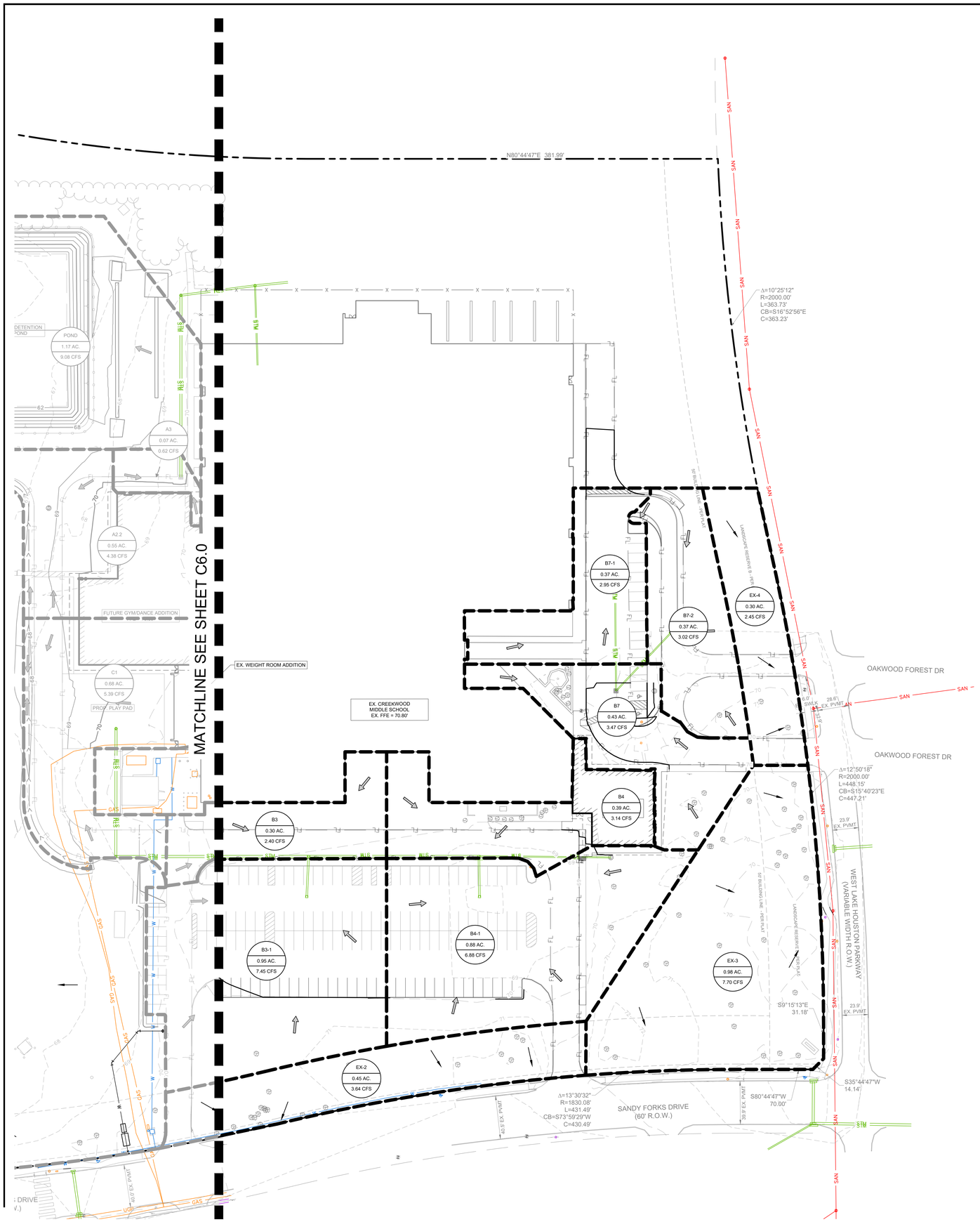

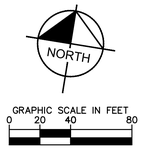

LEGEND

- A1-1 / 0.11 / 0.66 — DRAINAGE AREA NUMBER; DRAINAGE AREA (ACRES); FLOW (CFS) 100-YR
- 46 — EXISTING CONTOUR ELEVATIONS
- 46 — PROPOSED CONTOUR ELEVATIONS
- DRAINAGE AREA
- 100-YR EVENT FLOW PATH
- OFF-SITE DRAINAGE

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Revision / Date

Project: CREEKWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D KINGWOOD, TX

Kimley»Horn
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01/17/2025

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PROPOSED DRAINAGE AREA MAP (2 OF 2)

Job. No. 1821-13-01	Sheet No. C6.1
Drawn By: CSH	
Date: 01/17/2025	

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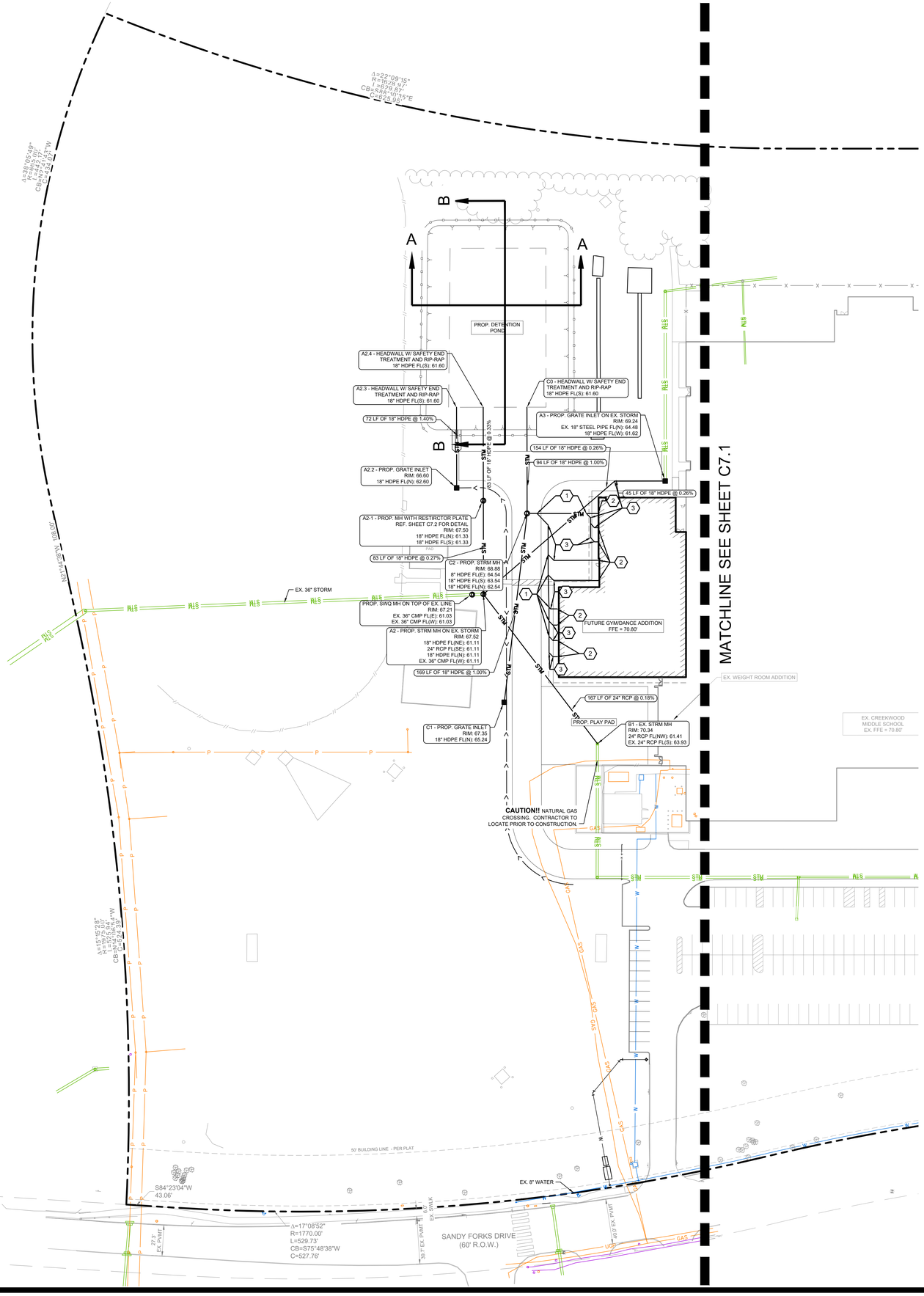



GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND	
	PROPERTY LINE
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT
STM	PROPOSED STORM LINE
	PROPOSED STORM MANHOLE
	PROPOSED GRATE INLET
	PROPOSED CURB INLET
W	PROPOSED WATER LINE
SAN	PROPOSED SSWR LINE
	PROPOSED SSWR MANHOLE
	PROPOSED FIRE HYDRANT
UGE	PROPOSED UNDERGROUND ELECTRIC
GAS	PROPOSED GAS LINE
COMM	PROPOSED COMMUNICATIONS LINE
OHE	PROPOSED OVERHEAD ELECTRIC
TEL	PROPOSED TELEPHONE LINE
FIB	PROPOSED FIBER OPTIC LINE
SAN	EXISTING SSWR LINE
W	EXISTING WATERLINE
STM	EXISTING STORM SEWER LINE

STORM SEWER NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

2. CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES IN FIELD PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

3. PUBLIC STORM LINES AS WELL AS CONNECTIONS TO EXISTING PUBLIC LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL MUNICIPALITIES STANDARD SPECIFICATIONS AND DETAILS WITH ALL ADDENDA AND AMENDMENTS THERETO.

4. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

A) RCP = ASTM C-76 CLASS III - REQUIRED IN PUBLIC RIGHT OF WAY AND CONNECTION POINTS TO PUBLIC STORM SEWER.

B) HDPE = N-12 DUAL WALL PIPE WITH BEDDING AND BACKFILL PER MANUFACTURER RECOMMENDATIONS.

C) PVC = ASTM D 3034 SDR35.

5. ALL EXISTING AND PROPOSED PIPES AND STRUCTURES ARE TO BE CLEANED OUT AT THE COMPLETION OF CONSTRUCTION TO REMOVE ALL SILT AND DEBRIS.

6. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.

7. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. LIDS SHALL BE LABELED "STORM SEWER".

8. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, OR TO BE 2"-4" ABOVE THE PROPOSED GRADE ELEVATIONS IN LANDSCAPE AREAS.

9. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.

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11. PROPERTY OWNER WILL BE RESPONSIBLE FOR MAINTENANCE OF THE DETENTION FACILITY.

KEYNOTES	
1	PROPOSED 8"x12" WYE
2	PROPOSED ROOF DRAIN (REF. MEP FOR CONTINUATION)
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FOR
HUMBLE I.S.D
KINGWOOD, TX

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TBPE FIRM REGISTRATION # 928

01/17/2025

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STORM SEWER PLAN (1 OF 2)

Job. No. 1821-13-01	Sheet No. C7.0
Drawn By: CSH	
Date: 01/17/2025	

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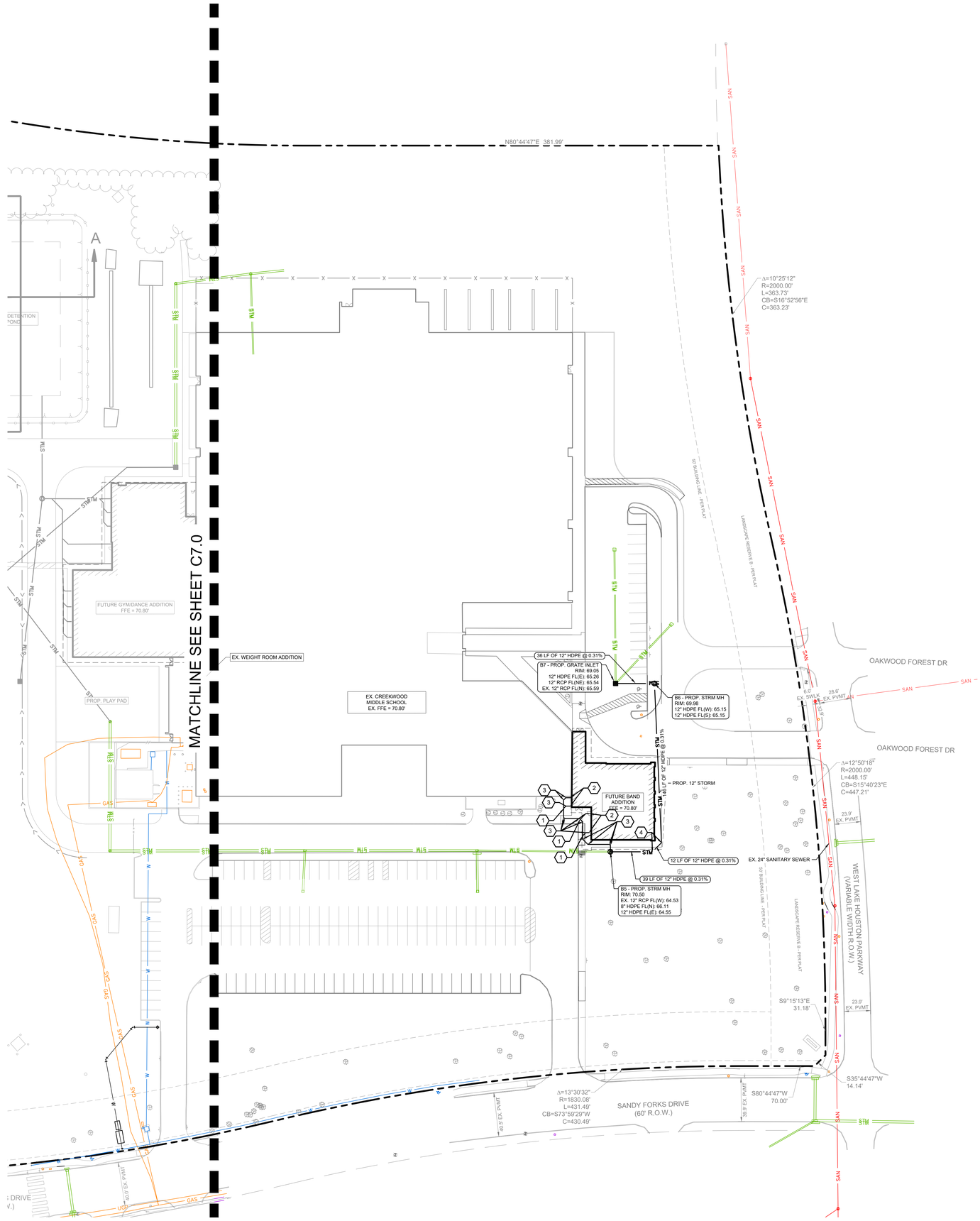

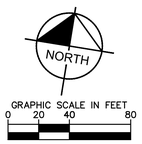

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STORM SEWER PLAN (2 OF 2)

Job. No. 192514-13-01	Sheet No. C7.1
Drawn By: CSH	
Date: 01/17/2025	

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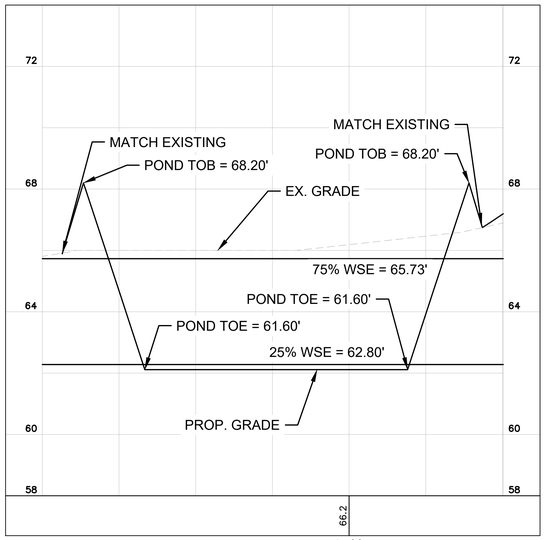
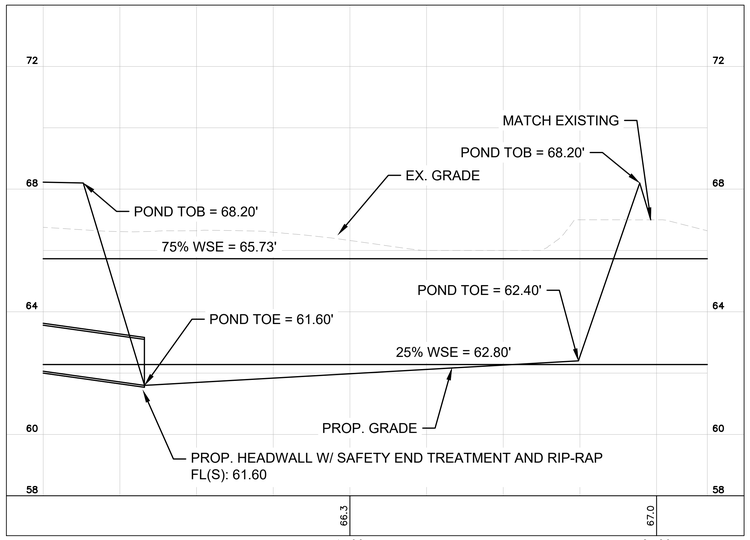


CROSS SECTION A-A

H: 1" = 20' ; V: 1" = 2'



CROSS SECTION B-B

H: 1" = 20' ; V: 1" = 2'

Low Level Restrictor

25% Full Water Elevation:		62.80	ft
$Q_{(ALLOWABLE\ RELEASE\ RATE\ AT\ 0.5\ cfs/ac.)}$	=	1.02	cfs
$H_{(25\%\ WATER\ SURFACE\ TO\ MID\text{-}RESTRICTOR)}$	=	1.22	ft.
$A_{(ORIFICE\ AREA)}$		0.19	ft^2
(Q-ALLOWABLE / [0.6 * (64.4 x H)$^{0.5}$])			
Max Diameter of Orifice:			
(D = 12*((4*A)/3.1415)$^{0.5}$]	=	5.94	in.
Proposed Restrictor Diameter:		***6.00***	in.
$A_{(ACTUAL\ RESTRICTOR\ ORIFICE\ AREA)}$		0.20	ft^2
($A=3.1415*R^2$)			
$Q_{(25\%\ ACTUAL\ RELEASE\ RATE)}$	=	1.39	cfs

High Level Restrictor Calculations

Combined Allowable Release Rate (2 cfs/acre):		4.10	cfs
Low Flow Release Rate at Max. Water Elevation			
$A_{(ACTUAL\ RESTRICTOR\ ORIFICE\ AREA)}$		0.20	ft^2
$H_{(MAX\ 100\text{-}YR\ WTR\ SURFACE\ TO\ MID\text{-}RESTRICTOR)}$	=	5.62	ft.
$Q_{(100\text{-}YEAR\ ACTUAL\ OUTFLOW\ DISCHARGE)}$	=	2.24	cfs
High Flow Restrictor			
$Q_{(ALLOWABLE\ HIGH\ FLOW\ RELEASE\ RATE)}$	=	1.85	cfs
Elevation of High Flow Restrictor	=	65.73	
$H_{(MAX\ 100\text{-}YR\ WTR\ SURFACE\ TO\ MID\text{-}RESTRICTOR)}$	=	0.84	ft.
$A_{(ORIFICE\ AREA)}$	=	0.42	ft^2
(Q-ALLOWABLE / [0.6 * (64.4 x H)$^{0.5}$])			
Proposed Rectangular Restrictor Dimensions		***1.5' L x 0.25' H***	
$A_{(ACTUAL\ RESTRICTOR\ ORIFICE\ AREA)}$		0.38	ft^2
$Q_{(100\text{-}YEAR\ ACTUAL\ OUTFLOW\ DISCHARGE)}$	=	2.21	cfs
$Q_{(100\text{-}YEAR\ ACTUAL\ COMBINED\ RELEASE\ RATE)}$	=	4.45	cfs

STORMWATER DETENTION REQUIREMENTS	
TOTAL SERVICE AREA	2.048 AC (100% IMPERVIOUS)
TOTAL IMPERVIOUS AREA	2.048 AC
DETENTION RATE REQUIREMENT:	0.97 AC-FT/AC OF IMPERVIOUS AREA (PER CITY OF HOUSTON STORM DETENTION REQUIREMENTS)
DETENTION VOLUME REQUIRED:	(0.97*2.048 AC*43,560) = 86,521 CF
DETENTION VOLUME PROVIDED:	**87,947 CF**

STORMWATER RELEASE REQUIREMENTS	
OUTFALL RATE ALLOWED (LOW FLOW)	0.5 CFS/AC * 2.04 AC = 1.02 CFS
OUTFALL RATE PROVIDED (LOW FLOW)	0.98 CFS
OUTFLOW RATE ALLOWED (HIGH FLOW)	2.0 CFS/AC * 2.04 AC = 4.10 CFS
OUTFLOW RATE PROVIDED (HIGH FLOW)	3.77 CFS
PRIMARY RESTRICTOR SIZE	6" DIAMETER
SECONDARY RESTRICTOR SIZE	1.5L'x0.25'H

STAGE STORAGE TABLE

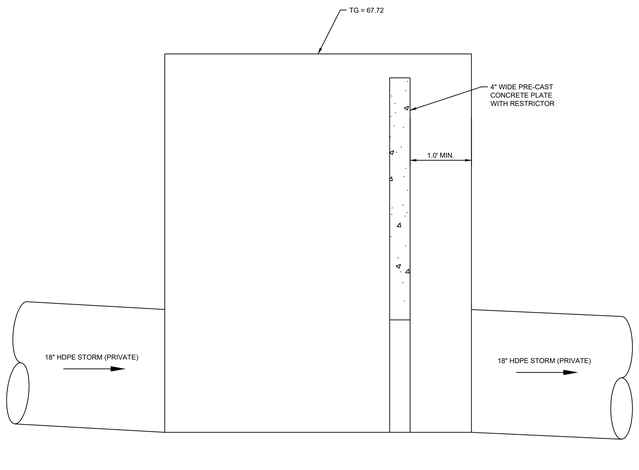
ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)
61.600	0.00	N/A	N/A	0.00
61.800	3,133.41	0.200	313.34	313.34
62.000	6,298.78	0.200	943.22	1256.56
62.200	9,497.43	0.200	1579.62	2836.18
62.400	12,730.62	0.200	2222.80	5058.99
62.600	13,031.28	0.200	2576.19	7635.18
62.800	13,334.88	0.200	2636.62	10271.79
63.000	13,641.43	0.200	2697.63	12969.42
63.200	13,950.93	0.200	2759.24	15728.66
63.400	14,263.37	0.200	2821.43	18550.09
63.600	14,578.76	0.200	2884.21	21434.30
63.800	14,897.10	0.200	2947.59	24381.89
64.000	15,218.38	0.200	3011.55	27393.43
64.200	15,542.62	0.200	3076.10	30469.53
64.400	15,869.80	0.200	3141.24	33610.78
64.600	16,199.92	0.200	3206.97	36817.75
64.800	16,533.00	0.200	3273.29	40091.04
65.000	16,869.02	0.200	3340.20	43431.24
65.200	17,207.98	0.200	3407.70	46838.94
65.400	17,549.90	0.200	3475.79	50314.73
65.600	17,894.76	0.200	3544.47	53859.19
65.800	18,242.57	0.200	3613.73	57472.93
66.000	18,593.32	0.200	3683.59	61156.52
66.200	18,947.03	0.200	3754.04	64910.55
66.400	19,303.68	0.200	3825.07	68735.62
66.600	19,663.27	0.200	3896.70	72632.32
66.800	20,025.82	0.200	3968.91	76601.23
67.000	20,391.31	0.200	4041.71	80642.94
67.200	20,759.75	0.200	4115.11	84758.05
67.400	21,131.13	0.200	4189.09	88947.13
67.600	21,505.47	0.200	4263.66	93210.79
67.800	21,882.75	0.200	4338.82	97549.61
68.000	22,262.97	0.200	4414.57	101964.19

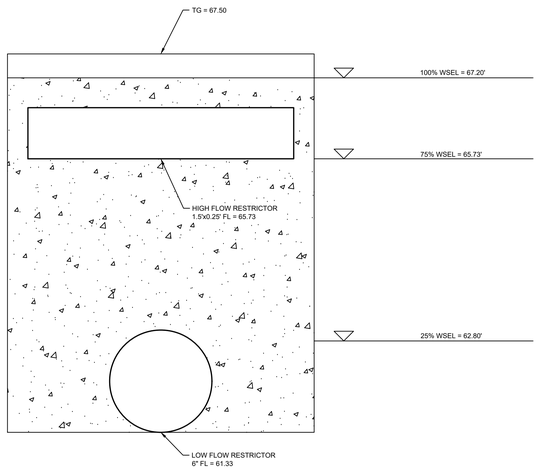
2-YEAR STORM CALCS

Stations		LINE	DA	CUMULATIVE AREA IN PIPE	RUNOFF COEFF	INTENSITY (100-YR)	TRAVEL TIME IN PIPE	TIME OF CONC.	Q'	SUM OF FLOWS 'Q'	PIPE LENGTH	PIPE BOX CULVERT WIDTH	PIPE DIA.	PIPE A	PIPE P	PIPE SLOPE	PIPE MANNING'S	DESIGN CAPACITY	FALL	MANHOLE DROP	FLOWLINE ELEVATION Downstream	FLOWLINE ELEVATION Upstream	DESIGN VELOCITY	ACTUAL VELOCITY	HYD GRAD	Hv	COEF Kj	Hj	HGL ELEV Downstream	HGL ELEV Upstream	HGL DIFF.	NATURAL GROUND Downstream	NATURAL GROUND Upstream
Downstream	Upstream		AC	AC	C	(in/hr)	MIN	(min.)	(cfs)	(cfs)	(ft)	(in)	(in)	(sf)	(ft)	(%)	n	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(ft/s)	%	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
POND 1	C2	A	0.00	0.94	0.80	3.76	24.89	24.89	0.00	2.83	95		18	1.77	4.71	0.26	0.013	5.35	0.95	0.00	61.60	62.55	3.04	1.60	0.07%	0.04	0.50	0.02	61.60	61.67	0.07	61.60	68.85
C2	C1	A	0.94	0.94	0.80	3.76		24.89	2.83	2.83	169		18	1.77	4.71	0.26	0.013	5.35	1.69	0.00	63.55	65.24	3.04	1.60	0.07%	0.04	1.25	0.04	65.05	65.17	0.12	68.85	67.35

100-YEAR STORM CALCS

Stations		LINE	DA	CUMULATIVE AREA IN PIPE	RUNOFF COEFF	INTENSITY (100-YR)	TRAVEL TIME IN PIPE	TIME OF CONC.	Q'	SUM OF FLOWS 'Q'	PIPE LENGTH	PIPE BOX CULVERT WIDTH	PIPE DIA.	PIPE A	PIPE P	PIPE SLOPE	PIPE MANNING'S	DESIGN CAPACITY	FALL	MANHOLE DROP	FLOWLINE ELEVATION Downstream	FLOWLINE ELEVATION Upstream	DESIGN VELOCITY	ACTUAL VELOCITY	HYD GRAD	Hv	COEF Kj	Hj	HGL ELEV Downstream	HGL ELEV Upstream	HGL DIFF.	NATURAL GROUND Downstream	NATURAL GROUND Upstream
Downstream	Upstream		AC	AC	C	(in/hr)	MIN	(min.)	(cfs)	(cfs)	(ft)	(in)	(in)	(sf)	(ft)	(%)	n	(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/s)	(ft/s)	%	(ft)		(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)
POND 1	C2	A	0.00	0.94	0.80	8.56	24.89	24.89	0.00	6.43	95		18	1.77	4.71	0.26	0.013	5.35	0.95	0.00	61.60	62.55	3.04	3.64	0.37%	0.21	0.50	0.10	61.60	61.95	0.35	61.60	68.85
C2	C1	A	0.94	0.94	0.80	8.56		24.89	6.43	6.43	169		18	1.77	4.71	0.26	0.013	5.35	1.69	0.00	63.55	65.24	3.04	3.64	0.37%	0.21	1.25	0.21	65.05	65.68	0.63	68.85	67.35

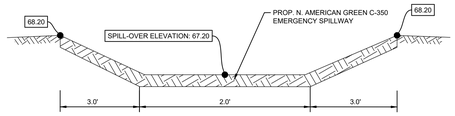




RESTRICTOR DETAIL

N.T.S.

EXTREME EVENT OVERFLOW WEIR DESIGN:
$Q_{100} = CLH^{3/2}$
$H_{100} = 1.0'$
$C = 3.0$
$L_{WEIG} = 1.02'$
$L_{PROV} = 2.0'$
$Q_{100} = 3.06$ CFS



EXTREME EVENT OVERFLOW WEIR

CROSS-SECTION A-A

NOT TO SCALE

Project:

CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Revision / Date

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01/17/2025

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STORM AND POND CALCULATIONS

Job. No. 1821-13-01	**Sheet No.** C7.2
Drawn By: CSH	
Date: 01/17/2025	

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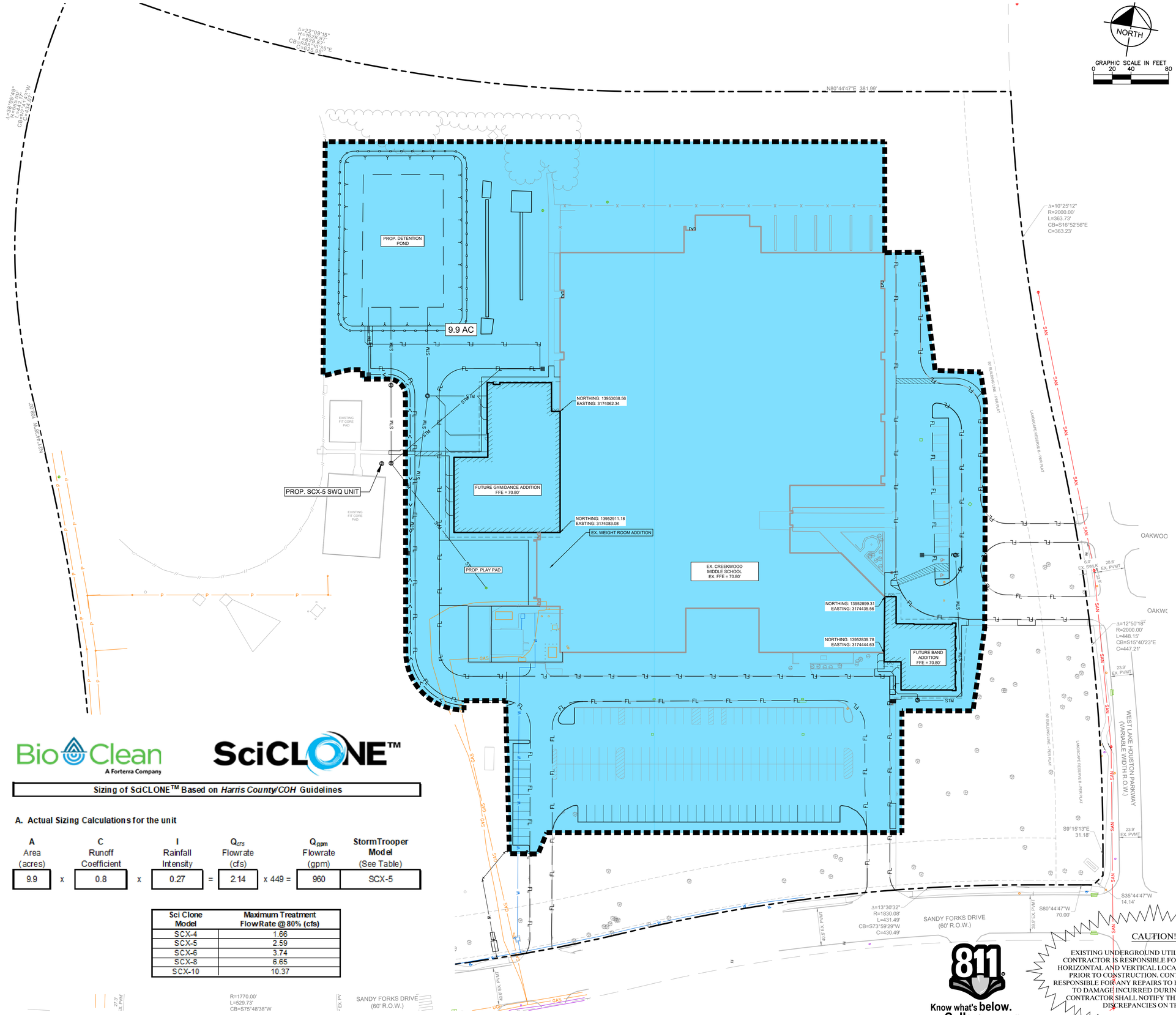

Bio Clean
A Forterra Company

SciCLONE™

Sizing of SciCLONE™ Based on *Harris County/COH* Guidelines

A. Actual Sizing Calculations for the unit

A Area (acres)		C Runoff Coefficient		I Rainfall Intensity		Q_{cfs} Flowrate (cfs)		Q_{gpm} Flowrate (gpm)	StormTrooper Model (See Table)
9.9	x	0.8	x	0.27	=	2.14	x 449 =	960	SCX-5

Sci Clone Model	Maximum Treatment FlowRate @ 80% (cfs)
SCX-4	1.66
SCX-5	2.59
SCX-6	3.74
SCX-8	6.65
SCX-10	10.37

811
Know what's below.
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SWQ SERVICE AREA MAP

Job. No. 1821-13-01	Sheet No. C7.3
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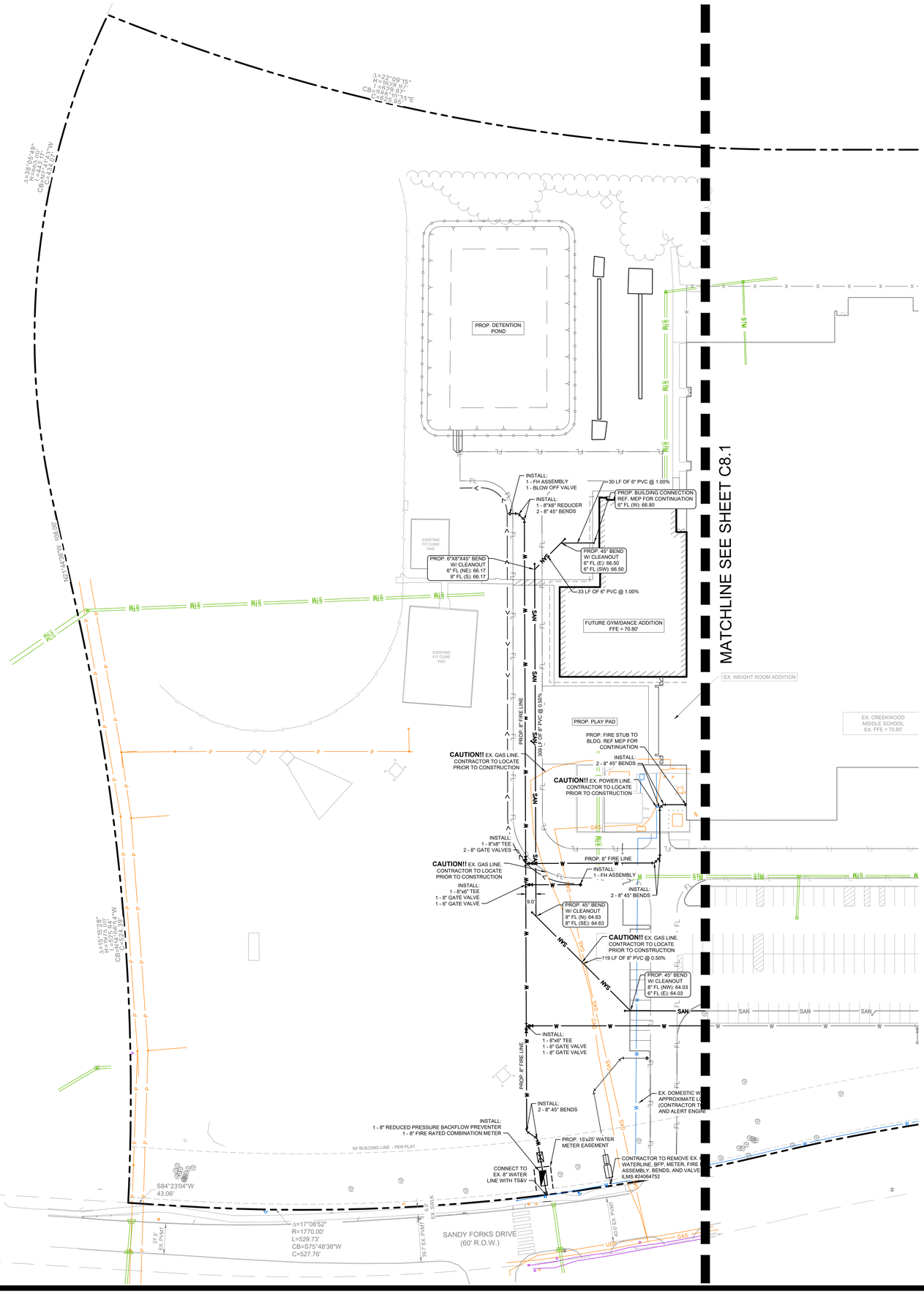

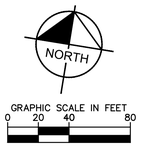

LEGEND	
	PROPERTY LINE
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT
STM	PROPOSED STORM LINE
D	PROPOSED STORM MANHOLE
	PROPOSED GRATE INLET
	PROPOSED CURB INLET
W	PROPOSED WATER LINE
SAN	PROPOSED SSWR LINE
S	PROPOSED SSWR MANHOLE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER VALVE
UGE	PROPOSED UNDERGROUND ELECTRIC
GAS	PROPOSED GAS LINE
COMM	PROPOSED COMMUNICATIONS LINE
OHE	PROPOSED OVERHEAD ELECTRIC
TEL	PROPOSED TELEPHONE LINE
FIB	PROPOSED FIBER OPTIC LINE
SAN	EXISTING SSWR LINE
W	EXISTING WATERLINE
STM	EXISTING STORM SEWER LINE

UTILITY NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

2. CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES IN FIELD PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

3. ALL WATER AND SEWER LINES AS WELL AS TAPS/CONNECTIONS TO EXISTING PUBLIC WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL MUNICIPALITIES STANDARD SPECIFICATIONS AND DETAILS WITH ALL ADDENDA AND AMENDMENTS THERETO.

4. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.

5. WATER LINES SHALL BE AS FOLLOWS:

A) 3" AND SMALLER = SCHEDULE 40 PVC

B) 4" - 12" = PVC CLASS 150 DR 18, WITH BEDDING AND BACKFILL PER MANUFACTURER RECOMMENDATIONS.

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16. THE SCOPE OF UTILITIES STUBBED TO THE PROPOSED BUILDING(S) IN THIS PLAN SET SHALL TERMINATE 5' OUTSIDE OF THE BUILDING.

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UTILITY PLAN (1 OF 2)

Job. No. 1821-13-01	Sheet No. C8.0
Drawn By: CSH	
Date: 01/17/2025	

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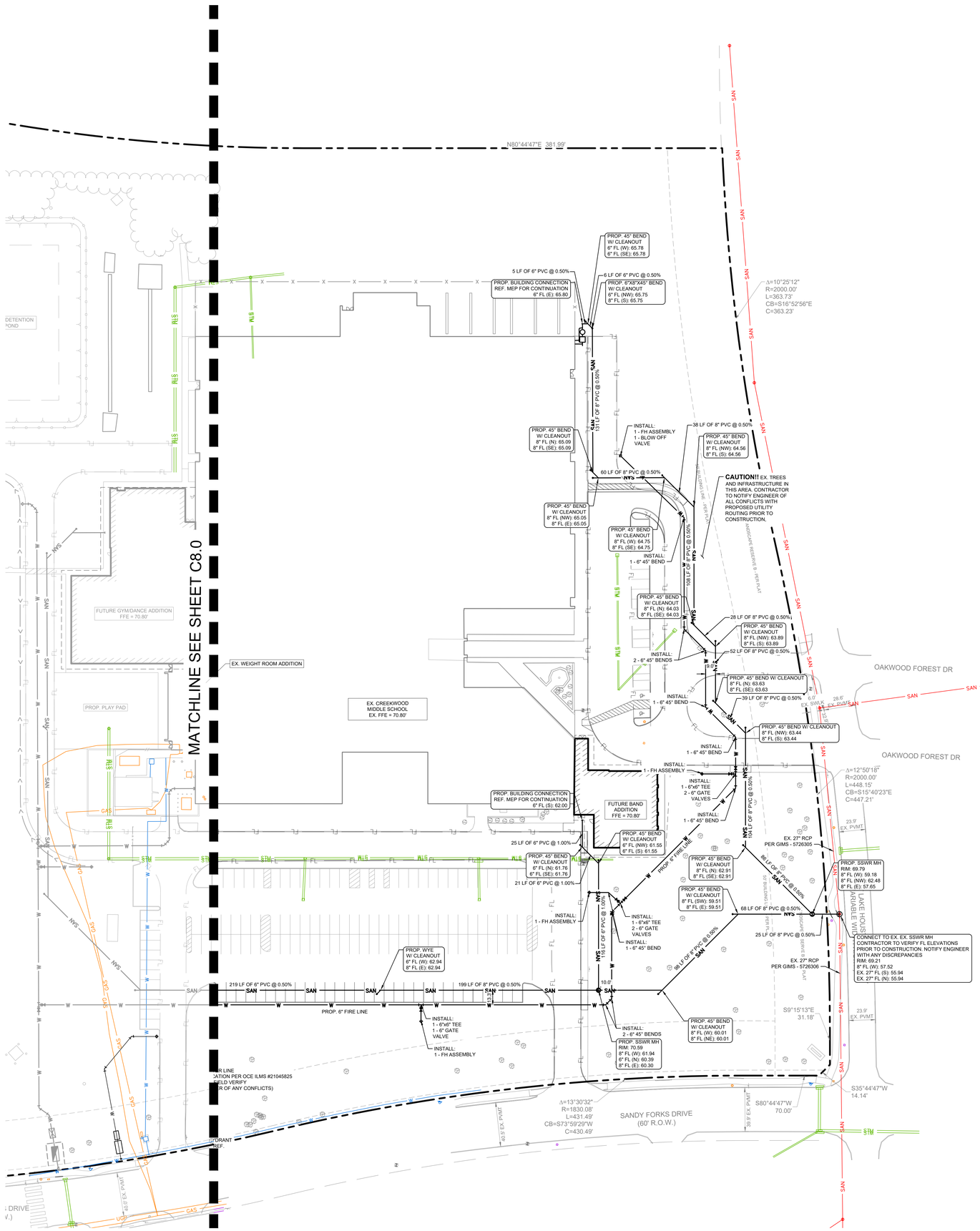

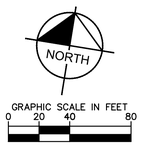

LEGEND	
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	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT
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Ⓓ	PROPOSED STORM MANHOLE
	PROPOSED GRATE INLET
	PROPOSED CURB INLET
W	PROPOSED WATER LINE
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Ⓢ	PROPOSED SSWR MANHOLE
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UTILITY PLAN (2 OF 2)

Job. No. 1821-13-01	Sheet No. C8.1
Drawn By: CSH	
Date: 01/17/2025	

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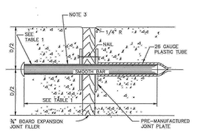
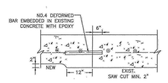
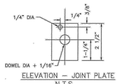


SECTION
DOWEL TYPE EXPANSION JOINT
N.T.S

SECTION
SIDEWALK TO EXISTING SIDEWALK
N.T.S



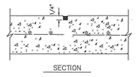
SECTION
SIDEWALK TO EXISTING DRIVEWAY
N.T.S.



ELEVATION — JOINT PLATE
N.T.S.



PLAN — JOINT PLATE
N.T.S.



SECTION
CONTROL JOINT
N.T.S.

NOTES:

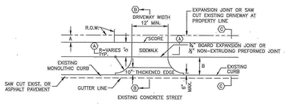
1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS.
2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 3 FEET MAXIMUM SPACING FOR CONTROL JOINTS SHALL BE 5 FEET.
3. CENTER DOWEL HORIZONTALLY ON JOINT.
4. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN A 2 INCH MINIMUM COVER.

TABLE 1

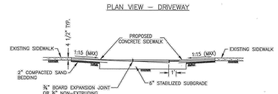
PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS			
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)	
4 1/2	1/2	18	12	
5	1/2	18	12	
6	3/4	18	12	
7	1	18	12	

SIDEWALK EXPANSION AND CONSTRUCTION JOINT DETAILS
NTS

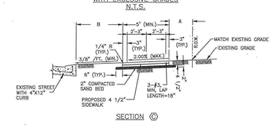
02754–01A



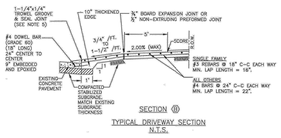
PLAN VIEW — DRIVEWAY
NTS



SECTION Ⓐ
PROPOSED SIDEWALK THROUGH DRIVEWAY
WITH EXCESSIVE GRADES
N.T.S.



SECTION Ⓑ
TYPICAL SIDEWALKS SECTION
N.T.S.



SECTION Ⓒ
TYPICAL DRIVEWAY SECTION
N.T.S.

NOTES:

1. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SW) ACCORDING TO SW REQUIREMENT, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.
2. DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY.
3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
4. THE OUTER DOWEL BARS ARE TO BE LOCATED 12" FROM END OF PROPOSED EDGE OF DRIVEWAY RETURN. EXTEND DOWEL 3" INCHES INTO PROPOSED DRIVEWAY AND BEND REMAINING BAR TO EXTEND TO RADIUS RETURN BOTH SIDES.
5. TROWEL GROOVE SEALANT SHALL BE LOW MODULUS SILICONE OR POLYURETHANE SEALANT.
6. EXPANSION & CONSTRUCTION JOINTS ALONG SIDEWALK SHALL BE ACCORDING TO DRAWING No. 02752–02.
7. REFER CHAPTER 17 DESIGN REQUIREMENTS FOR A AND B.
8. CEMENT STABILIZED SAND 1.5 SACKS OF CEMENT PER TON OF DRY SAND.
9. ALL RAMPS AND SIDEWALK/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
10. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

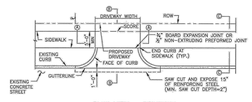
STREET PAVING AND SIDEWALK
02752–02 THROUGH 02754–01A

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
FOR CITY OF HOUSTON USE ONLY

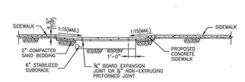
SHEET NO.

DRIVEWAY / LOCAL RESIDENTIAL STREETS
NTS

02754–01B



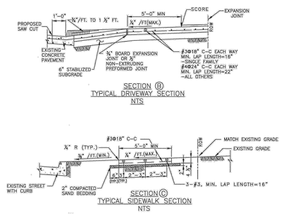
PLAN VIEW — DRIVEWAY
NTS



SECTION Ⓐ
PROPOSED SIDEWALK THROUGH DRIVEWAY
WITH EXCESSIVE ELEVATION DIFFERENCE
WITH EXISTING SIDEWALK
NTS

NOTES

1. ALL JOINTS SHALL CONFORM TO CITY OF HOUSTON 02752 STANDARD SPECIFICATIONS.
2. DRIVEWAYS SHALL BE MINIMUM 6" THICK FOR SINGLE FAMILY USE AND MINIMUM 7" THICK FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)
3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
4. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
5. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

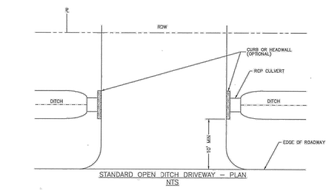


SECTION Ⓑ
TYPICAL DRIVEWAY SECTION
NTS

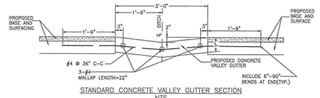
SECTION Ⓒ
TYPICAL SIDEWALK SECTION
NTS

DRIVEWAY DETAIL WITH 6" CURBED STREETS
NTS

02754–02



STANDARD OPEN DITCH DRIVEWAY — PLAN
NTS



STANDARD CONCRETE VALLEY GUTTER SECTION
NTS

NOTES:

1. REINFORCED CONCRETE PIPE (RCP) CULVERTS AND CONCRETE VALLEY GUTTER GRADES SHALL BE SET BY CITY ENGINEER. PROFILE SHOWING THE PROPOSED AND EXISTING DITCH FLOWLINE WILL BE REQUIRED WHERE CONCRETE VALLEY GUTTERS ARE TO BE CONSTRUCTED IN LIEU OF CULVERTS.
2. CULVERT SIZE WILL BE APPROVED BY CITY ENGINEER WITH 24" DIAMETER MINIMUM.
3. SPACING OF TYPE "D" OR "D–1" INLETS SHALL BE DETERMINED BY CITY ENGINEER. SEE DRAWING NO. 02632–07 FOR TYPE "D" OR DRAWING NO. 02632–08 FOR TYPE "D–1".
4. DRIVEWAY MAY BE CONCRETE, ASPHALT OR ANY OTHER MATERIAL WHICH WILL NOT PERMIT WIND OR WATERBORNE EROSION.
5. A 3–FOOT CONCRETE VALLEY GUTTER SECTION SHALL BE CONSTRUCTED THROUGH THE PROPOSED DRIVEWAY WHERE THE CITY ENGINEER DETERMINES THE INSTALLATION OF DITCH CULVERTS TO BE IMPRACTICAL DUE TO INSUFFICIENT DEPTH. THE VALLEY GUTTER SECTION WILL BE CONSTRUCTED OF 5–1/2 SACK CEMENT PER CUBIC YARD OF CONCRETE.

DRIVEWAYS WITH CULVERTS OR VALLEY GUTTERS
ON OPEN DITCH TYPE STREETS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02754–01B THROUGH 02754–02

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
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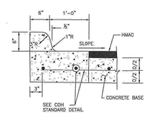
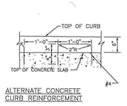
SHEET NO.

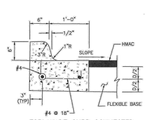
02771–01



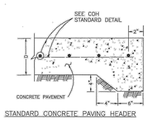
ESPLANADE CURB CONNECTED
TO CONCRETE BASE



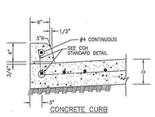
ALTERNATE CONCRETE
CURB REINFORCEMENT



ESPLANADE CURB CONNECTED
TO FLEXIBLE BASE

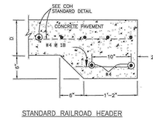


STANDARD CONCRETE PAVING HEADER

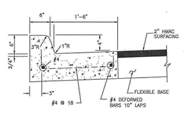


CONCRETE CURB

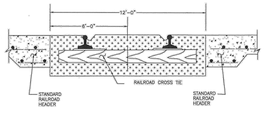
WHEN CONCRETE CURB IS TO BE PLACED EXISTING CONCRETE USE BASE #4 @ 18x10" LONG, DOWELED AND SET IN EPOXY GROUT. SET #4 DOWELS, 25" LONG AT 12" C–C WHEN PAVEMENT SECTION POURED.



STANDARD RAILROAD HEADER



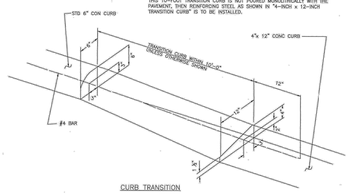
MONOLITHIC CURB AND GUTTER



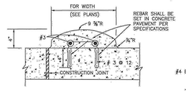
STANDARD RAILROAD CROSSING — SINGLE TRACK

4"x12" MONOLITHIC AND TRANSITION CURB NOTES:

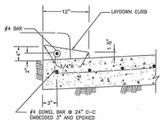
1. 6–INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL ESPLANADES, ISLANDS NON–RESIDENTIAL STREETS, AND RESIDENTIAL STREETS.
2. TRANSITIONS FROM 6– INCH CONCRETE CURB TO 4–INCH x 12–INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 10 FEET, UNLESS DRAINAGE SHOWS. IF THIS 10–FOOT TRANSITION CURB IS NOT POURED MONOLITHICALLY WITH THE PAVEMENT, THEN REINFORCING STEEL AS SHOWN IN "4–INCH x 12–INCH TRANSITION CURB" IS TO BE INSTALLED.



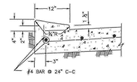
CURB TRANSITION



MOUNTABLE CURB



4–INCH x 12–INCH TRANSITION CURB



4–INCH x 12–INCH MONOLITHIC CURB

CURB, CURB AND GUTTER AND HEADER DETAILS
NTS

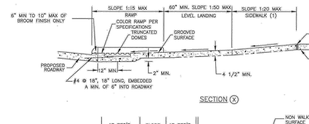
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02771–01

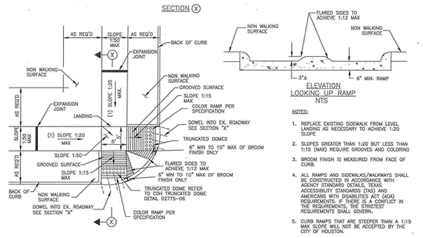
APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

02775–02



SECTION Ⓧ

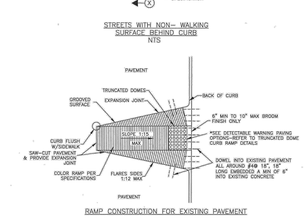


STREETS WITH NON– WALKING
SURFACE BEHIND CURB
NTS

ELEVATION
LOOKING UP RAMP
NTS

NOTES:

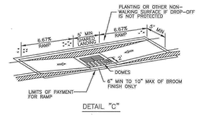
1. REPLACE EXISTING SIDEWALK FROM LEVEL LANDING AS NECESSARY TO ACHIEVE 1:20 SLOPE.
2. SLOPES GREATER THAN 1:20 BUT LESS THAN 1:15 (MAX) REQUIRE GROOVES AND COLORING
3. BROOM FINISH IS MEASURED FROM FACE OF CURB.
4. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
5. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.



RAMP CONSTRUCTION FOR EXISTING PAVEMENT

WHEEL CHAIR RAMP DETAILS
NTS

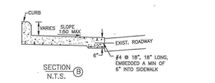
02775–03



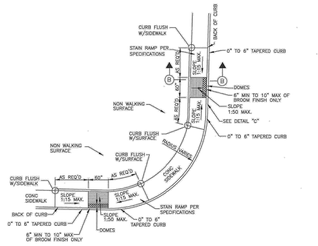
DETAIL "C"

NOTES:

1. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
2. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.



SECTION Ⓑ
N.T.S.



SIDEWALK ON BACK OF CURB
N.T.S.

PARALLEL CURB RAMP
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02775–02 THROUGH 02775–03

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Kimley»Horn
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11700 KATY FREEWAY, SUITE 800, HOUSTON, TX 77079
PHONE: 281–558–8700
WWW.KIMLEY–HORN.COM
TBPE FIRM REGISTRATION # F–928

01/17/2025

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CONSTRUCTION DETAILS (1 OF 5)

Job. No. 1821-13-01	Sheet No. C9.0
Drawn By: CSH	
Date: 01/17/2025	

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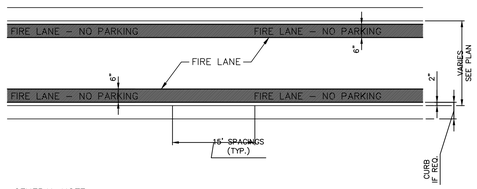
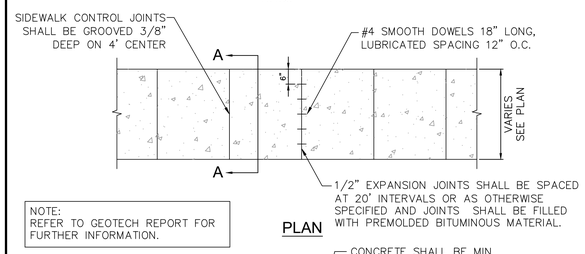


GENERAL NOTE:
1. STRIPING TO BE DONE IN ACCORDANCE WITH CITY STANDARDS.

STRIPING DETAIL NOTES:
1. PAINT:
 1.1. STRIPE SHALL BE FIVE (5) INCHES WIDE PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT.
  A. COLOR SHALL BE "TRAFFIC RED" GLIDDEN NO. 63251 OR EQUAL.
 1.1. LETTERS SHALL BE FOUR (4) INCHES HIGH PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT.
  B. COLOR SHALL BE "TRAFFIC WHITE" GLIDDEN NO. 563245 OR EQUAL.
2. APPLICATION:
 2.1. STRIPE MAY BE BRUSHED OR SPRAYED, ONE COAT TO FINISH.
 2.2. LETTERS SHALL BE STENCIL FORMED, BRUSH APPLIED AND SPACED AS DETAILED ON THIS SHEET.

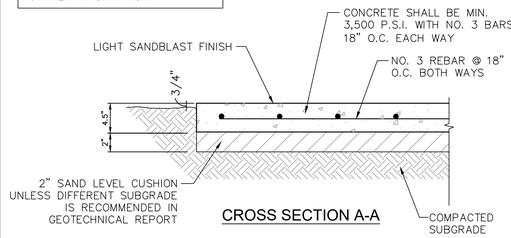
FIRE LANE STRIPING DETAIL

N.T.S.



NOTE:
REFER TO GEOTECH REPORT FOR FURTHER INFORMATION.

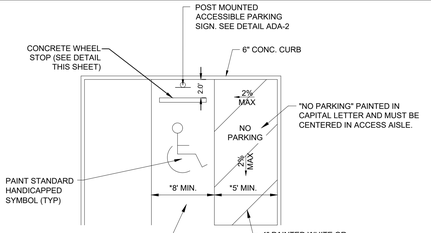
PLAN



CROSS SECTION A-A

CONCRETE SIDEWALK DETAIL

N.T.S.

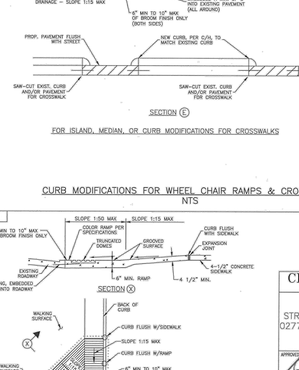


* DIMENSIONS MAY VARY REFER TO DIMENSION CONTROL PLAN

NOTES:
1. MAXIMUM SLOPE FOR ALL PATHS 5%, MAX CROSS FALL IS 2%; FOR THE FIRST FIVE FEET FROM THE DOOR A 2% SLOPE (MAX) MUST BE MAINTAINED.
2. SIGNAGE AND MARKINGS TO BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

ACCESSIBLE PARKING DETAIL

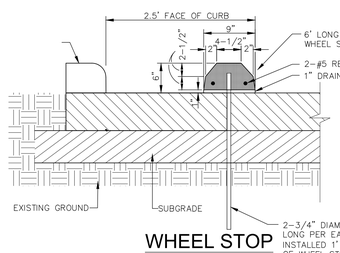
N.T.S.



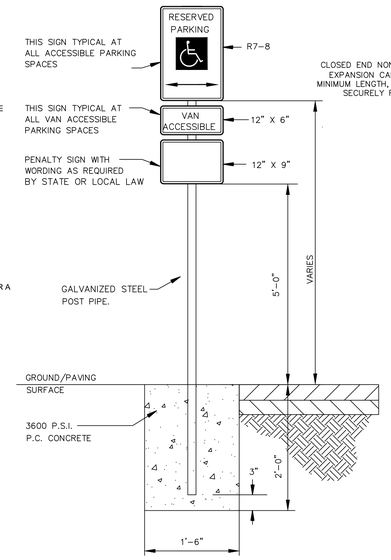
NOTE:
1. ALL TRAFFIC MARKINGS TO BE THERMOPLASTIC AS PER DIMENSIONS SHOWN.

ACCESSIBLE PARKING SYMBOL DETAIL

N.T.S.



WHEEL STOP

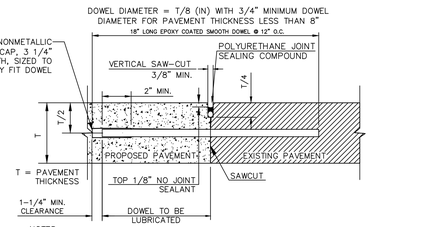


ACCESSIBLE PARKING SIGN

LETTERS, BORDER, AND SYMBOL PAINTED BLUE

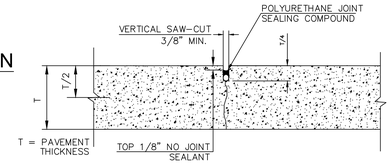
SIGN BACKGROUND PAINTED WHITE

NOTES:
1. PROVIDE IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS)
2. INSTALL WHERE HANDICAP STALLS ARE INDICATED ON PLAN
3. VAN ACCESSIBLE SIGNAGE ON VAN SPACES ONLY – SEE PLAN FOR LOCATION



NOTES:
1. DOWEL BARS SHALL BE DRILLED 9" DEEP, 12" ON CENTER INTO VERTICAL FACE OF EXISTING PAVEMENT BY USE OF A MECHANICAL RIG; CLEAN HOLES THOROUGHLY.
2. **DRILLING BY HAND OR PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.**
3. COMPLETELY FILL HOLE WITH EPOXY GROUT AND INSERT DOWEL WITH EXPANSION CAPS SHOWN IN DETAIL; INSTALL EXPANSION CAPS ON THE FREE END OF THE DOWELS.
4. DOWELS SHALL BE ALIGNED PERPENDICULAR TO THE JOINT.
5. DRILLING, CLEANING, AND GROUTING SHALL BE PERFORMED PER THE EPOXY MANUFACTURER'S REQUIREMENTS FOR THIS SPECIFIC APPLICATION.
6. FOR EPOXY GROUT, THE HOLE DIAMETER SHALL BE NOT MORE THAN 1/8" LARGER THAN THE DOWEL DIAMETER OR AS DIRECTED BY THE EPOXY MANUFACTURER.
6. FOR CEMENT–BASED GROUT, THE HOLE DIAMETER SHALL BE AT LEAST 1/4" LARGER AND NOT MORE THAN 3/8" LARGER THAN THE DOWEL DIAMETER OR AS DIRECTED BY THE EPOXY MANUFACTURER.

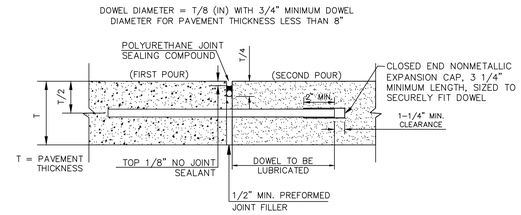
BUTT JOINT



NOTE:
1. TO BE PLACED IN A GRID PATTERN WITH MAX. OF 12.5' O.C.E.W FOR 5" PAVING AND 15' O.C.E.W. FOR 6" AND 7" PAVING.
2. SAW CUT CONTROL JOINTS SHOULD BE CUT WITHIN 4 TO 12 HOURS OF CONCRETE PLACEMENT.

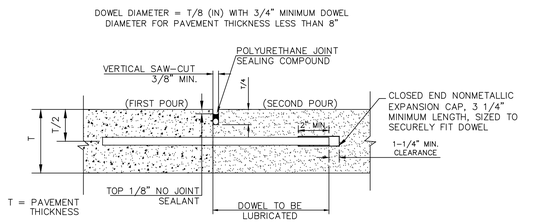
CONTRACTION JOINT

SMOOTH DOWELS AT EXPANSION/CONSTRUCTION JOINTS	
PAVEMENT	LENGTH AND EMBEDMENT
5" PAVEMENT	12" LONG WITH 5" EMBEDMENT @ 12" O.C.
6" PAVEMENT	14" LONG WITH 6" EMBEDMENT @ 12" O.C.
7" PAVEMENT	14" LONG WITH 6" EMBEDMENT @ 12" O.C.



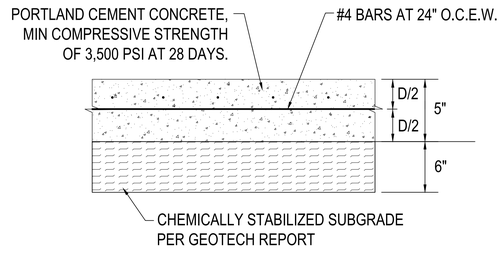
NOTES:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE, DRILLING BY HAND OR PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.
2. TO BE PLACED WHERE PAVEMENT ABUTS ANY STRUCTURE.

TRANSVERSE EXPANSION JOINT



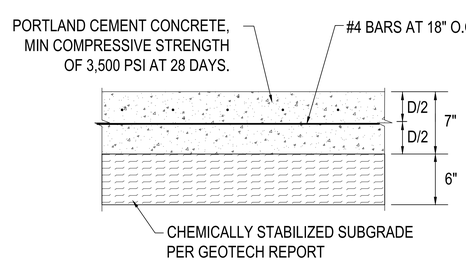
NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE, DRILLING BY HAND OR PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.

CONSTRUCTION JOINT



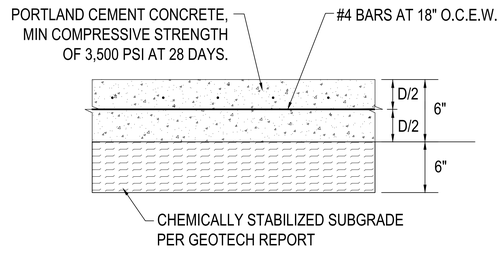
5" PAVEMENT SECTION

NOT TO SCALE



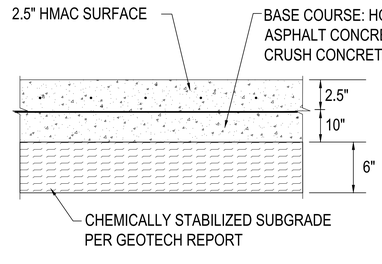
7" PAVEMENT SECTION

NOT TO SCALE



6" PAVEMENT SECTION

NOT TO SCALE



ASHPALT PAVEMENT SECTION

NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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01/17/2025
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CONSTRUCTION DETAILS (2 OF 5)

Job. No.	Sheet No.
1821-13-01	C9.1
Drawn By: CSH	
Date: 01/17/2025	

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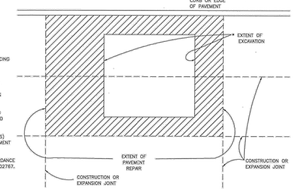
02951-01

CONCRETE PAVEMENT RESTORATION
AGE OF PAVEMENT
LESS THAN OR EQUAL TO 5 YEARS

NOTES:
1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. REPLACE ENTIRE PANEL WIDTH AND LENGTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL WITHIN EXISTING PAVEMENT. PROVIDE HORIZONTAL DOWELS PER SPECIFICATION SECTION 02952-013 IF EXISTING REINFORCING IS BROKEN OFF.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
6. SPECIALTY PAVEMENTS (IE: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
7. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767.
8. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

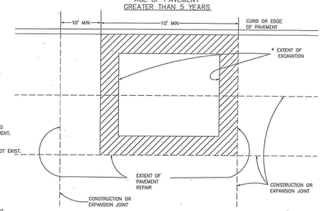


STREET CUT PAVEMENT REPLACEMENT – CONCRETE PAVEMENT LESS THAN 5 YEARS IN AGE
NTS

02951-02

CONCRETE PAVEMENT RESTORATION
AGE OF PAVEMENT
GREATER THAN 5 YEARS

NOTES:
1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. WIDTH:
REPLACE PANEL WIDTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. LENGTH:
a. MINIMUM LENGTH OF PAVEMENT REPAIR ALONG TRAVEL WAY IS 10' FROM THE NEAREST JOINT.
b. IF EDGE OF EXCAVATION IS LESS THAN 10' FROM EXISTING CONSTRUCTION OR EXPANSION JOINT, REPLACE PAVEMENT TO EXISTING JOINT.
4. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF PANEL REPLACEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02952-013) IF REINFORCING IS BROKEN OFF OR DOES NOT EXIST.
5. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
6. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
7. SPECIALTY PAVEMENTS (IE: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
8. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767
9. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

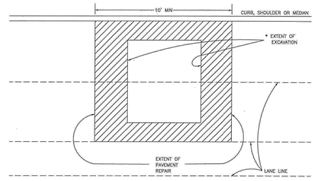


STREET CUT PAVEMENT REPLACEMENT – CONCRETE PAVEMENT OVER THAN 5 YEARS IN AGE
NTS

02951-03

ASPHALT PAVEMENT RESTORATION

PAVEMENT OF ALL AGES



NOTES:
1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. FLEXIBLE BASE:
REPLACE BASE TO SAME THICKNESS PLUS TWO INCHES (2") FOR EXTENT OF EXCAVATION. USE APPROVED BASE MATERIAL TYPES.
3. SURFACE COURSE:
A. WIDTH:
SURFACE MILL AND OVERLAY FULL WIDTH OF LANE(S) TO NEAREST LANE DIVIDER BEYOND EDGE OF EXCAVATION.
B. LENGTH:
MINIMUM LENGTH OF SURFACE MILL ALONG TRAVEL WAY IS 10'.
C. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATION 02764 & 02767.
4. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902-01.

ADDITIONAL REQUIREMENTS FOR ASPHALT OVERLAY ON CONCRETE PAVEMENT:
1. REPLACE CONCRETE FOR EXTENT OF EXCAVATION. REPLACE TO SAME THICKNESS PLUS TWO INCHES (2").
2. WIDTH:
IF EXCAVATION EXTENDS MORE THAN HALF OF A LANE, REPLACE ENTIRE LANE OF CONCRETE. OTHERWISE USE STANDARD DETAIL 02902-01.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF CONCRETE REPLACEMENT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER SPECIFICATIONS SECTION 02952.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN CONCRETE EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

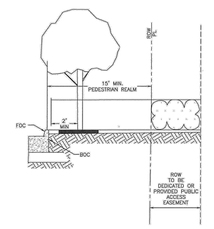
STREET PAVING AND SIDEWALK
02951-01 THROUGH 02951-03

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY:	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFFECTIVE DATE: JUL-01-2020	
FOR CITY OF HOUSTON USE ONLY	

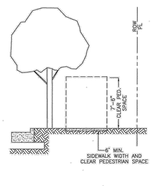
SHEET NO.

STREET CUT PAVEMENT REPLACEMENT – ASPHALT PAVEMENT FOR PAVEMENT OF ALL AGES
NTS

02775-08



ELEVATION



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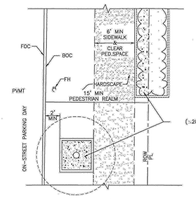
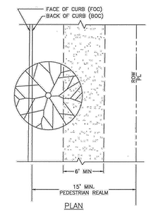


PLAN

PEDESTRIAN REALM PERFORMANCE STANDARD



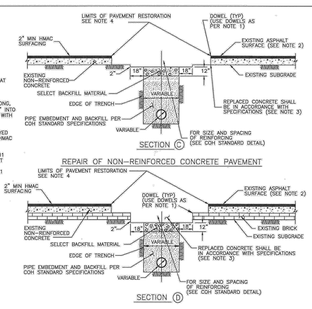
PLAN

SIDEWALK & CLEAR PEDESTRIAN ZONE MANDATORY MINIMUM REQUIREMENT

NOTES
1. REFER TO CHAPTER 42 OF THE CODE OF ORDINANCES, ARTICLE IV – TRANSIT CORRIDOR DEVELOPMENT.

SIDEWALKS AND CLEAR ZONE TRANSIT CORRIDOR STREET
NTS

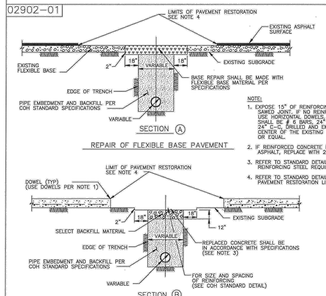
02902-02



NOTE:
1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C.C. DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROC" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED REPLACE WITH SAME THICKNESS OF HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02951-01 FOR REINFORCING STEEL REQUIREMENT
4. REFER TO STANDARD DETAIL 02951-01 FOR PAVEMENT RESTORATION LIMITS.

PAVEMENT REPAIR DETAILS FOR STREET CUTS – NON REINFORCED CONCRETE AND BRICK PAVEMENT
NTS

02902-01



NOTE:
1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C.C. DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROC" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED WITH ASPHALT, REPLACE WITH 2" MIN HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02751-01 FOR REINFORCING STEEL REQUIREMENTS
4. REFER TO STANDARD DETAIL 02951-01 FOR PAVEMENT RESTORATION LIMITS.

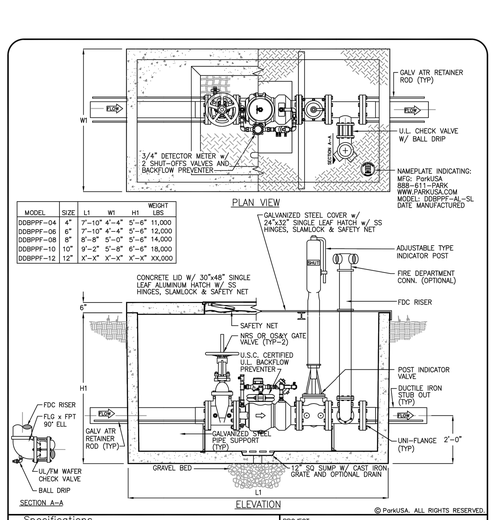
PAVEMENT REPAIR DETAILS FOR STREET CUTS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02775-08 THROUGH 02902-02

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY:	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFFECTIVE DATE: JUL-01-2020	
FOR CITY OF HOUSTON USE ONLY	

SHEET NO.



MODEL	SIZE	L1	W1	H1	WEIGHT LBS
DDBPPF-04	4"	7'-10"	4'-4"	5'-6"	11,000
DDBPPF-06	6"	7'-10"	4'-4"	5'-6"	12,000
DDBPPF-08	8"	8'-8"	5'-0"	5'-6"	14,000
DDBPPF-10	10"	9'-2"	5'-8"	6'-6"	18,000
DDBPPF-12	12"	X'-X"	X'-X"	X'-X"	XX,000

Specifications
CONCRETE: Class I/II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.
ACCESS COVER: 1/4" steel skid-resistant floor plate welded to 3" angle frame with (2) 3"x2-3/8" I-beam supports. Hatch to be furnished with 316 stainless steel bolts and hinges
HATCHWAY: 1/4" Aluminum diamond plate cover with extruded aluminum frame. Hatch to be furnished with 316 stainless steel slam lock & hinges.

Engineering Data
The backflow assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:
FM AWWA UL USC IAPMO CERTIFIED PLANT

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PROJECT:	
CUSTOMER:	
ENGINEER:	
ARCHITECT:	
ORDER #:	
DATE:	PM:

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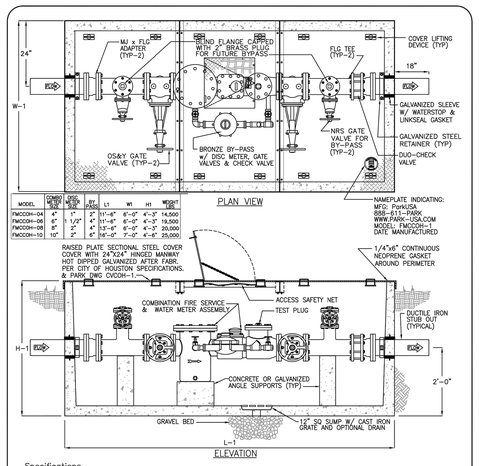
PARK USA
DESIGN FOR WATER

DETECTOR CHECK BACKFLOW PREVENTER ASSEMBLY w/ PIV & FDC
MODEL DDBPPF – 4 THRU 10"

PM	DRN	ENG	DWG. NO.	REV.
DATE 2018			DDBPPF-AL-SL	A



MODEL	CONNECT SIZE	METER SIZE	BY PASS	L1	W1	H1	WEIGHT LBS
FMCCOH-04	4"	1"	2"	11'-6"	6'-0"	4'-3"	14,500
FMCCOH-06	6"	1 1/2"	3"	11'-6"	6'-0"	4'-3"	19,000
FMCCOH-08	8"	2"	4"	13'-6"	6'-0"	4'-3"	20,000
FMCCOH-10	10"	2"	6"	16'-0"	7'-0"	4'-3"	25,000

Specifications
CONCRETE: Class I/II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.
ACCESS COVER: All steel fabrication shall be in accordance to AWA D1.1. Steel shall ASTM A36 carbon steel, and hot dipped galvanized after fabrication in accordance to ASTM A123. Standard cover is rated for 50 PSF.

Engineering Data
The meter assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:
FM AWWA UL USC IAPMO CERTIFIED PLANT

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PROJECT:	
CUSTOMER:	
ENGINEER:	
ORDER #:	PROJ #:
DATE:	LOCATION:

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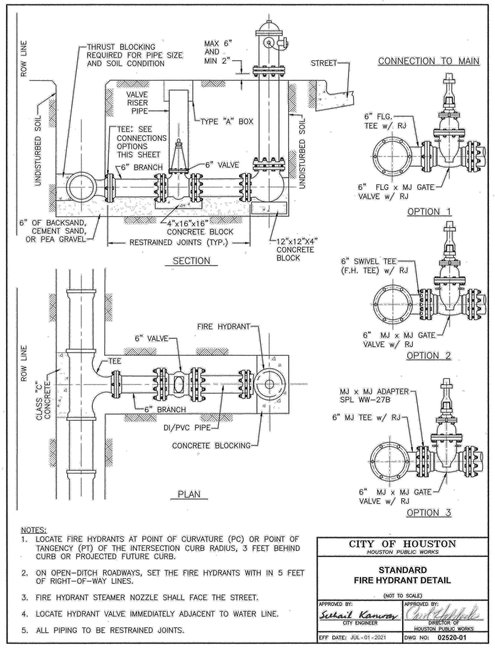
FIRE/DOMESTIC COMBINATION METER ASSEMBLY
MODEL FMCCOH – 4" THRU 10"

APPROVED	PM	PC	DRN	ENG	DWG. NO.	REV.
	DATE 07/2018				FMCCOH-1	A

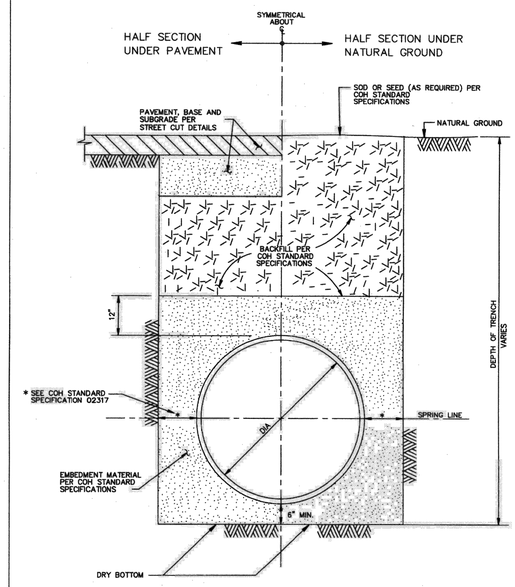


NOTES:
1. LOCATE FIRE HYDRANTS AT POINT OF CURVATURE (PC) OR POINT OF TANGENCY (PT) OF THE INTERSECTION CURB RADIUS, 3 FEET BEHIND CURB OR PROJECTED FUTURE CURB.
2. ON OPEN-DITCH ROADWAYS, SET THE FIRE HYDRANTS WITH IN 5 FEET OF RIGHT-OF-WAY LINES.
3. FIRE HYDRANT STEAMER NOZZLE SHALL FACE THE STREET.
4. LOCATE HYDRANT VALVE IMMEDIATELY ADJACENT TO WATER LINE.
5. ALL PIPING TO BE RESTRAINED JOINTS.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STANDARD
FIRE HYDRANT DETAIL
(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR HOUSTON PUBLIC WORKS
EFF DATE: JUL-01-2021	DWG NO: 02520-01



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER DISTRIBUTION MAIN
BEDDING AND BACKFILL FOR
OPEN CUT TRENCHES
(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL-01-2010	DWG NO: 02317-04

Revision /	Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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CONSTRUCTION DETAILS (3 OF 5)

Job. No. 1821-13-01	Sheet No. C9.2
Drawn By: CSH	
Date: 01/17/2025	

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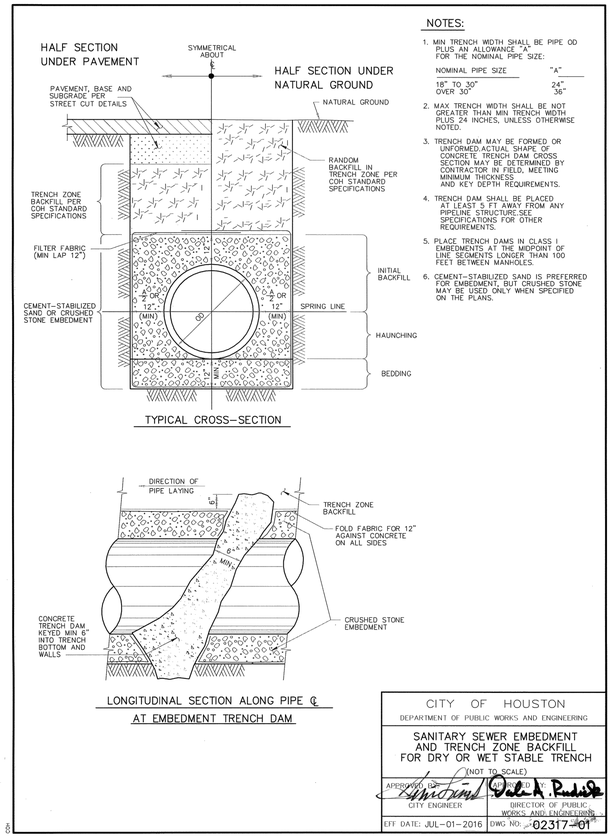


NOTES:

1. MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	36"

2. MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
3. TRENCH DAM MAY BE FORMED OR UNFORMED.ACTUAL SHAPE OF CONCRETE TRENCH DAM CROSS SECTION MAY BE DETERMINED BY CONTRACTOR IN FIELD, MEETING MINIMUM THICKNESS AND KEY DEPTH REQUIREMENTS.
4. TRENCH DAM SHALL BE PLACED AT LEAST 5 FT AWAY FROM ANY PIPELINE STRUCTURE.SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.
5. PLACE TRENCH DAMS IN CLASS I EMBEDMENTS AT THE MIDPOINT OF LINE SEGMENTS LONGER THAN 100 FEET BETWEEN MANHOLES.
6. CEMENT-STABILIZED SAND IS PREFERRED FOR EMBEDMENT, BUT CRUSHED STONE MAY BE USED ONLY WHEN SPECIFIED ON THE PLANS.

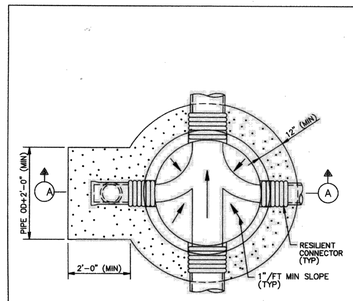
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER EMBEDMENT AND TRENCH ZONE BACKFILL FOR DRY OR WET STABLE TRENCH

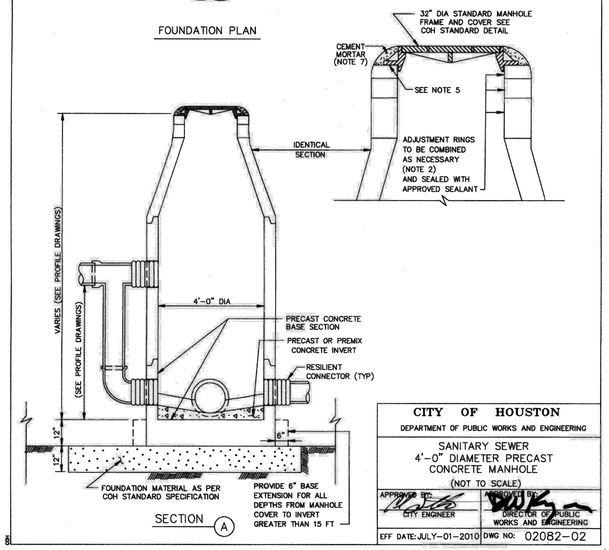
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JUL-01-2016 DWG NO: 02317-01



FOUNDATION PLAN



NOTES:

1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
3. MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 5".
4. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
5. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
6. ECCENTRIC PRECAST CONCRETE MANHOLE MAY BE USED.
7. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
8. MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8 EW.

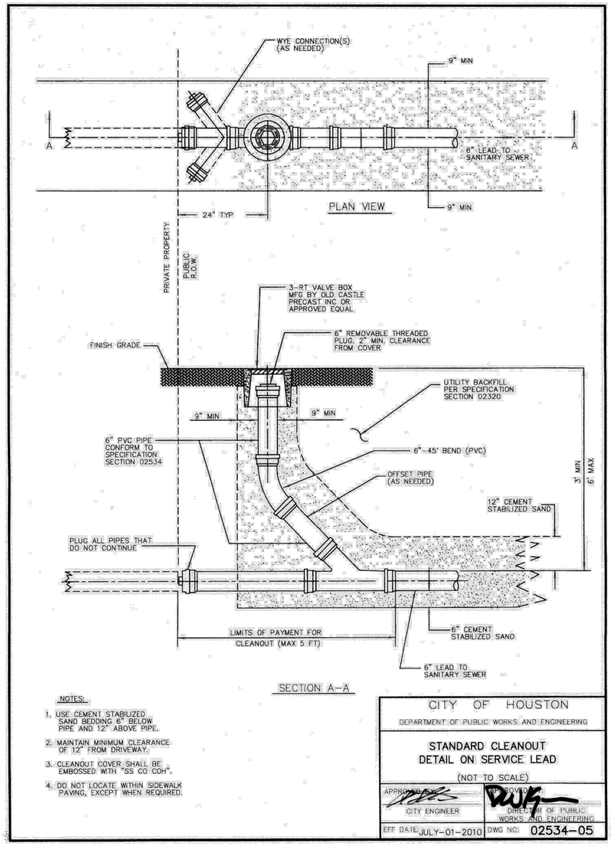
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER 4'-0" DIAMETER PRECAST CONCRETE MANHOLE

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 02082-02



NOTES:

1. USE CEMENT STABILIZED SAND BEDDING 6" BELOW PIPE AND 12" ABOVE PIPE.
2. MAINTAIN MINIMUM CLEARANCE OF 12" FROM DRIVEWAY.
3. CLEANOUT COVER SHALL BE EMBOSSED WITH "SS CO COH".
4. DO NOT LOCATE WITHIN SIDEWALK PAVING, EXCEPT WHEN REQUIRED.

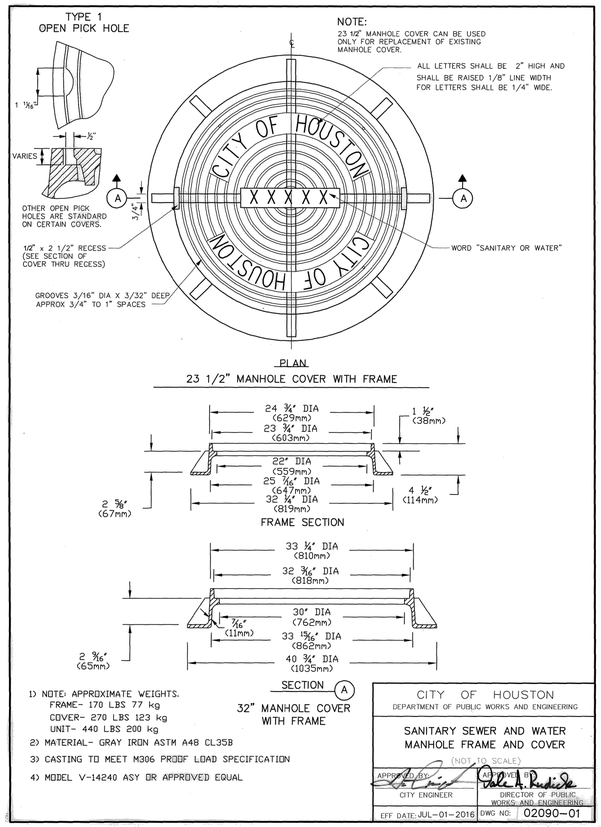
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD CLEANOUT DETAIL ON SERVICE LEAD

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 02534-05



1) NOTE: APPROXIMATE WEIGHTS.
FRAME- 170 LBS 77 kg
COVER- 270 LBS 123 kg
UNIT- 440 LBS 200 kg
2) MATERIAL- GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) MODEL V-14240 ASY OR APPROVED EQUAL

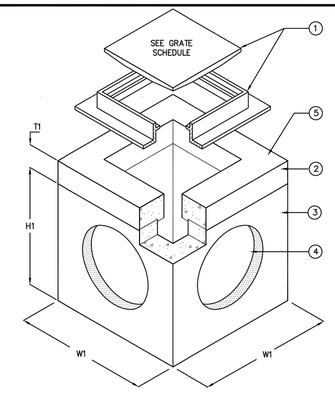
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER AND WATER MANHOLE FRAME AND COVER

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

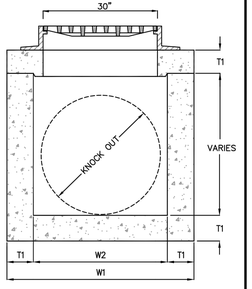
EFF DATE: JUL-01-2016 DWG NO: 02090-01



ISOMETRIC VIEW

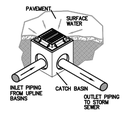
GRATE SCHEDULE

GRATE = 200 lbs OPEN AREA = 489 in²	MODEL No. V4880-1
GRATE = 240 lbs OPEN AREA = 434 in²	MODEL No. V4880-3
GRATE = 270 lbs OPEN AREA = 387 in²	MODEL No. V4880-4



SECTION VIEW

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	CAST IRON FRAME & GRATE
2	1	TOP SECTION
3	1	PRECAST CONCRETE BASIN SECTION
4	4	THIN WALL KNOCKOUT ON ALL 4 SIDES, SEE KO DIMENSION FOR MAXIMUM PIPE O.D.
5	1	NAMEPLATE MFG: ParkUSA 888-611-PARK WWW.PARKUSA.COM MODEL: CB4880



NOTE:
RISER SECTION AVAILABLE IN 6" TO 12" DEPTHS.

MODEL	W1	W2	H1	H2	T1	T2	KO	GRATE SIZE	OPEN AREA	WEIGHT LBS
CB-30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"	490	3,675
CB-36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"	693	4,585
CB-48	60"	48"	54"	48"	6"	6"	48"	38"x38"x2"	693	7,250
CB-60	72"	60"	66"	60"	6"	6"	60"	38"x38"x2"	693	10,500
CB-72	84"	72"	78"	72"	6"	6"	72"	38"x38"x2"	693	15,350
CB-84	96"	84"	78"	72"	6"	6"	72"	38"x38"x2"	693	19,500

SPECIFICATIONS

CONCRETE : CLASS I/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADING.

REINFORCEMENT: GRADE 60 REINFORCED WITH STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30.

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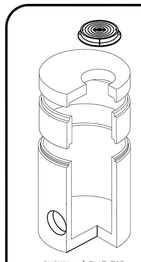
PROJECT:	.
CUSTOMER:	.
ENGINEER:	.
ORDER #:	. PROJ #: .
DATE:	. LOCATION: .

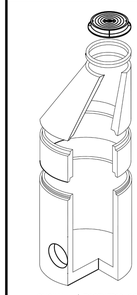
PARK USA
www.parkusa.com 888-611-PARK

TYPE-A GRATE INLET
MODEL CB4880 30" THRU 84"

PM	PC	DRN	ENG	DWG. NO.	REV.
DATE 01/2019				CB4880-1	.



SHOWN w/ FLAT TOP



SHOWN w/ ECCENTRIC CONE

OPTIONS

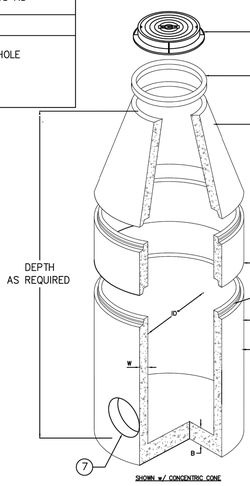
- STEPS
- EXTENDED LIP BASE
- COATINGS
- BOTTOM

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	CAST IRON MANHOLE FRAME & COVER
2	1	3" THICK ADJUSTMENT RINGS AS REQUIRED. FLAT TOPS ARE ARE AVAILABLE.
3	1	CONCENTRIC CONE
4	1	RISER SECTIONS AVAILABLE IN VARYING HEIGHTS.
5	1	48" USES O'RING, OTHER SIZES USE RAMNEK JOINT SEALANT
6	1	BASE SECTION, KNOCKOUTS AS REQUIRED.
7	1	HOLES AS REQUIRED
8	1	NAMEPLATE INDICATING: PRECAST CONCRETE MANHOLE MFG: ParkUSA 888-611-PARK WWW.PARKUSA.COM MODEL PCMHST

DIMENSIONS AND WEIGHTS				
I.D. SIZE (in)	W (in)	B* (in)	RISER WT/Δ' (lb)
48"	5"	6"	868
60"	6"	6"	1300
72"	6"	6"	1811
84"	6"	6"	2350
96"	6"	6"	3090
120"	8"	6"	3500
120"	8"	6"	3500

* MIN. THICKNESS BELOW INVERT

1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED w/ RAM-NEK JOINT SEALANT
3. STRUCTURE TO BE PLACED ON MIN. 6" STABILIZED BASE.



SHOWN w/ CONCENTRIC CONE

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PROJECT:	.
CUSTOMER:	.
ENGINEER:	.
ORDER #:	. PROJ #: .
DATE:	. LOCATION: .

PARK USA
www.parkusa.com 888-611-PARK

PRECAST CONCRETE MANHOLE
STORM SEWER-MODEL PC MHST - 48" THRU 120"

PM	PC	DRN	ENG	DWG. NO.	REV.
DATE 01/2019				PC MHST-1	.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Kimley»Horn
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11700 KATY FREEWAY, SUITE 800, HOUSTON, TX 77079
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WWW.KIMLEY-HORN.COM
TBPE FIRM REGISTRATION # 928

01/17/2025
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CONSTRUCTION DETAILS (4 OF 5)

Job. No. 1821-13-01	Sheet No. C9.3
Drawn By: CSH	
Date: 01/17/2025	

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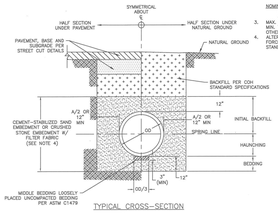
02317-03



TYPICAL CROSS-SECTION

NOTES:

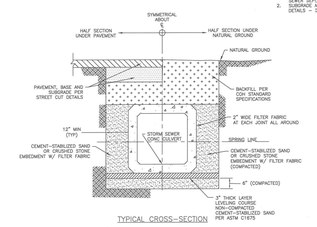
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD. SEE COH STANDARD SPECIFICATION FOR ADDITIONAL TRENCH SAFETY REQUIREMENTS.
2. MIN. TRENCH WIDTH SHALL BE: PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
12" TO 30"	24"
OVER 30"	36"

3. MAX. TRENCH WIDTH SHALL BE NOT GREATER THAN PIPE OD PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. ALTERNATIVE EMBEDMENT BACKFILL MATERIALS FOR STABLE TRENCH CONDITIONS ALLOWED. SEE COH STANDARD SPECIFICATIONS.

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317-05



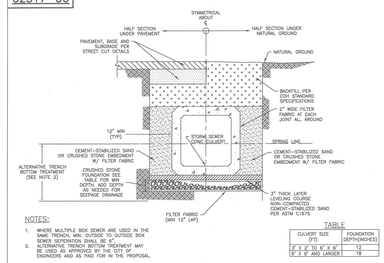
TYPICAL CROSS-SECTION

NOTES:

1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEPARATION SHALL BE 4".
2. SUBGRADE AND PAVEMENT FOR STREET CUT DETAILS = 02951.

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317-06



NOTES:

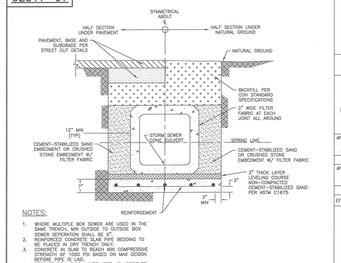
1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEPARATION SHALL BE 4".
2. ALTERNATIVE TRENCH BOTTOM TREATMENT MAY BE USED AS APPROVED BY THE CITY OF ENGINEERS AND AS PAID FOR IN THE PROPOSAL.

TABLE

CULVERT SIZE (ft)	FOUNDATION DEPTH(INCHES)
3' x 2' TO 6' x 6'	12
6' x 6' AND LARGER	18

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR WET STABLE TRENCH
NTS

02317-07



NOTES:

1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEPARATION SHALL BE 4".
2. REINFORCED CONCRETE SLAB PIPE BEDDING TO BE PLACED IN DRY TRENCH ONLY.
3. CONCRETE SLAB SHALL HAVE A MIN COMPRESSIVE STRENGTH OF 3000 PSI BASED ON MAX DESIGN BEFORE PIPE IS LAID.
4. PRECAST SEAL SLAB MAYBE USED AS APPROVED BY CITY ENGINEER.

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL WITH SEAL SLAB
NTS

FIRM INFORMATION	ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

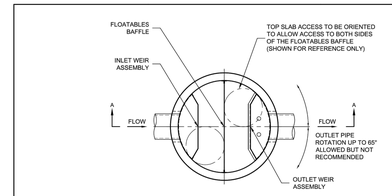
STORM SEWER
02317-03 THROUGH 07

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY:	
DIRECTOR	

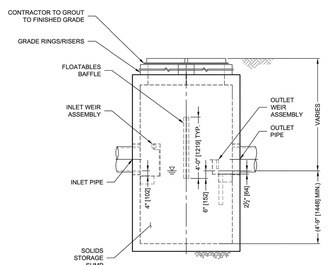
EFFECTIVE DATE: JUL-01-2019

FOR CITY OF HOUSTON USE ONLY

SHEET NO.



PLAN VIEW
TOP SLAB NOT SHOWN



SECTION A-A

SciCloneX™
FOR POTENT INFORMATION, GO TO www.ContechES.com/SCX

SCICLONEX DESIGN NOTES

THE STANDARD SCI> 05 CONFIGURATION IS SHOWN.



FRAME AND COVER
(MAY VARY)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID				
WATER QUALITY FLOW RATE (cfs [L/s])				
PEAK FLOW RATE (cfs [L/s])				
RETURN PERIOD OF PEAK FLOW (yrs)				
RIM ELEVATION				
PIPE DATA:	INVERT	MATERIAL	DIAMETER	
INLET PIPE 1				
INLET PIPE 2				
OUTLET PIPE				

NOTES / SPECIAL REQUIREMENTS:

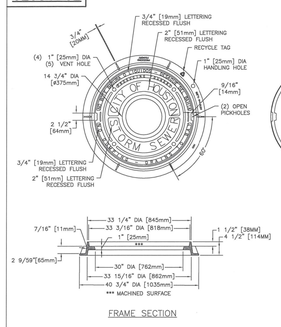
GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. SCICLONEX WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. SCICLONEX STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. SCICLONEX STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE SCICLONEX MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

SCX-05
SCICLONEX
STANDARD DETAIL

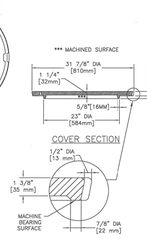
02084-02



FRAME SECTION



BOTTOM VIEW OF COVER



COVER SECTION

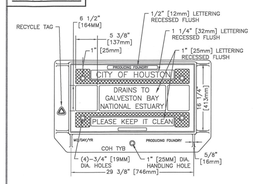
OPEN PICKHOLE DETAIL

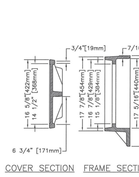
STORM SEWER MANHOLE FRAME AND COVER
NTS

NOTES:

1. APPROXIMATE WEIGHTS:
FRAME = 170 LBS (77KGS)
COVER = 270 LBS (123KGS)
UNIT = 440 LBS (200KGS)
2. MATERIALS = GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V-1420 ASY OR APPROVED EQUAL

02084-03

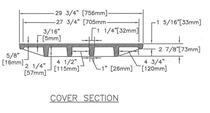




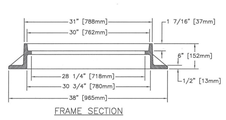
COVER SECTION FRAME SECTION

NOTES:

1. APPROXIMATE WEIGHTS:
FRAME = 125 LBS (57KGS)
COVER = 130 LBS (59KGS)
UNIT = 225 LBS (119KGS)
2. MATERIALS = GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V-4243 ASY OR APPROVED EQUAL



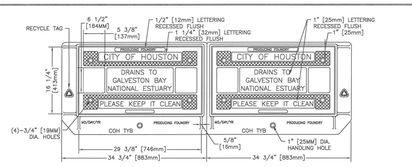
COVER SECTION

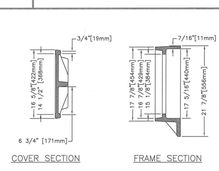


FRAME SECTION

STORM SEWER TYPE "B" INLET ASSEMBLY
NTS

02084-04

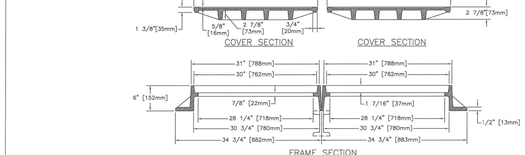




COVER SECTION FRAME SECTION

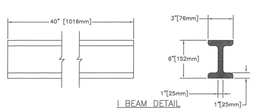
NOTES:

1. APPROXIMATE WEIGHTS:
FRAME = 125 LBS (57KGS)
COVER = 120 LBS (55KGS)
I BEAM = 107 LBS (49KGS)
UNIT = 597 LBS (271KGS)
2. MATERIALS = GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V-4243 ASY OR APPROVED EQUAL



COVER SECTION COVER SECTION

FRAME SECTION



I BEAM DETAIL

STORM SEWER TYPE "BB" INLET DOUBLE ASSEMBLY
NTS

FIRM INFORMATION	ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

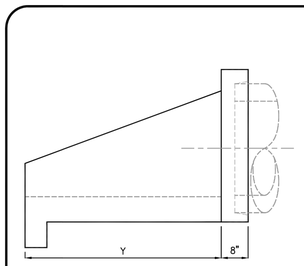
STORM SEWER
02084-02 THROUGH 04

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY:	
DIRECTOR	

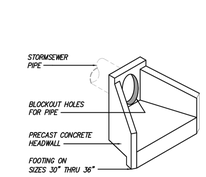
EFFECTIVE DATE: JUL-01-2019

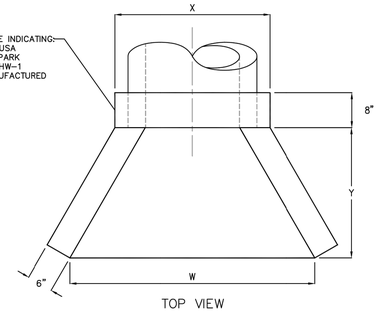
FOR CITY OF HOUSTON USE ONLY

SHEET NO.



SIDE VIEW FRONT VIEW





TOP VIEW

MODEL	PIPE DIA	DIMENSIONS H	W	X	Y	Z	WEIGHT (LBS)
HW-12	12"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-15	15"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-18	18"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,600
HW-21	21"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,300
HW-24	24"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,200
HW-30	30"	3'-6"	7'-6"	4'-1"	4'-0"	9"	6,200
HW-36	36"	4'-1"	9'-3"	4'-8"	5'-0"	9"	8,100
HW-42	42"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000
HW-48	48"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000

SPECIFICATIONS

CONCRETE: CLASS II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION INCLUDING WALLS AND FLOOR.

REINFORCEMENT: GRADE 60 REINFORCED. NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL. BAR BENDING AND PLACEMENT SHALL WITH THE LATEST ACI STANDARDS.

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PROJECT: .
CUSTOMER: .
ENGINEER: .
ORDER #: . PROJ #: .
DATE: . LOCATION: .

PARK USA
www.parkusa.com 888-611-PARK

HEADWALL FOR STORMWATER PIPING
MODEL HW 12" THRU 48"

PM	PC	DRN	ENG	DWG. NO.	REV.
.	.	.	.	HW-1	.

DATE 01/2019

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

Kimley»Horn
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11700 KATY FREEWAY, SUITE 800, HOUSTON, TX 77079
PHONE: 281-558-8700
WWW.KIMLEY-HORN.COM
TBPE FIRM REGISTRATION # 928

01/17/2025
STATE OF TEXAS
RASHARD D. HARRIS
142467
LICENSED
PROFESSIONAL ENGINEER

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CONSTRUCTION DETAILS (5 OF 5)

Job. No.	Sheet No.
1821-13-01	C9.4
Drawn By: CSH	
Date: 01/17/2025	

I:\COMMON\CAD\TREATMENT\214 SCICLONE\04 STANDARD DRAWINGS\01 PROCESS\SCX-04-DTL.DWG 4/25/2025 12:03 PM

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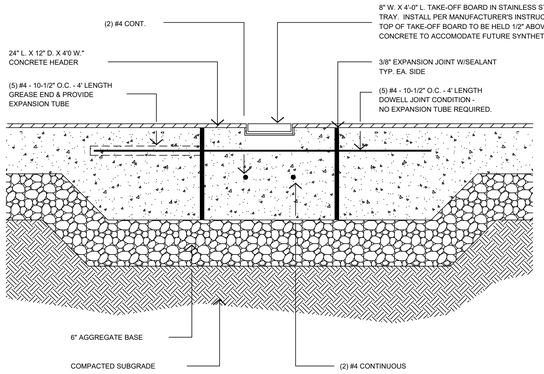
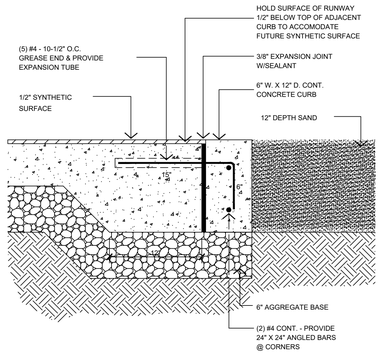
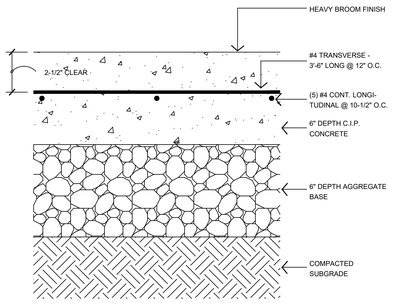


B TAKE-OFF BOARD
SECTION AT TRIPLE/LONGJUMP RUNWAY
SCALE: 1-1/2"=1'-0"



C CONCRETE PERIMETER CURB
SECTION AT LANDING PITS/ RUNWAY INTERFACE
SCALE: 1-1/2"=1'-0"

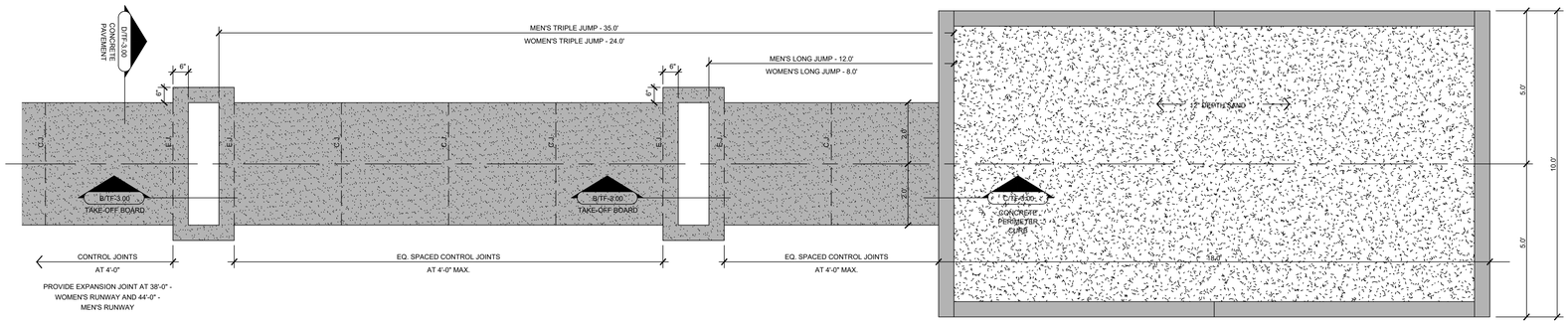


NOTE: PROVIDE 1" DEPTH SAWCUT CONTROL JOINTS AT 4'-0" AT LONG/TRIPLE JUMP & POLEVAULT RUNWAYS. RE: B/TF-4.00 FOR CONTROL JOINTS AT POLE VAULT LANDING AREA.

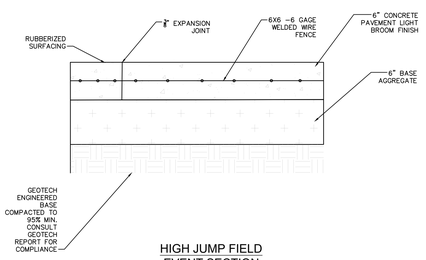
D CONCRETE PAVEMENT
SECTION
SCALE: 3" = 1'-0"

LEGEND

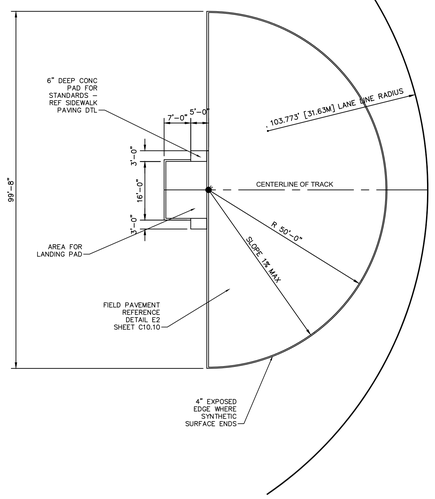
- LIMITS OF SYNTHETIC TRACK SURFACE
- CONCRETE PAVEMENT W/ HEAVY BROOM FINISH



A LONG JUMP/TRIPLE JUMP LANDING PIT - MEN'S & WOMEN'S
ENLARGED PLAN
1/2" = 1'-0"



HIGH JUMP FIELD EVENT SECTION
N.T.S.
E2



HIGH JUMP LAYOUT PLAN
N.T.S.
E1

Date
Revision /

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
KINGWOOD, TX

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WWW.KIMLEY-HORN.COM
TBPE FIRM REGISTRATION F-928

01/17/2025
STATE OF TEXAS
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SPORTS DETAILS

Job. No. 1821-13-01	Sheet No. C9.5
Drawn By: CSH	
Date: 01/17/2025	

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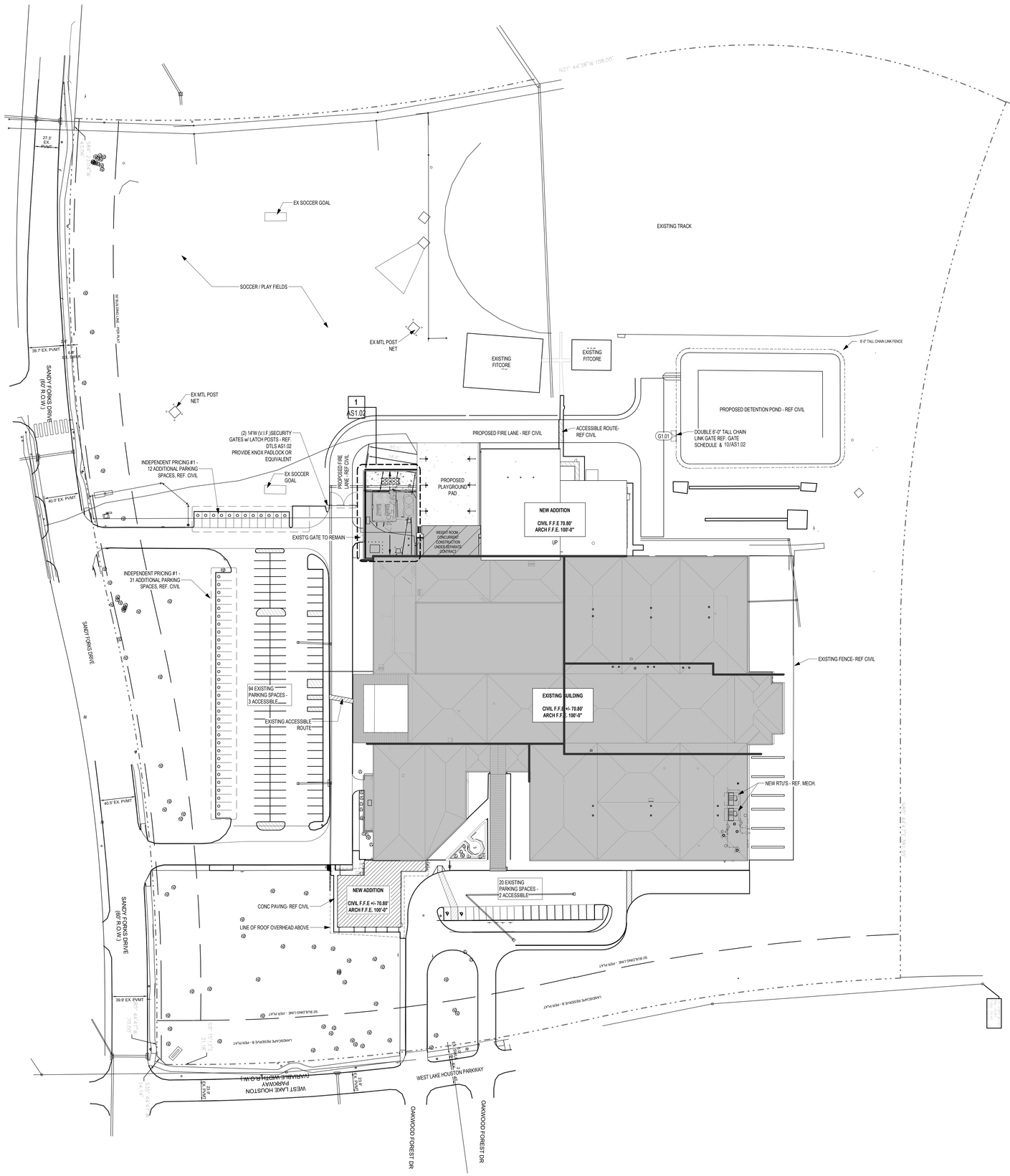


1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

1) ALL SITE INFORMATION INCLUDING, BUT NOT LIMITED TO, PROPERTY LINES, METES & BOUNDS, CONTOURS, EXISTING BUILDINGS, EASEMENTS, TREES, WALKS, DRIVES, FENCES, ETC., TAKEN FROM SURVEY BY:

GLS
455 RICE ROAD, STE 107
TYLER, TX 75703
PHONE (903) 581-3805

2) HUCKABEE AND ASSOCIATES, INC. ALONG WITH THEIR CONSULTANTS HAVE LOCATED, SHOWN , AND NOTED EXISTING SITE FEATURES INCLUDING BUT NOT LIMITED TO PROPERTY LINES, METES AND BOUNDS, GRADE CONTOURS, EXISTING STRUCTURES, EASEMENTS, TREES, FENCES, ROADWAYS, OVERHEAD AND UNDERGROUND UTILITIES, AND OTHER EXISTING FEATURES TO THE BEST OF OUR ABILITY BASED UPON OWNER PROVIDED SURVEYS, EXISTING CONSTRUCTION DOCUMENTS AND OTHER EXISTING DATA COLLECTION IN REGARDS TO THE SPECIFIED SITE. HUCKABEE AND ASSOCIATES, INC. NOR THEIR CONSULTANTS SHALL ASSUME ANY RESPONSIBILITY OR LIABILITIES IN REGARD TO THE ACCURACY OF THE ABOVE MENTIONED OWNER PROVIDED DATA.

3) IF THE CONTRACTOR FINDS ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND THOSE WHICH ARE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY CONTACT THE ARCHITECT.

4) THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH ALL UTILITY ENTITIES TO LOCATE AND MARK ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

5) THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS.

6) REF. SHEET AS2.01 FOR DETAILS AND OTHER SITE IMPROVEMENT DETAILS.

7) FINISH GRADE AT PERIMETER OF THE BUILDING SHALL BE AS SHOWN ON SITE GRADING PLAN. REF. CIVIL DRAWINGS. SITE GRADES SHALL SLOPE UNIFORMLY AWAY FROM THE BUILDING AND INTERSECT WITH ELEVATIONS SHOWN.

8) REF. CIVIL DRAWINGS FOR ALL SITE DIMENSIONS

9) MAKE ALL SLOPES OF WALKS AND DRIVES COMPLY WITH FINISH ELEVATION SHOWN ON CIVIL DRAWINGS. THE LINE OF SLOPE SHALL FORM STRAIGHT LINES BETWEEN FINISH ELEVATIONS WHEN POSSIBLE AND GRADING CONTOURS WHEN STRAIGHT LINES ARE NOT POSSIBLE. VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECT ON JOB. REF. CIVIL.

10) ALL WALKS AND PLAZAS SHALL BE REINFORCED CONCRETE - REF. CIVIL FOR DETAILS. PROVIDE 1/2" EXPANSION JOINT AS SHOWN BY CIVIL OR AT 25'-0" O.C. MAX. AND AT ALL INSIDE CORNERS. PROVIDE TOOLED CONTROL JOINTS AT 5'-0" O.C.B.W. MAX OR AS SHOWN. SEE CIVIL FOR TYPICAL WALK AND JOINT DETAILS.

11) PROVIDE 1/2" EXPANSION JOINT ALONG BUILDING FOUNDATION OR BRICK WHERE CONCRETE WALK IS PRESENT. REF. CIVIL DRAWINGS FOR TYPICAL DETAIL.

12) PROVIDE 1/2" EXPANSION JOINT ALONG BACK OF CONCRETE CURB WHERE WALK IS PRESENT. REF. CIVIL DRAWINGS FOR CURB DETAILS

13) CONTRACTOR SHALL REMOVE ALL EXISTING OBSTRUCTIONS TO NEW CONSTRUCTION, PAVING, WALKS, AND ALL OTHER SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO EXISTING TREES, FENCES, CONCRETE, ROCKS, DEBRIS, POSTS, VEGETATION, UTILITIES (AS NOTED), AND OTHER ITEMS AS NOTED FOR CONSTRUCTION.

14) REF. ELECTRICAL DRAWINGS FOR OUTDOOR LIGHTING REQUIREMENTS.

15) REF. CIVIL DRAWINGS FOR SITE GRADING PLAN, SITE UTILITY PLAN (INCLUDING FIRE HYDRANT LOCATIONS), EROSION CONTROL PLANS, AND CURB AND PAVING REQUIREMENTS AND DETAILS.

16) REF. CIVIL SHEETS FOR SITE GRADING CONTOURS. CONTRACTOR SHALL MAKE ALL CUTS AND FILLS REQUIRED TO ACCOMPLISH ALL WORK SHOWN. GRADE SITE TO TOLERANCES SPECIFIED.

17) REF. CIVIL DRAWINGS FOR THICKNESS AND LOCATIONS OF ALL TYPES OF PAVING.

18) FIRE LANE STRIPING SHALL COMPLY WITH CITY OF *HOUSTON* REQUIREMENTS AND NFPA.

19) PROVIDE DEDICATED STRUCTURAL CONCRETE FOUNDATION PAD FOR ALL ON-SITE ELECTRICAL TRANSFORMERS PER THE ELECTRICAL SERVICE PROVIDER REQUIREMENTS AND/OR SPECIFICATIONS.

20) PROVIDE DEDICATED STRUCTURAL CONCRETE FOUNDATION PAD FOR ALL ON-SITE GENERATORS AND ANY ASSOCIATED GENERATOR ENCLOSURES.

21) EXISTING TREES TO BE SAVED SHALL BE PROTECTED BY FENCING BEFORE CONSTRUCTION BEGINS.

GENERAL SITE NOTES

PROPERTY DESCRIPTION

1) OWNER INFORMATION

A. NAME : HUMBLE ISD
B. ADDRESS: 10203 BIRCHRIDGE DRIVE, HUMBLE, TX 77338

2) PROPERTY INFORMATION
A. NAME: CREEKWOOD MIDDLE SCHOOL
B: ADDRESS: 3603 W. LAKE HOUSTON PKWY, KINGWOOD, TX 77339

3) LEGAL DESCRIPTION
XXXXXXXXXXX
EXISTING MIDDLE SCHOOL

4) ZONING INFORMATION
A. CATEGORY: XXXXXXXXX
B: TRANSLATED CATEGORY: XXXXXX
C. ORDINANCE NUMBER: XXXXX

PARKING REQUIREMENTS

AS OBTAINED FROM CITY ORDINANCE, CHAPTER 26, ARTICLE VIII, SECTION 26-492. THE REQUIRED NUMBER OF OFF STREET PARKING SPACES IS DETERMINED AS FOLLOWS:

C.2. JUNIOR HIGH SCHOOL - 1.0 PARKING SPACE PER EVERY 7 OCCUPANTS

1. EXISTING SPACES
114 SPACES
5 ACCESSIBLE SPACES
119 TOTAL EXISTING SPACES
(EXISTING NON-CONFORMING)

2. NEW SPACES (INDEPENDENT PRICING 1)
42 SPACES ADDED
1 ACCESSIBLE SPACES ADDED
43 TOTAL SPACES ADDED (IF IP1 ACCEPTED)

3. TOTAL SPACES
156 SPACES
6 ACCESSIBLE SPACES (IF IP1 ACCEPTED)
162 TOTAL SPACES (IF IP1 ACCEPTED)

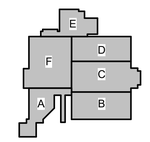
4. REQUIRED SPACES
187 SPACES
6 ACCESSIBLE SPACES
193 TOTAL SPACES

PROPERTY & PARKING NOTES

AS - GATE SCHEDULE

OPENING NUMBER	OPENING HARDWARE SET	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	PANIC HARDWARE	NOTES
G1.01		12' - 0"	6' - 0"	CL GATE (PR)		CHAIN LINK - PROVIDE PADLOCK

PLAN NORTH / TRUE NORTH



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WIRA
TX 24614
STATE OF TEXAS
10/24/2025

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ARCHITECTURAL SITE PLAN

Job No. 1821-13-01
Drawn By: CS
Date: 04.02.2025
Sheet No. 100% QC AS1.01

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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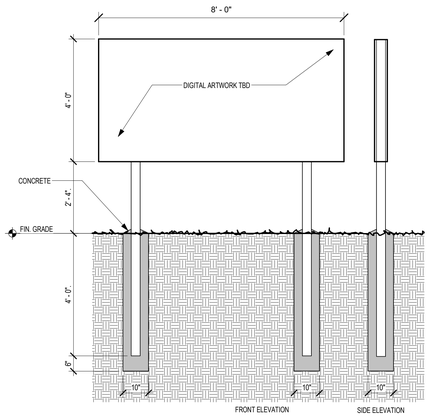
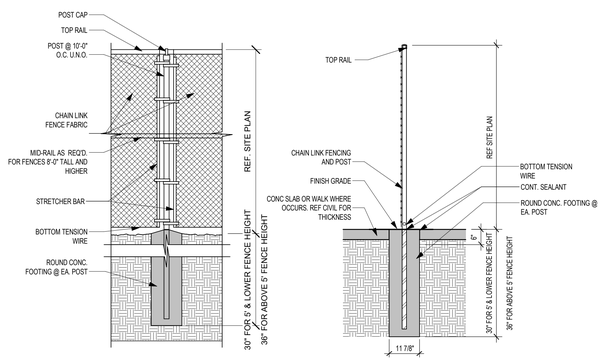
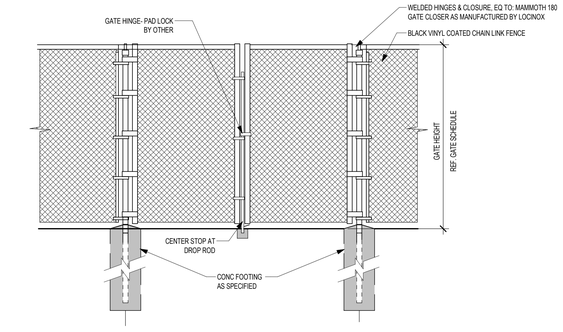
NOTE:
1) CONTRACTOR TO INSTALL ONE SIGN AS LOCATED BY ARCHITECT
2) REFER TO SEC. 01 2100 FOR SIGN ALLOWANCE



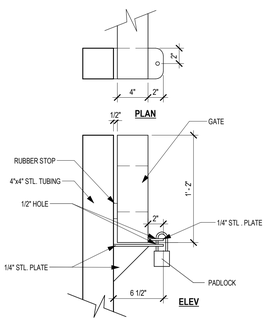
9 PROJECT SIGN
1/2" = 1'-0"



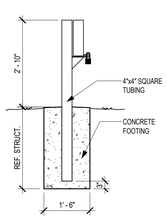
8 TYPICAL CHAIN LINK FENCE DETAILS
1/2" = 1'-0"



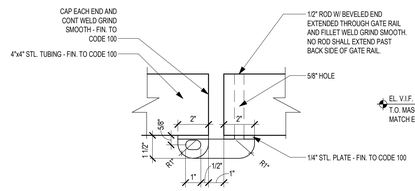
10 CHAIN LINK FENCE DETAIL - ACCESSIBLE EGRESS GATE
1/2" = 1'-0"



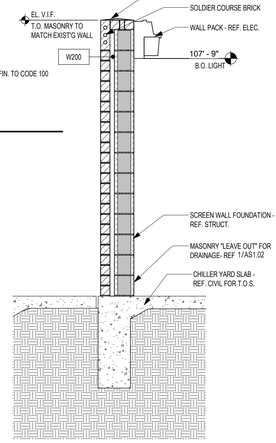
7 LATCH POST DETAIL
1 1/2" = 1'-0"



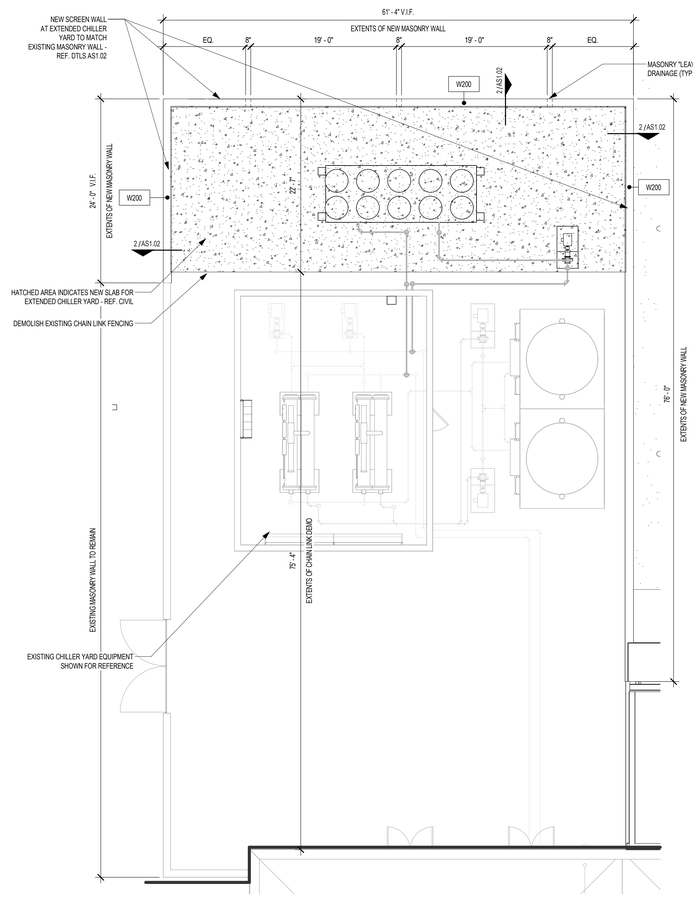
6 SECURITY GATE - LATCH POST
1/2" = 1'-0"



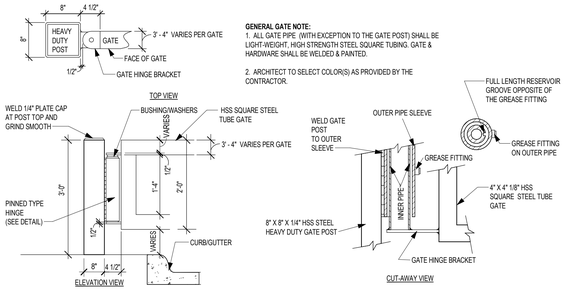
5 LATCH ASSEMBLY PLAN DETAIL
3" = 1'-0"



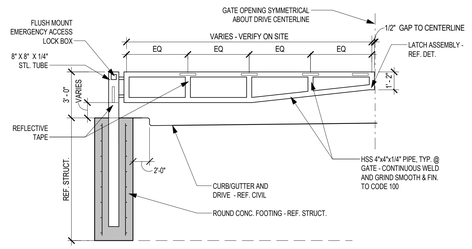
2 CHILLER YARD - SCREEN WALL SECTION
1/2" = 1'-0"



1 ENLARGED PLAN - CHILLER YARD
1/8" = 1'-0" BACK REF: AS1.01



4 GATE HINGE DETAIL
1/2" = 1'-0"



3 SECURITY GATE ELEVATION
1/4" = 1'-0"

Project:
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3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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HUMBLE ISD
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SUSAN F. WISH
REGISTERED ARCHITECT
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10/24/2025

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ARCHITECTURAL SITE DETAILS

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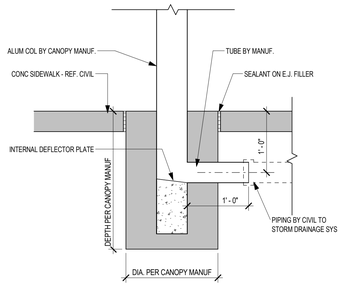
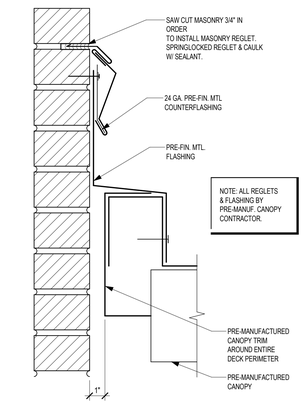
PRE-MANUF CANOPY DETAILS

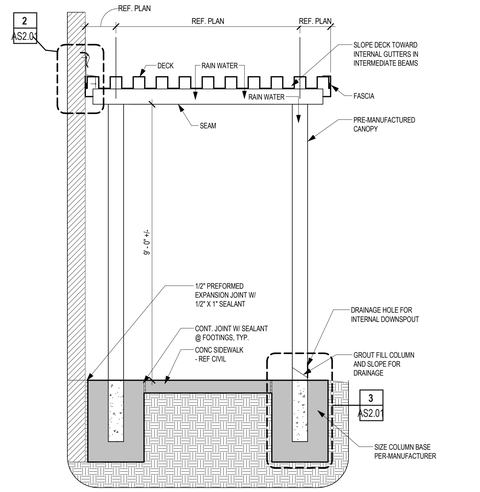
Job No. 1821-13-01	Sheet No. 100% QC AS2.01
Drawn By: Author	
Date: 04.02.2025	



3 DETAIL - CANOPY DRAIN BELOW GRADE
1" = 1'-0"



2 FLASHING DETAIL
3" = 1'-0"



1 PRE-MANUFACTURED CANOPY SECTION
1/2" = 1'-0"

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO\1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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GENERAL

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES. THE CODES LISTED SHALL INCLUDE ALL AMENDMENTS AND ADDENDA IN FORCE AT THE DATE OF THE CONTRACT DOCUMENTS.

   2015 EDITION OF THE INTERNATIONAL BUILDING CODE WITH LATEST CITY OF HOUSTON AMMENDMENTS.

2. WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL AND ARCHITECTURAL CONTRACT DOCUMENTS THE STRICTEST REQUIREMENTS SHALL GOVERN.

3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE AND REPORT ANY DISCREPANCIES OR INCONSISTENCIES FROM ASSUMED CONDITIONS TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.

4. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT THEY ARE CUT AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER.

5. DO NOT SCALE THE DRAWINGS.

6. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

7. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO HYDROSTATIC, EARTH, WIND OR SEISMIC FORCES, AND CONSTRUCTION EQUIPMENT. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

9. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.

10. PERIODIC SITE OBSERVATION BY THE ENGINEER IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

11. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN THE STRUCTURAL MEMBERS.

12. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER.

13. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

14. SEE THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

    SIZE AND LOCATION OF DOOR AND WINDOW OPENINGS,
    SIZE AND LOCATION OF INTERIOR AND EXTERIOR NON-LOAD BEARING PARTITIONS, SIZE AND LOCATION OF CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHAMFERS, GROOVES, INSERTS, ETC., SIZE AND LOCATION OF FLOOR AND ROOF OPENINGS, FLOOR AND ROOF FINISHES,
    STAIR FRAMING AND DETAILS, DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, CEILING AND EXTERIOR WALL ASSEMBLIES.

15. SEE THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:

    PIPES, SLEEVES, HANGERS, TRENCHES, WALL, FLOOR AND ROOF OPENINGS, DUCT PENETRATIONS, ETC., EXCEPT AS SHOWN OR NOTED OTHERWISE ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS, CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES, SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES AND ANCHOR BOLTS FOR MOUNTS.

DESIGN CRITERIA

1. DEAD LOAD MATERIALS ASSUMED IN THE DESIGN ARE SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

2. AN ALLOWANCE OF 15 PSF HAS BEEN MADE FOR PARTITIONS AS A UNIFORMLY DISTRIBUTED LIVE LOAD, WHEREVER PARTITIONS ARE USED AND LOCATION SUBJECT TO CHANGE EXCLUDING PUBLIC LOBBIES, CORRIDORS, RESTROOMS, AND PLACES OF PUBLIC ASSEMBLY.

3. LIVE LOADS:

LOCATION	UNIFORM LOAD	CONCENTRATED LOAD
ROOF	20 PSF REDUCIBLE	300 LBS
STAIRS AND EXITS	100 PSF REDUCIBLE	300 LBS
MECHANICAL ROOMS	150 PSF NON-REDUCIBLE	EQUIP. WEIGHT
GROUND FLR, COMMON AREAS	100 PSF REDUCIBLE	
HANDRAILS AND GUARDRAILS	50 PLF OR 200 LBS APPLIED AT TOP RAIL IN ANY DIRECTION. 50 LBS IN ANY DIRECTION APPLIED AT INTERMEDIATE RAILS.	
GRAB BARS		250 LBS ANY DIRECTION

4. WIND LOADS

ULTIMATE WIND SPEED	141 MPH (3-SEC GUST)
NOMINAL WIND SPEED	110 MPH (3-SEC GUST)
RISK CATEGORY	III
EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFF.	+/- 0.18
COMPONENTS & CLADDING	SEE DIAGRAM

5. SEISMIC LOADS

RISK CATEGORY	III
SITE CLASS	D
IMPORTANCE FACTOR	1.25
MAPPED ACCELERATION PARAMETERS	
SS	0.071
S1	0.042
SPECTRAL RESPONSE COEFFICIENTS	
SDS	0.076
SD1	0.066
SEISMIC DESIGN CATEGORY	A
SEISMIC ANALYSIS NOT REQUIRED PER SECTION 11.7 OF ASCE 7-10	

6. SNOW LOADS

GROUND SNOW LOAD	5.0 PSF
EXPOSURE FACTOR	1.0
IMPORTANCE FACTOR	1.10
THERMAL FACTORS	1.0

7. HANDRAILS, GUARDRAILS AND GRAB BARS (INCLUDING ATTACHMENT TO STRUCTURE) SHALL BE DESIGNED BY THE FABRICATOR FOR THE LOADS INDICATED IN THE REFERENCED BUILDING CODE. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF WHERE THE PROJECT IS LOCATED, REPRESENTING THE FABRICATOR.

8. STAIRS SHALL BE DESIGNED BY THE STEEL FABRICATOR FOR CODE REQUIRED LOADS. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF WHERE THE PROJECT IS LOCATED, REPRESENTING THE FABRICATOR.

FOUNDATION

1. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING GEOTECHNICAL REPORT (AND ANY ADDENDA) PREPARED BY THE FOLLOWING COMPANY:

   COMPANY TERRACON CONSULTANTS, INC.
   REPORT NO. 92235201
   DATED JULY 20, 2023

   ALL RECOMMENDATIONS THEREIN THAT RELATE TO THE WORK SHOWN ON THESE DRAWINGS SHALL BE FOLLOWED.

2. THE FOUNDATION SYSTEM IS DESIGNED BASED ON THE FOLLOWING

   ALLOWABLE BEARING PRESSURE
   SUSTAINED LOADS 3600PSF
   TOTAL LOADS 5400PSF

3. THE GENERAL CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR FOR REVIEW OF FOUNDATION BEARING SURFACE, INSPECTION OF FOUNDATION INSTALLATION, AND PLACEMENT OF REINFORCING STEEL. THE CONTRACTOR SHALL NOT PLACE CONCRETE WITHOUT INSPECTOR'S APPROVAL.

4. THE CONTRACTOR SHALL NOTIFY THE AUTHORIZED INSPECTOR 48 HOURS IN ADVANCE OF ANY MAJOR FOUNDATION POUR.

5. FORM EXPOSED FACES OF GRADE BEAMS.

6. GRADE BEAM BOTTOM STEEL SHALL BE CHAIRED AT 5 FOOT MAXIMUM CENTERS USING BEAM BOLSTERS PROVIDING 3 INCH BOTTOM COVER TO REINFORCING STEEL. BEAM BOLSTERS USED SHALL BE INTENDED FOR SUPPORT ON SOIL.

7. BOTTOM BARS OF GRADE BEAM SHALL BE SPLICED (WHERE REQUIRED) AT THE PIERS ONLY. TOP BARS SHALL BE SPLICED (WHERE REQUIRED) AT THE MIDSPAN OF THE GRADE BEAMS. LAP LENGTH SHALL BE 44 TIMES BAR DIAMETER UNLESS SPECIFIED OTHERWISE. PROVIDE CORNER BARS TO MATCH TOP AND BOTTOM STEEL.

8. VOID FORMS UNDER GRADE BEAMS SHALL BE CAPABLE OF SUPPORTING THE WET WEIGHT OF CONCRETE OVER IT.

9. ALL REINFORCING STEEL FOR SLABS SHALL BE CHAIRED WITH SLAB BOLSTERS FOR SUPPORT ON SOIL AT 4'-0" MAXIMUM CENTERS EACH WAY FOR REINFORCING FOR SLABS. DEPTH OF CHAIRS SHALL PROVIDE COVER TO REINFORCING AS NOTED ON PLANS/DETAILS.

10. SLAB ON GRADE CONSTRUCTION SHALL FOLLOW THE RECOMMENDATIONS OF GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION ACI 302.1R. PROVIDE (3) #3 X 4'-0" TOP AND BOTTOM AT ALL SLAB ON GRADE RE-ENTRANT CORNERS.

11. SUBGRADE PREPARATION SHALL CONFORM TO THE SOILS REPORT NOTED ABOVE. IF REPORT DOES NOT SPECIFY THE AMOUNT OF SELECT FILL, PROVIDE FILL AS REQUIRED ABOVE TO REDUCE PVR TO 1 INCH.

12. VAPOR RETARDER SHALL HAVE NO MORE THAN 0.01 PERMS AS TESTED BEFORE AND AFTER MANDATORY CONDITIONING (ASTM E 1745 SECTION 7.1 AND SUB-PARAGRAPHS 7.1.2-5), MEET OR EXCEED THE REQUIREMENTS OF ASTM E 1745 CLASS A AND BE NO LESS THAN 15 MILS THICK.

13. ALL VAPOR RETARDER SEAMS SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND TAPED WITH MANUFACTURER'S TAPE. ALL PENETRATIONS, BLOCK-OUTS, AND OPENINGS SHALL BE SEALED USING A COMBINATION OF THE VAPOR RETARDER, MASTIC AND MANUFACTURER'S TAPE. DO NOT PENETRATE VAPOR RETARDER WITH FORMWORK STAKES. USE STEGO BEAST FORM STAKES OR EQUIVALENT WHERE REQUIRED.

14. REMOVE ALL VEGETATION, TREE ROOTS, ORGANIC SOIL, EXISTING FOUNDATIONS, PAVED AREAS, AND ANY UNDESIRABLE MATERIALS FROM THE CONSTRUCTION AREA.

15. SCARIFY THE SUBGRADE, ADD MOISTURE, OR DRY AS NECESSARY AND RECOMPACT TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR TEST).

16. THE SUBGRADE AREAS SHALL THEN BE PROOF-ROLLED WITH HEAVY EQUIPMENT. ANY SOILS DEFLECTING EXCESSIVELY UNDER MOVING LOADS SHALL BE UNDERCUT TO FIRM SOILS AND RECOMPACTED. THE MOISTURE CONTENT AT THE TIME OF COMPACTION OF SUBGRADE SOILS SHALL BE WITHIN -2% TO +2% OF THE OPTIMUM PROCTOR VALUE.

17. STRUCTURAL FILL BENEATH THE BUILDING AREA SHALL CONSIST OF SANDY CLAYS WITH A A PLASTICITY INDEX BETWEEN 10 AND 20. STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING EIGHT INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN -2% TO +2% OF THE OPTIMUM VALUE.

18. PROVIDE MINIMUM 54 INCHES OF SELECT FILL UNDER BUILDING SLAB TO SEPARATE BUILDING SLAB FROM THE EXISTING GRADE. SELECT FILL PAD SHALL EXTEND A MINIMUM OF 5FEET BEYOND THE EDGE OF THE BUILDING AREAS. THIS OVERBUILD REQUIREMENT MAY BE OMITTED WHERE THE BUILDING ADDITION ARE LOCATED IMMEDIATELY ADJACENT TO THE EXISTING STRUCTURES. REMOVE EXISTING GRADE AS REQUIRED. CONTRACTOR SHALL RETAIN A TESTING LABORATORY FOR THE DETERMINATION OF SOIL COMPACTION AND CONCRETE TESTING. SUBMIT RESULTS TO ARCHITECT.

19. THE CONTRACTOR SHALL ENSURE THE SELECT FILL MATERIAL IS PROPERLY MIXED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND TESTING LAB AND SHALL MAKE PROVISIONS FOR SOIL PULVERIZATION OR OTHER MIXING METHODS AS REQUIRED.

20. THE BEARING STRATUM OF EACH DRILLED PIER SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR PRIOR TO POURING OF CONCRETE.

21. THE BOTTOM ELEVATION OF PIERS IS SHOWN ON THE DRAWINGS FOR BID PURPOSES. THE ACTUAL REQUIRED BEARING ELEVATION MAY VARY AS REQUIRED TO PROVIDE PROPER CAPACITY AS DETERMINED BY THE GEOTECHNICAL ENGINEER. FOOTINGS SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.

22. PROVIDE AND INSTALL 1/8 INCH STEEL TEMPLATES TO ACCURATELY SET VERTICAL PIER REINFORCING STEEL, AND ANCHOR BOLTS FOR STEEL COLUMNS.

23. THE PRESENCE OF SAND SEAMS AND SLICKENSIDES IN THE LAYERS MAY CAUSE SLOUGHING DURING PIER EXCAVATION. THIS MAY REQUIRE THE USE OF TEMPORARY STEEL CASING.

24. REDUCING THE POTENTIAL FOR CAVING OF THE BELL CAN BE ACHIEVED BY LIMITING THE BELL TO SHAFT DIAMETER RATIO TO 2:1 OR TO INSTALL STRAIGHT SHAFT FOOTINGS.

25. THE GROUNDWATER LEVELS MAY FLUCTUATE SEASONALLY AND WITH CLIMATIC CHANGES. SEEPAGE OF GROUNDWATER INTO THE EXCAVATIONS IS POSSIBLE AND SEEPAGE FROM "PERCHED" WATER TRAPPED IN THE SOILS MAY ALSO OCCUR. THE CONTRACTOR SHALL MAKE PROVISIONS FOR DEWATERING THE FOOTING EXCAVATION IF GROUNDWATER IS ENCOUNTERED.

26. CONCRETE SHALL BE PLACED AS SOON AS POSSIBLE AFTER THE FOOTING EXCAVATIONS ARE COMPLETED TO REDUCE THE POTENTIAL FOR WATER SEEPAGE AND TO MINIMIZE THE DISTURBANCE TO THE BEARING AREA. IN NO CASE, SHOULD AN EXCAVATION BE LEFT OPEN OVERNIGHT.

CONCRETE

1. ALL ASPECTS OF WORK RELATING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   CURRENT EDITION OF ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
   CRSI MANUAL OF STANDARD PRACTICE

2. STRUCTURAL CONCRETE 28-DAY COMPRESSIVE STRENGTHS AND TYPES ARE AS FOLLOWS:

LOCATION	STRENGTH	TYPE	AGGREGATE SIZE
FOUNDATIONS	3000 PSI	NORMAL WT	1 1/2"
SLAB-ON-GRADE	3000 PSI	NORMAL WT	1 1/2"
METAL DECK SLAB	3000 PSI	NORMAL WT	1"

3. THERE SHALL BE NO HORIZONTAL COLD JOINT IN ANY CONCRETE POUR.

4. ADMIXTURES USED SHALL BE COMPATIBLE WITH FLOOR TREATMENTS. FINISH APPLICATOR SHALL APPROVE ADMIXTURES AND CURING COMPOUNDS PRIOR TO USE.

5. CONCRETE FOR SLAB-ON-GRADE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.45. ALL OTHER CONCRETE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.50. ADJUST CONCRETE STRENGTH BEYOND MINIMUM SPECIFIED ABOVE TO MAINTAIN MAXIMUM WATER-CEMENT RATIO.

6. FLY ASH CONFORMING TO ASTM C618, MAY BE USED UNLESS NOTED OTHERWISE. THE MAXIMUM AMOUNT OF FLY ASH SHALL BE 25% OF THE TOTAL CEMENTITIOUS MATERIAL BY WEIGHT.

7. AT POLISHED OR STAINED CONCRETE, THE FLY ASH ALLOWANCE IN NOTE 6 DOES NOT APPLY. NO FLY ASH IS PERMITTED IN THESE MIXES. ADDITIONALLY, NO AIR ENTRAINMENT IS ALLOWED EITHER. MAX WATER CEMENT RATIO SHALL BE 0.45. WET CURING IS REQUIRED AT POLISHED CONCRETE. USE ONE SOURCE FOR CEMENT, AGGREGATES, AND POZZOLANS THROUGHOUT THE PROJECT. DO NOT USE CALCIUM CHLORIDE-BASED ADMIXTURES. NON-CHLORIDE ADMIXTURES MAY BE USED. GENERAL CONTRACTOR SHALL PROTECT AREAS TO RECEIVE CONCRETE FINISH AT ALL TIMES DURING CONSTRUCTION TO PREVENT OILS, DIRT, METAL, EXCESSIVE WATER, AND OTHER POTENTIALLY DAMAGING MATERIALS FROM AFFECTING THE FINISHED CONCRETE SURFACE.

8. SUBMIT SHOP DRAWINGS TO ARCHITECT AND ENGINEER INDICATING LOCATIONS OF CONSTRUCTION JOINTS TO REVIEW PRIOR TO PLACING CONCRETE. PLACE JOINTS AT LOCATIONS TO MINIMIZE THE EFFECTS OF SHRINKAGE AS WELL AS BEING PLACED AT POINTS OF LOW STRESS.

9. ROUGHEN CONCRETE SURFACES TO 1/4 INCH AMPLITUDE WHERE MASONRY WALLS INTERSECT CONCRETE OR WHERE NEW CONCRETE INTERFACES WITH EXISTING CONCRETE.

10. MECHANICAL PIPES AND ELECTRICAL CONDUITS WHICH PASS THROUGH SLAB-ON-GRADE, CONCRETE JOINTS TO REVIEW PRIOR TO PLACING CONCRETE. PLACE JOINTS AT LOCATIONS TO MINIMIZE THE EFFECTS OF SHRINKAGE AS WELL AS BEING PLACED AT POINTS OF LOW STRESS. ROUGHEN CONCRETE SURFACES TO 1/4 INCH AMPLITUDE WHERE MASONRY WALLS INTERSECT CONCRETE OR WHERE NEW CONCRETE INTERFACES WITH EXISTING CONCRETE

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STEEL ROOF DECK (WITH RIGID INSULATION BOARD)

1. THE STEEL ROOF DECK SHALL BE OF THE TYPE AND GAUGE CALLED FOR ON THE DRAWINGS. STEEL DECK SHALL BE MANUFACTURED FROM STEEL CONFORMING TO ASTM A653 STRUCTURAL QUALITY GRADE 33 OR HIGHER. THE DESIGN, FABRICATION, AND ERECTION OF ALL ROOF DECK SHALL CONFORM TO THE SDI MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS.
2. STEEL DECK SHALL BE GALVANIZED WITH A PROTECTIVE ZINC COATING CONFORMING TO ASTM A653-G90.
3. MINIMUM BEARING OF STEEL DECK ON SUPPORTS SHALL BE 2 INCHES. ALL 3 IN DEEP STEEL DECK SHALL HAVE A MINIMUM BEARING OF 3 INCHES. END LAPS OF SHEETS SHALL BE A MINIMUM OF 2 INCHES AND SHALL OCCUR OVER SUPPORTS. SHEETS SHALL BE ATTACHED TO SUPPORTING STEEL MEMBERS BY WELDING AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. UPON COMPLETION OF ERECTION, ALL WELDS ON STEEL DECK SHALL BE DE-SLAGGED, CLEANED, AND TOUCHED UP WITH A ZINC RICH PRIMER.
4. PROVIDE ROOF DECK CONSTRUCTION WHICH IS LISTED AND CONFORMS TO THE UL FIRE RESISTANCE DIRECTORY AND BUILDING MATERIALS DIRECTORY. DECK ATTACHMENT SHALL BE INCREASED ABOVE THE MINIMUM SPECIFIED HEREIN AS REQUIRED TO ACHIEVE A CLASS 90 UPLIFT RATING.
5. DECK SUPPORTED ON COLD-FORMED STEEL FRAMING SHALL BE ATTACHED TO EACH SUPPORT MEMBER USING #12 TEK SCREWS AT ALL RIBS WHERE SIDES LAP AND EACH RIB IN BETWEEN.
6. PROVIDE MINIMUM 20 GAUGE RIDGE AND VALLEY PLATES, MINIMUM 20 GAUGE CANT STRIPS, MINIMUM 14 GAUGE SUMP PANS, MINIMUM 20 GAUGE INSIDE OR OUTSIDE CLOSURE CHANNELS, MINIMUM 20 GAUGE BUTT STRIPS AT CHANGE OF DECK DIRECTIONS, MINIMUM 20 GAUGE FILLER SHEETS, AND RUBBER CLOSURES AS REQUIRED TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF INSULATION AND ROOFING.
7. DO NOT HANG LOADS FROM METAL DECK. PROVIDE ENGINEERED STRUCTURAL SYSTEM TO HANG ALL LOADS FROM STEEL JOISTS OR BEAMS. THIS INCLUDES BUT IS NOT LIMITED TO METAL STUD SOFFIT OR CEILING FRAMING, MECHANICAL OR PLUMBING EQUIPMENT, ETC.
8. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC., FOR SIZES AND LOCATIONS OF DECK OPENINGS AND FOR DECK OPENINGS SMALLER THAN 10 INCHES NOT SHOWN ON THE STRUCTURAL DRAWINGS. ROOF OPENINGS LESS THAN 6 INCHES SQUARE OR DIAMETER REQUIRE NO REINFORCEMENT. OPENINGS 6 INCHES TO 10 INCHES INCLUSIVE SHALL BE REINFORCED WITH A 20 GAUGE GALVANIZED PLATE WELDED TO THE DECK AT EACH CORNER AND 6 INCHES O.C. WITH 5/8 INCH DIAMETER PUDDLE WELDS OR SHEET METAL SCREWS. SEE TYPICAL DETAILS FOR FRAMING REQUIREMENTS AT OPENINGS LARGER THAN 10 INCHES. OPENINGS LARGER THAN 6 FEET SHALL BE REFERRED TO THE ENGINEER FOR FRAMING.
9. METAL DECK SPANS SHALL NOT EXCEED THE MAXIMUM CENTER TO CENTER SPANS AS REQUIRED BY SDI. WHERE POSSIBLE, ALL METAL DECK SHALL EXTEND OVER THREE OR MORE SUPPORTS. TWO SPAN DECK SHALL BE USED ONLY WHERE DECK LAYOUT DOES NOT PERMIT THE USE OF THREE SPANS. SINGLE SPAN DECK IS NOT PERMITTED.

COLD-FORMED STEEL

1. ALL ASPECTS OF WORK RELATING TO COLD-FORMED (LIGHT GAGE) STEEL CONSTRUCTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, INCLUDING ANY SUPPLEMENTS.
2. COLD-FORMED STEEL MEMBERS SHALL BE OF THE SIZE, GAUGE, AND SPACING SHOWN ON THE DRAWINGS. FLANGE WIDTHS SHALL BE 1 5/8" WITH 1/2" RETURNS UNLESS SPECIFIED OTHERWISE.
3. ALL FRAMING MEMBERS SHALL BE MANUFACTURED FROM CORROSION RESISTANT STEEL CONFORMING TO ASTM A653 (G60). 25 GAUGE THROUGH 18 GAUGE MEMBERS SHALL BE FORMED FROM STEEL HAVING A MINIMUM 33 KSI YIELD POINT PER ASTM A653 GRADE 33. 16 GAUGE THROUGH 12 GAUGE MEMBERS SHALL BE FORMED FROM STEEL HAVING A MINIMUM 50 KSI YIELD POINT PER ASTM A446 GRADE 50.
4. SPLICES IN FRAMING COMPONENTS EXCEPT RUNNERS AND TRACKS SHALL NOT BE PERMITTED.
5. AT LOAD BEARING WALLS SUPPORTING FLOOR OR ROOF JOISTS, LOCATE STUDS DIRECTLY UNDER THE JOISTS OR PROVIDE LOAD DISTRIBUTING MEMBER BETWEEN STUDS TO SUPPORT JOISTS.
6. FASTENING OF COMPONENTS SHALL BE WITH SELF-DRILLING SCREWS OR WELDING. WELDING SHALL BE DONE USING FILLET, PLUG, BUTT OR SEAM WELDS WITH A MINIMUM 3/32 IN. AWS TYPE 6013 WELDING RODS. WELD AREAS SHOULD BE RE-TOUCHED WITH THE APPROPRIATE PAINT OR COLD-GALVANIZING TO RETAIN CORROSION RESISTANCE. ALL WORK SHALL BE COMPLETED BY QUALIFIED WELDERS IN ACCORDANCE WITH AWS D1.3 STANDARDS.
7. PROVIDE HORIZONTAL BRIDGING IN ALL STUD SYSTEMS AT 4'-0" O.C. VERTICALLY FOR AXIALLY LOADED STUDS AND AT 6'-0" O.C. FOR NON-LOAD BEARING STUDS. WELD AT EACH STUD INTERSECTION.
8. SCREWS SHALL BE SELF-DRILLING AND OF TYPE S-12, ASTM C-954, EXCEPT THAT TYPE S, ASTM C-1002 MAY BE USED FOR 20 GAUGE OR 22 GAUGE MATERIAL ONLY. SCREWS SHALL BE 3/8" TO 1/2" LONGER THAT TOTAL MATERIAL THICKNESS.
9. SHEATHING MATERIALS FOR SHEAR WALLS MUST EXTEND AND BE CONNECTED TO THE TOP AND BOTTOM TRACKS.
10. STEEL STRUCTURAL STUD TRACK OF THE SAME GAUGE AS THE STUDS SHALL BE USED AT THE TOP AND BOTTOM OF ALL STUD WALLS UNLESS NOTED OTHERWISE. STUDS SHALL SIT FLAT AGAINST THE WEB OF THE STUD TRACK AND BE ATTACHED WITH 1-#8 X 5/8" SCREW EACH SIDE OF EACH STUD.
11. WEB PUNCH-OUTS SHOULD BE COORDINATED WITH BRACING AND UTILITY REQUIREMENTS. WEB PUNCH-OUTS OR WEB OPENINGS SHALL BE LOCATED A MINIMUM OF 6" OR MEMBER DEPTH, WHICHEVER IS GREATER, FROM STUD OR JOIST BEARING POINTS.
12. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
13. FOR NON-LOAD BEARING STUDS, CONNECTIONS SHALL ACCOUNT FOR THE DEFLECTION OF THE STRUCTURAL MEMBERS TO WHICH THE STUDS ARE ATTACHED (1" MINIMUM). PROVIDE SLIDING CLIPS AND/OR SLIP TRACKS.
14. JACK STUDS OR CRIPPLES SHALL BE INSTALLED BELOW WINDOW SILLS, ABOVE WINDOW AND DOOR HEADS, AND ELSEWHERE TO FURNISH SUPPORT, AND SHALL BE SECURELY ATTACHED TO CONNECTING MEMBERS.
15. PRIOR TO FABRICATION, THE CONTRACTOR SHALL SUBMIT ERECTION DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
16. TRACK SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE. ABUTTING PIECES OF TRACK SHALL BE SECURELY SPLICED TOGETHER.
17. THE DESIGN OF ALL COLD-FORMED STEEL SHALL BE PERFORMED BY THE COLD-FORMED METAL CONTRACTOR. THE DESIGN SHALL INCLUDE MEMBER SIZES AND CONNECTION. THE DESIGN SHALL CONSIDER MEMBER DIMENSIONS NOTED ON THE DRAWINGS. THE COLD-FORMED CONTRACTOR SHALL SUPPLY DRAWINGS SEALED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. THE OUT-OF-PLANE DEFLECTION OF STUDS SHALL BE LIMITED TO H/600 (H = UNSUPPORTED HEIGHT OF STUDS) IF USED FOR MASONRY OR STONE BACKUP, H/720 FOR ADHERED VENEER, FOR OTHER CONDITIONS THE DEFLECTION SHALL BE LIMITED TO H/360.
18. COLD-FORMED STEEL FRAMING SHALL HAVE A MINIMUM BASE METAL THICKNESS OF 0.43 (18 GA.) IF USED FOR MASONRY OR STONE BACKUP.
19. DO NOT HANG STUD FRAMING FROM METAL DECK ROOF. FRAMING SHALL BE SUPPORTED BETWEEN ROOF FRAMING MEMBERS.
20. FOR ANCHORED MASONRY VENEER, THE DISTANCE BETWEEN THE INSIDE FACE OF THE VENEER AND THE COLD-FORMED STEEL, MASONRY, WOOD, OR CONCRETE BACKUP SHALL BE AS SPECIFIED BY THE ARCHITECT, BUT NOT GREATER THAN 4 1/2". A MINIMUM 1 INCH AIR SPACE SHALL BE PROVIDED.
21. ANCHORED MASONRY VENEER NOT LAID IN A RUNNING BOND SHALL HAVE A JOINT REINFORCEMENT OF AT LEAST ONE WIRE, OF SIZE W1.7, SPACED AT A MAXIMUM OF 18 INCHES ON CENTER VERTICALLY.

CONCRETE MASONRY

1. ALL MASONRY MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE RECOMMENDATIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION AND THE FOLLOWING CODES AND SPECIFICATIONS:

   ACI 530-11 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES
2. ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90. THE MINIMUM COMPRESSIVE STRENGTH OF MASONRY (F'M) SHALL BE 2000 PSI AS DETERMINED BY THE UNIT STRENGTH METHOD OR BY THE PRISM TEST METHOD.
3. UNLESS SPECIFIED OTHERWISE, ALL MORTARS AND THE MATERIALS THEREIN SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF MASONRY UNITS, ASTM C270, TYPE S EXCEPT FOR MASONRY IN CONTACT WITH THE EARTH SHALL BE TYPE M.
4. ALL GROUT SHALL BE FINE GROUT CONTAINING SAND, PORTLAND CEMENT, AND LIME (OPTIONAL) FOR GROUT SPACES LESS THAN 2 INCHES IN ANY HORIZONTAL DIRECTION, UNLESS SPECIFIED OTHERWISE. GROUT SHALL ATTAIN A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 2500 PSI TESTED ACCORDING TO ASTM C476.
5. CONTROL JOINTS SHALL BE LOCATED PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS OR AT A MAXIMUM SPACING OF 24 FEET ON CENTERS OR 3 TIMES THE WALL HEIGHT, WHICHEVER IS LESS. ALL MASONRY UNITS SHALL BE PLACED IN RUNNING BOND.
6. PROVIDE HORIZONTAL JOINT REINFORCING (TRUSS OR LADDER TYPE, 9 GAUGE) AT 16 INCHES ON CENTER FOR ALL CMU WALLS LAID IN A RUNNING BOND AND AT 8 INCHES ON CENTER FOR ALL CMU WALL NOT LAID IN A RUNNING BOND. HORIZONTAL JOINT REINFORCING SHALL BE LAPPED A MINIMUM OF 6". REINFORCEMENT SHALL CONFORM TO ASTM A951 AND SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
7. ALL HORIZONTAL REINFORCING STEEL IN BOND BEAMS AND LINTEL BLOCK UNITS SHALL BE CONTINUOUS AND UNITS SHALL BE SOLID GROUTED. PROVIDE 48 TIMES BAR DIAMETER LAP FOR HORIZONTAL REINFORCING IN BOND BEAMS. NO SPLICES SHALL BE PROVIDED FOR HORIZONTAL REINFORCING IN BLOCK LINTELS.
8. GROUT CELLS SOLID WHERE VERTICAL BARS ARE SHOWN ON THE DRAWINGS. VERTICAL BARS SHALL EXTEND FROM BOTTOM TO THE TOP OF THE WALL. AT EACH VERTICAL BAR, PROVIDE MATCHING BAR SIZE DOWEL INTO FOUNDATIONS. PROVIDE MINIMUM 48 TIMES BAR DIAMETER SPLICE FOR VERTICAL BARS WHERE REQUIRED AND/OR SHOWN ON THE DRAWINGS UNLESS NOTED OTHERWISE.
9. GROUT LIFTS SHALL TERMINATE TO FORM A GROUT KEY A MINIMUM OF 1 1/2" BELOW MORTAR JOINTS WHEN SUBSEQUENT GROUT LIFTS WILL HAPPEN AFTER PREVIOUS GROUT LIFTS HAVE SET. GROUT KEYS IN BOND BEAMS OR LINTELS SHALL NOT BE PERMITTED.
10. MAXIMUM GROUT POUR HEIGHT SHALL BE 5' - 4" (8 BLOCK COURSES).
11. PROVIDE A BOND BEAM AT THE TOP OF ALL CMU WALLS AND REINFORCE WITH (2) - #5 CONTINUOUS UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, ALL EXTERIOR BOND BEAMS SHALL BE REINFORCED WITH (2) - #4 CONTINUOUS AND ALL INTERIOR BOND BEAMS SHALL BE REINFORCED WITH (2) - #4 CONTINUOUS. BOND BEAM REINFORCING SHALL NOT BE CONTINUED THROUGH CONTROL JOINT LOCATIONS.
12. PROVIDE BOND BEAMS AT A MAXIMUM OF 48 INCHES ON CENTER IN ALL EXTERIOR AND LOAD BEARING CMU WALLS NOT LAID IN A RUNNING BOND (E.G. STACK BOND) REINFORCED WITH (2) - #5 CONTINUOUS UNLESS NOTED OTHERWISE BOND BEAM REINFORCEMENT SHALL BE DISCONTINUED AT CONTROL JOINTS.
13. AT THE END OF EACH DAY AND DURING INCLEMENT WEATHER, ALL UNFINISHED MASONRY WORK SHALL BE COVERED AT THE TOP OF WALL AND EXTEND DOWN ALL SIDES A MINIMUM OF 24".
14. SEE TYPICAL DETAILS FOR INTERIOR WALL HEIGHT, BRACING AND REINFORCING REQUIREMENTS.
15. MECHANICAL PIPES AND ELECTRICAL CONDUITS WHICH PASS THROUGH MASONRY WALLS DO NOT REQUIRE SLEEVES, UNLESS NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS, MECHANICAL OR ELECTRICAL DRAWINGS. IF SLEEVES ARE REQUIRED, INSTALL SLEEVES BEFORE GROUTING. DO NOT CUT ANY REINFORCING WHICH MAY INTERFERE WITH SLEEVE PLACEMENT. CORING OPENINGS IN GROUTED MASONRY IS NOT PERMITTED. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. NO PIPES OR ELECTRICAL CONDUIT SHALL PASS THROUGH MASONRY LINTELS UNLESS SPECIFICALLY DETAILED.
16. ALL REINFORCED MASONRY WALL CORNERS AND INTERSECTIONS SHALL HAVE ONE VERTICAL BAR (MINIMUM) IN GROUTED CELL. REINFORCING SHALL MATCH TYPICAL WALL VERTICAL REINFORCEMENT.
17. FOR ANCHORED MASONRY VENEER. THE DISTANCE BETWEEN THE INSIDE FACE OF THE VENEER AND THE COLD-FORMED STEEL, MASONRY, WOOD, OR CONCRETE BACKUP SHALL BE AS SPECIFIED BY THE ARCHITECT, BUT NOT GREATER THAN 4 1/2". A MINIMUM 1 INCH AIR SPACE SHALL BE PROVIDED.
18. ANCHORED MASONRY VENEER NOT LAID IN A RUNNING BOND SHALL HAVE A JOINT REINFORCEMENT OF AT LEAST ONE WIRE, OF SIZE W1.7, SPACED AT A MAXIMUM OF 18 INCHES ON CENTER VERTICALLY.
19. ALL CONCRETE MASONRY AND MASONRY VENEER SHALL HAVE A MINIMUM BEARING WIDTH OF 2/3 THE WIDTH OF THE MASONRY UNIT.
20. SPECIAL INSPECTION, IN ACCORDANCE WITH THE BUILDING CODE REFERENCED ABOVE, SHALL BE PROVIDED FOR ALL CMU WALLS.

SUBMITTALS

1. THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:

   CONCRETE MIX DESIGNS AND ACCESSORIES
   REINFORCING STEEL
   STRUCTURAL STEEL (*,^)
   METAL DECK
   BAR JOISTS (^)
   MISCELLANEOUS STEEL
   STEEL STAIR (*,^)
   SKYLIGHT (#)
   CURTAIN WALL (*,#)
   LIGHT-GAGE FRAMING (*,^)
   CONCRETE MASONRY (MATERIAL AND REBAR PLACEMENT PLANS)
   SLAB CONTRACTION JOINT LAYOUT

   ITEMS MARKED (*) SHALL HAVE SHOP DRAWINGS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. ITEMS MARKED (#) SHALL BE SUBMITTED TO ENGINEER FOR OWNER'S RECORD ONLY AND WILL NOT HAVE ENGINEER'S SHOP DRAWING STAMP. ITEMS MARKED (^) SHALL HAVE SEALED STRUCTURAL CALCULATIONS SUBMITTED TO ENGINEER FOR OWNER'S RECORD.
2. ALL SHOP DRAWINGS MUST BE REVIEWED AND SEALED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
3. CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES (E.G. PDFS) OF ALL SHOP DRAWINGS SPECIFIED TO BE RETURNED BY THE ENGINEER.
4. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIAL REQUIRED BY THE CONTRACT DOCUMENTS TO BE FURNISHED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, REGARDLESS OF WHETHER THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED.
5. SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.
6. THE USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREIN.

THE G.C. SHALL SUBMIT BUILDING SHORING DRAWING THAT ARE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS TO E.O.R./ ARCH. AND CITY OF HOUSTON. BUILDING SHORING PLANS SHALL BE REVIEWED AND APPROVED BY THE E.O.R./ARCH. PRIOR TO COMMENCEMENT OF BUILDING DEMO WORK.

SPECIAL INSPECTION

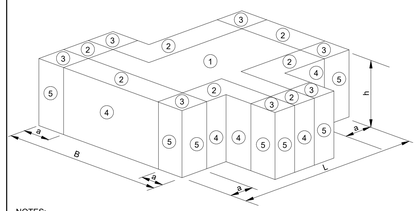
1. ALL ASPECTS OF WORK RELATING TO SPECIAL INSPECTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   2015 INTERNATIONAL BUILDING CODE (CHAPTER 17).
2. THE OWNER'S SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE ARCHITECT (OR ENGINEER) SHALL CALL A PRE-CONSTRUCTION MEETING WITH THE ARCHITECT, ENGINEER, BUILDING OFFICIAL, CONTRACTOR AND SPECIAL INSPECTORS TO REVIEW THE SPECIAL INSPECTION REQUIREMENTS.
4. DUTIES OF THE OWNER'S SPECIAL INSPECTOR INCLUDE (BUT ARE NOT LIMITED TO):
   A. ACKNOWLEDGE THE SPECIAL INSPECTION AND TESTING AGREEMENT PROVIDED BY THE LOCAL JURISDICTION.
   B. THE OWNER'S SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND TO THE BUILDING OFFICIAL.
   C. THE OWNER'S SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, ARCHITECT, REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, CONTRACTOR AND (OTHER DESIGNATED PARTIES), IN A TIMELY MANNER, AS ESTABLISHED AT THE PRE-CONSTRUCTION MEETING.
   D. THE OWNER'S SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE.
5. DUTIES OF THE CONTRACTOR INCLUDE (BUT ARE NOT LIMITED TO):
   A. NOTIFY THE SPECIAL INSPECTOR THAT THE WORK IS READY FOR INSPECTION AT LEAST 24 HOURS BEFORE SUCH INSPECTION.
   B. ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED AND INDICATED TO BE IN CONFORMANCE BY THE SPECIAL INSPECTOR AND APPROVED BY THE BUILDING OFFICIAL.
   C. PROVIDE THE SPECIAL INSPECTOR WITH ACCESS TO APPROVED CONSTRUCTION DOCUMENTS AT JOBSITE.
   D. MAINTAIN AT THE JOBSITE COPIES OF ALL REPORTS SUBMITTED BY THE SPECIAL INSPECTOR.
6. CONTINUOUS SPECIAL INSPECTION REFERS TO INSPECTIONS BY THE SPECIAL INSPECTOR WHO IS CONTINUOUSLY PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED.
7. PERIODIC SPECIAL INSPECTION REFERS TO INSPECTIONS BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.
8. SPECIAL INSPECTIONS AND TESTING SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK LISTED BELOW. SPECIAL INSPECTIONS AND TESTING SHALL FOLLOW THE REQUIREMENTS OF THE BUILDING AND MATERIAL CODE REFERENCES AND TABLES. IN THE EVENT OF A CONFLICT BETWEEN REFERENCES, THE OWNER'S SPECIAL INSPECTOR SHALL FOLLOW THE MORE STRINGENT REQUIREMENT.

SOILS	IBC 1705.6 AND TABLE 1705.6, APPROVED GEOTECHNICAL REPORT AND CONSTRUCTION DOCUMENTS
CAST-IN-PLACE DEEP FOUNDATIONS	IBC 1705.8 AND TABLE 1705.8 APPROVED GEOTECHNICAL REPORT AND CONSTRUCTION DOCUMENTS
CONCRETE	IBC 1705.3 AND TABLE 1705.3
STEEL	IBC 1705.2 AND TABLE 1705.2.3 AND AISC 360 CHAPTER N AND SDI QA/QC DOCUMENT
SHOP FABRICATION	IBC 1704.2.5 (NOT REQUIRED IF FABRICATOR IS APPROVED IN ACCORDANCE WITH IBC 1704.2.5.1.
MASONRY	IBC 1705.4, TMS 402/ACI 530/ASCE 5 SECTION 3.1 AND TABLE 3.1.2, TMS 602/ACI 530.1/ASCE 6 SECTION 1.6 AND TABLE 4
SPRAYED FIRE-RESISTANT MATERIALS	IBC 1705.14 AND CONSTRUCTION DOCUMENTS
MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	IBC 1705.15 AND AWCI 12-B AND CONSTRUCTION DOCUMENTS
EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)	IBC 1705.16
EXPANSION/EPOXY ANCHORS	MANUFACTURER'S ICC REPORT

ROOF PRESSURE (GROSS)					
ZONE	0-10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	>100 SQ. FT.	>500 SQ. FT.
1	+27,-43	+25,-42	+22,-40	+19,-39	+19,-39
2	+27,-75	+25,-69	+22,-61	+19,-55	+19,-55
3	+27,-111	+25,-104	+22,-94	+19,-87	+19,-87

WALL PRESSURE					
ZONE	0-10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	>100 SQ. FT.	>500 SQ. FT.
4	+45,-49	+43,-47	+41,-44	+39,-42	+34,-38
5	+45,-60	+43,-56	+41,-51	+39,-47	+34,-38



NOTES:
1. (0-10 SQ. FT.) EXAMPLE DENOTES EFFECTIVE WIND AREA.
2. + AND - SIGNS SIGNIFY PRESSURES ACTING TOWARD OR AWAY FROM THE SURFACES, RESPECTIVELY. ALL VALUES SHOWN ARE IN PSF.
3. WIND PRESSURE FOR EFFECTIVE WIND AREAS BETWEEN THE SPECIFIED RANGES MAY BE DETERMINED BY INTERPOLATION, OTHERWISE, USE THE VALUE ASSOCIATED WITH THE LOWER EFFECTIVE AREA.
4. a = WIDTH OF EDGE STRIP EQUAL TO 10% OF THE LEAST HORIZONTAL DIMENSION (L or B) or 4% OF THE ROOF HEIGHT (h), WHICHEVER IS SMALLER, BUT NOT LESS THAN 4% OF THE LEAST HORIZONTAL DIMENSION or 3ft.
5. ELEMENTS WITH TRIBUTARY AREAS GREATER THAN 700 SQ. FEET MAY BE DESIGNED USING MWFRS PROVISIONS.
6. VALUES SHOWN ARE BASED ON IBC 2015 / ASCE 7-10 WIND CALCULATIONS FOR COMPONENTS AND CLADDING AND ARE ULTIMATE VALUES (LRFD). VALUES SHOWN ARE FOR USE IN ASCE 7-10 LOAD COMBINATIONS SHOWN IN SECTION 2.32 (1.0W).
7. THE BUILDING LAYOUT SHOWN IS INTENDED TO BE SCHEMATIC, APPLY WIND PRESSURE PROVIDED SIMILARLY TO THE BUILDING(S) AT THIS PROJECT.
8. UNLESS OTHERWISE SPECIFIED, ROOF DEAD LOAD TO BE USED FOR NET UPLIFT CALCULATIONS SHALL NOT EXCEED 10 PSF. NET UPLIFT PRESSURE SHALL NOT BE LESS THAN 16 PSF.

COMPONENTS & CLADDING PRESSURES

ABBREVIATIONS

ABBR.	ABBREVIATION
A.F.F.	ABOVE FINISH FLOOR
ADDN'L	ADDITIONAL
AHU	AIR HANDLING UNIT
ALT.	ALTERNATE
ANCH.	ANCHOR
A.B.	ANCHOR BOLT
A.R.	ANCHOR ROD
APPROX.	APPROXIMATELY
ARCH.	ARCHITECT(URAL)
BM.	BEAM
BRG.	BEARING
BTW	BETWEEN
BOT.	BOTTOM
B.F.B.	BOTTOM FLANGE BRACE
B.O.	BOTTOM OF
BRDG.	BRIDGING
BLDG	BUILDING
C	CAMBER
CANT.	CANTILEVER
C.I.P.	CAST IN PLACE
C/C	CENTER TO CENTER
CL	CENTERLINE
CH	CHANNEL
CLR.	CLEAR(ANCE)
CFMF	COLD FORMED METAL FRAMING
COL.	COLUMN
CJP	COMPLETE JOINT PENETRATION
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONST.	CONSTRUCTION
C.J.	CONSTRUCTION / CONTRACTION JOINT
CONT.	CONTINUOUS
COORD.	COORDINATE
DL	DEAD LOAD
DBA	DEFORM BAR ANCHOR
D	DEPTH
DET.	DETAIL
DIA. or Ø	DIAMETER
DIM.	DIMENSION
DWL.	DOWEL
D.N.	DOWN
DWG.	DRAWING
EA.	EACH
E.F.	EACH FACE
E.W.	EACH WAY
EL.	ELEVATION
ELEV.	ELEVATOR
EMBED.	EMBEDMENT
ENGR.	ENGINEER
EOR	ENGINEER OF RECORD
EQ.	EQUAL
EQUIP.	EQUIPMENT
EQUIV.	EQUIVALENT
EXIST.	EXISTING
E.J.	EXPANSION JOINT
EXT.	EXTERIOR
f'c=	28 DAY CONCRETE STRENGTH
FAB.	FABRICATE
F.S.	FAR SIDE
FIN	FINISH/FINISHED
FLR	FLOOR
F.D.	FLOOR DRAIN
FTG.	FOOTING
Fy=	YIELD STRENGTH
GALV.	GALVANIZED
GA.	GAUGE
GEN	GENERAL
G.C.	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GR.	GRADE/GRADING
HGR.	HANGER
HSA	HEADED STUD ANCHOR
HI	HIGH
HSS	HOLLOW STRUCTURAL SECTION
HORIZ. OR (H)	HORIZONTAL
H	HORIZONTAL REACTION
IN	INCH
INFO.	INFORMATION
ID	INSIDE DIAMETER
I.F.	INSIDE FACE
INT.	INTERIOR
JT.	JOINT
JST.	JOIST
K	KIPS (1000 LBS)
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	ANGLE
Ld	DEVELOPMENT LENGTH
LWC	LIGHTWEIGHT CONCRETE
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLV	LONG LEG VERTICAL
LLH	LONG LGE HORIZONTAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LONG	LONGITUDINAL
LO	LOW
LBS	POUNDS
MFR. / MNFR.	MANUFACTURER
MAS.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M	MOMENT
M.C.	MOMENT CONNECTION
N.S.	NEAR SIDE
NWC	NORMAL WEIGHT CONCRETE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
O.C.	ON CENTER(S)
OPNG.	OPENING
OPP.	OPPOSITE
OPH.	OPPOSITE HAND
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OA	OVERALL
O.H.	OVERHEAD
OVS.	OVERSIZED HOLE
P	AXIAL LOAD
P.J.	PANEL JOINT
PAR.	PARALLEL
PRKG.	PARKING
PJP	PARTIAL JOINT PENETRATION
PVMT	PAVEMENT
PVG	PAVING
PERP.	PERPENDICULAR
PL.	PLATE
PLBG	PLUMBING
PT	POST-TENSION(ED)
PCF	POUNDS PER CUBIC FOOT/FEET
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT/FEET
PSI	POUNDS PER SQUARE INCH
P/C	PRECAST CONCRETE
PRELIM.	PRELIMINARY
P.L.	PROPERTY LINE
QTY	QUANTITY
R	RADIUS, REACTION, REMAIND

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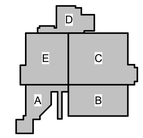
DEMOLITION PLAN NOTES:

1. THIS PLAN IS TO SHOW PROBABLE TYPE OF DEMOLITION ASSOCIATED WITH THE PROJECT THAT MIGHT IN SOME WAYS ASSOCIATED WITH STRUCTURAL SCOPE OF WORK BUT EXCLUSIVELY DO NOT LIMIT THE EXPECTED EXTENT OF DEMOLITION REQUIRED. FOR THE TRUE EXTENT OF DEMOLITION REFER ARCHITECTURAL DRAWINGS. G.C. TO COORDINATE W/ ARCH DRAWINGS FOR EXACT LOCATION, FULL EXTENTS AND TYPE OF DEMOLITION NEEDED FOR THE PROJECT.
2. "W2" INDICATES TO SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. SEE DETAIL 1 AND 11/S7.02 FOR DETAIL AT NEW OPENING AT NON-LOAD BEARING EXISTING WALLS. SEE ARCH DRAWING FOR MORE INFO.
3. G.C TO COORDINATE FOR NEED OF ANY SHORING REQUIRED. ALL BOLTS HOLES FOR TEMPORARY SHORING/STABILITY SHALL BE REVIEWED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION. BOLT HOLES SHALL BE REPAIRED AS APPROVED BY ARCHITECT



1 DEMOLITION MASTER PLAN - OVERALL
SCALE: 1" = 20'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
5177 Richmond Avenue, Suite 670
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Tel: 713.664.0130
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Matrix Structural Engineers
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DEMOLITION MASTER PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. SD1.01
Drawn By: Author	
Date: 10-29-2025	

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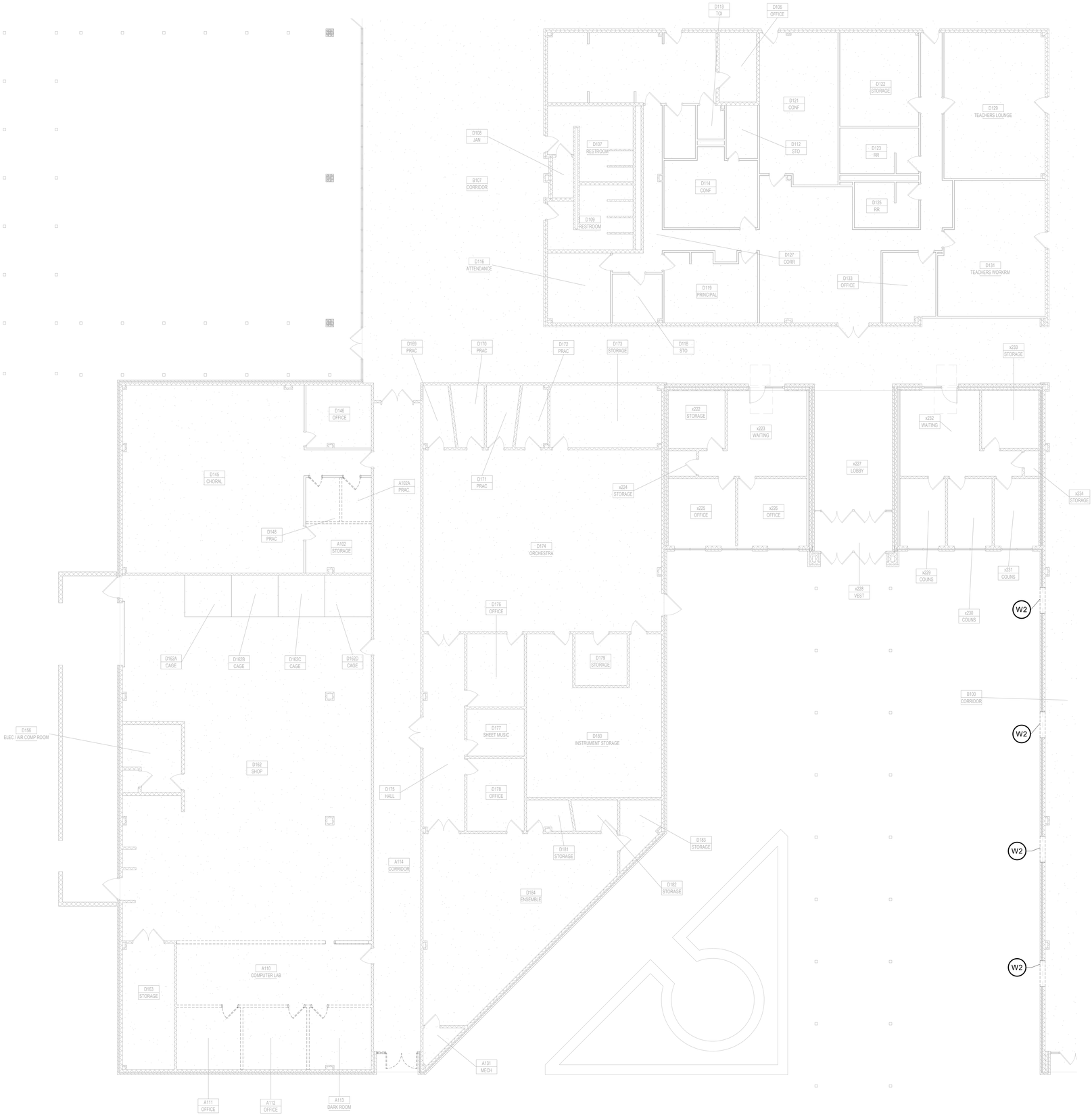
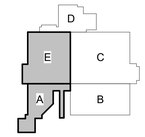


1 DEMOLITION PLAN - AREA A AND E
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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DEMOLITION PLAN - AREA A

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Date: 10-29-2025	

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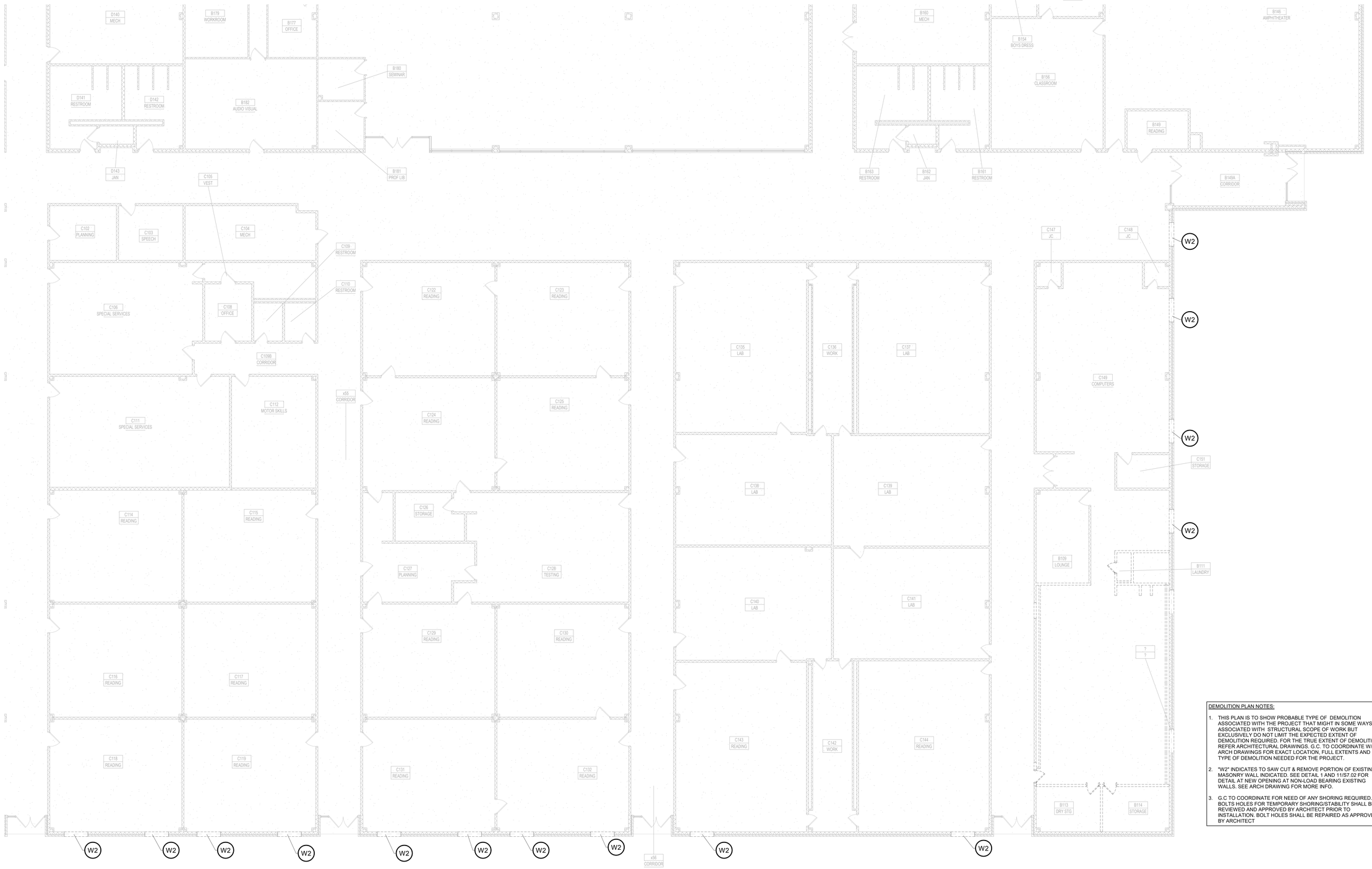


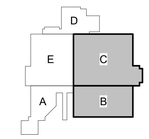
1 DEMOLITION PLAN - AREA B

SCALE: 1/8" = 1'-0"

DEMOLITION PLAN NOTES:

1. THIS PLAN IS TO SHOW PROBABLE TYPE OF DEMOLITION ASSOCIATED WITH THE PROJECT THAT MIGHT IN SOME WAYS ASSOCIATED WITH STRUCTURAL SCOPE OF WORK BUT EXCLUSIVELY DO NOT LIMIT THE EXPECTED EXTENT OF DEMOLITION REQUIRED. FOR THE TRUE EXTENT OF DEMOLITION REFER ARCHITECTURAL DRAWINGS. G.C. TO COORDINATE W/ ARCH DRAWINGS FOR EXACT LOCATION, FULL EXTENTS AND TYPE OF DEMOLITION NEEDED FOR THE PROJECT.
2. "W2" INDICATES TO SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. SEE DETAIL 1 AND 11/S7.02 FOR DETAIL AT NEW OPENING AT NON-LOAD BEARING EXISTING WALLS. SEE ARCH DRAWING FOR MORE INFO.
3. G.C TO COORDINATE FOR NEED OF ANY SHORING REQUIRED. ALL BOLTS HOLES FOR TEMPORARY SHORING/STABILITY SHALL BE REVIEWED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION. BOLT HOLES SHALL BE REPAIRED AS APPROVED BY ARCHITECT

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
5177 Richmond Avenue, Suite 670
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MSE - 23030
Matrix Structural Engineers
TBPE Firm Registration No. F-2640
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DEMOLITION PLAN - AREA B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. SD1.03
Drawn By: Author	
Date: 10-29-2025	

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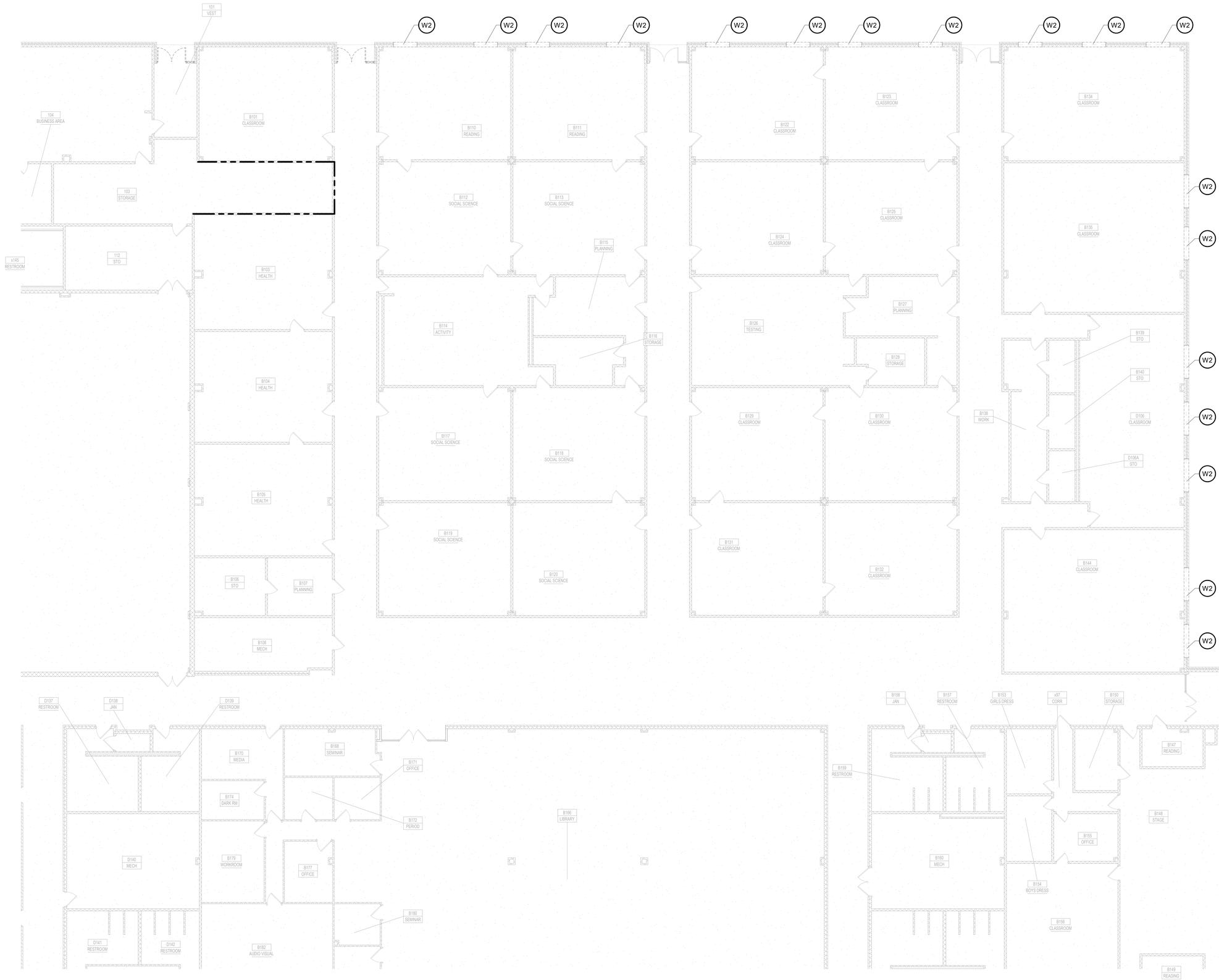

DEMOLITION PLAN NOTES:

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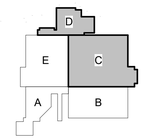
1 DEMOLITION PLAN - AREA C
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
04/01/2025 Issue for Bid

Project:
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FOR
HUMBLE ISD
HUMBLE, TX

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Tel: 713.664.0130
MSE - 23030
Matrix Structural Engineers
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DEMOLITION PLAN - AREA C

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Date: 10-29-2025	

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DEMOLITION PLAN NOTES:

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A104 VEST
A105 FIRE RISER
A122 VEST
101 VEST
A101 CANS
A102 RR
x150 CORR
A103 DRY STORAGE
A107 LAUNDRY
A107A FREEZER
A107B COOLER
A106 MECH
A156 EQUIP
A114 JAN
121 STORAGE
115 EXERCISE
117 VEST
116 BUSINESS AREA
x146 RESTROOM
110 CORR
x252 STORAGE
109 VEST
102 EXERCISE
104 BUSINESS AREA
107 BUSINESS AREA
x145 RESTROOM
103 STORAGE
112 STO
B101 CLASSROOM
B103 HEALTH
B104 HEALTH
B105 HEALTH
B106 STO
B107 PLANNING
B108 MECH
A115 VEST
118 RESTROOM
113 STORAGE
117 BUSINESS AREA
108 RR
A111 T&C
A108 OFFICE
x149 DISHWASHING
A109 JAN
A146 GYM/CAFE
A145 GYM ASSEMBLY
A151 KITCHEN
A150 SERVING
A147 SNACK BAR
A149 POTS & PANS
A148 STO

1 DEMOLITION PLAN - AREA E
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS

KEY PLAN - 1ST FLOOR
N.T.S

D
E
C
A
B

Revision / Date
04/01/2025 Issue for Bid

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DEMOLITION PLAN - AREA E

PACKAGE | VOLUME

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Date: 10-29-2025
Sheet No. SD1.05

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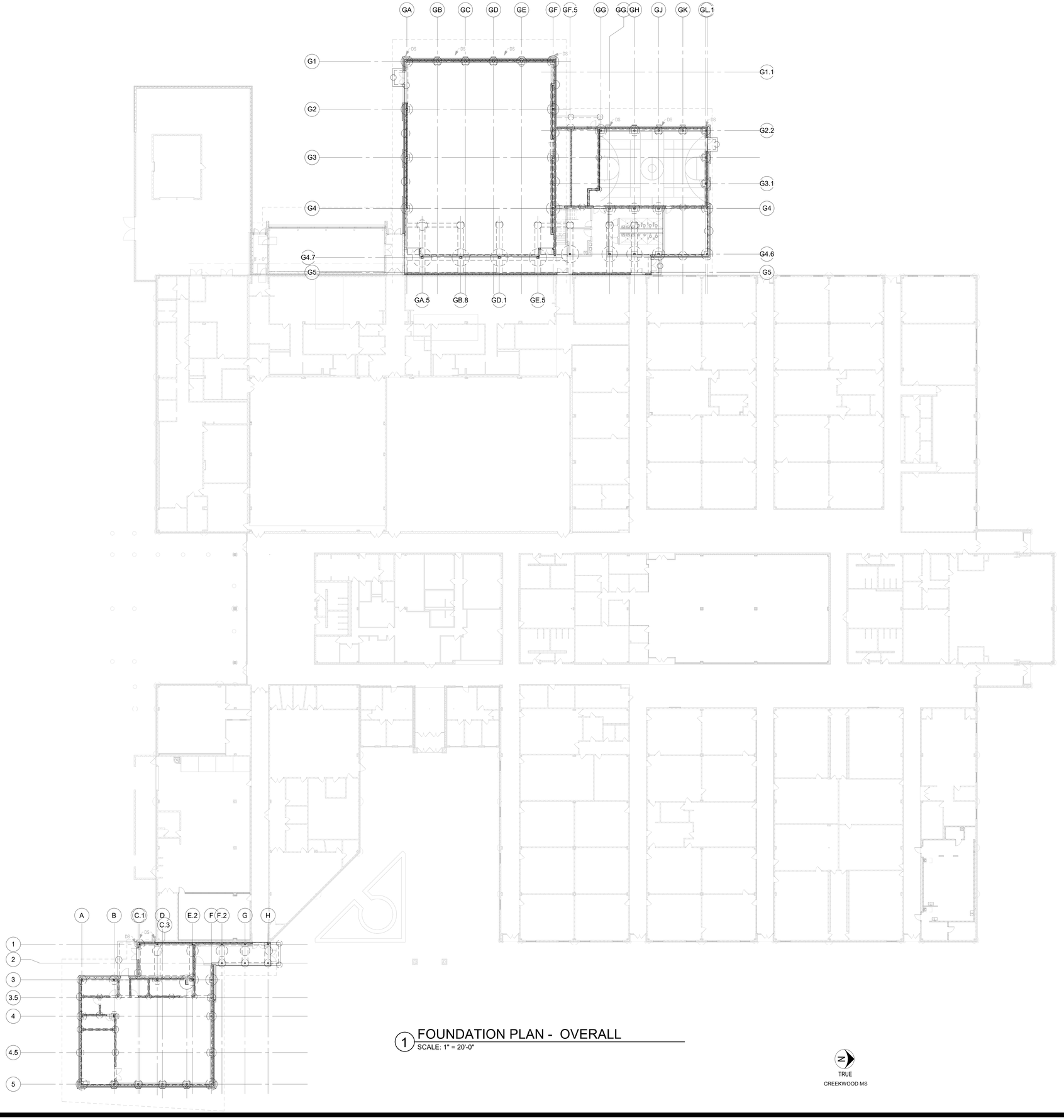
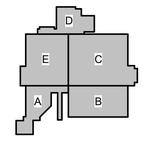


1 FOUNDATION PLAN - OVERALL
SCALE: 1" = 20'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
04/01/2025 Issue for Bid

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HUMBLE, TX

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Matrix Structural Engineers
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FOUNDATION PLAN - OVERALL

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S2.00
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Date: 10-29-2025	

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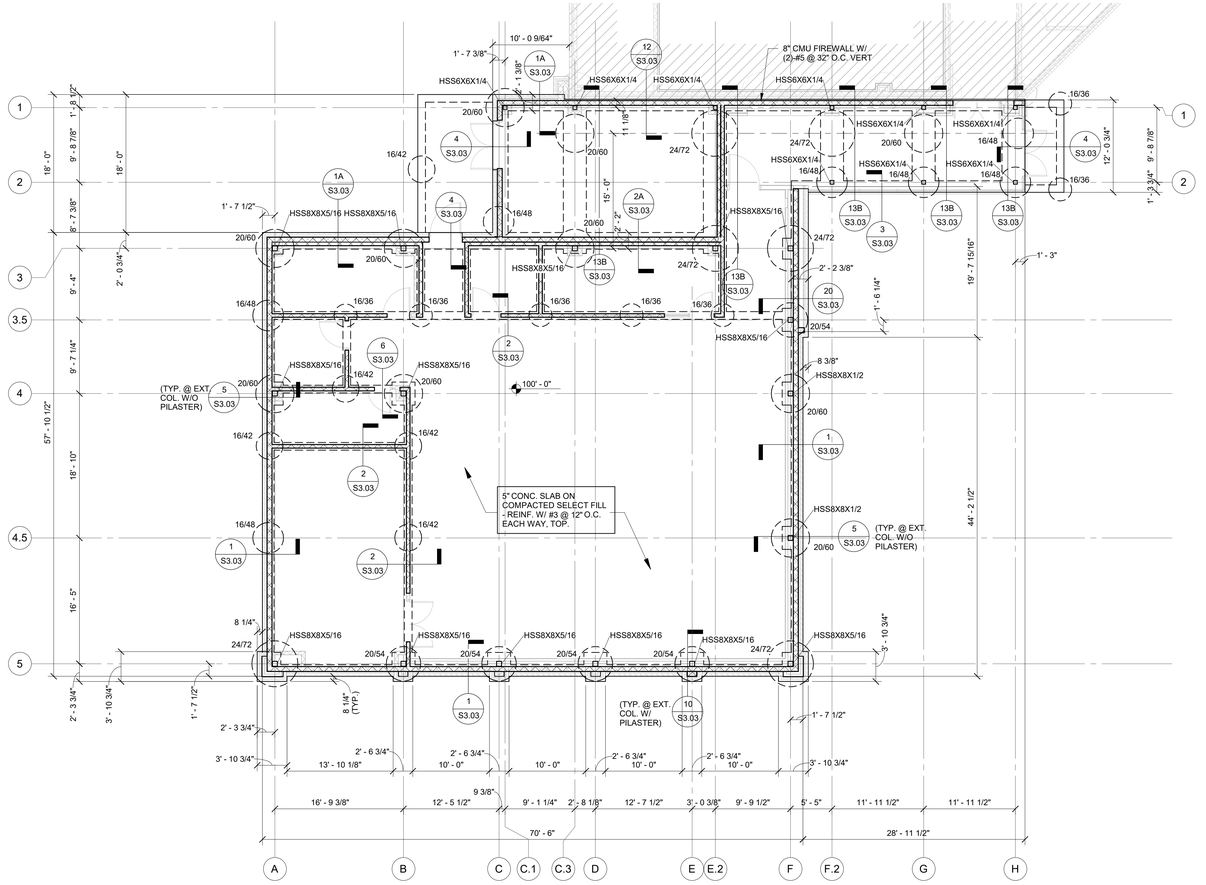
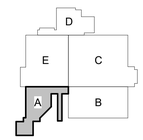
FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: 100' - 0" INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL ELEVATION _____. VERIFY WITH CIVIL.
7. SEE DETAIL 6/S3.02 FOR BASE PLATES.
8. SEE DETAILS 1, 8 & 3/S3.02 FOR ADDITIONAL REBAR AT OPENINGS, DISCONTINUOUS JOINTS, AND RE-ENTRANT CORNERS IN SLAB-ON-GRADE.
9. PROVIDE CONTRACTION JOINTS AND DISCONTINUOUS SLAB REINFORCING AS SHOWN IN DETAIL DETAIL 6/S3.01.
10. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
11. REINFORCE ALL EXTERIOR 8" CMU WALL W/ (2)-#5 VERT. @ 24" O.C., GROUT CMU CELLS WITH REINFORCING ONLY. PROVIDE HORIZONTAL JOINT REINF. PER GENERAL NOTES. PROVIDE HORIZONTAL BOND BEAMS W/ (2)-#5 CONT. SPACED VERTICALLY AT 8'-0" O.C. AND AT TOP OF WALL, CONTINUE HORIZONTAL JOINT AND BOND BEAM REINF. THROUGH CONTROL JOINTS.
12. SEE 3/S7.01 FOR SCHEDULE ADDITIONAL REINFORCING AT EXTERNAL CMU WALL OPENING AND DETAIL 5/S5.01 FOR INTERIOR NON-LOAD BEARING CMU WALL OPENINGS.
13. SEE 12/S5.01 FOR VENEER SUPPORT OVER MASONRY OPENING AT CMU WALL BACKUP.
14. G.C. TO COORDINATE W/ ARCH FOR LOCATION OF ANY SLAB TRENCHING AND SLAB REPAIR ON EXISTING SLAB. SEE DETAILS 14 THRU 20 ON S3.03.
15. T.D. INDICATED TURN DOWN AT CMU. SEE DETAIL 17/S3.03



1 FOUNDATION PLAN - BAND HALL
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
NTS

Revision /	Date
Issue for Bid	04/01/2025

Project:
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FOR
HUMBLE ISD
HUMBLE, TX

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5177 Richmond Avenue, Suite 670
Houston, TX 77046-2401
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MSE - 23030
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FOUNDATION PLAN - BAND HALL

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S2.01
Drawn By: RC	
Date: 10-29-2025	

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6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL ELEVATION _____. VERIFY WITH CIVIL.
7. SEE DETAIL 6/S3.02 FOR BASE PLATES.
8. SEE DETAILS 1, 8 & 3/S3.02 FOR ADDITIONAL REBAR AT OPENINGS, DISCONTINUOUS JOINTS, AND RE-ENTRANT CORNERS IN SLAB-ON-GRADE.
9. PROVIDE CONTRACTION JOINTS AND DISCONTINUOUS SLAB REINFORCING AS SHOWN IN DETAIL DETAIL 6/S3.01.
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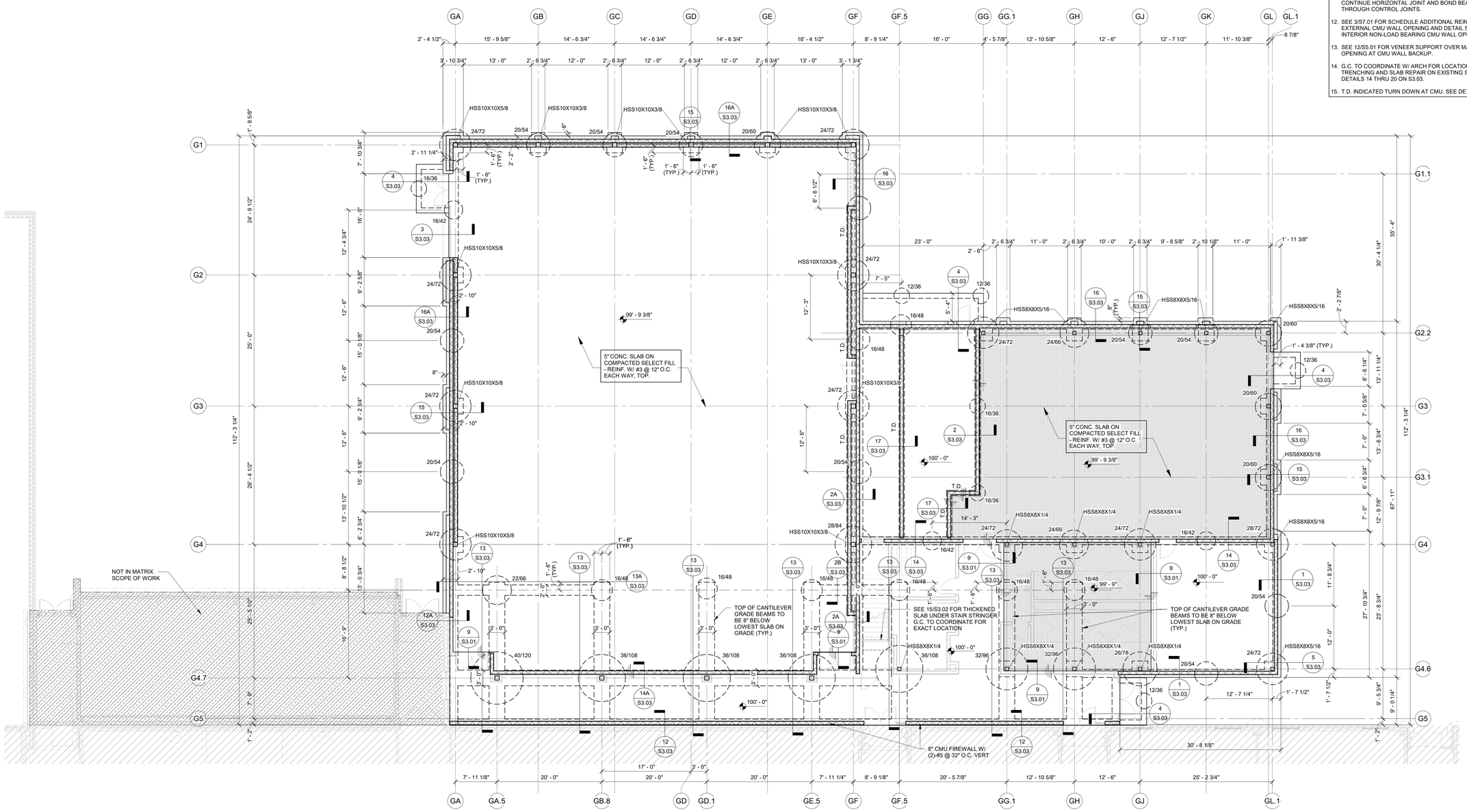

1 FOUNDATION PLAN - GYM-DANCE
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS

KEY PLAN - 1ST FLOOR
N.T.S

Revision /	Date
Issue for Bid	04/01/2025

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FOUNDATION PLAN - GYM AND DANCE HALL

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Job No. 1821-13-01	Sheet No. S2.02
Drawn By: Author	
Date: 10-29-2025	

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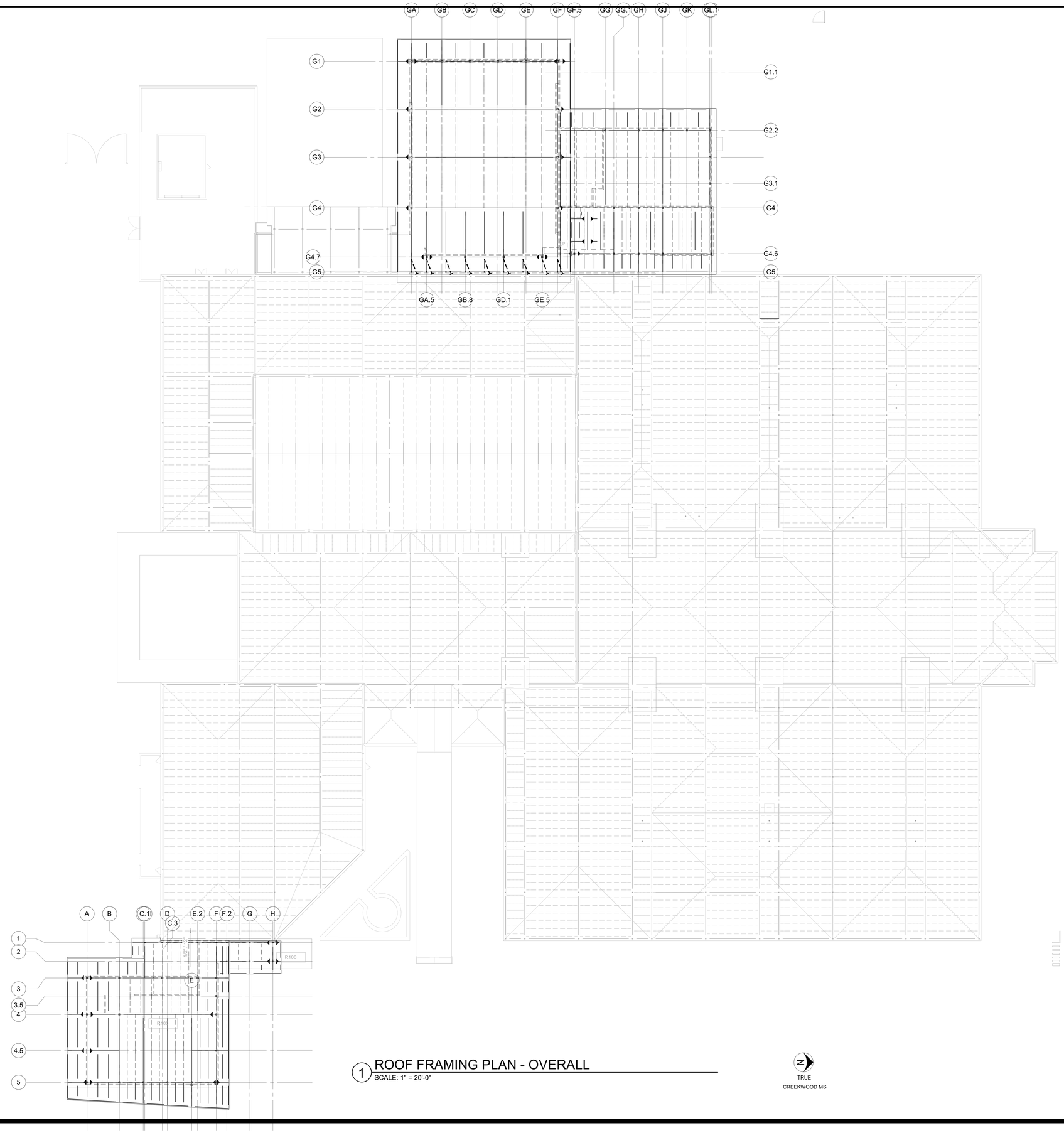
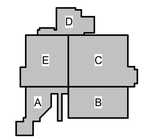


1 ROOF FRAMING PLAN - OVERALL
SCALE: 1" = 20'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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ROOF FRAMING PLAN - OVERALL

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Drawn By: Author	
Date: 10-29-2025	

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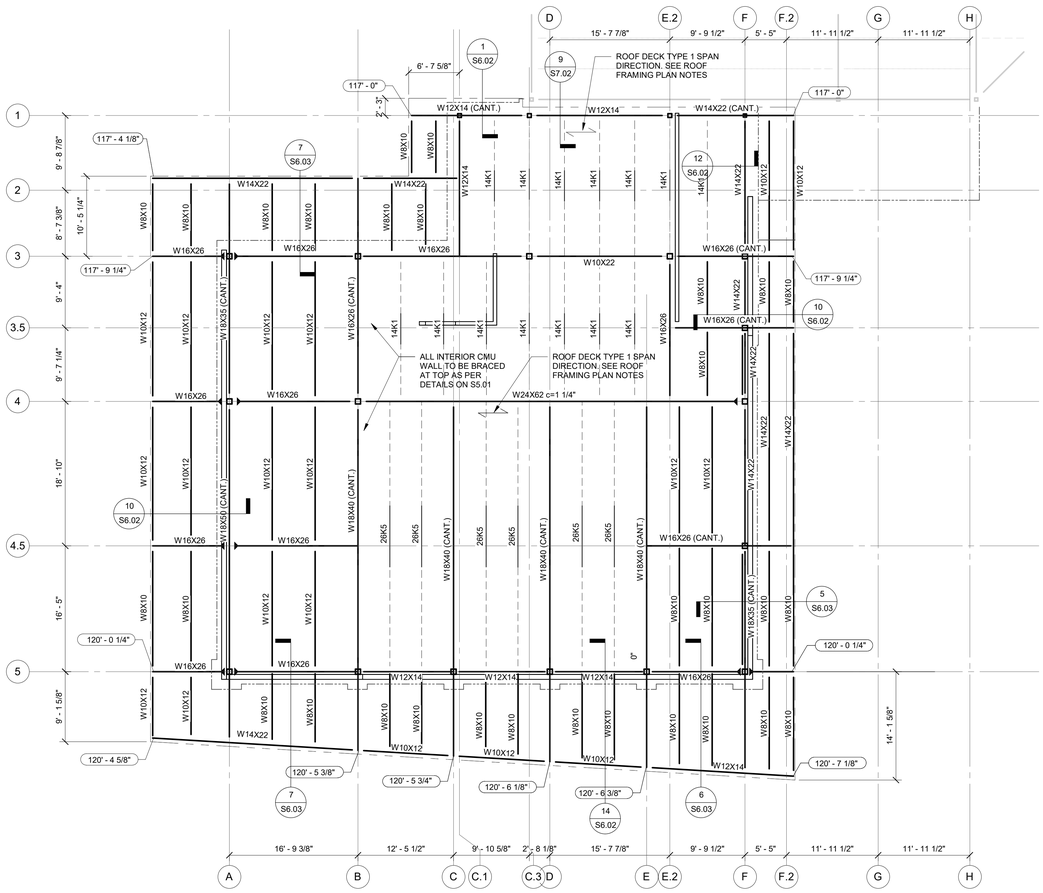
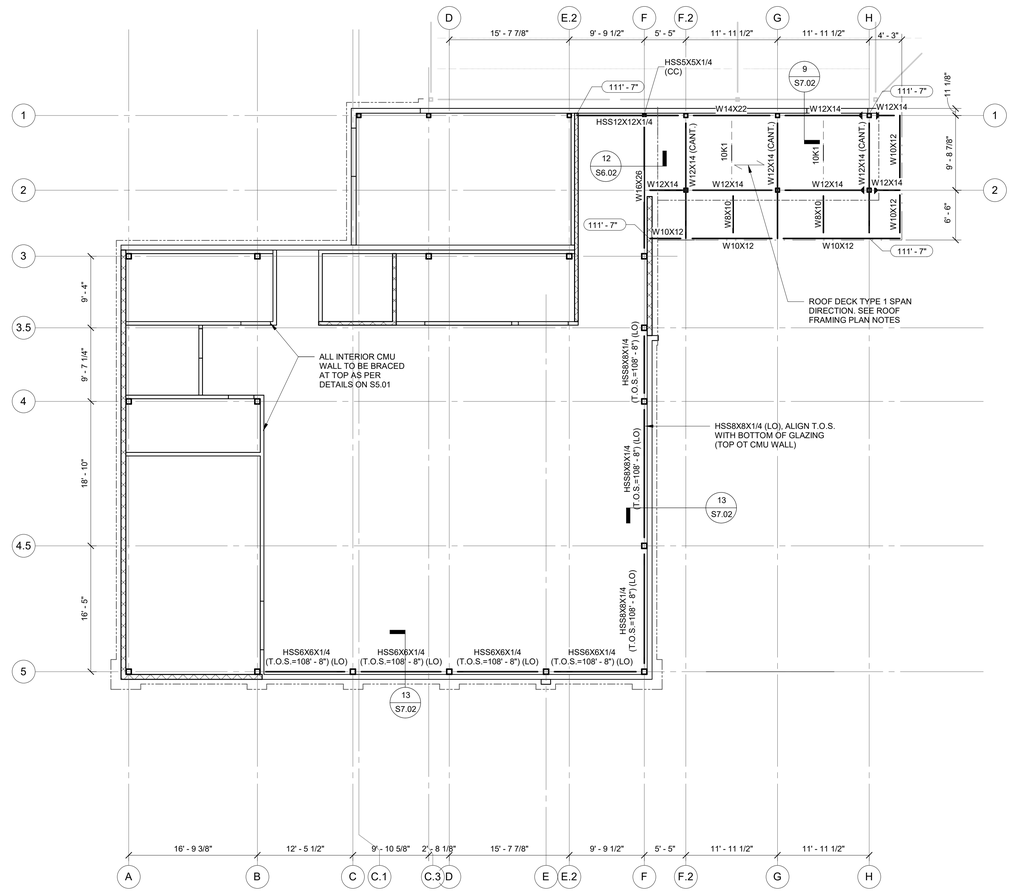
ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
3. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
4. G.C. TO COORDINATE FOR EXACT SOLAR TUBE LOCATION, NUMBER OF SOLAR TUBES AND OPENING SIZE W/ ARCH AND MEP. PROVIDE ADDITIONAL FRAMING AROUND OPENING AS PER 7/S6.01. (TYP)



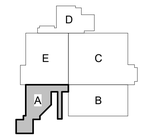
1 ROOF FRAMING PLAN - BAND HALL
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



2 LOW ROOF FRAMING PLAN - BAND HALL
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
NTS

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ROOF FRAMING PLANS - BAND HALL

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S2.11
Drawn By: Author	
Date: 10-29-2025	

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ROOF FRAMING PLAN NOTES:

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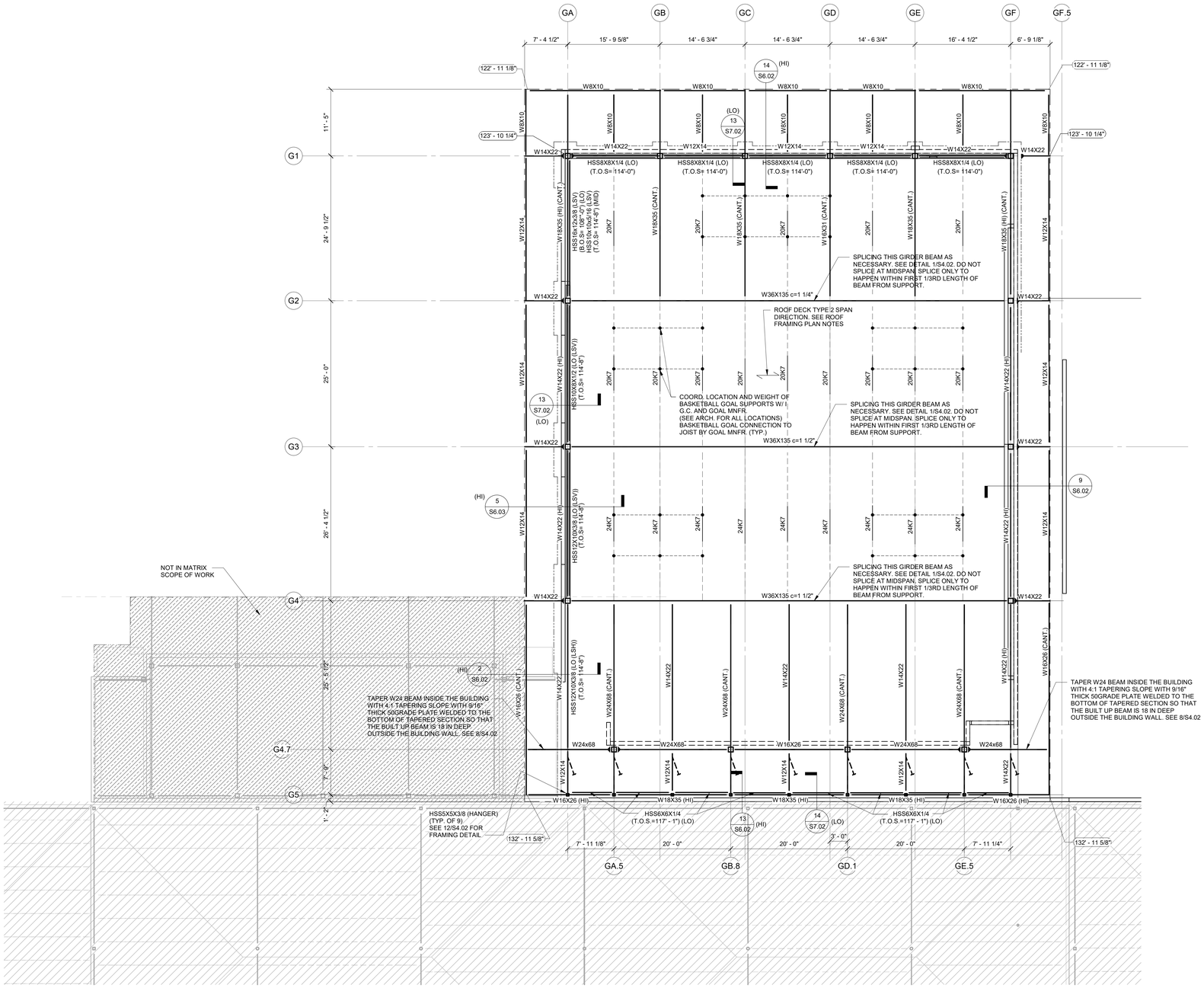
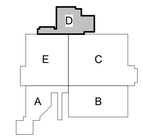


1 ROOF FRAMING PLAN - GYM
SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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ROOF FRAMING PLAN - GYM

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Job No. 1821-13-01	Sheet No. S2.12
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Date: 10-29-2025	

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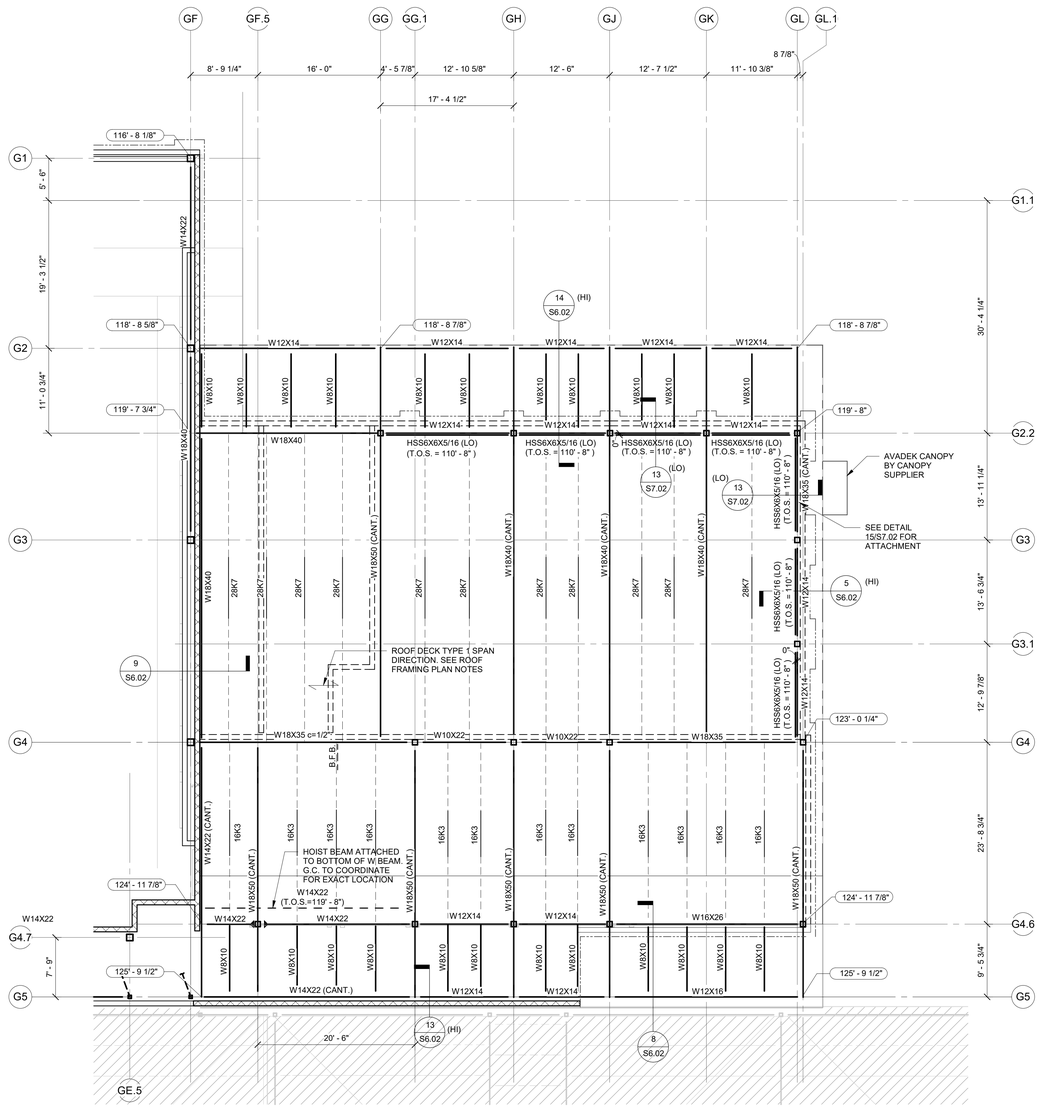


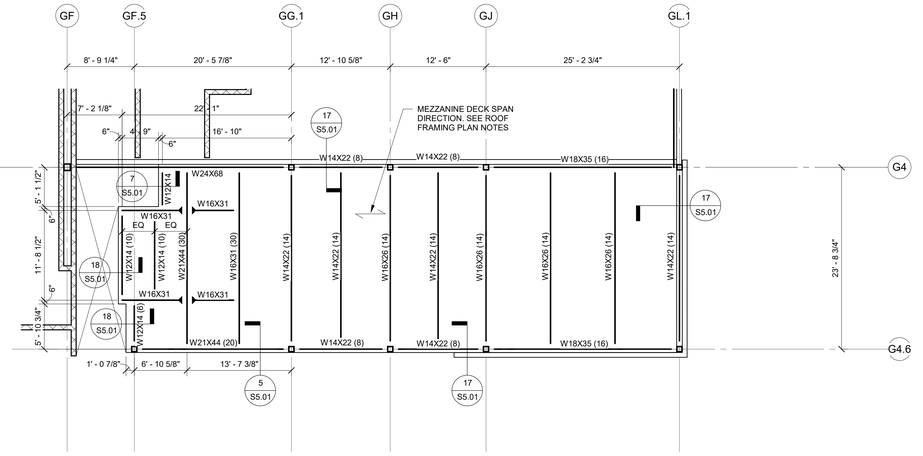
ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
3. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
4. G.C. TO COORDINATE FOR EXACT SOLAR TUBE LOCATION, NUMBER OF SOLAR TUBES AND OPENING SIZE W/ ARCH AND MEP. PROVIDE ADDITIONAL FRAMING AROUND OPENING AS PER 7/S6.01. (TYP)

2 ROOF FRAMING PLAN - DANCE

SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



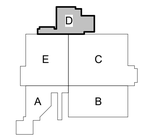
MEZZANINE PLAN NOTES:

1. TOP OF CONCRETE ELEVATION = 111' - 8"
2. LOCATIONS SHOWN THUS: (12) C=3/4" INDICATES NUMBER OF SHEAR CONNECTORS AS 12 AND UPWARD CAMBER AT MID SPAN OF BEAM AS 3/4".
3. SPACE JOISTS EQUALLY U.N.O.
4. PROVIDE END PLATES AT ALL TUBE BEAMS.
5. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION CONSTRUCTION.
6. ⊢ = MOMENT CONNECTION
   LSH = LONG SIDE HORIZONTAL
   LSV = LONG SIDE VERTICAL
7. ALL LOWER TUBE BEAM ELEVATIONS TO BE VERIFIED WITH ARCHITECT DRAWINGS.
8. FLOOR SHALL BE 3 1/2" NORMAL WEIGHT CONCRETE OVER THE FLUTES OF 2" x 18 GA TYPE VLI STEEL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT TO TOTAL THICKNESS = 5 1/2". REINFORCE CONCRETE WITH #3 AT 18" O.C. EACH WAY. PLACE REBAR PERPENDICULAR TO BEAMS (PARALLEL TO DECK) IN THE OUTSIDE LAYER. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS:
   a. PERPENDICULAR BEARING : 36/4 PATTERN.
   b. PARALLEL BEARING AND EDGE : AT 12" O.C.
   c. SIDE SEAMS : SEAM WELDS AT 12" O.C.
9. SEE 8/S5.01 FOR ADDITIONAL SLAB REINFORCING AT ALL BEAMS & GIRDERS.
10. SEE 9, 16, & 19/S5.01 FOR ADDITIONAL SLAB REINFORCING AT OPENINGS AND EDGES.
11. SEE 12/S5.01 FOR ADDITIONAL STEEL ANGLES AND REINFORCING AT STEEL COLUMNS.

1 MEZZANINE FRAMING PLAN

SCALE: 1/8" = 1'-0"

TRUE
CREEKWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
04/01/2025 Issue for Bid

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MEZZANINE & ROOF FRAMING PLAN - DANCE HALL

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Job No. 1821-13-01	Sheet No. S2.13
Drawn By: Author	
Date: 10-29-2025	

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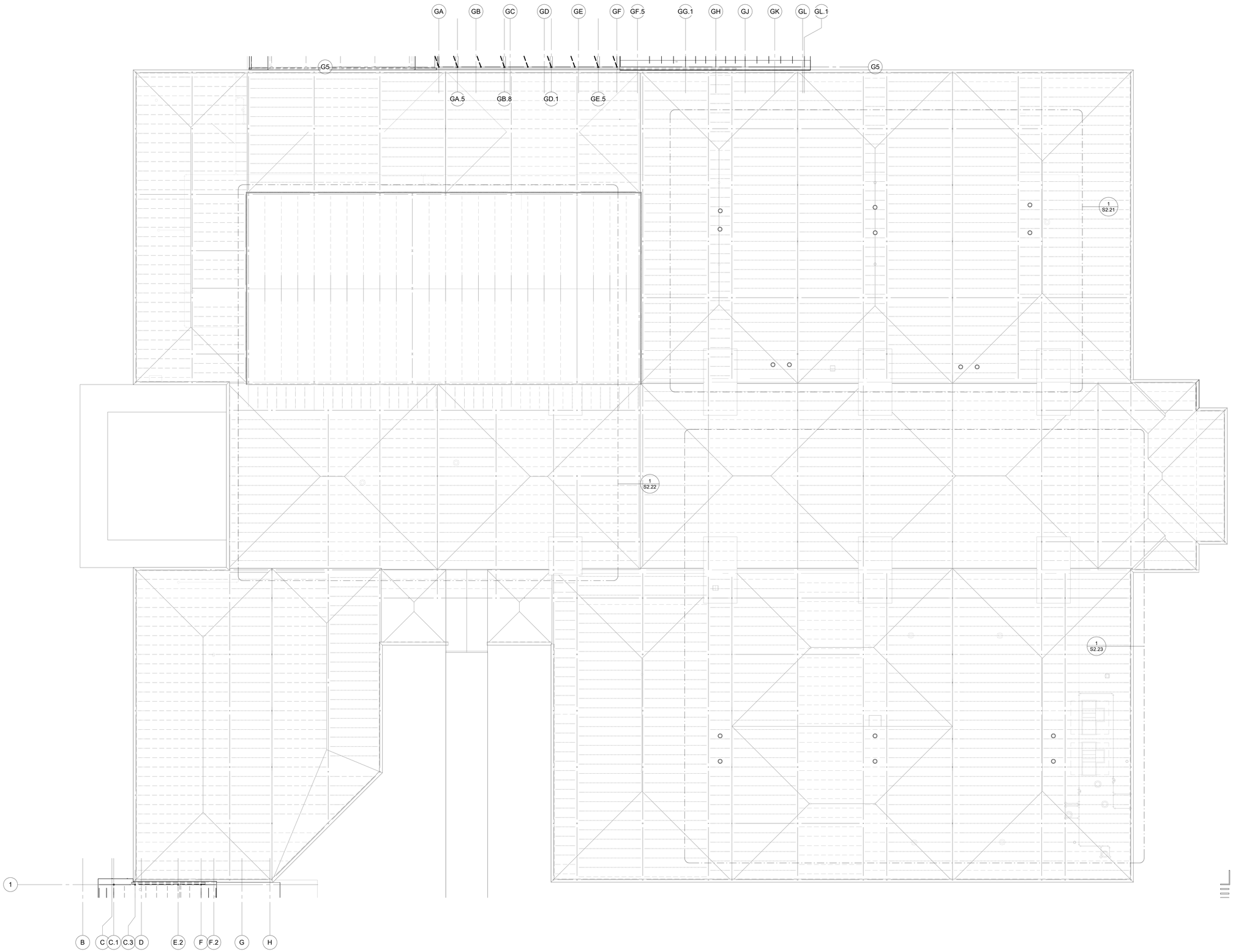
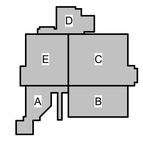


1 EXISTING ROOF FRAMING PLAN
SCALE: 1/16" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
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ROOF SKYLIGHTS FRAMING PLAN - OVERALL

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Job No. 1821-13-01	Sheet No. S2.20
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ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
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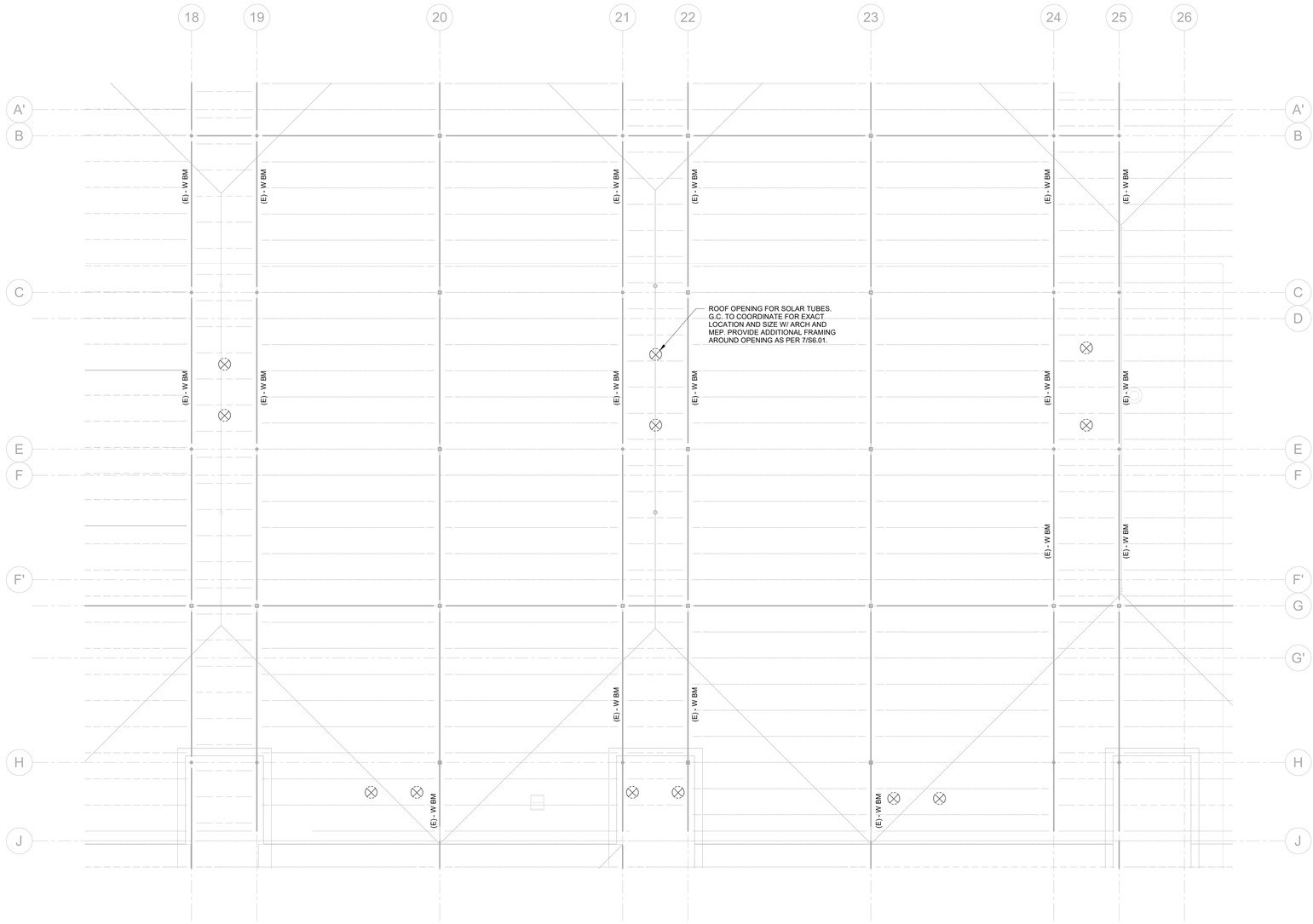
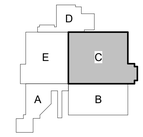


1 SKYLIGHTS FRAMING PARTIAL PLAN
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
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SKYLIGHT FRAMING PLAN - AREA C

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Drawn By: Author	
Date: 10-29-2025	

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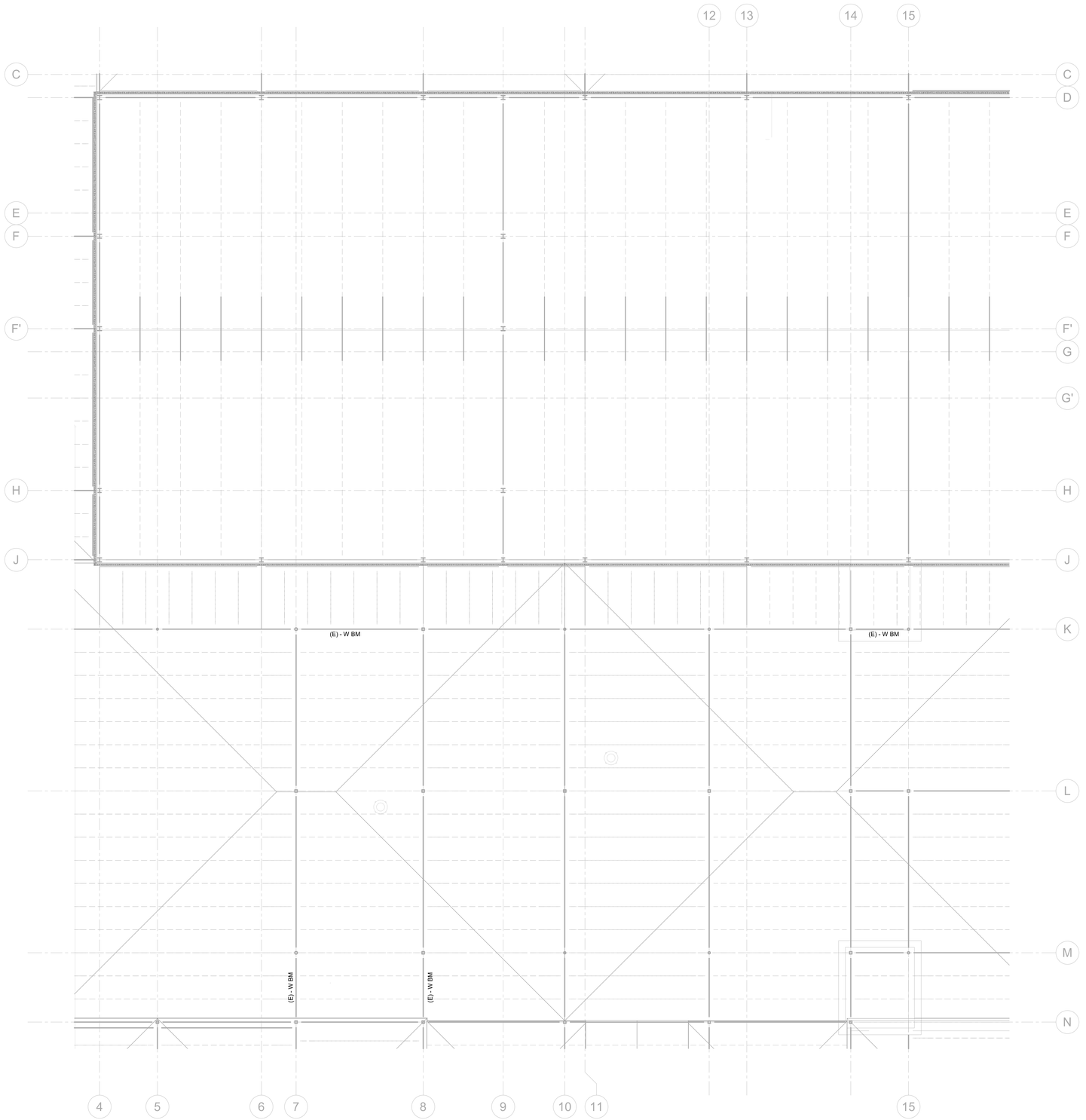

1 SKYLIGHTS FRAMING PARTIAL PLAN
SCALE: 1/8" = 1'-0"

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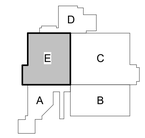
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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SKYLIGHT FRAMING PLAN - AREA E

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Drawn By: Author	
Date: 10-29-2025	

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ROOF FRAMING PLAN NOTES:

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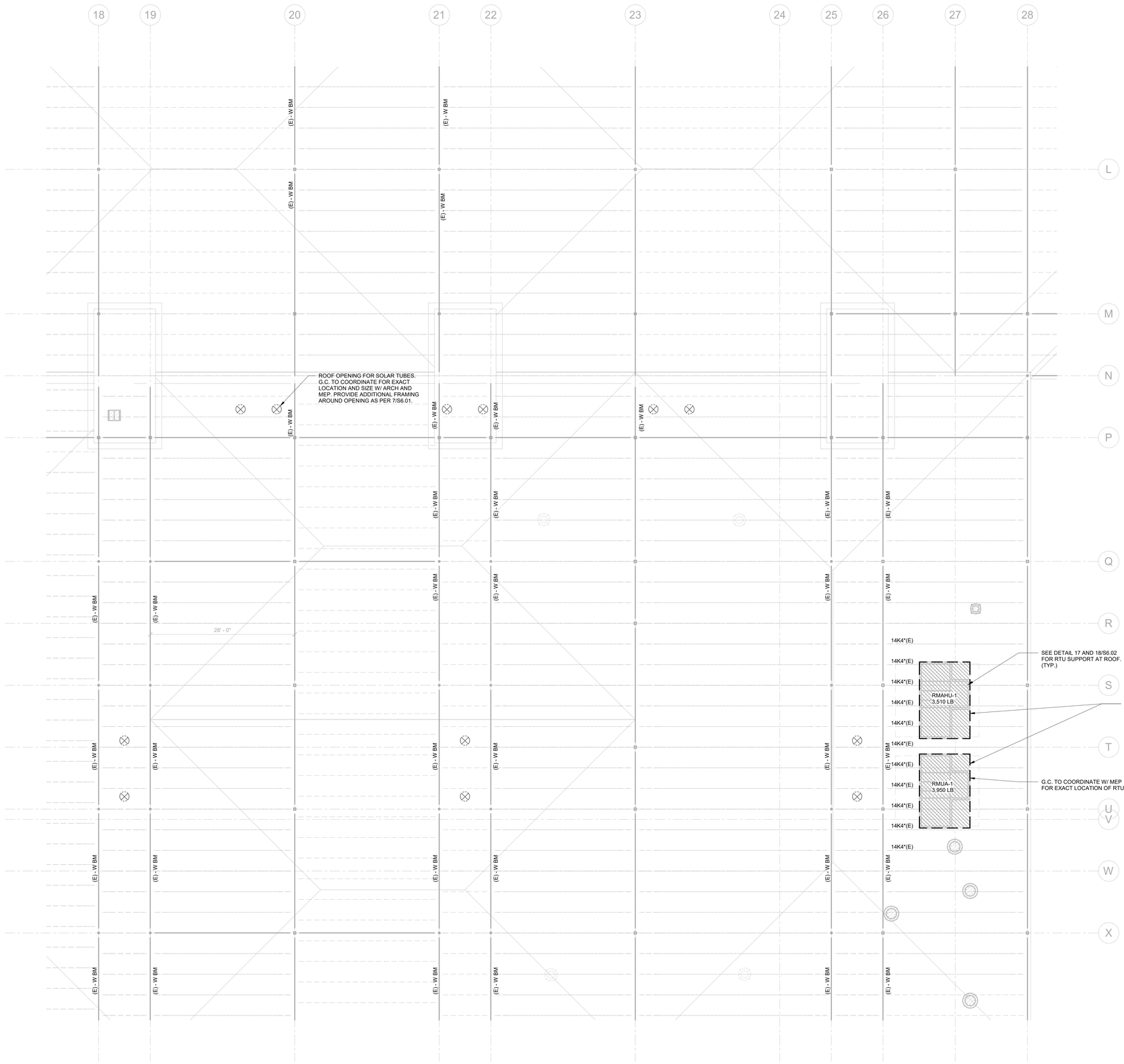
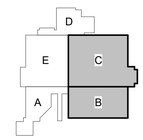


1 SKYLIGHTS FRAMING PARTIAL PLAN
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
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SKYLIGHT FRAMING PLAN -AREA B

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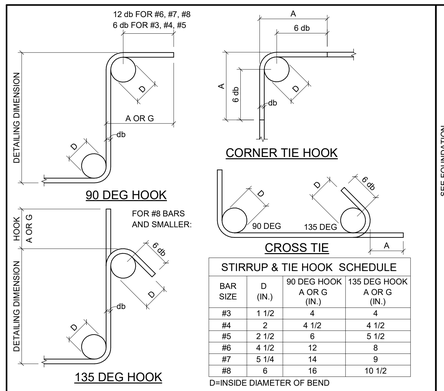
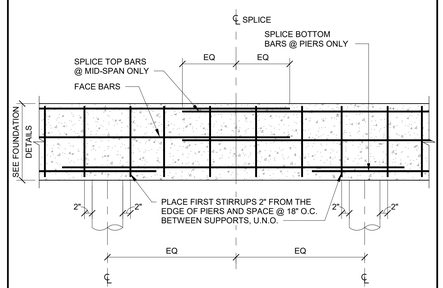


STIRRUP & TIE HOOK SCHEDULE			
BAR SIZE	D (IN.)	90 DEG HOOK A OR G (IN.)	135 DEG HOOK A OR G (IN.)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2
#6	4 1/2	12	8
#7	5 1/4	14	9
#8	6	16	10 1/2

D=INSIDE DIAMETER OF BEND

STIRRUP AND TIE HOOK TYPES

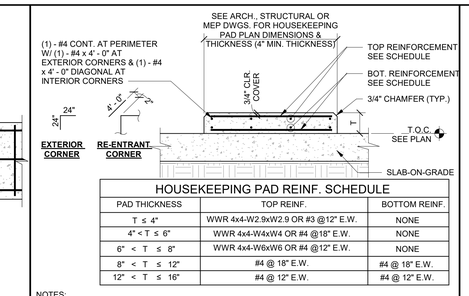
20 SCALE: N.T.S.



NOTES:
1. SLAB STEEL NOT SHOWN FOR CLARITY.
2. SEE TYPICAL DETAIL "TENSION DEVELOPMENT AND SPLICE LENGTH" FOR SPLICE DIMENSION.

TYPICAL DETAIL BEAM REINFORCING SPLICE DETAIL

16 SCALE:N.T.S.



HOUSEKEEPING PAD REINF. SCHEDULE		
PAD THICKNESS	TOP REINF.	BOTTOM REINF.
T ≤ 4"	WWR 4x4-W2.9xW2.9 OR #3 @12" E.W.	NONE
4" < T ≤ 6"	WWR 4x4-W4xW4 OR #4 @18" E.W.	NONE
6" < T ≤ 8"	WWR 4x4-W6xW6 OR #4 @12" E.W.	NONE
8" < T ≤ 12"	#4 @ 18" E.W.	#4 @ 18" E.W.
12" < T ≤ 16"	#4 @ 12" E.W.	#4 @ 12" E.W.

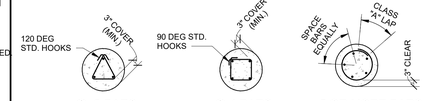
NOTES:
1. GENERAL CONTRACTOR TO COORDINATE WITH MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE REQUIREMENTS FOR HOUSEKEEPING PADS OVER SLAB-ON-GRADE AND PROVIDE WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. COORDINATE DIMENSIONS AND OTHER SPECIAL REQUIREMENTS WITH EQUIPMENT MANUFACTURERS AS REQUIRED.
2. PAD SHALL NOT BE POURED UNTIL AFTER SLAB HAS REACHED ITS SPECIFIED 28 DAYS STRENGTH.
3. CONCRETE FOR HOUSEKEEPING PAD SHALL BE NORMAL WEIGHT CONCRETE WITH f'c = 3,000 PSI.

TYPICAL DETAIL CONCRETE ISLAND OR HOUSEKEEPING PAD SLAB-ON-GRADE

12 SCALE: N.T.S.

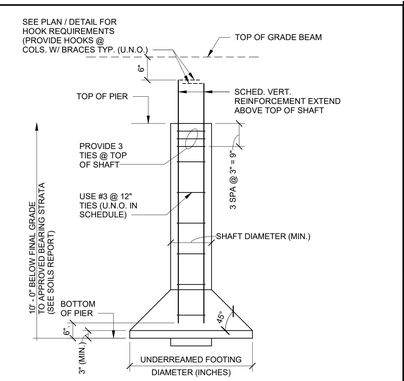
DRILLED PIER VERTICAL REINFORCEMENT SCHEDULE		
SHAFT DIAMETER (INCHES)	VERTICAL REINFORCEMENT	TIES (USE #3 @ 12" U.N.O.)
12	3 - #5	#3 @ 10"
14, 16	4 - #5	#3 @ 10"
18, 20	4 - #6	
22, 24, 26	5 - #7	
28, 30	5 - #8	
36	5 - #9	
42	7 - #9	
48	7 - #10	
54	9 - #10	
60	9 - #11	#4 @ 12"
66	11 - #11	#4 @ 12"
72	13 - #11	#4 @ 12"

*ALL PIER SIZES SHOWN MAY NOT BE USED ON THIS PROJECT.



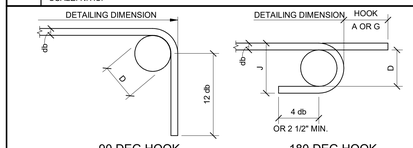
SHAFT BAR PLACEMENT PLANS

8 SCALE: N.T.S.



TYPICAL DETAIL DRILLED PIER

4 SCALE: N.T.S.

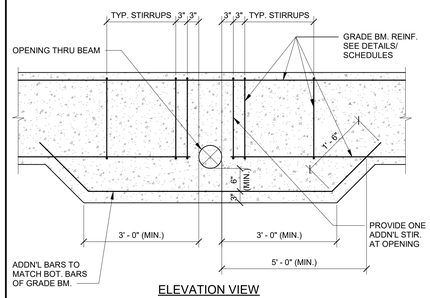


RECOMMENDED END HOOKS, ALL GRADES				
BAR SIZE	FINISHED BEND DIAMETER D, (IN.)	180 DEG HOOKS		90 DEG HOOKS
		A OR G, (IN.)	J, (IN.)	A OR G, (IN.)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	28 1/2	41

D = INSIDE DIAMETER OF BEND

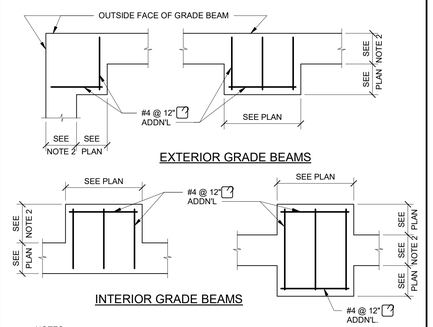
END HOOK TYPES

19 SCALE: N.T.S.



TYPICAL DETAIL OPENING THRU GRADE BEAM THAT CONFLICTS WITH BOTTOM REINFORCEMENT

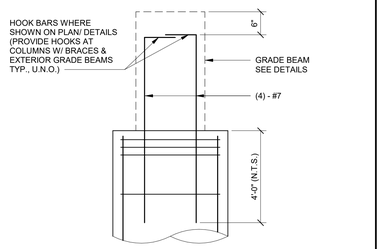
15 SCALE: N.T.S.



NOTES:
1. PLAN VIEWS FOR TYPICAL WIDENED GRADE BEAMS ARE SHOWN. FOR SIMILAR CONDITION NOT SHOWN, PROVIDE #4 ADDN'L. @ 12" O.C. MAX. IN WIDENED SECTION.
2. SEE DETAIL SHEETS FOR GRADE BEAM WIDTH.

TYPICAL DETAIL ADDITIONAL BARS AT WIDENED GRADE BEAM (PLAN VIEW)

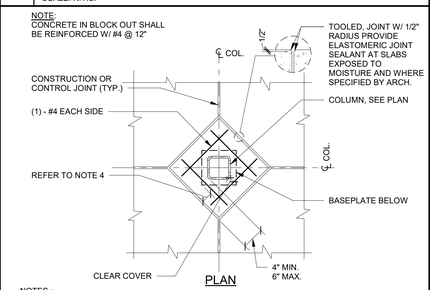
11 SCALE: N.T.S.



NOTES:
1. THIS DETAIL SHALL BE USED WHERE PIER REINFORCING STEEL CAN NOT BE ACCOMMODATED WITHIN WIDTH OF GRADE BEAMS.
2. SEE TYPICAL DRILLED PIER DETAIL FOR ADDITIONAL INFORMATION.

TYPICAL DETAIL SHAFT SIZE LARGER THAN GRADE BEAM WIDTH

7 SCALE: N.T.S.



NOTES :
1. GENERAL CONTRACTOR TO COORDINATE REQUIRED SIZE OF BLOCK OUT FOR COLUMNS. SUBMIT THE DESIRED BLOCK OUT SIZE TO ARCHITECT FOR APPROVAL.
2. PROVIDE 3" MINIMUM CONCRETE COVER ALL AROUND COLUMN.
3. BLOCKOUT SHALL BE SIZED TO PROVIDE 3" MINIMUM CONCRETE COVER ALL AROUND COLUMN AND BASE PLATE.
4. GENERAL CONTRACTOR TO INCREASE COLUMN BLOCK-OUT DIMENSIONS AS REQUIRED TO ACCOMMODATE GUSSET PLATES AT BRACE FRAMES.

TYPICAL DETAIL BLOCK-OUT AROUND COLUMN (SLAB-ON-GRADE)

3 SCALE: N.T.S.

DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION
GRADE 60 (UNCOATED) REINFORCEMENT
(NORMAL WEIGHT CONCRETE)

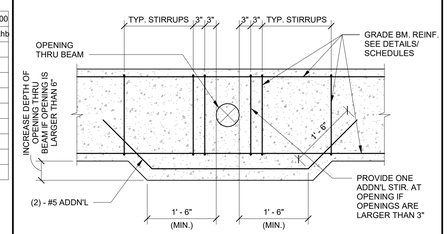
BAR SIZE	f'c = 3000		f'c = 4000		f'c = 5000		f'c = 6000		f'c = 7000		f'c = 8000		f'c = 9000		f'c = 10000	
	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh
#3	9	6	8	6	7	6	6	6	6	6	6	6	6	6	6	6
#4	11	8	10	7	9	6	8	6	8	6	7	6	7	6	6	6
#5	14	10	12	9	11	8	10	7	9	7	9	6	8	6	8	6
#6	17	12	15	10	13	9	12	9	11	8	11	8	10	7	9	7
#7	20	14	17	12	15	11	14	10	13	9	12	9	12	8	11	8
#8	22	16	19	14	17	12	16	11	15	11	14	10	13	9	12	9
#9	25	18	22	15	20	14	18	13	17	12	16	11	15	10	14	10
#10	28	20	25	17	22	16	20	14	19	13	18	12	17	12	16	11
#11	31	22	27	19	24	17	22	16	21	15	19	14	18	13	17	12

90° HOOKS Ldh 180° HOOKS Ldh

NOTES:
1. ALL LENGTHS SHOWN IN THE TABLE ARE IN INCHES.
2. Lhb = TENSION DEVELOPMENT LENGTH.
3. Ldh = Lhb, UNLESS CONDITIONS OF ITEM 4 ARE SATISFIED.
4. Ldh = 0.7 Lhb, WHEN SIDE COVER NORMAL TO PLANE OF HOOK IS NOT LESS THAN 2 1/2 INCHES AND FOR 90° HOOK, COVER ON BAR EXTENSION BEYOND HOOK SHALL NOT BE LESS THAN 2 INCHES.
5. HOOKS SHALL NOT BE CONSIDERED EFFECTIVE IN DEVELOPING BARS IN COMPRESSION.

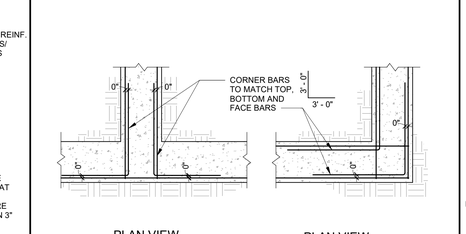
TYPICAL DETAIL DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION (NORMAL WEIGHT CONCRETE)

18 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL OPENING THRU GRADE BEAM

14 SCALE: N.T.S.

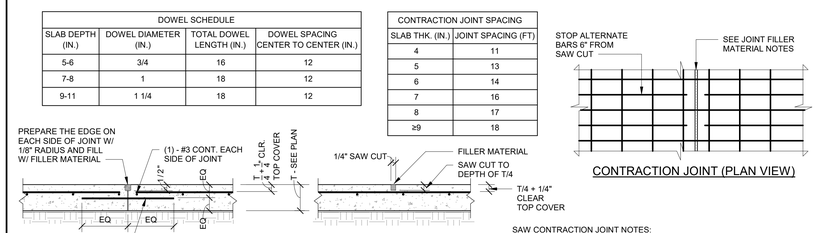


TYPICAL DETAIL GRADE BEAM REINFORCEMENT STEEL CORNER BARS

10 SCALE: N.T.S.

DOWEL SCHEDULE			
SLAB DEPTH (IN.)	DOWEL DIAMETER (IN.)	TOTAL DOWEL LENGTH (IN.)	DOWEL SPACING CENTER TO CENTER (IN.)
5-6	3/4	16	12
7-8	1	18	12
9-11	1 1/4	18	12

CONTRACTION JOINT SPACING	
SLAB THK. (IN.)	JOINT SPACING (FT)
4	11
5	13
6	14
7	16
8	17
≥9	18



CONSTRUCTION JOINT NOTES:
1. SLAB REINFORCEMENT SHALL BE CHAIRED BY SOIL SUPPORTED SLAB BOLSTERS.
2. BREAK BOND BETWEEN NEW AND PREVIOUSLY PLACED SLAB BY SPRAYING OR PAINTING EXPOSED SIDE WITH FORM OIL.
3. SUBGRADE SHALL BE FREE OF STANDING WATER AT THE TIME OF CONCRETE PLACEMENT.
4. ALL DOWELS IN THIS DETAIL SHALL BE SMOOTH BAR DOWELS.

JOINT SPACING NOTE:
1. PROVIDE CONTRACTION AND/OR CONSTRUCTION JOINTS AT EVERY COLUMN CENTERLINE AND AT A MAXIMUM SPACING AS SCHEDULED. NOT TO EXCEED 18 FEET, U.N.O. ASPECT RATIOS OF SLAB PANELS ENCLOSED BY CONTROL JOINTS SHALL NOT EXCEED 1.5 TO 1.

JOINT FILLER MATERIAL NOTES:
1. FILLER MATERIAL USED SHALL BE EPOXY RESINS WITH A MINIMUM SHORE "A" HARDNESS OF 80 AND SHALL CONFORM TO ASTM D2240. JOINT FILLER SHALL BE APPROVED BY ENGINEER PRIOR TO APPLICATION. INSTALL JOINT FILLER PER MANUFACTURER'S SPECIFICATIONS.
2. WHERE POSSIBLE, FILLER MATERIAL SHALL BE APPLIED WHEN BUILDING IS UNDER PERMANENT TEMPERATURE CONTROL. THIS SHALL BE EITHER AT THE END OF CONSTRUCTION OF THE COMPLETE BUILDING SHELL, OR A MINIMUM OF 90 DAYS AFTER SLAB CONSTRUCTION.
3. ALL EXPOSED SLAB JOINTS SHALL BE FILLED WITH FILLER MATERIAL.

TYPICAL DETAIL CONSTRUCTION AND CONTRACTION JOINTS SLAB-ON-GRADE

6 SCALE: N.T.S.

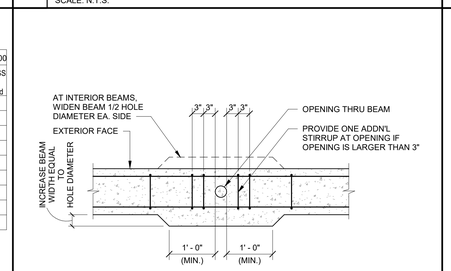
TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS
GRADE 60 (UNCOATED) REINFORCEMENT
(NORMAL WEIGHT CONCRETE)

BAR SIZE	f'c = 3000		f'c = 4000		f'c = 5000		f'c = 6000		f'c = 7000		f'c = 8000		f'c = 9000		f'c = 10000	
	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld
#3	17	22	15	19	13	17	12	16	12	16	12	16	12	16	12	16
#4	22	29	19	25	17	23	16	21	15	19	14	18	13	17	12	16
#5	28	36	24	31	22	28	20	26	18	24	17	22	16	21	15	20
#6	33	43	29	37	26	34	24	31	22	28	21	27	19	25	18	24
#7	48	63	42	54	38	49	34	45	32	41	30	39	28	36	27	35
#8	55	72	48	62	43	56	39	51	36	47	34	44	32	42	30	39
#9	62	81	54	70	48	63	44	57	41	53	38	50	36	47	34	44
#10	70	91	61	79	54	71	50	64	46	60	43	56	41	53	39	50
#11	78	101	67	87	60	78	55	71	51	66	48	62	45	58	43	55

NOTES:
1. ALL LENGTHS SHOWN IN THE TABLE ARE IN INCHES.
2. Ld = TENSION DEVELOPMENT LENGTH.
3. THE ABOVE TABLE IS VALID FOR
   a. BEAMS AND COLUMNS WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 2db AND WITH STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE CODE MINIMUM.
   b. OTHER ELEMENTS SUCH AS SLABS, WALLS, ETC. WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 3db.
4. FOR TOP BARS, MULTIPLY THE SPLICE LENGTHS BY 1.30. TOP BARS REQUIRE A MINIMUM OF 12" OF FRESH CONCRETE BELOW BAR.
5. WHEN BARS OF A DIFFERENT SIZE ARE LAP SPLICED IN TENSION, SPLICE LENGTH SHALL BE THE LARGER OF Ld OF THE LARGER BAR AND COMPRESSION LAP SPLICE LENGTH OF SMALLER BAR.
6. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN THE SMALLER OF ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH AND 6

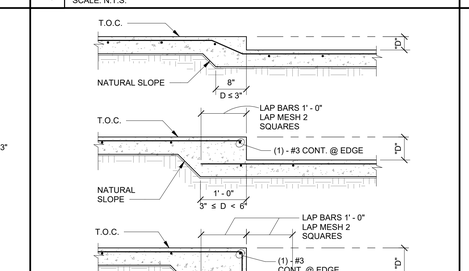
TYPICAL DETAIL TENSION DEVELOPMENT AND SPLICE LENGTHS (NORMAL WEIGHT CONCRETE)

17 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL VERTICAL HOLE THRU GRADE BEAM LARGER THAN 3" DIAMETER

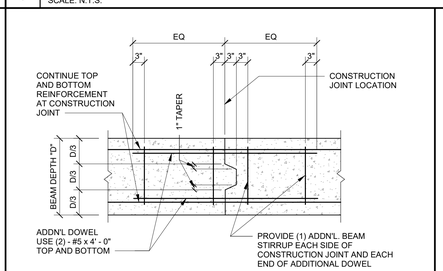
13 SCALE: N.T.S.



NOTES:
1. COORDINATE DEPTH & LOCATIONS OF ALL FLOOR DEPRESSIONS WITH ARCHITECTURAL DRAWINGS.
2. PROVIDE (1) - #4 x 4' - 0" TOP AT INTERIOR CORNERS OF ALL DEPRESSIONS.

TYPICAL DETAIL AT FLOOR DEPRESSIONS

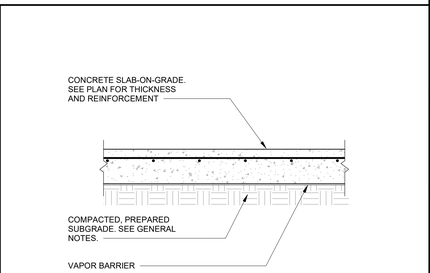
9 SCALE: N.T.S.



NOTES:
1. GENERAL CONTRACTOR SHALL SUBMIT DESIRED CONSTRUCTION JOINT LAYOUT AS A SHOP DRAWING FOR APPROVAL A MINIMUM OF TWO WEEKS PRIOR TO POUR.
2. CONSTRUCTION JOINT LOCATIONS SHALL BE COORDINATED WITH REINFORCING STEEL SUPPLIER AND ERECTOR.
3. JOINT LOCATIONS SHALL BE WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN.
4. FOR JOINT LOCATIONS OTHER THAN WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN, CONTRACTOR SHALL COORDINATE REQUIRED ADDITIONAL REINFORCEMENT WITH THE ENGINEER ON THE SHOP DRAWINGS.

TYPICAL DETAIL GRADE BEAM CONSTRUCTION JOINT

5 SCALE: N.T.S.



NOTE:
1. UNLESS SPECIFIED ELSEWHERE, VAPOR RETARDER SHALL BE A MINIMUM OF 15 MILS THICK (UNLESS THICKER SPECIFIED IN SPECS./ARCH. DRAWINGS) MEETING OR EXCEEDING ASTM E-1745, CLASS C, AND HAVE NO MORE THAN 0.01 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E-96.

TYPICAL DETAIL SLAB-ON-GRADE CONSTRUCTION SUBGRADE PREPARATION

1 SCALE: N.T.S.

Revision	Date
Issue for Bid	04/01/2025

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
5177 Richmond Avenue, Suite 670
Houston, TX 77046-2401
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10-29-2025

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FOUNDATION DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S3.01
Drawn By: KG	
Date: 10-29-2025	

10/28/2025 11:01:38 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO 23301 CREEKWOOD-MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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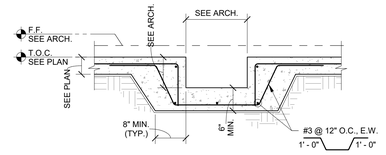
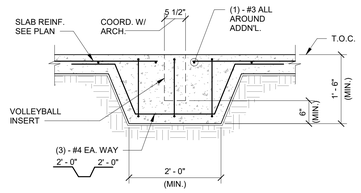


NOTE:
1. SEE ARCHITECT DRAWINGS FOR ACTUAL LOCATION AND SIZE.

TYPICAL DETAIL
FLOOR BOX DEPRESSION

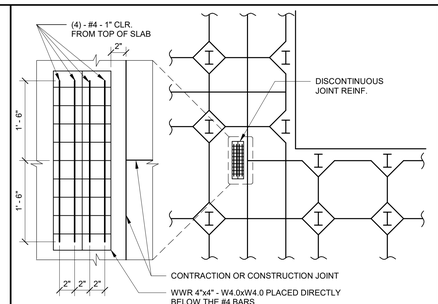
16 SCALE: 3/4" = 1'-0"



NOTE:
SEE ARCH. DWGS. FOR THE LOCATION OF INSERTS.

TYPICAL DETAIL
VOLLEYBALL INSERTS

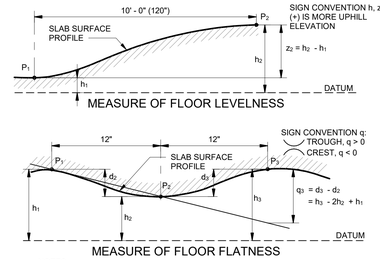
12 SCALE: 3/4" = 1'-0"



NOTE:
DISCONTINUOUS CONTRACTION OR CONSTRUCTION JOINTS SHOULD BE AVOIDED WHERE POSSIBLE.

TYPICAL DETAIL
ADDITIONAL REINFORCEMENT AT DISCONTINUOUS JOINT IN SLAB-ON-GRADE

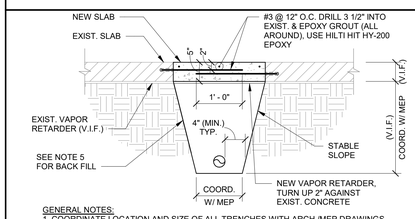
8 SCALE: N.T.S.



NOTES:
1. F_L = LEVELNESS F-NUMBER
   $F_L = \frac{12.5}{(3 \times S_Z) + Z}$ WHERE z = MEAN VALUE OF ALL z FLOOR READINGS.
   S_Z = STANDARD DEVIATION OF ALL z FLOOR READINGS.
2. F_F = LEVELNESS F-NUMBER
   $F_F = \frac{4.57}{(3 \times S_Q) + Q}$ WHERE q = MEAN VALUE OF ALL z FLOOR READINGS.
   S_Z = STANDARD DEVIATION OF ALL q FLOOR READINGS
3. F_L AND F_F SHALL BE STATISTICALLY DETERMINED ACCORDING TO ASTM E 1155 "STANDARD TEST METHOD FOR DETERMINING FLOOR FLATNESS AND LEVELNESS USING THE F-NUMBER SYSTEM."
4. REFER TO CONCRETE SPECIFICATIONS FOR REQUIRED F_F AND F_L VALUES.

TYPICAL DETAIL SLAB SURFACE TOLERANCE

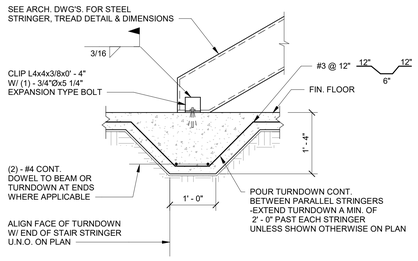
4 SCALE: N.T.S.



GENERAL NOTES:
1. COORDINATE LOCATION AND SIZE OF ALL TRENCHES WITH ARCH./MEP DRAWINGS.
2. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL HAVE 28 DAYS COMPRESSION STRENGTH OF MINIMUM 3,000 PSI (MAXIMUM AGGREGATE SIZE = 1 1/2"). MIX DESIGN SHALL CONFORM TO THE STANDARDS OF ACI 318 AND ACI 301.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
4. VAPOR RETARDER UNDER THE NEW SLAB SHALL BE 15 MIL STEGO VAPOR BARRIERS AS MANUFACTURED BY STEGO OR EQUIVALENT. ALL SEAMS SHALL BE OVERLAPPED MINIMUM 6 INCHES AND TAPED WITH MANUFACTURER'S TAPE.
5. FILL UNDER THE NEW SLAB SHALL BE STRUCTURAL FILL (SANDY CLAY OR CLAYEY SAND) HAVING PLASTICITY INDEX BETWEEN 10 AND 20 AND LIQUID LIMIT NOT EXCEEDING 40. FILL MATERIAL SHALL BE PLACED IN 6 INCH LOOSE LIFTS AND COMPACTED TO AT LEAST 95% MAXIMUM DENSITY (ASTM D698). THE SELECT FILL SHALL BE MOISTURE ADJUSTED TO WITHIN 2% OF OPTIMUM MOISTURE CONTENT. AS AN ALTERNATE TO SELECT FILL, CONTRACTOR MAY UTILIZE CEMENT STABILIZED SAND FOR BACKFILLING TRENCHES. SAND SHALL BE CLEAN AND SHALL CONFORM TO ASTM C33 AND CEMENT SHALL CONFORM TO ASTM C150. SAND-CEMENT MIXTURE SHALL PROVIDE COMPRESSIVE STRENGTH OF MINIMUM 100 PSI WHEN COMPACTED TO MINIMUM 95% (ASTM D558). PLACE MATERIAL IN 8 INCH LOOSE LIFTS AND COMPACT TO MINIMUM 95% WITH MOISTURE CONTENT AT OPTIMUM OR BELOW OPTIMUM MOISTURE CONTENT.
6. V.I.F. - VERIFY IN FIELD.

TYPICAL DETAIL AT PLUMBING TRENCHES

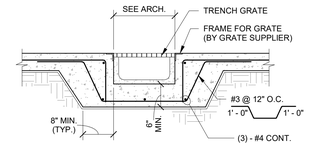
19 SCALE: N.T.S.



NOTES:
1. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF STAIR STRINGER LOCATIONS WITH ARCHITECTURAL DRAWINGS & PROVIDE TURNDOWNS WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT.
2. CLIP ANGLE TO BE HIDDEN BENEATH FIRST TREAD, WHERE OPEN RISERS ARE USED, COORDINATE THE LOCATION WITH THE ARCHITECT.

TYPICAL DETAIL
TURNDOWN AT STEEL STAIR SLAB-ON-GRADE

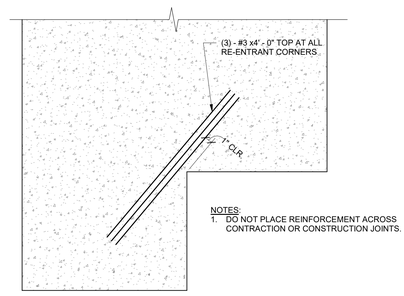
15 SCALE: N.T.S.



NOTE:
1. SEE ARCHITECT DRAWINGS FOR ACTUAL LOCATION AND TRENCH SIZE.

TYPICAL DETAIL
TRENCH DRAIN

11 SCALE: 3/4" = 1'-0"

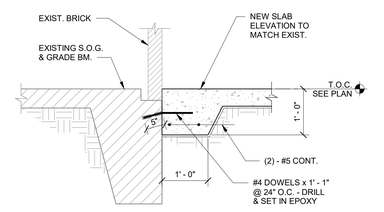


NOTES:
1. DO NOT PLACE REINFORCEMENT ACROSS CONTRACTION OR CONSTRUCTION JOINTS.

SCHEMATIC SLAB-ON-GRADE

TYPICAL DETAIL
RE-ENTRANT CORNER BARS AT SLAB-ON-GRADE

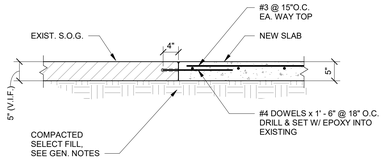
3 SCALE: 1 1/2" = 1'-0"



NOTES:
1. AT LOCATIONS WHERE EXISTING BRICK IS TO BE REMOVED, CONTINUE NEW SLAB OVER LEDGE.
2. PROVIDE TOOLED JOINT AT ALL LOCATIONS WHERE NEW SLAB ABUTS EXISTING SLAB. FILL JOINT W/ SEALANT.

TYPICAL DETAIL
SLAB-ON-GRADE AT EXISTING BUILDING

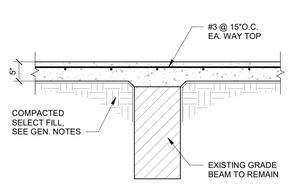
18 SCALE: 3/4" = 1'-0"



NOTE:
1. SAWCUT TOP 1" OF EXISTING SLAB PRIOR TO REMOVING EXISTING CONCRETE.
2. EXTENT OF SLAB DEMOLITION TO BE DETERMINED BY CONTRACTOR.

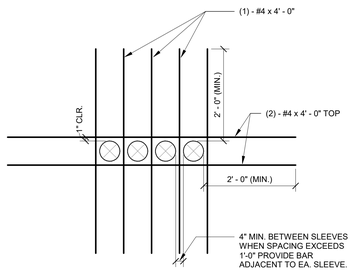
TYPICAL DETAIL
AT EXISTING SLAB-ON-GRADE

14 SCALE: 3/4" = 1'-0"

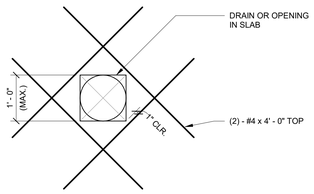


TYPICAL DETAIL
SLAB REPAIR OVER EXISTING BEAM

5 SCALE: 3/4" = 1'-0"



MULTIPLE OPENINGS
(PIPE SLEEVES)

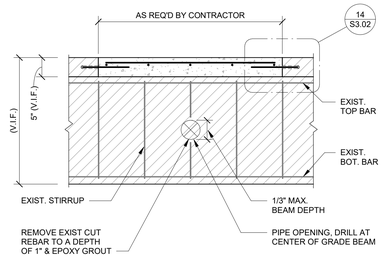


SINGLE DRAIN OR OPENING

NOTES:
1. COORDINATE OPENING SIZE AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. CONDUIT & PIPES OF ALUMINUM SHALL NOT BE PLACED IN CONCRETE UNLESS EFFECTIVELY COATED W/ PROTECTIVE MATERIAL TO PREVENT CHEMICAL REACTION.

TYPICAL DETAIL
ADDITIONAL REINFORCEMENT AT OPENINGS AT SLAB-ON-GRADE

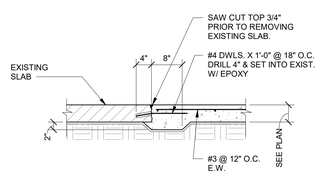
1 SCALE: N.T.S.



NOTE:
OPENINGS SHOULD ONLY BE PROVIDED WITHIN MIDDLE 8' - 0" OF GRADE BEAM SPAN AND MIDDLE 1/3 OF BEAM DEPTH.

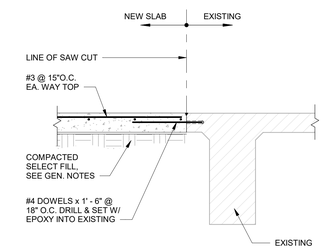
TYPICAL DETAIL
PIPE OPENING THROUGH EXIST GRADE BEAM

17 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
NEW SLAB AT EXISTING

13 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
SLAB REPAIR NEAR BEAM

9 SCALE: 3/4" = 1'-0"

10/28/2025 11:01:39 AM

Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO23/01 CREEKWOOD-MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

Revision
Date 04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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FOUNDATION DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S3.02
Drawn By: KG	
Date: 10-29-2025	

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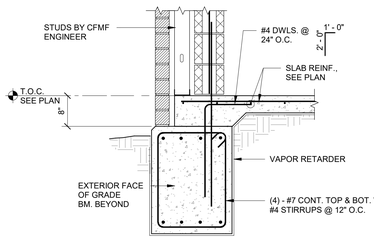
NOTE:
1. ELIMINATE BRICK / MASONRY LEDGE & CMU AT DOORS

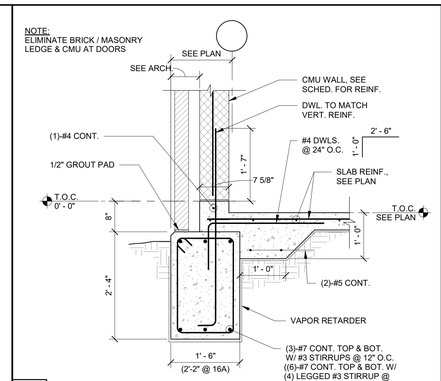
2. GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL EXTERIOR GRADE BEAM

20 SCALE: 3/4" = 1'-0"

NOTE:
ELIMINATE BRICK / MASONRY LEDGE & CMU AT DOORS

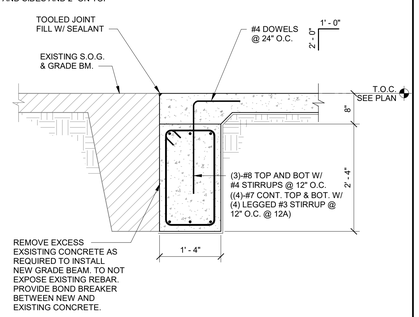


16A

TYPICAL DETAIL EXTERIOR GRADE BEAM

16 SCALE: 3/4" = 1'-0"

NOTE:
GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP

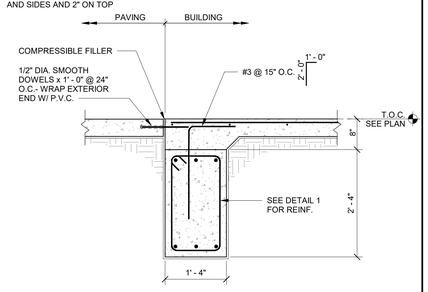


12A

TYPICAL DETAIL AT EXISTING SLAB-ON-GRADE

12 SCALE: 3/4" = 1'-0"

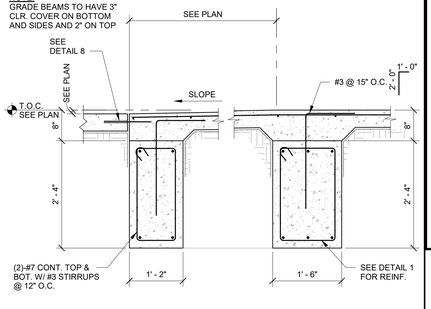
NOTE:
GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL EXTERIOR GRADE BEAM AT DOORS/FLATWORK

8 SCALE: 3/4" = 1'-0"

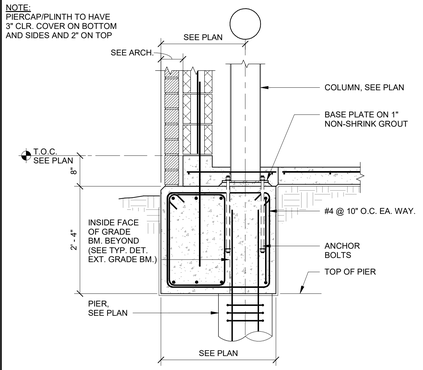
NOTE:
GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL GRADE BEAM AT PORCH

4 SCALE: 3/4" = 1'-0"

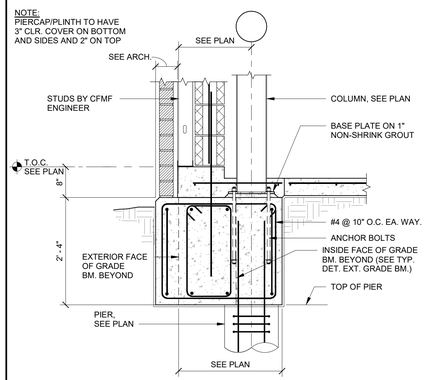
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL EXTERIOR GRADE BEAM AT COLUMN

19 SCALE: 3/4" = 1'-0"

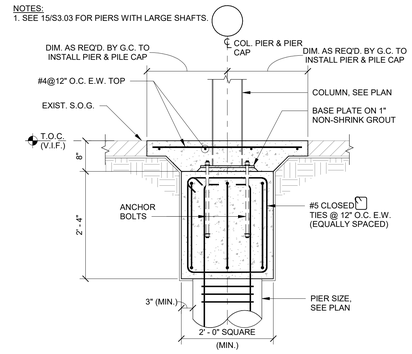
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL EXTERIOR GRADE BEAM AT COLUMN

15 SCALE: 3/4" = 1'-0"

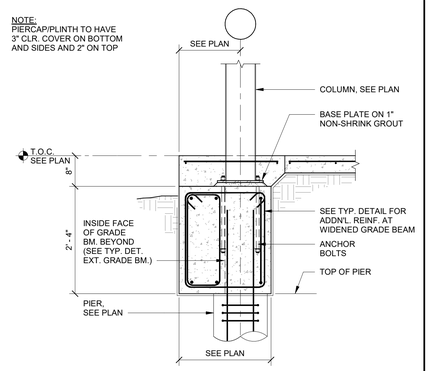
NOTES:
1. SEE 15/S3.03 FOR PIERS WITH LARGE SHAFTS.



TYPICAL DETAIL NEW INTERIOR COLUMN AT EXISTING WITH PIER CAP

11 SCALE: 3/4" = 1'-0"

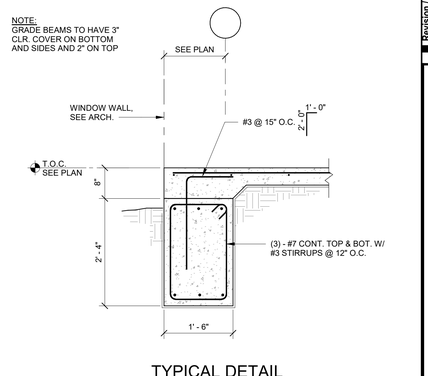
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL EXTERIOR GRADE BEAM AT COLUMN

7 SCALE: 3/4" = 1'-0"

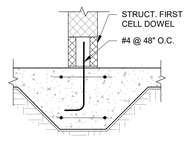
NOTE:
GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



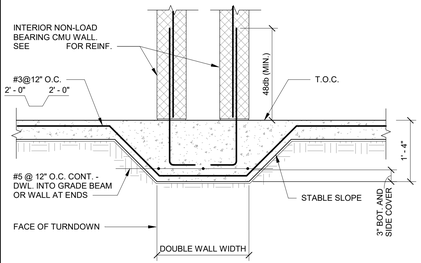
TYPICAL DETAIL EXTERIOR GRADE BEAM AT WINDOW WALL

3 SCALE: 3/4" = 1'-0"

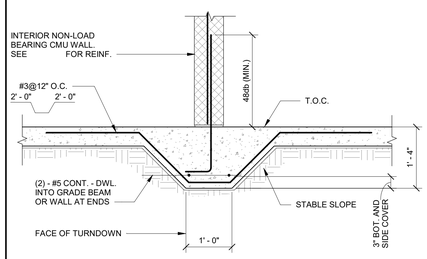
NOTES :
1. THIS DETAIL APPLIES AT ALL CMU WALL LOCATIONS WITHOUT GRADE BEAMS.
2. SEE PLAN FOR LOCATIONS MARKED "TURNDOWN", T.D. OR OTHERWISE NOTED.



AT UNREINFORCED WALLS



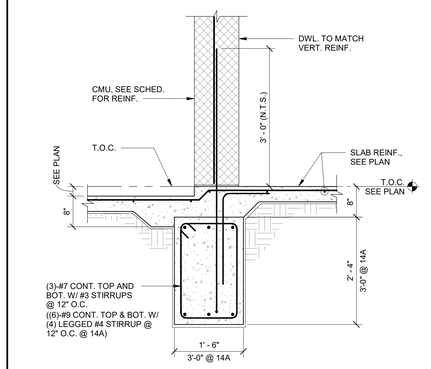
AT DOUBLE WALL



AT SINGLE WALL

TYPICAL DETAIL TURNDOWN AT CMU WALL

17 SCALE: 3/4" = 1'-0"

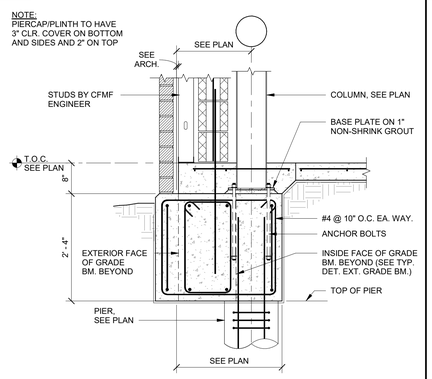


14A

TYPICAL DETAIL CMU WALL AT FLOOR DEPRESSION

14 SCALE: 3/4" = 1'-0"

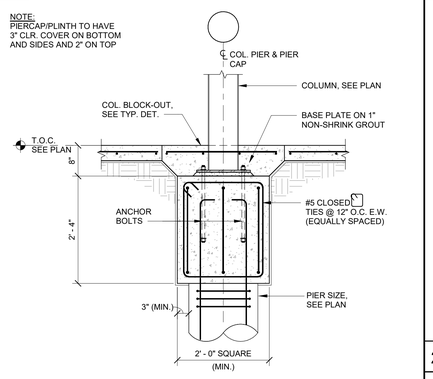
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL EXTERIOR GRADE BEAM AT COLUMN

10 SCALE: 3/4" = 1'-0"

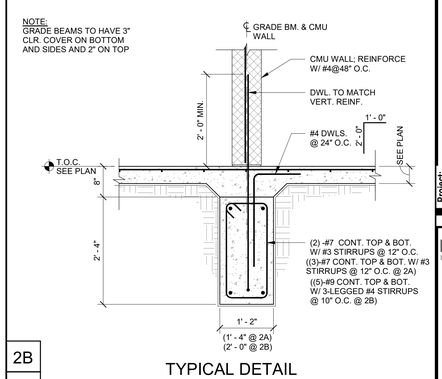
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL INTERIOR COLUMN WITH PIER CAP

6 SCALE: 3/4" = 1'-0"

NOTE:
GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP

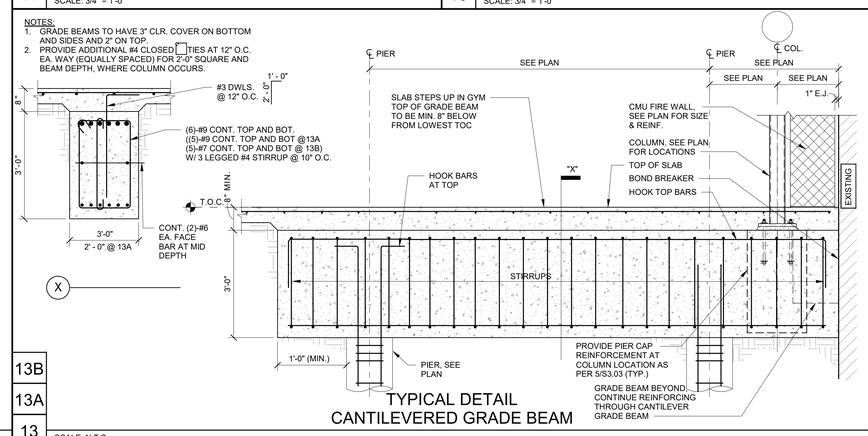


2B 2A

TYPICAL DETAIL INTERIOR GRADE BEAM AT NON-LOAD BEARING WALL

2 SCALE: 3/4" = 1'-0"

NOTES:
1. GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP.
2. PROVIDE ADDITIONAL #4 CLOSED TIES AT 12" O.C. EA. WAY (EQUALLY SPACED) FOR 2'-0" SQUARE AND BEAM DEPTH, WHERE COLUMN OCCURS.

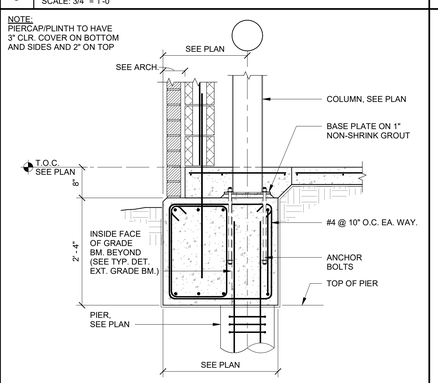


13B 13A

TYPICAL DETAIL CANTILEVERED GRADE BEAM

13 SCALE: N.T.S.

NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP

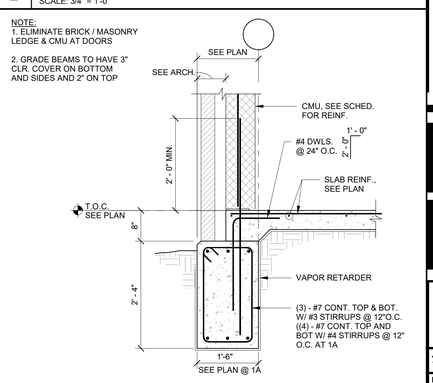


TYPICAL DETAIL EXTERIOR GRADE BEAM AT COLUMN

5 SCALE: 3/4" = 1'-0"

NOTE:
1. ELIMINATE BRICK / MASONRY LEDGE & CMU AT DOORS

2. GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



1A

TYPICAL DETAIL EXTERIOR GRADE BEAM

1 SCALE: 3/4" = 1'-0"

Revision	Date
Issue for Bid	04/01/2025

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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TBPE Firm Registration No. F-2640
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TRAVIS KOEHRING
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FOUNDATION DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S3.03
Drawn By: Author	
Date: 10-29-2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO 23301 / CREEKWOOD-MS_ADDITION & RENOVATION_STRUCT-R9T23.rvt

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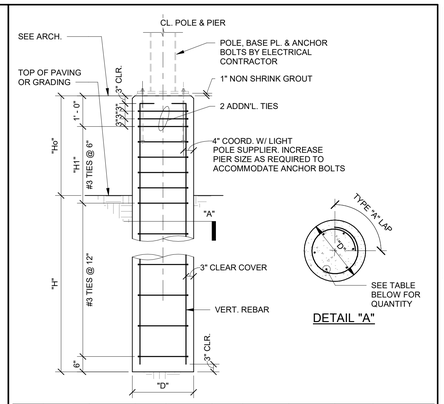
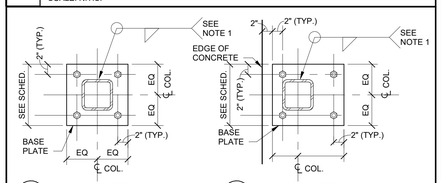


POLE MARK	NOM. POLE HEIGHT	ASSUMED EPA (sf)	"H" DEPTH OF PIER	"Ho" ABOVE GRADE	"H1"	"D" DIAMETER OF PIER	VERTICAL REINF	TIES	REMARKS
LP1	15' - 0"	5.0	5' - 0"	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	TYPICAL PARKING
LP2	25' - 0"	10.0	8' - 0"	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	TYPICAL PARKING
LP3	35' - 0"	10.0	10' - 0"	RE: ARCH.	1' - 6"	24"	6 - #7	#3 @ 12"	
LP4	40' - 0"	25.0	12' - 0"	9"	2' - 0"	24"	6 - #8	#3 @ 12"	TENNIS
LP5	50' - 0"	30.0	14' - 0"	9"	2' - 0"	30"	8 - #9	#3 @ 12"	
LP6	60' - 0"	40.0	16' - 0"	9"	2' - 6"	30"	10 - #9	#3 @ 12"	
LP7	70' - 0"	40.0	18' - 0"	9"	3' - 0"	36"	12 - #9	#3 @ 18"	SOFTBALL
LP8	80' - 0"	80.0	20' - 0"	9"	4' - 0"	42"	15 - #9	#3 @ 18"	BASEBALL
LP9	90' - 0"	80.0	22' - 0"	9"	5' - 0"	42"	17 - #9	#3 @ 18"	BASEBALL

NOTES:
1. WIND LOAD CRITERIA IS PER IBC 2018. Vult = 140 MPH.
2. CONCRETE COMPRESSIVE STRENGTH, F'C = 3,000 PSI (NWC), WITH A MAX WATER/CEMENT RATIO OF 0.54.
3. STEEL REINFORCEMENT SHALL BE ASTM A615, GR. 60.
4. REFER TO ARCH DRAWINGS/CIVIL DRAWINGS FOR LOCATIONS OF LIGHT POLES.
5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION (AND SPECIFICATIONS FOR LIGHT STANDARDS).
6. VERIFY PROJECTION OF CONCRETE ABOVE GROUND WITH ARCHITECT.
7. EPA INDICATES MAXIMUM EXPOSED PROJECTED AREA AT THE TOP OF THE POLE IN ANY DIRECTION.
8. FOR A STATED POLE HEIGHT SHOWN ON THE TABLE, THE DEPTH OF PIER IS DEEMED ADEQUATE IF EPA IS LESS THAN SHOWN ON TABLE ABOVE.
9. THE PRESENCE OF SAND SEAMS AND SLICKENSIDES IN THE LAYERS MAY CAUSE SLOUGHING DURING PIER EXCAVATION, THIS MAY REQUIRE THE USE OF TEMPORARY STEEL CASING.
10. CONCRETE SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.

TYPICAL DETAIL
LIGHT POLE FOUNDATION

3 SCALE: N.T.S.

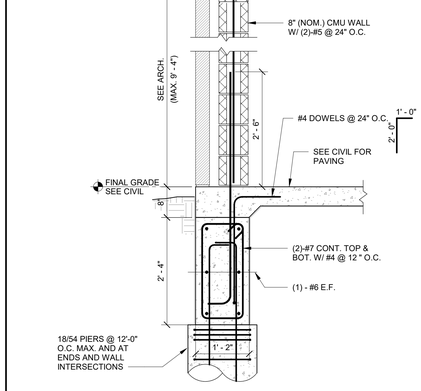


BASE PLATE SCHEDULE		
COLUMN	BASE PLATE	ANCHOR BOLTS
HSS 6 x 6	14" x 14" x 3/4"	(4)-3/4"Ø TYPE A
HSS 8 x 8	16" x 16" x 3/4"	(4)-3/4"Ø TYPE A
HSS 10 x 10	18" x 18" x 1 1/4"	(4)-1"Ø TYPE A

NOTES:
1. MINIMUM FILLET WELD ACCORDING TO AISC (1/4" MIN.). WELDING AROUND CORNER RADIUS IS NOT REQUIRED U.N.O.
2. USE OVERSIZED HOLES FOR ANCHOR RODS ACCORDING TO AISC.
3. WASHERS SHALL BE INSTALLED OVER OVERSIZED HOLES.
4. CONTRACTOR SHALL PROVIDE 1/8" THICK TEMPLATE FOR ANCHOR ROD INSTALLATION.

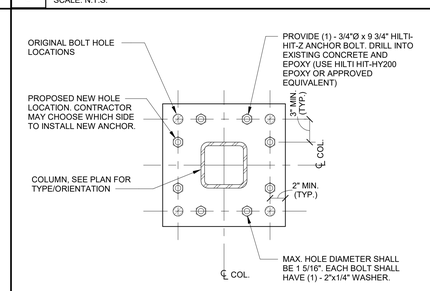
TYPICAL DETAIL
BASE PLATE AT HSS COLUMNS

2 SCALE: N.T.S.



FOUNDATION DETAIL AT DUMPSTER

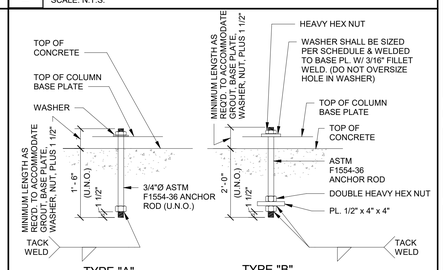
6 SCALE: N.T.S.



NOTES:
1. THIS DETAIL SHALL NOT BE USED AT BRACE FRAMES OR MOMENT FRAMES. ENGINEER APPROVAL IS REQUIRED PRIOR TO INSTALLATION FOR EA. LOCATION WITH DAMAGED ANCHOR BOLTS.
2. CUT AWAY DAMAGED ANCHOR BOLTS AND PROVIDE NEW HOLES FOR EPOXY ANCHOR.
3. HIT-Z-R ANCHORS SHALL BE USED IN LIEU OF HIT-Z ANCHORS AT COLUMNS EXPOSED TO WEATHER.

TYPICAL DETAIL
REPAIR AT GRAVITY BASE PLATE

5 SCALE: N.T.S.



TYPE "B" WASHER SCHEDULE		
ANCHOR ROD DIA.	WASHER SIZE*	MIN. WASHER THICKNESS
3/4"	2"	1/4"
7/8"	2 1/2"	5/16"
1"	3"	3/8"
1 1/4"	3 1/2"	1/2"
1 1/2"	4"	1/2"
1 3/4"	4 1/2"	5/8"
2"	5"	3/4"
2 1/2"	5 1/2"	7/8"

NOTE:
USE TYPE "B" ANCHOR BOLTS AT COLUMNS WITH DIAGONAL BRACES, MOMENT CONNECTIONS, & AT CANOPY COLUMNS

*CIRCULAR OR SQUARE WASHERS MEETING WASHER SIZE ARE ACCEPTABLE

TYPICAL DETAIL ANCHOR BOLT

1 SCALE: N.T.S.

Revision / Date
04/01/2025 Issue for Bid

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FOR
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HUMBLE, TX

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MSE - 23030
Matrix Structural Engineers
TBPE Firm Registration No. F-3040

STATE OF TEXAS
TRAVIS KOEHRING
103149
REGISTERED PROFESSIONAL ENGINEER
10-29-2025

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FOUNDATION DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S3.04
Drawn By: Author	
Date: 10-29-2025	

10/28/2025 11:01:41 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/21001_CREEKWOOD-MS_ADDITION & RENOVATION_STRUCT-ENYT23.rvt

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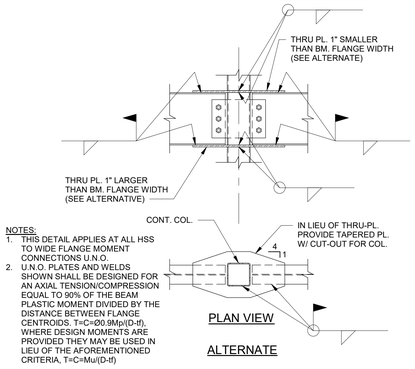
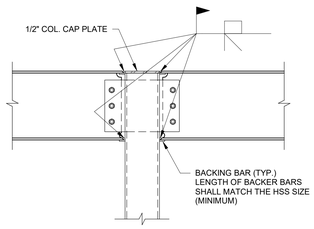


NOTES:
1. THIS DETAIL APPLIES AT ALL HSS TO WIDE FLANGE MOMENT CONNECTIONS U.N.O.
2. U.N.O. PLATES AND WELDS SHOWN SHALL BE DESIGNED FOR AN AXIAL TENSION/COMPRESSION EQUAL TO 90% OF THE BEAM PLASTIC MOMENT DIVIDED BY THE DISTANCE BETWEEN FLANGE CENTROIDS. T=C=Ø0.9Mp/(D-tf), WHERE DESIGN MOMENTS ARE PROVIDED THEY MAY BE USED IN LIEU OF THE AFOREMENTIONED CRITERIA, T=C=Mu/(D-tf)

HSS STRENGTH HSS COLUMN TO WIDE FLANGE BEAM MOMENT CONNECTION

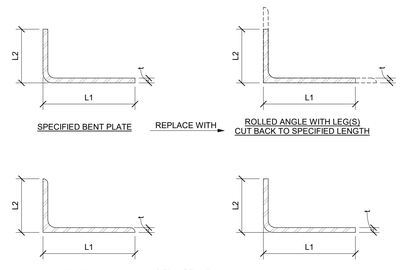
20 SCALE: N.T.S.



NOTES:
1. THIS DETAIL SHALL ONLY BE USED WHERE SPECIFICALLY NOTED. FOR GENERIC OR UNMARKED MOMENT CONNECTIONS, SEE20/S4.01
2. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

WIDE FLANGE BEAM TO HSS COLUMN MOMENT CONNECTION

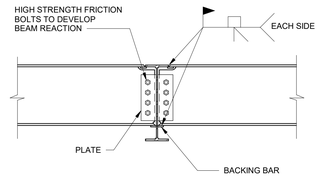
16 SCALE: N.T.S.



NOTE:
1. AT CONTRACTOR/FABRICATOR PREFERENCE ANGLE AND 90° BENT PLATES MAY BE SUBSTITUTED AS SHOWN U.N.O. BY EOR/ARCH.

TYPICAL DETAIL ANGLE OR BENT PLATE SUBSTITUTION

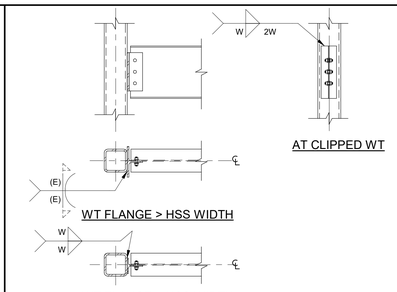
12 SCALE: N.T.S.



NOTE:
1. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

TYPICAL DETAIL STEEL BEAM TO BEAM MOMENT CONNECTION

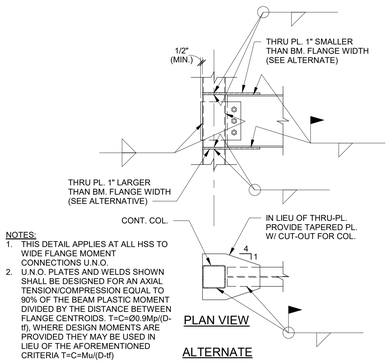
8 SCALE: N.T.S.



NOTES:
1. WELD SIZES W & E SHALL MEET AISC MIN. SIZE TO ENSURE ROTATIONAL DUCTILITY.
2. WT WEB THICKNESS SHALL NOT EXCEED 7/16".
3. THIS DETAIL MAY BE USED IN LIEU OF THE TYPICAL CONN. DETAIL AT CONTRACTOR PREFERENCE.
4. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
5. REFER TO GENERAL NOTES FOR BOLT TYPE.
6. EITHER WELDED/BOLTED OR WELDED/WELDED CONNECTIONS ARE ACCEPTABLE.

ALTERNATE DETAIL STEEL BEAM TO HSS COLUMN CONNECTION

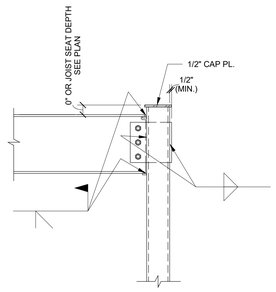
4 SCALE: N.T.S.



NOTES:
1. THIS DETAIL APPLIES AT ALL HSS TO WIDE FLANGE MOMENT CONNECTIONS U.N.O.
2. U.N.O. PLATES AND WELDS SHOWN SHALL BE DESIGNED FOR AN AXIAL TENSION/COMPRESSION EQUAL TO 90% OF THE BEAM PLASTIC MOMENT DIVIDED BY THE DISTANCE BETWEEN FLANGE CENTROIDS. T=C=Ø0.9Mp/(D-tf), WHERE DESIGN MOMENTS ARE PROVIDED THEY MAY BE USED IN LIEU OF THE AFOREMENTIONED CRITERIA T=C=Mu/(D-tf)

HIGH STRENGTH HSS COLUMN TO WIDE FLANGE BEAM MOMENT CONNECTION

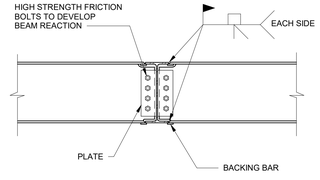
19 SCALE: N.T.S.



NOTES:
1. THIS DETAIL SHALL ONLY BE USED WHERE SPECIFICALLY NOTED. FOR GENERIC OR UNMARKED MOMENT CONNECTIONS, SEE19/S4.01
2. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

TYPICAL DETAIL HSS COLUMN TO WIDE FLANGE BEAM MOMENT CONNECTION

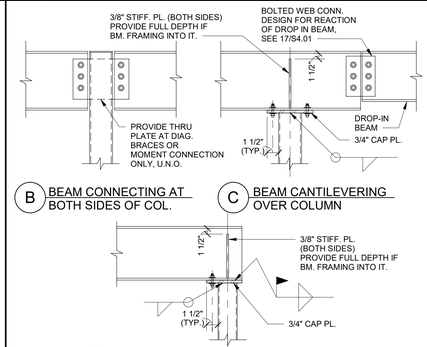
15 SCALE: N.T.S.



NOTE:
1. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

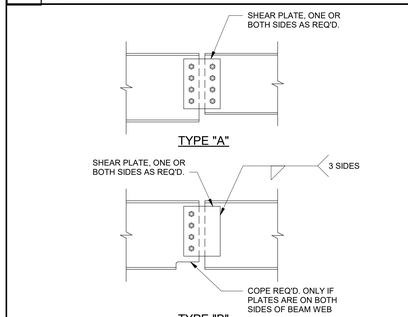
TYPICAL DETAIL STEEL BEAM TO BEAM MOMENT CONNECTION

7 SCALE: N.T.S.



TYPICAL DETAIL STEEL BEAM TO HSS/PIPE - COLUMN CONNECTION

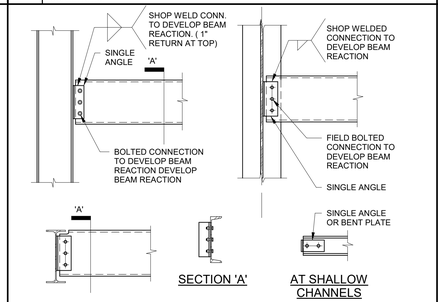
3 SCALE: N.T.S.



NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. REFER TO GENERAL NOTES FOR BOLT TYPE.
3. ALL CONNECTIONS SHALL MEET THE ROTATIONAL DUCTILITY AND STABILITY REQUIREMENTS PROVIDED BY AISC.

TYPICAL DETAIL SHEAR SPLICE AT BEAM

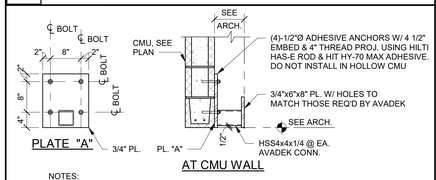
17 SCALE: N.T.S.



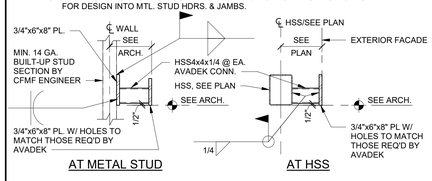
NOTES:
1. ANGLES MAY BE SHOP WELDED TO THE CHANNEL AND FIELD BOLTED TO THE COLUMN AT CONTRACTOR'S OPTION.
2. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
3. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN A.I.S.C. MANUAL WHERE APPLICABLE.
4. REFER TO GENERAL NOTES FOR BOLT TYPE.

TYPICAL DETAIL CONNECTION AT CHANNELS

14 SCALE: N.T.S.

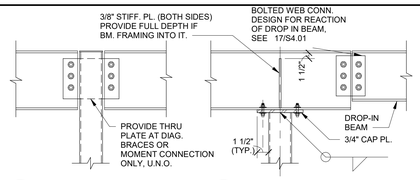


NOTES:
1. ALL STEEL TO BE GALVANIZED.
2. COORDINATE BOLT HOLE LOCATIONS AND PLATE SIZE WITH CANOPY SUPPLIER.
3. MTL. STUD ENGINEER TO COORD. W/ AVADEK EXACT LOADING FROM CANOPY FOR DESIGN INTO MTL. STUD HDRS. & JAMBS.



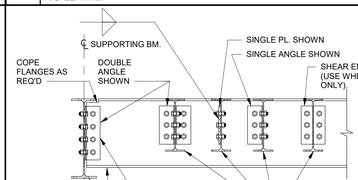
DETAIL AT AVADEK CANOPY CONNECTION

13 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL CANTILEVER BEAM OVER HSS COLUMN CONNECTION

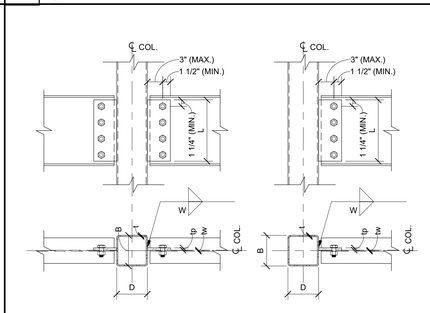
9 SCALE: N.T.S.



NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL WHERE APPLICABLE.
3. REFER TO GENERAL NOTES FOR BOLT TYPE.
4. SUPPORTED BEAMS PRIMARILY SUPPORT DISTRIBUTED LOADS FROM SLABS OR DECKING.
5. SUPPORTING BEAMS SUPPORT SIGNIFICANT POINT LOADS FROM ONE OR MORE SUPPORTED BEAMS OR FROM COLUMNS BEING TRANSFERRED. SUPPORTING BEAMS MAY BE SUPPORTED BY COLUMNS OR BY OTHER SUPPORTING BEAMS.
6. FOR AISC SIMPLE SHEAR CONNECTIONS AT SUPPORTED BEAM ENDS, USE DOUBLE ANGLE, SINGLE PLATE, OR SINGLE ANGLE U.N.O.
7. WELDED/BOLTED, WELDED/WELDED OR BOLTED/BOLTED CONNECTIONS PER AISC ARE PERMITTED.
8. ALL CONNECTIONS SHALL MEET THE ROTATIONAL DUCTILITY AND STABILITY REQUIREMENTS
9. BEAMS WITH SHEAR END PLATES REQUIRE CLOSE CONTROL IN FABRICATION TO ENSURE PROPER LENGTH AND SQUARE BEAM ENDS, PARTICULARLY WHEN CAMBER IS SPECIFIED.

TYPICAL DETAIL BEAM TO BEAM SHEAR CONNECTION (4 TYPES)

5 SCALE: N.T.S.



MAX. COLUMN WIDTH	
t	B OR D MAX.
3/16"	6"
1/4"	8"
5/16"	10"
3/8"	12"
1/2"	16"
5/8"	18"

MAX. DESIGN END REACTION Ru (KIPS)*						
L (IN.)	t = 3/16"	t = 1/4"	t = 5/16"	t = 3/8"	t = 1/2"	t = 5/8"
5.5	15	20	25	30	40	50
8.5	36	48	60	73	97	121
11.5	66	89	111	133	178	222
14.5	106	142	177	212	283	354
17.5	154	206	258	309	412	516
20.5	212	283	354	425	566	708
23.5	278	373	466	558	744	930
26.5	354	474	592	710	946	1183

* - VALUES SHOWN FOR ASTM A500 GR. B STEEL. FOR ASTM A500 GR. C, MULTIPLY VALUES BY 1.07.

NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA, REACTIONS SHOWN ARE FACTORED LOADS (LRFD).
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL WHERE APPLICABLE.
3. REFER TO GENERAL NOTES FOR BOLT TYPE.
4. THIS CONNECTION MAY ONLY BE USED WITH THE GEOMETRY SHOWN ABOVE AND WHERE THE BEAM DESIGN REACTION IS LESS THAN THE VALUE SHOWN IN THE SCHEDULE. ALL VALUES SHOWN ARE ULTIMATE DESIGN (LRFD) VALUES.
5. tp SHALL BE LESS THAN OR EQUAL TO 1/4" AT 3/16" THICK HSS, AND LESS THAN OR EQUAL TO 3/8" AT 1/4" THICK HSS.
6. AT ALL PLATE CONNECTIONS WITH STANDARD HOLES, tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 7/16" FOR CONNECTIONS WITH 2 TO 5 BOLTS, AND SHALL BE LESS THAN OR EQUAL TO 5/16" FOR CONNECTIONS WITH 6 OR MORE BOLTS. AT ALL PLATE CONNECTIONS WITH HORIZONTAL SHORT SLOTTED HOLES, tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 7/16 FOR CONNECTIONS WITH 6 OR MORE BOLTS.
7. COLUMN WIDTH B OR D SHALL BE LESS THAN OR EQUAL TO THE MAXIMUM WIDTH SHOWN IN THE SCHEDULE.
8. W SHALL BE 5/8 (tp).
9. FOR TWO SIDED CONNECTIONS, ALL CRITERIA MUST BE MET AT BOTH SIDES. WHERE ONLY ONE SIDE FAILS THE CRITERIA A WT CONNECTION MAY BE PROVIDED AT THAT SIDE. THIS DETAIL IS NOT ALLOWED AT BRACED FRAMES OR OTHER AXIALLY LOADED CONNECTIONS.
10. SEE 3/S4.01 FOR THRU PLATE AND END BEARING CONNECTIONS OR SEE 4/S4.01 FOR WT CONNECTIONS WHERE THIS DETAIL DOES NOT APPLY.
11. PLATE DEPTH "L" SHALL NOT BE LESS THAN 1/2 THE "T" DIMENSION OF THE SUPPORTED BEAM.

TYPICAL DETAIL SINGLE PLATE TO RECTANGULAR HSS WALL CONNECTION

1 SCALE: N.T.S.

Revision	Date
Issue for Bid	04/01/2025

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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10-29-2025

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TYPICAL FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S4.01
Drawn By: Author	
Date: 10-29-2025	

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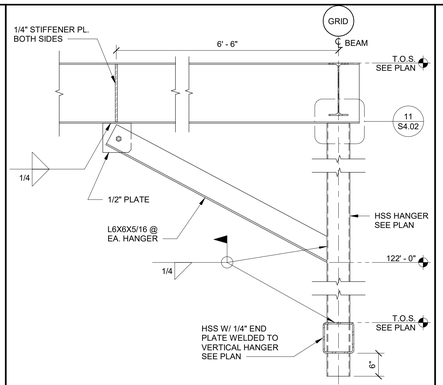
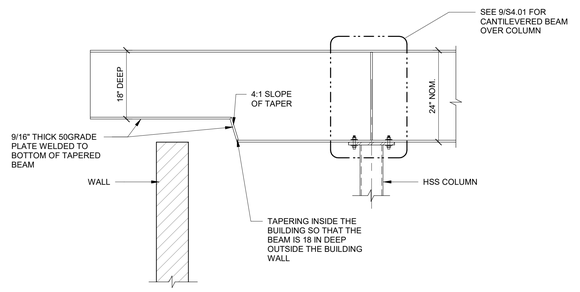


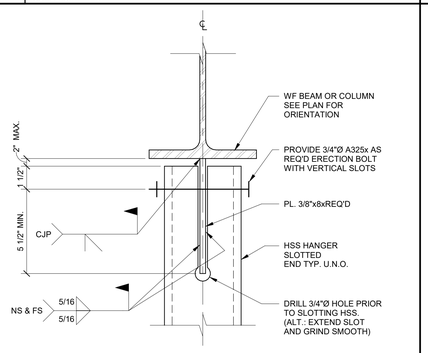
ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW

12 SCALE: 3/4" = 1'-0"



TAPPERING THE CANTILEVER BEAM INSIDE THE BUILDING

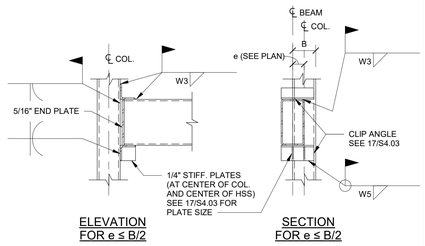
8 SCALE: 3/4" = 1'-0"



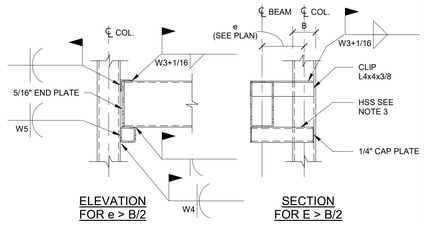
TYPICAL TUBE HANGER DETAIL

11 SCALE: N.T.S.

NOTES:
1. SEE FOR INFORMATION NOT SHOWN.
2. W5 SHALL BE W1 + 1/16" FOR (e-B/2)<6", and W1+ 1/4" FOR (e-B/2)=6" U.N.O.
3. HSS SHALL MATCH ANGEL DEPTH, WIDTH AND THICKNESS IN (E.G. FOR L6x4x3/8 USE HSS6x4x3/8)



ELEVATION FOR e ≤ B/2 — SECTION FOR e ≤ B/2

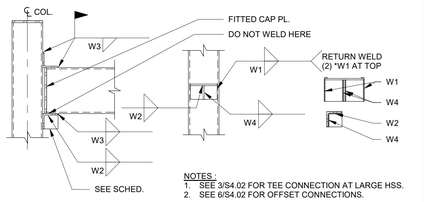


ELEVATION FOR e > B/2 — SECTION FOR E > B/2

TYPICAL DETAIL OFFSET TUBE BEAM TO COLUMN OFFSET CONNECTION

6 SCALE: N.T.S.

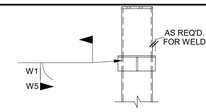
CONNECTION SCHEDULE							
GIRT SIZE	BOTTOM CONN.	STIFF. PL.	TOP ANGLE	W1	W2	W3	W4
HSS6x6	L4x4x3/8	5/16	L3x3x3/16	3/16	3/16	3/16	3/16
HSS8x8	L4x4x3/8	3/8	L3x3x1/4	3/16	3/16	3/16	3/16
HSS10x8 & HSS 10x10	L6x4x3/8 (LLV)	3/8	L3x3x5/16	5/16	1/4	1/4	5/16
HSS12x10 & HSS 16X12	L6x4x3/8 (LLV)	3/8	L3x3x5/16	5/16	1/4	1/4	5/16



NOTES:
1. SEE 3/S4.02 FOR TEE CONNECTION AT LARGE HSS.
2. SEE 6/S4.02 FOR OFFSET CONNECTIONS.

TYPICAL DETAIL TUBE BEAM TO COLUMN

5 SCALE: N.T.S.

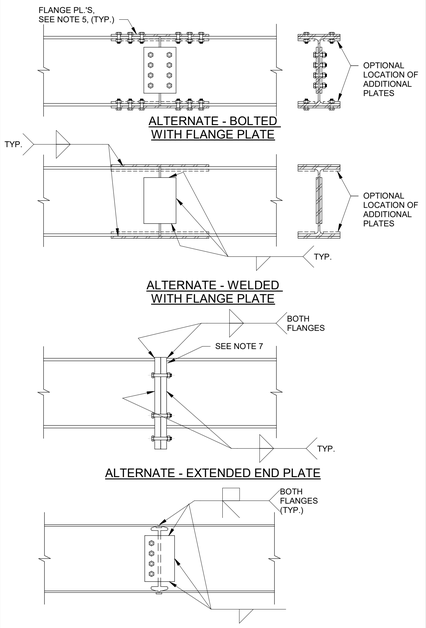


REINFORCED FILLET SIZE W5 SCHEDULE						
t \ W1	3/16	1/4	5/16	3/8	7/16	1/2
3/16	3/16	3/16	1/4	5/16	3/8	7/16
1/4	3/16	3/16	1/4	5/16	3/8	7/16
5/16	N/A	1/4	1/4	5/16	3/8	7/16
3/8	N/A	N/A	3/16	1/4	5/16	3/8
1/2	N/A	N/A	N/A	1/4	5/16	3/8
5/8	N/A	N/A	N/A	N/A	1/4	5/16

NOTES:
1. WHERE CONTRACTOR/FABRICATOR PREFERS SEAT WIDER THAN TUBE COLUMN FLAIR BEVEL WELDS SHALL BE REINFORCED TO MATCH W1 FILLET WELD CAPACITY AS SHOWN
2. REFERENCE 5/S4.04 FOR INFORMATION NOT SHOWN.
3. t INDICATES NOMINAL COLUMN THICKNESS
4. THIS DETAIL MAY NOT BE USED FOR ARCHITECTURALLY EXPOSED CONNECTIONS U.N.O.

TYPICAL DETAIL TUBE SEAT WIDER THAN TUBE COLUMN

3 SCALE:N.T.S.



NOTES:
1. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.
2. ALL BOLTED MOMENT AND AXIAL CONNECTIONS SHALL USE SLIP CRITICAL BOLTS. ALLOWABLE STRENGTH OF BOLTS SHALL BE BASED ON A CLASS "A" FAYING SURFACE. DO NOT PAINT STEEL AT SLIP CRITICAL CONNECTIONS.
3. U.N.O. FLANGE PLATES, BOLTS, AND WELDS SHOWN SHALL BE DESIGNED FOR AN AXIAL TENSION/COMPRESSION EQUAL TO 90% OF THE BEAM PLASTIC MOMENT CAPACITY DIVIDED BY THE DISTANCE BETWEEN FLANGE CENTROIDS. T=C=0.9ØMp/(D-tf) ,WHERE DESIGN MOMENTS ARE PROVIDED THEY MAY BE USED IN LIEU OF THE AFOREMENTIONED CRITERIA. T=C=Mui/(D-tf)
4. BOLTED MOMENT CONNECTIONS MAY BE USED IN LIEU OF A FULLY WELDED MOMENT CONNECTION AT CONTRACTOR PREFERENCE EXCEPT WHERE PROHIBITED IN NOTE 5.
5. BOLTED MOMENT CONNECTIONS MAY NOT BE USED AT ROOF BEAMS WHERE THE DECK IS DIRECTLY ATTACHED TO THE BEAM OR WHERE BOLTS WILL INTERFERE WITH JOIST SEATS OR OTHER BEARING CONNECTIONS.
6. BOLTS IN FLANGE SHALL BE SIZED SUCH THAT THE CROSS-SECTIONAL AREA OF THE FLANGE IS NOT REDUCED BY MORE THAN 30%, ANY VARIANCE MUST BE SUBMITTED TO E.O.R. FOR APPROVAL.
7. EXTENDED END PLATES MAY NOT BE USED WHERE PLATES INTERFERE WITH JOIST SEATS OR OTHER BEARINGS CONNECTIVES. LOCALLY CUT DECK IF REQUIRED.

TYPICAL DETAIL MOMENT SPLICE AT BEAM

1 SCALE: N.T.S.

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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TRAVIS KOEHRING
133149
LICENSED PROFESSIONAL ENGINEER
10-29-2025

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TYPICAL FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S4.02
Drawn By: Author	
Date: 10-29-2025	

10/28/2025 11:01:43 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/23001_CREEKWOOD_MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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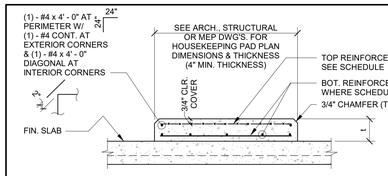


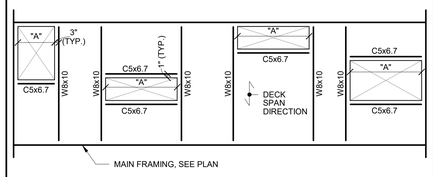
HOUSEKEEPING PAD REINF. SCHEDULE		
PAD THICKNESS	TOP REINFORCEMENT	BOTTOM REINF.
4" (MAX.)	4"x4" - W4.0 x W4.0	NONE

NOTE:
1. GENERAL CONTRACTOR TO DETERMINE REQUIREMENTS FOR HOUSEKEEPING PADS OVER STRUCTURAL SLAB AND PROVIDE WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. COORDINATE DIMENSIONS AND OTHER SPECIAL REQUIREMENTS WITH EQUIPMENT MANUFACTURERS AS REQUIRED.
2. PAD SHALL NOT BE POURED UNTIL AFTER SLAB HAS REACHED ITS SPECIFIED 28 DAYS STRENGTH.
3. CONCRETE FOR HOUSEKEEPING PAD SHALL BE LIGHTWEIGHT CONCRETE WITH f'c = 3,000 psi

TYPICAL DETAIL
CONCRETE ISLAND OR HOUSEKEEPING PAD ELEVATED FLOOR

20 SCALE: N.T.S.

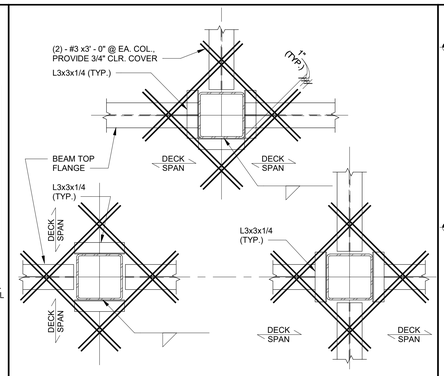
"A" = OPENING DIMENSION IN THE DIRECTION PERPENDICULAR TO DECK SPAN. USE THIS DETAIL FOR 4'-0" < "A" < 8'-0".



NOTES :
1. COORDINATE OPENING SIZE AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. THIS DETAIL SHOWS TYPICAL CONFIGURATIONS. VERIFY WITH STRUCTURE ENGINEER FOR SPECIAL CASES.
3. REFER TO STRUCTURAL ENGINEER FOR FRAMING IF DIMENSION "A" EXCEEDS 8'-0".
4. DECK MANUFACTURER TO PROVIDE 14 GAGE METAL EDGE CLOSURE AROUND EACH OPENING UNLESS DETAILED OTHERWISE.

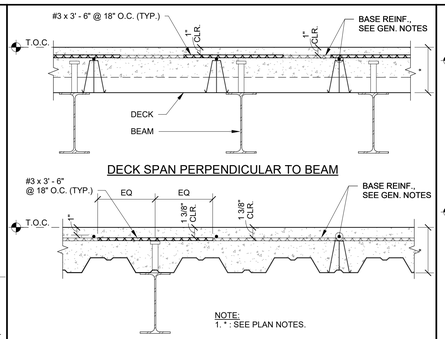
TYPICAL DETAIL
FRAMED OPENINGS IN COMPOSITE METAL DECK SLAB FLOOR OR ROOF

16 SCALE: N.T.S.



TYPICAL DETAIL
METAL DECK SUPPORT AT STEEL COLUMNS

12 SCALE: N.T.S.

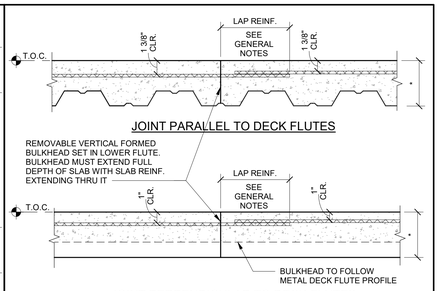


NOTE:
1. * : SEE PLAN NOTES.

DECK SPAN PARALLEL TO BEAM

TYPICAL DETAIL
ADDITIONAL REBAR FOR CONCRETE ON STEEL DECK

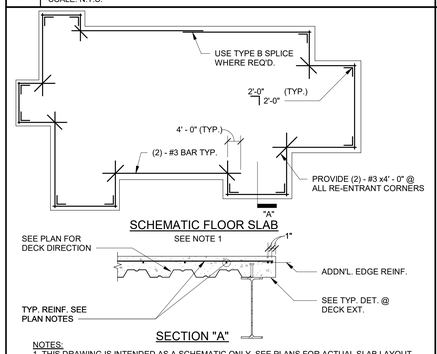
8 SCALE: N.T.S.



NOTES:
1. CONSTRUCTION JOINTS PARALLEL TO DECK FLUTES SHALL BE LOCATED NO CLOSER THAN 5' - 0" FROM THE CENTERLINE OF THE NEAREST GIRDER.
2. CONSTRUCTION JOINTS PERPENDICULAR TO DECK FLUTES SHALL BE LOCATED AT THE CENTER OF THE METAL DECK SPAN.
3. * : SEE PLAN NOTES.

TYPICAL DETAIL
CONSTRUCTION JOINT CONCRETE SLAB ON METAL DECK

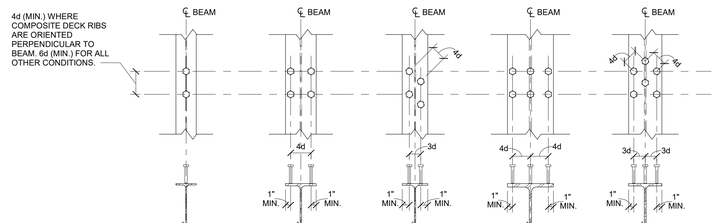
4 SCALE: N.T.S.



NOTES:
1. THIS DRAWING IS INTENDED AS A SCHEMATIC ONLY. SEE PLANS FOR ACTUAL SLAB LAYOUT.
2. TYPICAL REINFORCING PARALLEL TO EDGE REINF. SHALL START 6" FROM EDGE REBAR.

TYPICAL DETAIL
REINFORCING AT SLAB EDGE

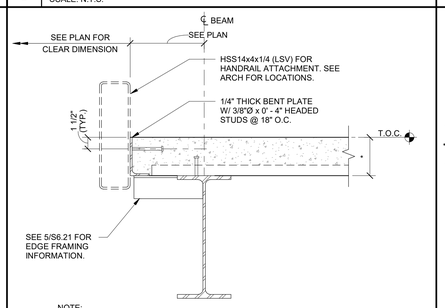
19 SCALE: N.T.S.



NOTES:
1. SHEAR CONNECTORS IN ONE ROW SHALL BE PLACED DIRECTLY OVER THE BEAM WEB.
2. PLACE STUDS IN A SINGLE ROW WHERE SPACING REQUIREMENTS PERMIT. STUDS SHALL BE PLACED IN TWO ROWS OR THREE ROWS ONLY WHERE REQUIRED IN ORDER TO PLACE THE TOTAL NUMBER OF STUDS. SEE TYPICAL DETAIL, "SHEAR CONNECTOR PLACEMENT DIAGRAMS COMPOSITE METAL DECK".
3. PROVIDE MINIMUM 1" SPACING FROM EDGE OF FLANGE TO CENTERLINE OF STUD.
4. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR ENGINEER'S APPROVAL.
5. D - INDICATES STUD SHAFT DIAMETER.
6. IF THE STEEL BEAM FLANGE IS NARROW. SPACING REQUIREMENTS MAYBE MET BY STAGGERING STUDS AS SHOWN.
7. SPACINGS SHOWN ARE MINIMUM AND MAY BE EXCEEDED WHERE SPACE IS AVAILABLE. SEE TYPICAL DETAIL "SHEAR CONNECTOR PLACEMENT DIAGRAMS ON COMPOSITE METAL DECK" FOR ADDITIONAL INFO.

TYPICAL DETAIL
SHEAR CONNECTOR SPACING CRITERIA

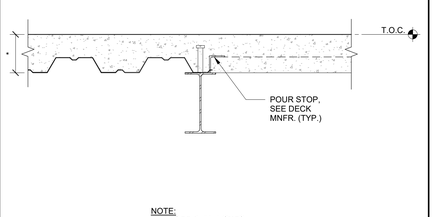
11 SCALE: N.T.S.



NOTE:
1. SEE PLAN FOR DECK DIRECTION.
2. REFER TO STAIR DRAWINGS FOR CONNECTION OF STAIR STRINGERS TO BEAM.
3. * : SEE PLAN NOTES.

TYPICAL DETAIL
STEEL STAIR FLOOR LANDING /HANDRAIL ATTACHMENT COMPOSITE METAL DECK

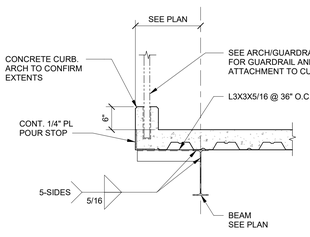
7 SCALE: N.T.S.



NOTE:
1. * : SEE PLAN NOTES.

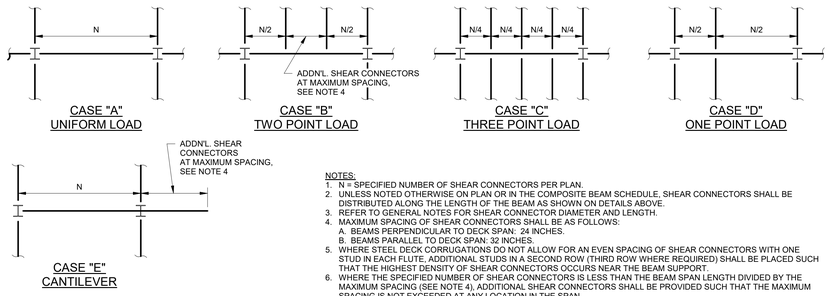
TYPICAL DETAIL
CHANGE IN DECK DIRECTION IN COMPOSITE METAL DECK

3 SCALE: N.T.S.



GUARDRAIL DETAIL AT MEZZANINE CONCRETE CURB

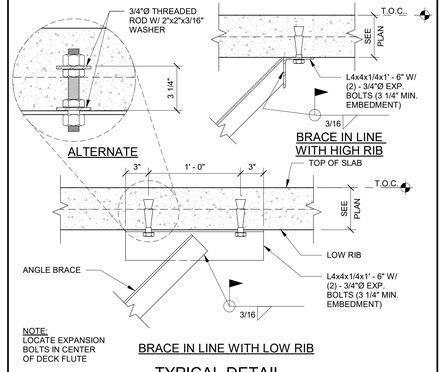
18 SCALE: N.T.S.



NOTES:
1. N = SPECIFIED NUMBER OF SHEAR CONNECTORS PER PLAN.
2. UNLESS NOTED OTHERWISE ON PLAN OR IN THE COMPOSITE BEAM SCHEDULE, SHEAR CONNECTORS SHALL BE DISTRIBUTED ALONG THE LENGTH OF THE BEAM AS SHOWN ON DETAILS ABOVE.
3. REFER TO GENERAL NOTES FOR SHEAR CONNECTOR DIAMETER AND LENGTH.
4. MAXIMUM SPACING OF SHEAR CONNECTORS SHALL BE AS FOLLOWS:
   A. BEAMS PERPENDICULAR TO DECK SPAN: 24 INCHES.
   B. BEAMS PARALLEL TO DECK SPAN: 32 INCHES.
5. WHERE STEEL DECK CORRUGATIONS DO NOT ALLOW FOR AN EVEN SPACING OF SHEAR CONNECTORS WITH ONE STUD IN EACH FLUTE, ADDITIONAL STUDS IN A SECOND ROW (THIRD ROW WHERE REQUIRED) SHALL BE PLACED SUCH THAT THE HIGHEST DENSITY OF SHEAR CONNECTORS OCCURS NEAR THE BEAM SUPPORT.
6. WHERE THE SPECIFIED NUMBER OF SHEAR CONNECTORS IS LESS THAN THE BEAM SPAN LENGTH DIVIDED BY THE MAXIMUM SPACING (SEE NOTE 4), ADDITIONAL SHEAR CONNECTORS SHALL BE PROVIDED SUCH THAT THE MAXIMUM SPACING IS NOT EXCEEDED AT ANY LOCATION IN THE SPAN.
7. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR ENGINEER'S APPROVAL.

TYPICAL DETAIL
SHEAR CONNECTOR PLACEMENT DIAGRAMS COMPOSITE METAL DECK

10 SCALE: N.T.S.

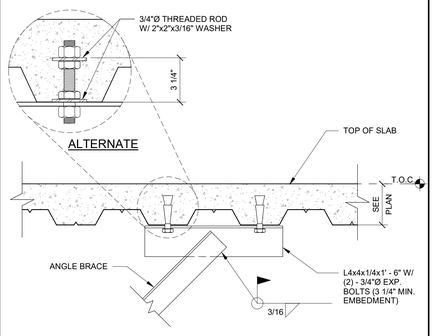


NOTE:
LOCATE EXPANSION BOLTS IN CENTER OF DECK FLUTE

BRACE IN LINE WITH LOW RIB

TYPICAL DETAIL
BRACE CONNECTION TO SLAB

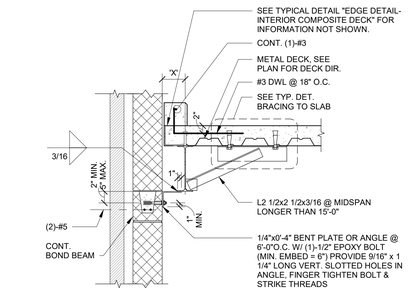
6 SCALE: N.T.S.



NOTE:
LOCATE EXPANSION BOLTS IN CENTER OF DECK FLUTE

TYPICAL DETAIL
BRACE CONNECTION TO SLAB

2 SCALE: N.T.S.

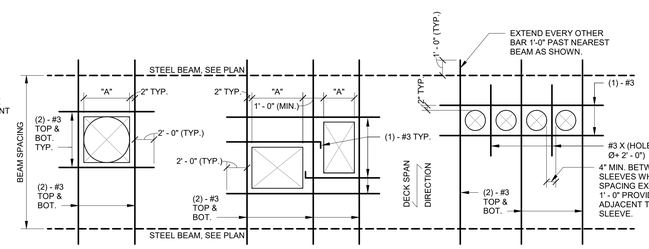


DETAIL AT EXTERIOR NON-LOAD BEARING CMU AT MEZZANINE

17 SCALE: N.T.S.

"A" = OPENING DIMENSION IN THE DIRECTION PERPENDICULAR TO DECK SPAN. USE THIS DETAIL FOR "A" ≤ 4' - 0".

NOTE:
WHEN SPACING BETWEEN MULTIPLE OPENINGS IS ≤ 2' - 0", REINFORCEMENT SHOULD BE PLACED AS SHOWN IN SINGLE OPENING CONDITION.

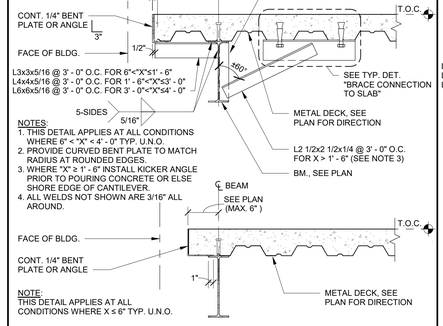


SINGLE OPENING | MULTIPLE OPENINGS | PIPE SLEEVES

NOTES:
1. COORDINATE OPENING SIZE AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. MAXIMUM DIMENSION "A" SHALL BE 4'-0". REFER TO PLAN OR DETAIL ON DRAWINGS FOR FRAMING OF OPENINGS GREATER THAN 4' - 0".
3. OPENINGS 10" AND SMALLER DO NOT REQUIRE ADDITIONAL REINFORCEMENT.
4. FIELD CUT OPENINGS IN DECK AFTER CONCRETE SLAB HAS BEEN POURED AND HAS ATTAINED MINIMUM OF 75% OF ITS SPECIFIED 28-DAY COMPRESSIVE STRENGTH.
5. REINFORCEMENT PERPENDICULAR TO DECK SPAN SHALL BE PLACED ON TOP OF DECK FLUTES.
6. REINFORCEMENT PARALLEL TO DECK SPAN SHALL BE PLACED IN THE LOWER FLUTE AND SHALL BE CHAIRED TO PROVIDE 3/4" COVER.
7. THIS DETAIL SHOWS TYPICAL CONDITIONS, VERIFY REINFORCING STEEL PLACEMENT WITH ENGINEER FOR SPECIAL CASES.
8. PROVIDE REINFORCEMENT AS SHOWN FOR SQUARE, RECTANGULAR AND ROUND OPENINGS.

TYPICAL DETAIL
OPENINGS IN COMPOSITE METAL DECK SLAB, FLOOR OR ROOF

9 SCALE: N.T.S.

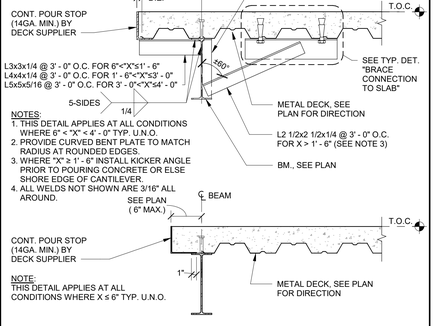


NOTES:
1. THIS DETAIL APPLIES AT ALL CONDITIONS WHERE 6" < "X" < 4' - 0" TYP. U.N.O.
2. PROVIDE CURVED BENT PLATE TO MATCH RADIUS AT ROUNDED EDGES.
3. WHERE "X" ≥ 1' - 6" INSTALL KICKER ANGLE PRIOR TO POURING CONCRETE OR ELSE SHORE EDGE OF CANTILEVER.
4. ALL WELDS NOT SHOWN ARE 3/16" ALL AROUND.

NOTE:
THIS DETAIL APPLIES AT ALL CONDITIONS WHERE X ≤ 6" TYP. U.N.O.

TYPICAL DETAIL
EDGE DETAIL - EXTERIOR COMPOSITE METAL DECK

5 SCALE: N.T.S.



NOTES:
1. THIS DETAIL APPLIES AT ALL CONDITIONS WHERE 6" < "X" < 4' - 0" TYP. U.N.O.
2. PROVIDE CURVED BENT PLATE TO MATCH RADIUS AT ROUNDED EDGES.
3. WHERE "X" ≥ 1' - 6" INSTALL KICKER ANGLE PRIOR TO POURING CONCRETE OR ELSE SHORE EDGE OF CANTILEVER.
4. ALL WELDS NOT SHOWN ARE 3/16" ALL AROUND.

NOTE:
THIS DETAIL APPLIES AT ALL CONDITIONS WHERE X ≤ 6" TYP. U.N.O.

TYPICAL DETAIL
EDGE DETAIL - INTERIOR COMPOSITE METAL DECK

1 SCALE: N.T.S.

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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FLOOR FRAMING DETAILS

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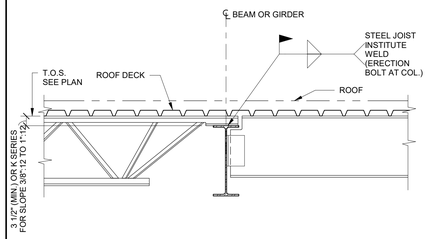
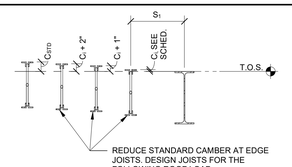


NOTE:
COORDINATE JOIST SEATS WITH JOIST SUPPLIER.

TYPICAL DETAIL
STEEL JOIST/STEEL BEAM AT INTERIOR STEEL BEAM, ROOF

20 SCALE: N.T.S.

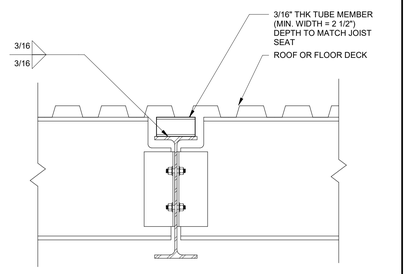


NOTES:
1. TO FACILITATE DECK INSTALLATION THE MAX. CAMBER OF THE NEAREST JOIST TO THE WALL SHALL BE AS SCHEDULED. ALL LOADING AND DEFLECTION CRITERIA REMAIN THE SAME U.N.O.
2. AT EACH SUBSEQUENT JOIST, CAMBER MAY BE INCREASED 1" UNTIL STANDARD CAMBER IS ACHIEVED.

	MAX. OUTSIDE JOIST CAMBER C. (INCHES)		
JOIST SPAN (FT.)	$S_1 \leq 2' - 0"$	$2' - 0" < S_1 \leq 4' - 6"$	$4' - 6" < S_1 \leq 6' - 0"$
0 - 59	0"	1/2"	3/4"
60 - 69	1/2"	3/4"	1"
70 - 79	3/4"	1"	1 1/4"
80 - 89	1"	1 1/4"	1 1/2"
90 - 99	1 1/4"	1 1/2"	1 3/4"
100 - 109	1 1/2"	1 3/4"	2"
110+	1.5 + 2.5 (SPAN - 110)/100	1.75 + 2.5 (SPAN - 110)/100	2 + 2.5 (SPAN - 110)/100

TYPICAL DETAIL
EXTERIOR JOIST CAMBER

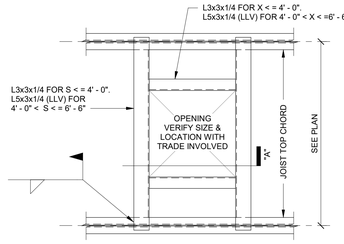
16 SCALE: 3/4" = 1'-0"



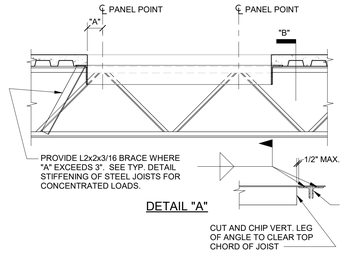
NOTE:
AT LOCATIONS WITH A JOIST ON ONE SIDE AND A BEAM ON THE OTHER SIDE, PROVIDE FILLER TS MEMBER ON HALF THE FLANGE. ALTERNATIVELY, THE TOP CHORD OF THE JOIST CAN BE EXTENDED TO THE EDGE OF THE MAIN BEAM FLANGE.

TYPICAL DETAIL
FILLER MEMBER FOR DECK AND SUPPORT AT SECONDARY BEAMS PARALLEL TO JOISTS

12 SCALE: N.T.S.



PLAN

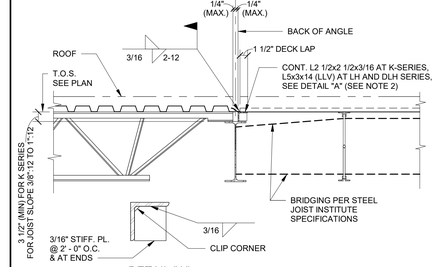


DETAIL "A"

DETAIL "B"

TYPICAL DETAIL
OPEN WEB STEEL JOIST ROOF OPENING

7 SCALE: N.T.S.

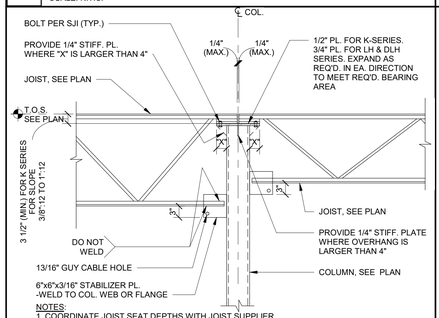


DETAIL "A"

NOTES:
1. PROVIDE JOIST BRIDGING AS REQUIRED BY STEEL JOIST INSTITUTE SPECIFICATIONS.
2. WHERE JOIST SEAT REQUIRES MORE THAN 1/2 THE FLANGE WIDTH FOR BEARINGS EXTEND JOIST SEATS TO THE EDGE OF FLANGE AND PROVIDE ANGLES BETWEEN JOISTS. WHERE JOIST SEAT DEPTH DIFFERS FROM ANGLE LENGTH SHOWN USE CONT. 1/4" BENT PLATE OF EQUAL DEPTH TO JOIST SEAT WITH 3" FLANGE.

TYPICAL DETAIL OPEN WEB STEEL JOIST INTERIOR STEEL BEAM AT CHANGE IN METAL DECK DIRECTION, ROOF

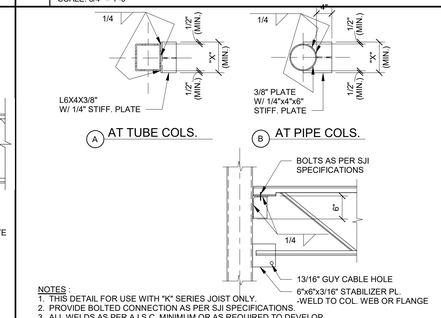
4 SCALE: N.T.S.



NOTES:
1. COORDINATE JOIST SEAT DEPTHS WITH JOIST SUPPLIER.
2. PER OSHA STANDARDS WHERE STEEL JOISTS ARE USED & COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH SOLID WEB STRUCTURAL STEEL MEMBERS, STEEL JOIST SHALL BE FIELD BOLTED TO COLUMN.
3. DIMENSION "X" SHALL BE DETERMINED BY JOIST MANUFACTURER.

TYPICAL DETAIL
JOIST SEAT AT HSS COLUMN

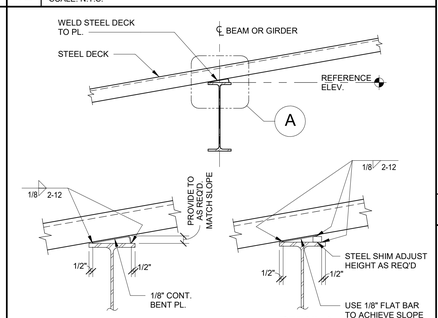
19 SCALE: N.T.S.



NOTES :
1. THIS DETAIL FOR USE WITH "K" SERIES JOIST ONLY.
2. PROVIDE BOLTED CONNECTION AS PER SJI SPECIFICATIONS.
3. ALL WELDS AS PER A.I.S.C. MINIMUM OR AS REQUIRED TO DEVELOP JOIST REACTION WHICHEVER IS GREATER.
4. "X" DIMENSION SHALL BE AS FOLLOWS:
7" FOR K1-12 & LH02-06
9" FOR LH07-17 & DLH10-17
14" FOR DLH18-25

TYPICAL DETAIL
JOIST SEAT AT TUBE/PIPE COLUMN

15 SCALE: N.T.S.

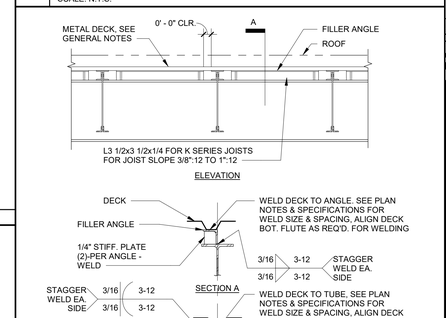


DETAIL A

DETAIL A ALTERNATE

TYPICAL SLOPING STEEL DECK SUPPORT ON BEAM WITH VERTICAL WEB

11 SCALE: N.T.S.



ELEVATION

ALTERNATE

NOTES:
1. PROVIDE FILLER ANGLES AT BEAMS WITH DIAGONAL BRACES OR MOMENT CONNECTIONS.
2. INCREASE SIZE OR PROVIDE BENT PLATES TO FILL GAP WHERE REQUIRED TO MATCH JOIST SEATS.

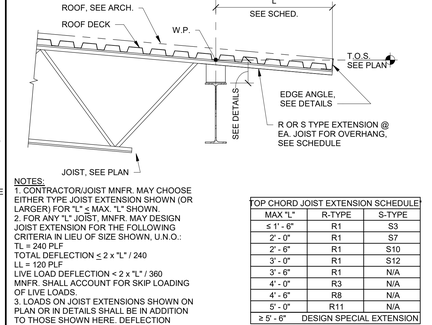
TYPICAL DETAIL
OPEN WEB STEEL JOIST DECK DIAPHRAGM CONNECTION TO STEEL BEAM

3 SCALE: N.T.S.

NOTES:
1. COORDINATE JOIST SEAT DEPTHS WITH JOIST SUPPLIER.
2. PER OSHA STANDARDS WHERE STEEL JOISTS ARE USED & COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH SOLID WEB STRUCTURAL STEEL MEMBERS, STEEL JOIST SHALL BE FIELD BOLTED TO COLUMN.
3. DIMENSION "X" SHALL BE DETERMINED BY JOIST MANUFACTURER.

TYPICAL DETAIL
JOIST SEAT AT HSS COLUMN

14 SCALE: N.T.S.



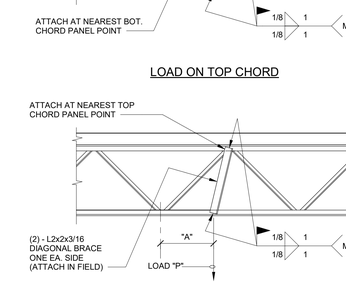
NOTES:
1. CONTRACTOR/JOIST MNFR. MAY CHOOSE EITHER TYPE JOIST EXTENSION SHOWN (OR LARGER) FOR "L" ≤ MAX. "L" SHOWN.
2. FOR ANY "L" JOIST, MNFR. MAY DESIGN JOIST EXTENSION FOR THE FOLLOWING CRITERIA IN LIEU OF SIZE SHOWN, U.N.O.:
TL = 240 PLF
TOTAL DEFLECTION ≤ 2 x "L" / 240
LL = 120 PLF
LIVE LOAD DEFLECTION < 2 x "L" / 360
MNFR. SHALL ACCOUNT FOR SKIP LOADING OF LIVE LOADS.
3. LOADS ON JOIST EXTENSIONS SHOWN ON PLAN OR IN DETAILS SHALL BE IN ADDITION TO THOSE SHOWN HERE. DEFLECTION CRITERIA SHALL REMAIN THE SAME AS SHOWN ABOVE. THE SCHEDULE SHOWN HERE DOES NOT APPLY WHERE ADDITIONAL LOADS ARE SHOWN.

TOP CHORD JOIST EXTENSION SCHEDULE		
MAX "L"	R-TYPE	S-TYPE
≤ 1' - 6"	R1	S3
2' - 0"	R1	S7
2' - 6"	R1	S10
3' - 0"	R1	S12
3' - 6"	R1	N/A
4' - 0"	R3	N/A
4' - 6"	R8	N/A
5' - 0"	R11	N/A
≥ 5' - 6"	DESIGN SPECIAL EXTENSION	

*CONTRACTOR/FABRICATOR MAY CHOOSE EITHER TYPE JOIST EXTENSION FOR "L" ≤ MAX "L" SHOWN

TYPICAL DETAIL
K-JOIST EXTENSION SCHEDULE

10 SCALE: N.T.S.



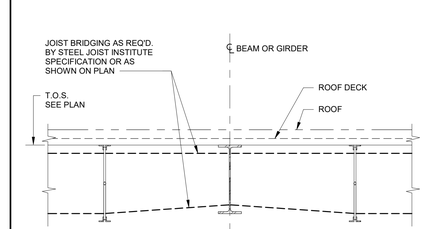
LOAD ON TOP CHORD

LOAD ON BOTTOM CHORD

NOTES:
1. DIAGONAL BRACE IS NOT REQUIRED FOR "A" LESS THAN 3".
2. PROVIDE DIAGONAL BRACE AT LOCATION OF CONCENTRATED LOADS SUCH AS HEAVY PIPES, MECHANICAL UNITS, HEAVY LIGHTS AND ANY OTHER CONCENTRATED LOADS AS DIRECTED BY EOR.
3. P = CONCENTRATED LOAD.

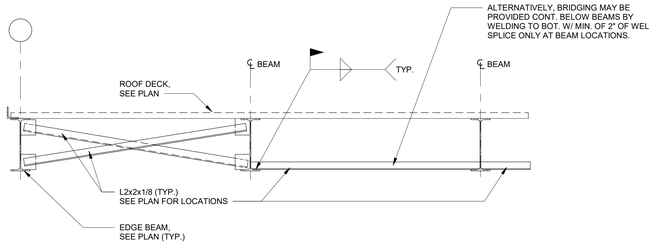
TYPICAL DETAIL
STIFFENING OF STEEL JOIST FOR CONCENTRATED LOADS

6 SCALE: N.T.S.



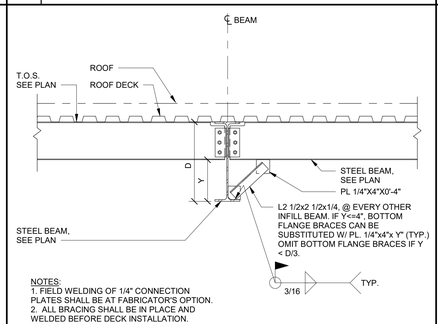
TYPICAL DETAIL
OPEN WEB STEEL JOIST AT INTERIOR TIE BEAM, ROOF

2 SCALE: N.T.S.



TYPICAL BEAM BRIDGING

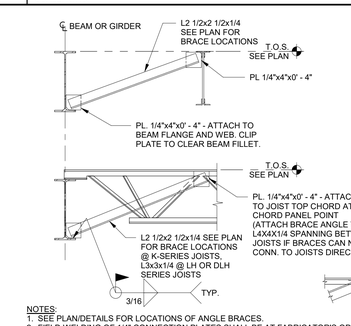
17 SCALE: 3/4" = 1'-0"



NOTES:
1. FIELD WELDING OF 1/4" CONNECTION PLATES SHALL BE AT FABRICATOR'S OPTION.
2. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION.
3. BRACE SIZES SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
4. SEE GENERAL NOTES FOR DECK CONSTRUCTION

TYPICAL BEAM AT INTERIOR STEEL BEAM, ROOF

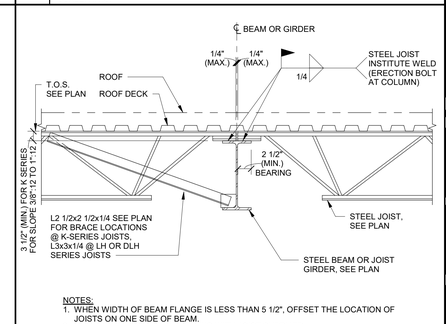
9 SCALE: 3/4" = 1'-0"



NOTES:
1. SEE PLAN/DETAILS FOR LOCATIONS OF ANGLE BRACES.
2. FIELD WELDING OF 1/4" CONNECTION PLATES SHALL BE AT FABRICATOR'S OPTION.
3. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION.
4. BRACE SIZES SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
5. SEE GENERAL NOTES FOR DECK CONSTRUCTION.

TYPICAL DETAIL
BEAM BOTTOM FLANGE BRACE JOIST CONSTRUCTION

5 SCALE: N.T.S.



NOTES:
1. WHEN WIDTH OF BEAM FLANGE IS LESS THAN 5 1/2", OFFSET THE LOCATION OF JOISTS ON ONE SIDE OF BEAM.
2. COORDINATE JOIST SEAT DEPTHS WITH JOIST SUPPLIER.

TYPICAL DETAIL
OPEN WEB STEEL JOIST AT INTERIOR STEEL BEAM, ROOF

1 SCALE: N.T.S.

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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ROOF FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S6.01
Drawn By: Author	
Date: 10-29-2025	

10/28/2025 11:01:45 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/23031 - CREEKWOOD MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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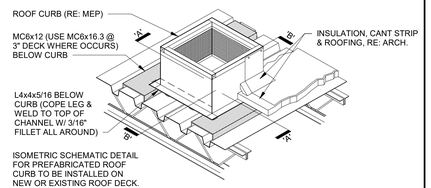
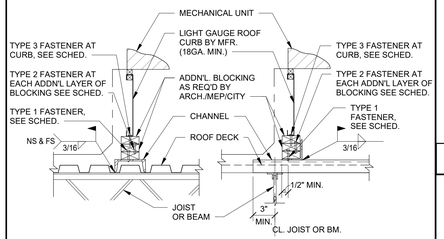
NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6'-0" O.C.



ISOMETRIC SCHEMATIC DETAIL FOR PREFABRICATED ROOF CURB TO BE INSTALLED ON NEW OR EXISTING ROOF DECK.

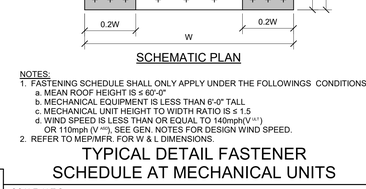


SECTION "A" SECTION "B"

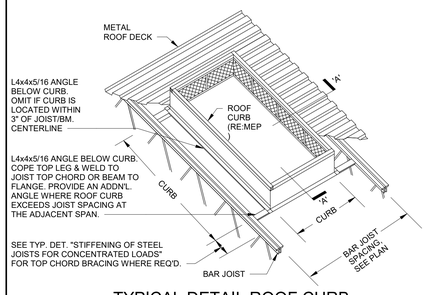
OPTIONAL DETAIL SUPPORT AT ROOFTOP MECHANICAL EQUIPMENT

19 SCALE: N.T.S.

NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6'-0" O.C.



SECTION 'A'

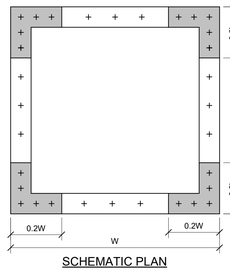


TYPICAL DETAIL ROOF CURB AT MECHANICAL UNITS

18 SCALE: N.T.S.

FASTENER SCHEDULE			
		SPACINGS	
TYPE	MINIMUM FASTENER SIZE	TYPICAL	CORNER
1	#8 SELF TAPPING SCREW	16" O.C.	8" O.C.
2	#10 SCREW*	12" O.C.	4" O.C.
3	#10 SCREW*	12" O.C.	4" O.C.

*SCREW SHALL EMBED 1" MIN. INTO WOOD BLOCKING

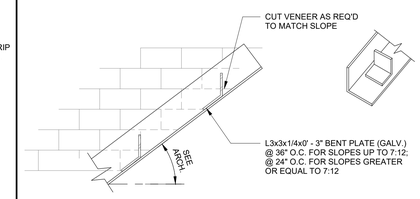


SCHEMATIC PLAN

NOTES:
1. FASTENING SCHEDULE SHALL ONLY APPLY UNDER THE FOLLOWINGS CONDITIONS.
   a. MEAN ROOF HEIGHT IS ≤ 60'-0".
   b. MECHANICAL EQUIPMENT IS LESS THAN 6'-0" TALL
   c. MECHANICAL UNIT HEIGHT TO WIDTH RATIO IS ≤ 1.5
   d. WIND SPEED IS LESS THAN OR EQUAL TO 140mph(V ult) OR 110mph (V asd), SEE GEN. NOTES FOR DESIGN WIND SPEED.
2. REFER TO MEP/MFR. FOR W & L DIMENSIONS.

TYPICAL DETAIL FASTENER SCHEDULE AT MECHANICAL UNITS

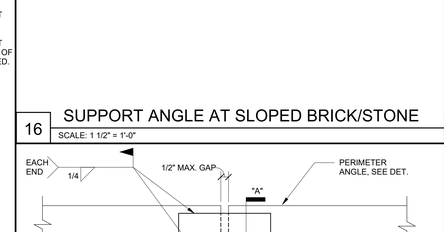
17 SCALE: N.T.S.



"A"

SUPPORT ANGLE AT SLOPED BRICK/STONE

16 SCALE: 1 1/2" = 1'-0"

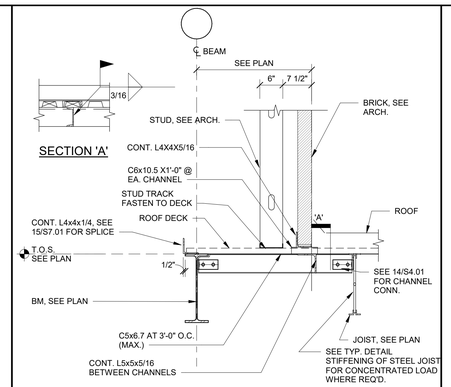


"A" ALTERNATE "A"

PERIMETER ANGLE	SPLICE MEMBER		LENGTH
	PLATE	REBAR	L(INCH)
L3x3x1/4	1/2x2	#7 BAR	9"
L4x4x1/4	1/2x3	#9 BAR	12"
L5x5x5/16	1/2x4	#9 BAR	12"
L6x4x5/16	1/2x4 1/2	#11 BAR	15"

TYPICAL DETAIL SPLICE AT PERIMETER ROOF ANGLE

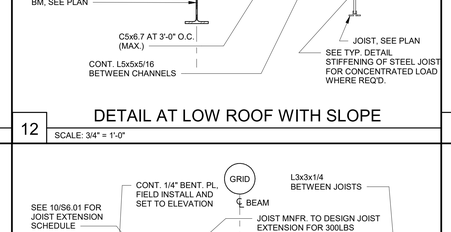
15 SCALE: N.T.S.



SECTION 'A'

DETAIL AT LOW ROOF WITH SLOPE

12 SCALE: 3/4" = 1'-0"

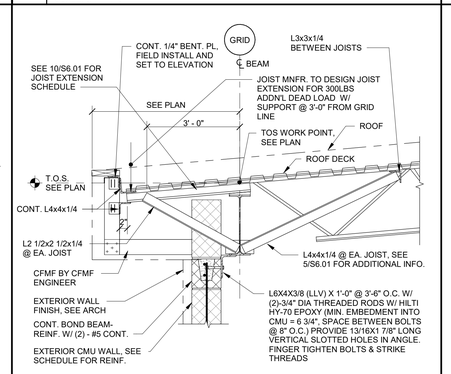


"A" ALTERNATE "A"

PERIMETER ANGLE	SPLICE MEMBER		LENGTH
	PLATE	REBAR	L(INCH)
L3x3x1/4	1/2x2	#7 BAR	9"
L4x4x1/4	1/2x3	#9 BAR	12"
L5x5x5/16	1/2x4	#9 BAR	12"
L6x4x5/16	1/2x4 1/2	#11 BAR	15"

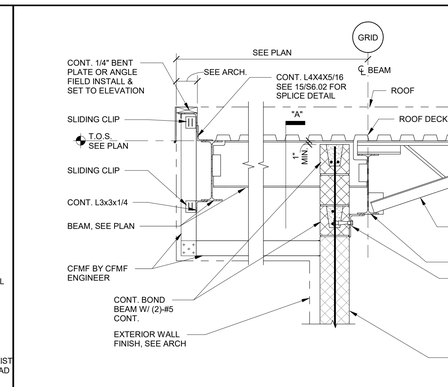
TYPICAL DETAIL SPLICE AT PERIMETER ROOF ANGLE

15 SCALE: N.T.S.



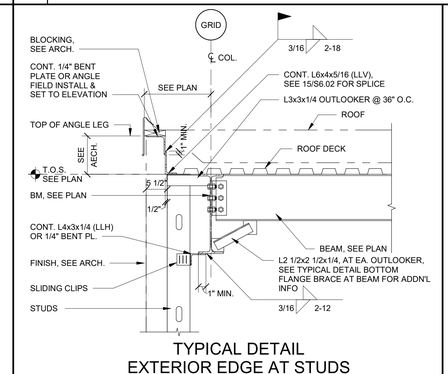
ROOF EDGE DETAIL AT ROOF EXTENSION

11 SCALE: 3/4" = 1'-0"



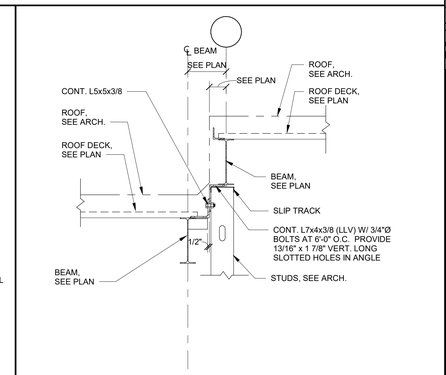
ROOF EDGE DETAIL AT HIGH ROOF EXTENSION

8 SCALE: 3/4" = 1'-0"



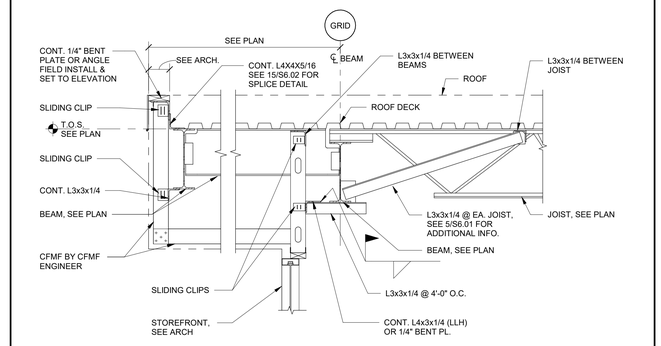
TYPICAL DETAIL EXTERIOR EDGE AT STUDS (PERPENDICULAR TO BEAMS)

7 SCALE: 3/4" = 1'-0"



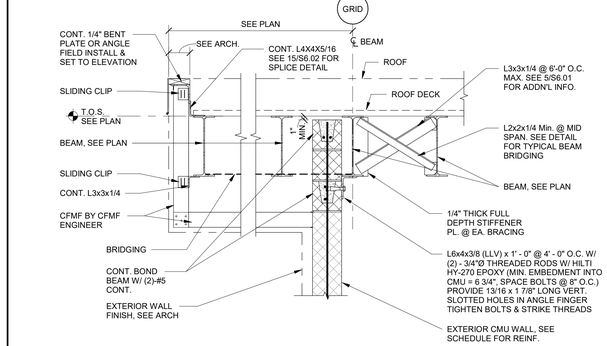
DETAIL AT ROOF TRANSITION

3 SCALE: 3/4" = 1'-0"



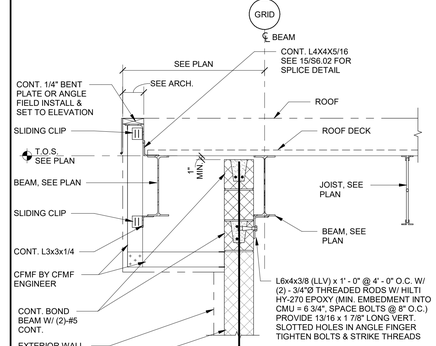
ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW

14 SCALE: 3/4" = 1'-0"



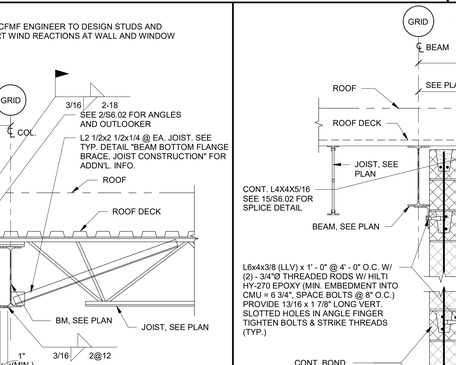
ROOF EDGE DETAIL AT ROOF EXTENSION

10 SCALE: 3/4" = 1'-0"



ROOF EDGE DETAIL AT ROOF EXTENSION

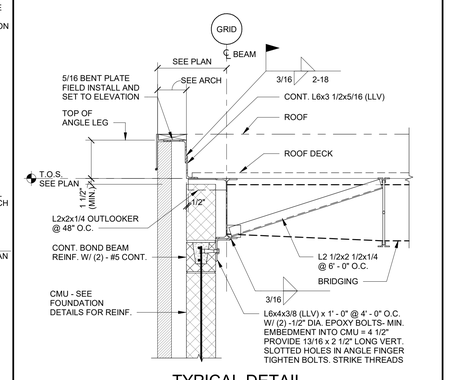
2 SCALE: 3/4" = 1'-0"



ROOF EDGE DETAIL AT HIGH-LOW ROOF WITH ROOF EXTENSION

9 SCALE: 3/4" = 1'-0"

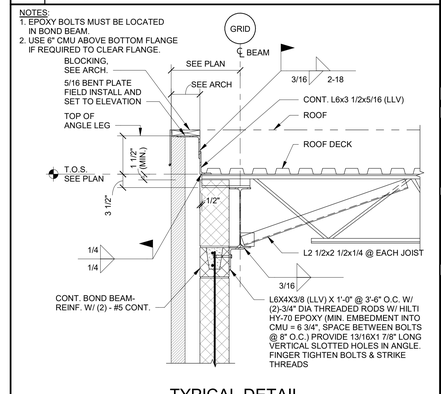
NOTES:
1. EPOXY BOLTS MUST BE LOCATED IN BOND BEAM.
2. USE 6" CMU ABOVE BOTTOM FLANGE IF REQUIRED TO CLEAR FLANGE.



TYPICAL DETAIL EXTERIOR EDGE AT CMU

5 SCALE: 3/4" = 1'-0"

NOTES:
1. EPOXY BOLTS MUST BE LOCATED IN BOND BEAM.
2. USE 6" CMU ABOVE BOTTOM FLANGE IF REQUIRED TO CLEAR FLANGE.



TYPICAL DETAIL EXTERIOR EDGE AT CMU

1 SCALE: 3/4" = 1'-0"

ROOF FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S6.02
Drawn By: Author	
Date: 10-29-2025	

Project: CREEKWOOD MS ADDITION & RENOVATION FOR HUMBLE ISD HUMBLE, TX

Revision	Date
Issue for Bid	04/01/2025

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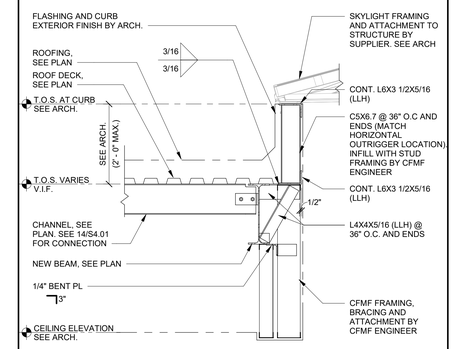
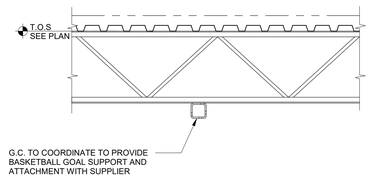
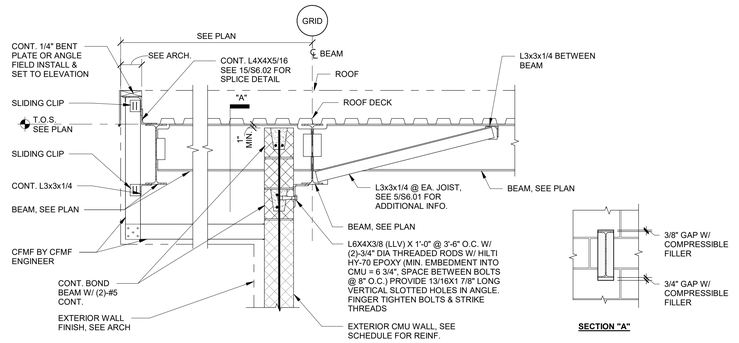
NOTE:
WELD NOT SHOWN TO BE 1/4"
WELD ALL AROUND



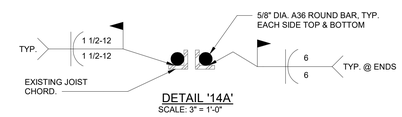
2 DETAIL AT CURB FOR SKYLIGHT SUPPORT
SCALE: N.T.S.



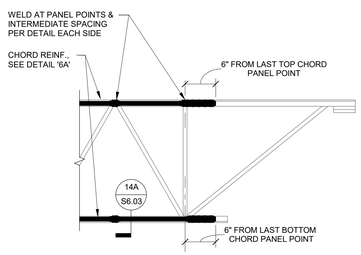
11 CONNECTION FOR BASKETBALL SUPPORT
SCALE: N.T.S.



7 ROOF EDGE DETAIL AT HIGH ROOF EXTENSION
SCALE: 3/4" = 1'-0"

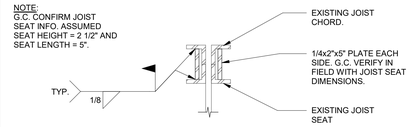


DETAIL '14A'
SCALE: 3" = 1'-0"

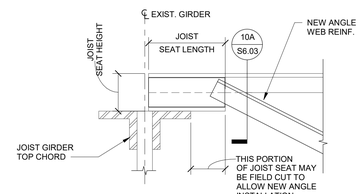


14 JOIST TOP/BOTTOM CHORD REINFORCING
SCALE: 1" = 1'-0"

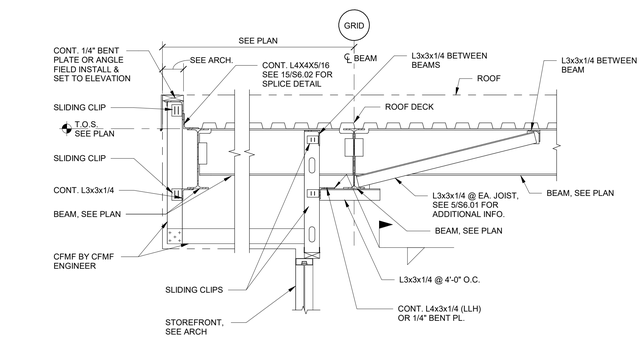
NOTE:
G.C. CONFIRM JOIST SEAT INFO. ASSUMED SEAT HEIGHT = 2 1/2" AND SEAT LENGTH = 5".



DETAIL '10A'
SCALE: 3" = 1'-0"

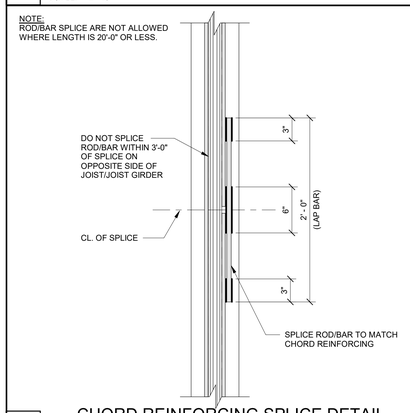


10 JOIST SEAT REINFORCING
SCALE: 3" = 1'-0"

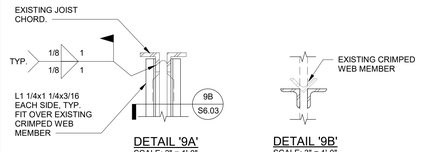


6 ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW
SCALE: 3/4" = 1'-0"

NOTE:
ROD/BAR SPLICE ARE NOT ALLOWED WHERE LENGTH IS 20'-0" OR LESS.

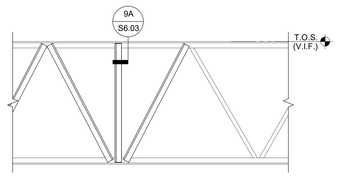


13 CHORD REINFORCING SPLICE DETAIL
SCALE: 1 1/2" = 1'-0"

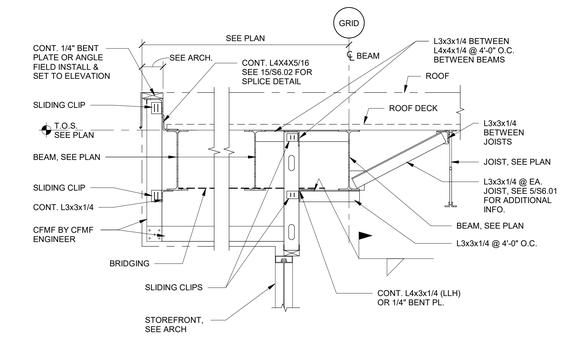


DETAIL '9A'
SCALE: 3" = 1'-0"

DETAIL '9B'
SCALE: 3" = 1'-0"



9 JOIST WEB REINFORCING
SCALE: 1" = 1'-0"



5 ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW
SCALE: 3/4" = 1'-0"

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
5177 Richmond Avenue, Suite 670
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MSE - 23030
Matrix Structural Engineers
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ROOF FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. S6.03
Drawn By: Author	
Date: 10-29-2025	

10/28/2025 11:01:47 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/23001_CREEKWOOD_MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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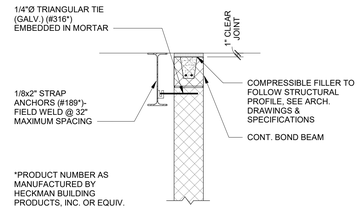
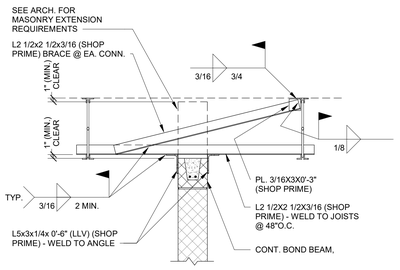


NOTE:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL SIDE CONNECTION TO STEEL BEAM

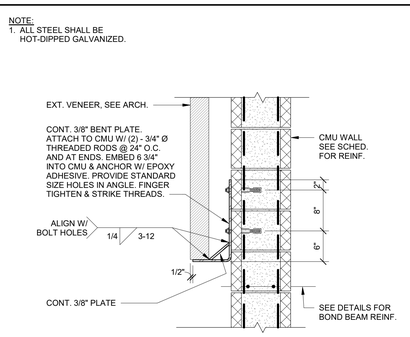
20 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

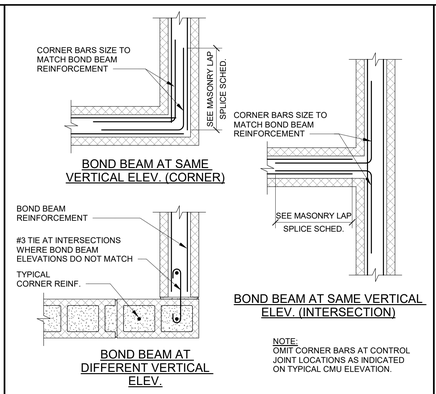
TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PARALLEL TO BAR JOISTS

16 SCALE: N.T.S.



TYPICAL DETAIL
VENEER SUPPORT AT CMU WALL

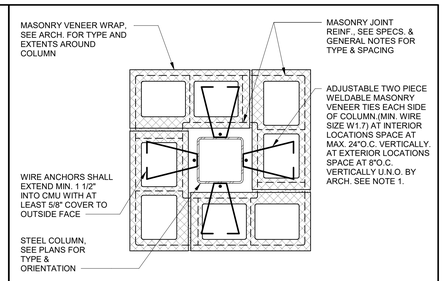
12 SCALE: 1" = 1'-0"



NOTE:
OMIT CORNER BARS AT CONTROL JOINT LOCATIONS AS INDICATED ON TYPICAL CMU ELEVATION.

TYPICAL CMU BOND BEAM REINFORCEMENT

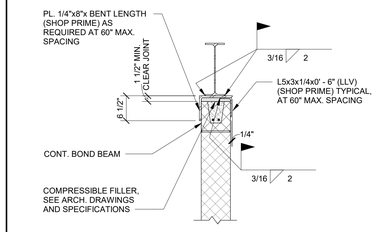
8 SCALE: N.T.S.



NOTES:
1. REDUCE ANCHOR SPACING OR PROVIDE DOUBLE ANCHORS AT EA. LOCATION AS REQ'D SO THAT THERE IS AT LEAST ONE ANCHOR FOR EACH 2.67 SQUARE FEET OF WALL AREA AT INTERIOR LOCATIONS & ONE ANCHOR FOR EACH 1.87 SQUARE FEET OF WALL AREA AT EXTERIOR LOCATIONS.
2. WHERE STUDS & SHEATHING ARE PROVIDED AROUND COLUMN, THIS DETAIL DOES NOT APPLY REFER TO ARCH. FOR DETAIL.
3. THIS DETAIL APPLIES AT BRICK CONCRETE & STONE MASONRY.

TYPICAL DETAIL
MASONRY WRAP AT STEEL COLUMN

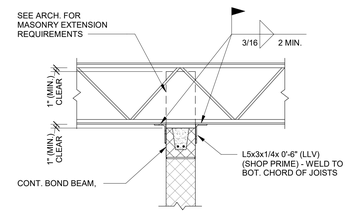
4 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

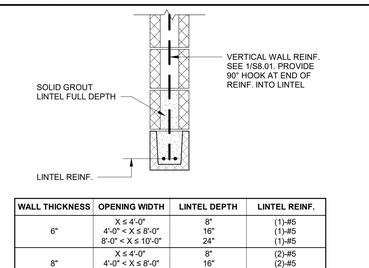
19 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PERPENDICULAR TO BAR JOISTS

15 SCALE: N.T.S.

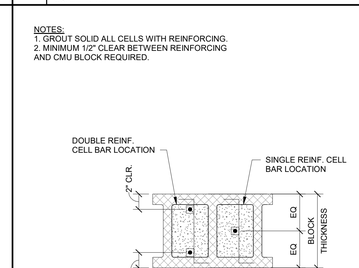


WALL THICKNESS	OPENING WIDTH	LINTEL DEPTH	LINTEL REINF.
6"	X ≤ 4'-0"	8"	(1)-#5
	4'-0" < X ≤ 8'-0"	16"	(1)-#5
	8'-0" < X ≤ 10'-0"	24"	(1)-#5
8"	X ≤ 4'-0"	8"	(2)-#5
	4'-0" < X ≤ 8'-0"	16"	(2)-#5
	8'-0" < X ≤ 10'-0"	24"	(2)-#5
12"	X ≤ 4'-0"	8"	(2)-#5
	4'-0" < X ≤ 8'-0"	16"	(2)-#5
	8'-0" < X ≤ 10'-0"	24"	(2)-#5

NOTES:
1. SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. EXTEND LINTEL REINFORCING AND GROUT A MINIMUM OF 16" BEYOND OPENING EACH SIDE, U.N.O.
3. CONTACT E.O.R. FOR RECOMMENDATIONS ON OPENINGS LARGER THAN SHOWN.
4. SEE DETAIL 9/S8.01 FOR OPENING IN EXTERIOR AND/ OR LOAD BEARING WALLS.
5. CMU CONTROL JOINTS SHALL NOT BE LOCATED OVER OPENINGS OR IN JAMBS.

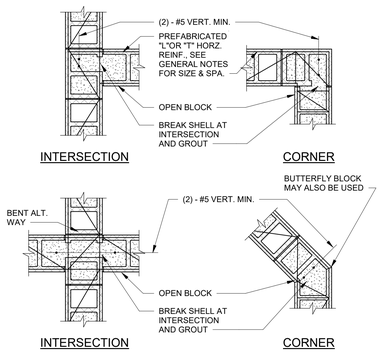
TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU LINTEL SCHEDULE

11 SCALE: N.T.S.



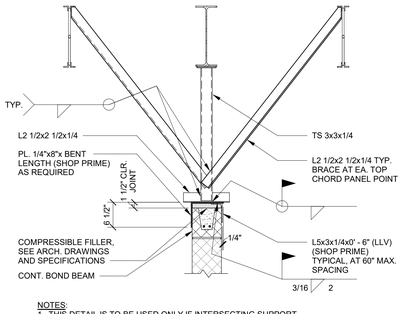
TYPICAL DETAIL
CMU CELL REINFORCING

7 SCALE: N.T.S.



CMU WALL INTERSECTIONS

3 SCALE: N.T.S.

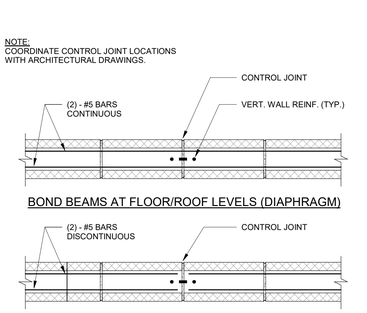


NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

18 SCALE: N.T.S.

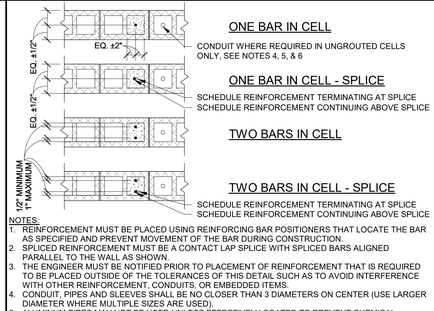
BOND BEAMS AT FLOOR/ROOF LEVELS (DIAPHRAGM)



BOND BEAMS AT INTERMEDIATE LEVELS

TYPICAL BOND BEAM AT CONTROL JOINTS

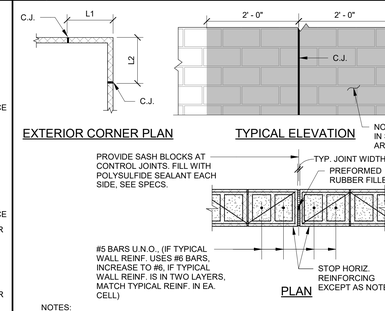
14 SCALE: N.T.S.



NOTES:
1. REINFORCEMENT MUST BE PLACED USING REINFORCING BAR POSITIONERS THAT LOCATE THE BAR AS SPECIFIED AND PREVENT MOVEMENT OF THE BAR DURING CONSTRUCTION.
2. SPLICED REINFORCEMENT MUST BE A CONTACT LAP SPLICE WITH SPLICED BARS ALIGNED PARALLEL TO THE WALL AS SHOWN.
3. THE ENGINEER MUST BE NOTIFIED PRIOR TO PLACEMENT OF REINFORCEMENT THAT IS REQUIRED TO BE PLACED OUTSIDE OF THE TOLERANCES OF THIS DETAIL SUCH AS TO AVOID INTERFERENCE WITH OTHER REINFORCEMENT, CONDUITS, OR EMBEDDED ITEMS.
4. CONDUIT, PIPES AND SLEEVES SHALL BE NO CLOSER THAN 3 DIAMETERS ON CENTER (USE LARGER DIAMETER WHERE MULTIPLE SIZES ARE USED).
5. ALUMINUM PIPES MAY NOT BE USED UNLESS EFFECTIVELY COATED TO PREVENT CHEMICAL REACTION.
6. PIPES SHALL NOT BE EMBEDDED IN MASONRY WHEN:
   (a) CONTAINING LIQUIDS, GAS, OR VAPORS AT A TEMPERATURE HIGHER THAN 150°F (66°C).
   (b) UNDER PRESSURE IN EXCESS OF 55 PSI (379 KPA).
   (c) CONTAINING WATER OR OTHER LIQUIDS SUBJECT TO FREEZING.

TYPICAL DETAIL
CMU VERTICAL BAR PLACEMENT

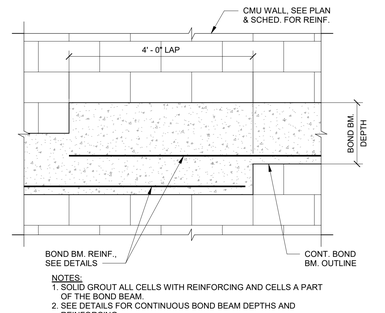
10 SCALE: N.T.S.



NOTES:
1. CONTRACTOR SHALL OBTAIN ARCHITECT'S APPROVAL OF JOINT LOCATIONS, WHICH SHALL NOT EXCEED THE MINIMUM OF 1.5 TIMES THE WALL HEIGHT OR 20'-0".
2. HORIZONTAL REINFORCING AT FLOOR AND ROOF LINES SHALL BE CONTINUOUS THRU JOINT.
3. CONCRETE BLOCK SHOWN - BRICK SIMILAR.
4. SAWCUT BLOCK OR BRICK AS REQUIRED.
5. AT EXTERIOR CORNERS LOCATE JOINTS SUCH THAT: L1+L2 ≤ 20' - 0", EITHER L1 OR L2 ≤ 10' - 0".

MASONRY WALL CONTROL JOINT

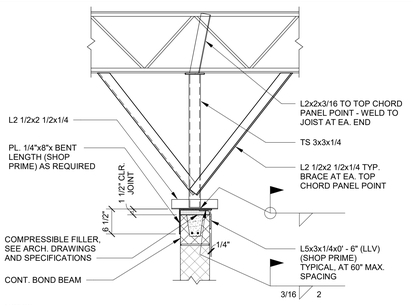
6 SCALE: N.T.S.



NOTES:
1. SOLID GROUT ALL CELLS WITH REINFORCING AND CELLS A PART OF THE BOND BEAM.
2. SEE DETAILS FOR CONTINUOUS BOND BEAM DEPTHS AND REINFORCING.
3. DISCONTINUE BOND BEAM REINFORCING THROUGH CMU CONTROL JOINTS.
4. SEE PLAN FOR T.O.S. ELEVATIONS AND ARCHITECTURAL FOR ROOF SLOPES.

TYPICAL DETAIL
CMU BOND BEAM STEP

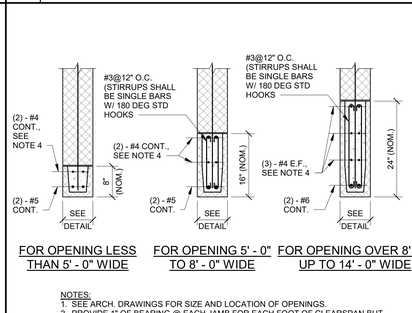
2 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PERPENDICULAR TO JOISTS

17 SCALE: N.T.S.

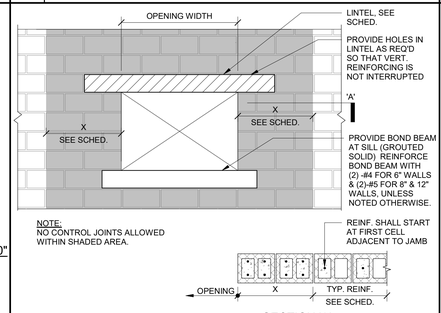


FOR OPENING LESS THAN 5' - 0" WIDE | FOR OPENING 5' - 0" TO 8' - 0" WIDE | FOR OPENING OVER 8' - 0" UP TO 14' - 0" WIDE

NOTES:
1. SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING @ EACH JAMB FOR EACH FOOT OF CLEARSPAN BUT NOT LESS THAN 8". REINF. SHALL PROJECT A MIN. OF 6" ONTO THE BEARING CMU.
3. BOND BEAMS SHALL BE FULLY GROUTED (2500 PSI @ 28 DAYS).
4. THE #4 BARS ARE ONLY REQUIRED AT EXTERIOR CMU WALLS.

TYPICAL DETAIL
EXTERIOR BLOCK LINTEL

13 SCALE: N.T.S.



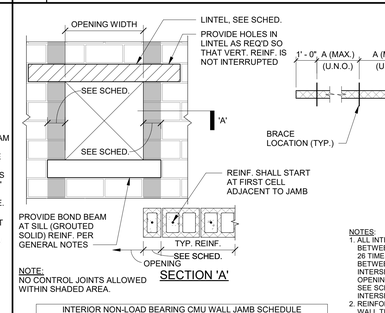
NOTE:
NO CONTROL JOINTS ALLOWED WITHIN SHADED AREA.

SECTION 'A'

WALL THICKNESS	OPENING SIZE	JAMB WIDTH 'X'	JAMB REINF.
8"	≥ 3' - 0" & ≤ 5' - 0"	2' - 0"	(2) - #5 @ 8" O.C.
8"	< 5' - 0" & ≤ 8' - 0"	2' - 0"	(2) - #6 @ 8" O.C.
8"	≤ 12" - 0"	2' - 8"	(2) - #6 @ 8" O.C.
12"	≥ 3' - 0" & ≤ 5' - 0"	1' - 4"	(2) - #6 @ 8" O.C.
12"	≤ 14' - 0"	2' - 0"	(2) - #7 @ 8" O.C.

CMU JAMB REINFORCING SCHEDULE

9 SCALE: N.T.S.

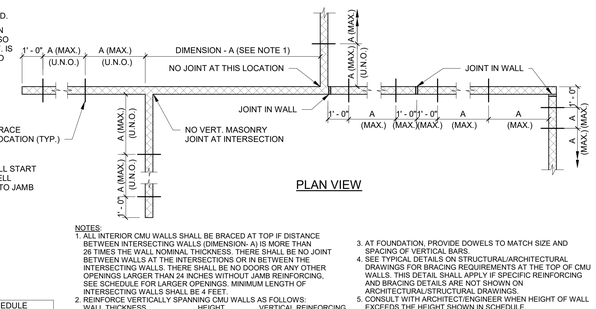


NOTE:
NO CONTROL JOINTS ALLOWED WITHIN SHADED AREA.

SECTION 'A'

INTERIOR NON-LOAD BEARING CMU WALL JAMB SCHEDULE							
WALL THICKNESS	SPANNING CMU HEIGHT	OPENING WIDTH ≤ 4' - 0" # OF CELLS	REINF.	OPENING WIDTH ≤ 8' - 0" # OF CELLS	REINF.	OPENING WIDTH ≤ 10' - 0" # OF CELLS	REINF.
6"	≤ 16' - 0"	1	#4	2	#4	2	#4
8"	≤ 18' - 0"	1	#4	2	#4	2	#4
12"	≤ 30' - 0"	1	#5	2	#5	2	#5

CONSULT W/ ARCHITECT/ENGINEER WHEN WIDTH OF OPENING EXCEEDS SCHEDULE



NOTES:
1. ALL INTERIOR CMU WALLS SHALL BE BRACED AT TOP IF DISTANCE BETWEEN INTERSECTING WALLS (DIMENSION- A) IS MORE THAN 26 TIMES THE WALL NOMINAL THICKNESS. THERE SHALL BE NO JOINT BETWEEN WALLS AT THE INTERSECTIONS OR IN BETWEEN THE INTERSECTING WALLS. THERE SHALL BE NO DOORS OR ANY OTHER OPENINGS LARGER THAN 24 INCHES WITHOUT JAMB REINFORCING, SEE SCHEDULE FOR LARGER OPENINGS. MINIMUM LENGTH OF INTERSECTING WALLS SHALL BE 4 FEET.
2. REINFORCE VERTICALLY SPANNING CMU WALLS AS FOLLOWS:

WALL THICKNESS	HEIGHT	VERTICAL REINFORCING
6"	≤ 16' - 0"	#4 @ 48"
8"	≤ 18' - 0"	#6 @ 48"
8"	≤ 30' - 0"	#5 @ 24"
12"	≤ 30' - 0"	#5 @ 48"

ALL REINFORCED CELLS SHALL BE GROUTED SOLID.

3. AT FOUNDATION, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF VERTICAL BARS.
4. SEE TYPICAL DETAILS ON STRUCTURAL/ARCHITECTURAL DRAWINGS FOR BRACING REQUIREMENTS AT THE TOP OF CMU WALLS. THIS DETAIL SHALL APPLY IF SPECIFIC REINFORCING AND BRACING DETAILS ARE NOT SHOWN ON ARCHITECTURAL/STRUCTURAL DRAWINGS.
5. CONSULT WITH ARCHITECT/ENGINEER WHEN HEIGHT OF WALL EXCEEDS THE HEIGHT SHOWN IN SCHEDULE.
6. PROVIDE CONTINUOUS BOND BEAM AT THE TOP OF WALLS. REINFORCE BOND BEAMS WITH (1) - #5 FOR 6" WALLS & (2)-#5 FOR 8" & 12" WALLS, UNLESS NOTED OTHERWISE.
7. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.

TYPICAL DETAIL - NON-LOAD BEARING INTERIOR/CMU WALLS BRACING AND REINFORCING STEEL

5 SCALE: N.T.S.

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
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TBPE Firm Registration No. F-2640
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MASONRY DETAILS

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Drawn By: JW	
Date: 10-29-2025	

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THROUGH BOLT AT CANTILEVER		
CANTILEVER LENGTH	MAX. CONN. SPACING	THROUGH BOLT DIA.
5' - 0"	12' - 0"	3/8"
	15' - 0"	1/2"

THREADED ROD W/ HY-270 AT CANTILEVER			
CANTILEVER LENGTH	MAX. CONN. SPACING	THREADED ROD	
		DIA.	EMBEDMENT
3' - 0"	5' - 0"	3/8"	3 3/8"
	12' - 0"	3/8"	3 3/8"
5' - 0"	5' - 0"	1/2"	4 1/2"
	8' - 0"	5/8"	5 5/8
	10' - 0"	3/4"	6 3/4"

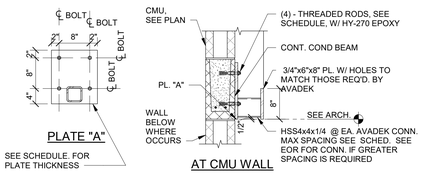
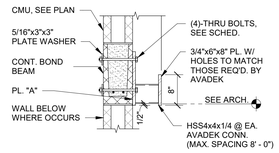


PLATE "A"

SEE SCHEDULE. FOR PLATE THICKNESS

AT CMU WALL



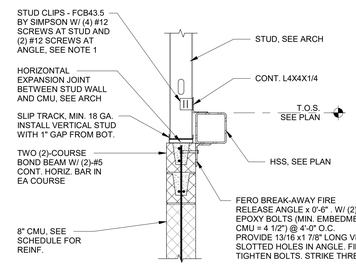
AT CMU WALL (FOR CANTILEVER CANOPIES LONGER THAN 5' - 0" OR WHERE REQ'D FOR STRENGTH)

NOTES:
1. CONTRACTOR SHALL CONFIRM SPACING FROM CANOPY SUPPLIER PRIOR TO FABRICATION & SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. SIMPLE SPAN INDICATES CANOPY IS SUPPORTED ON EXTERIOR COLUMNS.

TYPICAL DETAIL AT AVADEK CANOPY CONNECTION

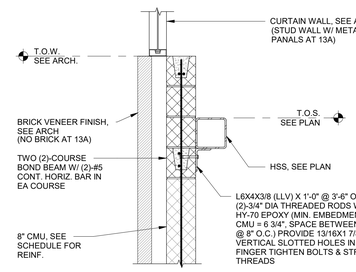
15 SCALE: 3/4" = 1'-0"

NOTES:
1. IN LIEU OF STUD SIZES AND CLIPS SHOWN CFMF ENGINEER TO DESIGN STUDS AND CLIPS AS DOUBLE CANTILEVER TO SUPPORT WIND REACTIONS AT WALL AND WINDOW HEAD AS WELL AS PARAPET.



INTERMEDIATE HSS BEAM AT CMU WALL

14 SCALE: 3/4" = 1'-0"

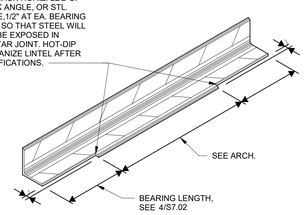


13A

INTERMEDIATE HSS BEAM AT CMU WALL

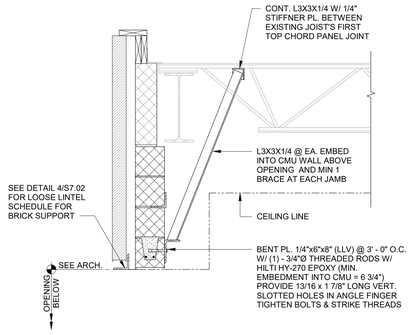
13 SCALE: 3/4" = 1'-0"

NOTE:
SEE 4/S7.02 FOR LINTEL SCHEDULE



TYPICAL DETAIL LOOSE LINTEL CUT BACK AND BEARING

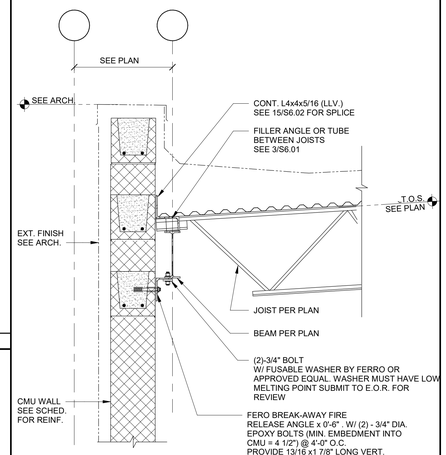
12 SCALE: N.T.S.



BRACING OF EXTERIOR EXISTING CMU WALL WITH NEW OPENING

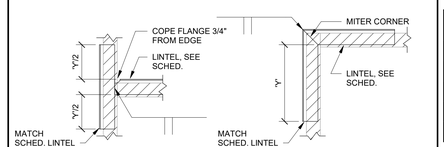
11 SCALE: N.T.S.

NOTE:
1. DO NOT WELD BREAKAWAY ANCHORS TO ADJACENT STEEL.
2. BREAK AWAY ANCHORS TO BE MANUFACTURED BY FEROCORP OR ENGINEER APPROVED EQUAL.



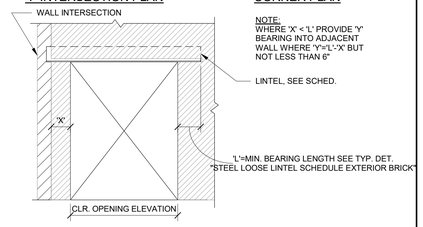
CMU WALL AT EXPANSION JOINT

9 SCALE: 3/4" = 1'-0"



'T' INTERSECTION PLAN

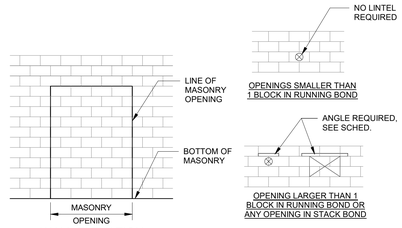
CORNER PLAN



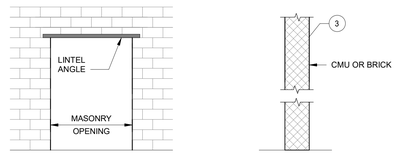
BRICK LOOSE LINTEL AT CORNER AND INTERSECTION

8 SCALE: N.T.S.

LINTEL SCHED. OPNG.	FOR 8" CMU WALLS	FOR 12" CMU WALLS
< = 3' - 0"	L6x3 1/2x5/16 (LLH)	(2) - L4x4x1/4
4' - 0"	L6x3 1/2x5/16 (LLH)	(2) - L4x4x1/4
5' - 0"	L6x3 1/2x5/16 (LLH)	(2) - L4x4x1/4
6' - 0"	L6x4x5/16 (LLH)	(2) - L4x4x5/16
7' - 0"	L6x6x5/16	(2) - L6x4x5/16 (LLV)
8' - 0"	L6x6x3/8	(2) - L6x4x5/16 (LLV)
9' - 0"	L6x6x3/8	(2) - L6x4x3/8 (LLV)
10' - 0"	(2) - L7x4x3/8 (LLV)	(2) - L7x4x3/8 (LLV)

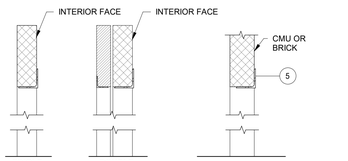


WALL ELEVATION



FINISH WALL ELEVATION

SECTION DETAIL



WALL SECTIONS

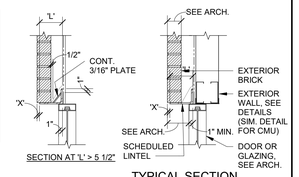
SECTION DETAIL
8" CMU WALL

CONSTRUCTION SEQUENCE:
1. ESTABLISH THE SIZE OF THE M.O. (MASONRY OPENING).
2. FURNISH A LOOSE LINTEL AND PLATE 1" - 4" LONGER THAN THE MASONRY OPENING, THIS ALLOWS 8" OF BEARING AT EACH END.
3. SYSTEMATICALLY REMOVE THE MORTAR FROM THE JOINT THAT IS TO RECEIVE THE HORIZONTAL LEG OF THE LOOSE LINTEL. LEAVE SOME MORTAR IN PLACE OR INSTALL SHIMS AT 12" O.C. TO SUPPORT THE UPPER MASONRY.
4. SAW CUT THE JAMBS.
5. HAMMER THE ANGLE INTO PLACE. THIS STEP WILL DISLODGE THE SHIMS.
6. REMOVE THE MASONRY AT THE DOOR OPENING.
7. FOR BRICK WALL, SEE LOOSE STEEL LINTEL SCHEDULE FOR ANGLE SIZE.
8. AT WALL WITH MULTIPLE WYTHES, PROVIDE ANGLE SUPPORT AT EACH WYTHE.
9. ALL ANGLES SHALL BE HOT-DIPPED GALVANIZED AT EXTERIOR OPENINGS.
10. EXISTING MASONRY CONTROL JOINTS ARE NOT PERMITTED OVER NEW OPENINGS. CONTACT E.O.R. AND ARCH. FOR STEEL LINTEL BEAM RECOMMENDATIONS.

TYPICAL DETAIL NEW OPENING IN EXISTING CMU WALL

5 SCALE: 3/4" = 1'-0"

CLEAR OPNG.	MINIMUM ANGLE SIZE
≤ 6'-0"	1 - L 3 1/2 x 'L' x 5/16
6'-8"	1 - L 4 x 'L' x 5/16
7'-4"	1 - L 5 x 'L' x 5/16
8'-0"	1 - L 6 x 'L' x 5/16
10'-0"	1 - L 6 x 'L' x 3/8

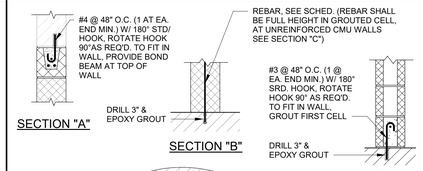


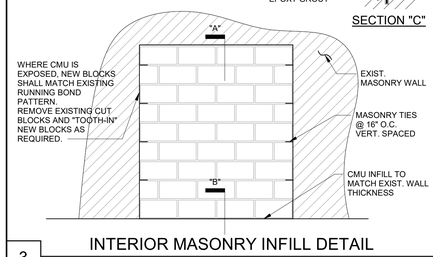
TYPICAL SECTION

NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING AT EACH JAMB FOR EACH FOOT OF CLEAR SPAN BUT NOT LESS THAN 6".
3. WHERE MINIMUM BEARING CANNOT BE ACHIEVED, PROVIDE ADEQUATE CONNECTION TO ADJACENT STRUCTURAL MEMBERS OR PROVIDE SEPARATE VERTICAL SUPPORTS. SUBMIT SUCH DETAILS FOR THE ENGINEER'S APPROVAL.
4. ALL LINTELS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
5. FOR MASONRY OPENINGS GREATER THAN 10'-0", SEE DETAILS ON THE DRAWINGS OR REFER TO ENGINEER.
6. BRICK HEIGHTS OVER OPENINGS GREATER THAN ONE HALF THE LINTEL SPAN SHALL BE SHORED UNTIL MORTAR HAS SET AND CURED.
7. 'L' DIMENSION SHALL NOT BE LESS THAN 4" FOR 'L' DIMENSION GREATER THAN 5 1/2". PROVIDE 3/16" PLATE STIFFENER.
8. UNLESS NOTED OTHERWISE BY ARCHITECT, 'X' DIMENSION SHALL BE 5/8" AT NOMINAL BRICK OR 4" CMU, AT KING BRICK 'X' SHALL BE 1/2".
9. WHERE MINIMUM ANGLE THICKNESS EXCEEDS GROUT BED THICKNESS. BOOT CUT BRICK AS REQ'D IN ORDER TO MAINTAIN LEVEL COURSING

TYPICAL DETAIL STEEL LOOSE LINTEL SCHEDULE EXTERIOR BRICK

4 SCALE: N.T.S.

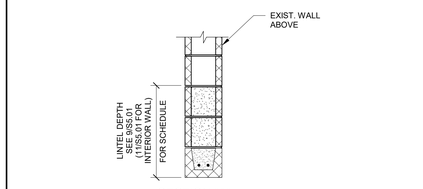




INTERIOR MASONRY INFILL DETAIL

3 SCALE: 3/4" = 1'-0"

NOTES:
1. DRAWINGS INDICATE FINAL DESIGN. THE CONTRACTOR IS RESPONSIBLE FOR SHORING AND STABILITY OF THE STRUCTURE DURING DEMOLITION AND INSTALLATION OF MASONRY LINTELS.
2. ALL BOLT HOLES FOR TEMPORARY SHORING/STABILITY SHALL BE REVIEWED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION. BOLT HOLES SHALL BE REPAIRED AS APPROVED BY ARCHITECT.
3. SEE 4/S7.01 AND 9/S7.01 FOR ADDITIONAL INFORMATION. FOR INTERIOR WALL, AND DETAILS 3 AND 14/S7.01 FOR EXTERIOR WALLS
4. EXISTING MASONRY CONTROL JOINTS ARE NOT PERMITTED OVER NEW OPENINGS. CONTACT EOR AND ARCH. FOR STEEL LINTEL BEAM RECOMMENDATIONS.
5. SEE DETAIL 11/S7.02 FOR BRACING AT EXTRIOR CMU WALLS WITH NEW OPENINGS.



NEW OPENING IN EXISTING NON-LOAD BEARING CMU WALL

1 SCALE: 3/4" = 1'-0"

Revision / Date
04/01/2025 Issue for Bid

Project:
CREEKWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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TYPICAL CMU WALL DETAILS

PACKAGE VOLUME

Job No. 1821-13-01
Sheet No. S7.02
Drawn By: KN/TH
Date: 10-29-2025

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1 DEMOLITION MASTER PLAN
1" = 20'-0"

EXTERIOR

E1. SAW CUT & REMOVE EXISTING CONC SIDEWALK, CURB OR FLAT WORK.

FLOORS

F1. REMOVE EXISTING TILE FLOORING & BASE DOWN TO EXISTING SUBSTRATE. PATCH AND/OR REPAIR EXISTING SUBSTRATE. APPLY LEVELING COMPOUND AS REQ'D. FOR NEW SCHEDULED FINISH.

WALLS

W1. REMOVE CASEWORK AND ANY OTHER ITEMS MOUNTED TO WALLS TO RECEIVE NEW EXTERIOR STOREFRONT. STORE/PROTECT AND REINSTALL AS DIRECTED BY OWNER.

W2. SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. PREPARE FOR INSTALLATION OF STOREFRONT/DOOR. PAINT INTERIOR WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

W3. REMOVE EXISTING MASONRY WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF OR TERMINATE UTILITIES THEREIN

W4. REMOVE EXISTING WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN.

CEILINGS

C1. REMOVE EXISTING CEILING GRID, TILE, GRILLES, DIFFUSERS, LIGHTING, EQUIPMENT, DEVICES, AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. REMOVE ANY CEILING TRIM WHERE OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN ON REFLECTED CEILING PLANS. REF. ELEC.

C2. REMOVE EXISTING CEILING GRID, TILE AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C3. REMOVE EXISTING HARD CEILING AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C4. REMOVE EXISTING CEILING AND PAINT ALL WALLS UP TO DECK.

DOORS & WINDOWS

D1. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO REPLACE DOOR AS SHOWN ON FLOOR PLANS.

D2. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO INFILL OPENING AS SHOWN ON FLOOR PLANS.

MISCELLANEOUS

M1. UNINSTALL/RELOCATE AND STORE/PROTECT EXISTING CASEWORK AND ACCESSORIES AS NEEDED TO COMPLETE SCOPE OF WORK. REINSTALL AS DIRECTED, COORDINATE WITH OWNER.

M2. COORDINATE WITH OWNER'S VENDOR TO RELOCATE INSTRUMENT STORAGE CASEWORK.

MECHANICAL

ME1. REMOVE EXISTING KITCHEN HOOD, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. MECHANICAL.

PLUMBING

P1. REMOVE EXISTING PLUMBING FIXTURES, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. PLUMBING.

ROOF

R1. REMOVE PORTION OF EXISTING ROOF AND DECK AND PREPARE ADJACENT AREAS FOR NEW CONSTRUCTION AS SHOWN.

STRUCTURAL

S1. REMOVE EXISTING CONCRETE COLUMN. REF. STRUCTURAL DRAWINGS FOR BRACING AND COLUMN REPLACEMENT IF APPLICABLE.

NOTES BY SYMBOL

A. BIDDERS SHALL VISIT SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO EXISTING DIMENSIONS, EQUIPMENT, LOCATIONS, SIZES, QUANTITIES, AND MATERIALS.

B. EXISTING ELECTRICAL POWER SERVING THE EXISTING FACILITY SHALL REMAIN ON LINE. DISRUPTIONS REQUIRED FOR CONSTRUCTION TO BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

C. EXISTING DRAIN LINES SERVING THE EXISTING FACILITY SHALL REMAIN FUNCTIONAL. ANY DISRUPTIONS REQUIRED FOR NEW TIE-INS DURING CONSTRUCTION MUST BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

D. CONTRACTOR SHALL COORDINATE EXACT SIZES AND LOCATIONS FOR MECHANICAL, PLUMBING, ELECTRICAL, AND TECHNOLOGY PENETRATIONS REQUIRED FOR NEW WORK WITH EACH RESPECTIVE TRADE.

E. CONTRACTOR SHALL KEEP OPENINGS TO THE EXTERIOR TEMPORARILY COVERED FOR PROTECTION FROM WATER.

F. CONTRACTOR SHALL KEEP OPENINGS TEMPORARILY COVERED FOR PEDESTRIAN SAFETY.

G. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF TEMPORARY SHORING AND BRACING REQUIRED FOR DEMOLITION.

H. REFER TO MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING SHEETS FOR ADDITIONAL PENETRATIONS AND OTHER RELATED DEMOLITION OR EQUIPMENT REMOVAL.

I. EXISTING CONSTRUCTION IS SHOWN BASED UPON OWNER FURNISHED PLANS, OWNER FURNISHED SURVEYS, AND ONSITE OBSERVATIONS. DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE REPORTED TO THE ARCHITECT/ENGINEER/PROJECT MANAGER PRIOR TO PROCEEDING WITH WORK.

J. EXISTING CONSTRUCTION ADJACENT TO DEMOLITION WORK WILL BE PATCHED AND REPAIRED TO MATCH ORIGINAL CONDITION.

K. DEMOLITION WORK TIMES SHALL BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

L. THIS EXISTING FACILITY SHALL REMAIN FUNCTIONAL DURING THE COURSE OF THE DEMOLITION WORK. CONTRACTOR WILL MAINTAIN DUST BARRIERS, BARRICADES, PEDESTRIAN PROTECTION, WATER PROTECTION, AND SAFETY DEVICES IN PLACE AT ALL TIMES DURING AND AFTER DEMOLITION UNTIL NEW WORK IS INSTALLED.

M. CONTRACTOR SHALL MAINTAIN SITE DRAINAGE DEVICES AND COMPONENTS DURING THE COURSE OF DEMOLITION AND UP UNTIL NEW WORK IS IN PLACE. THIS INCLUDES, BUT IS NOT LIMITED TO, EXISTING SUB-SOIL DRAINAGE.

N. REFER TO MECHANICAL, ELECTRICAL, ROOF PLAN, AND OTHER DISCIPLINE DRAWINGS FOR ADDITIONAL DEMOLITION NOT SPECIFICALLY COVERED BY ARCHITECTURAL DEMOLITION PLANS, ESPECIALLY RELATIVE TO MODIFICATIONS TO EXISTING H.V.A.C. SYSTEMS.

O. DEMOLITION, AS NOTED, CONSISTS OF COMPLETE REMOVAL OF THE LISTED ITEMS, RELATED FASTENERS, AND ATTACHMENT MATERIALS LEAVING A CLEAN SURFACE READY TO RECEIVE NOTED MATERIALS OR SCHEDULED FINISHES.

P. UNLESS NOTED OTHERWISE, MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED OF AT CONTRACTOR'S EXPENSE. DISPOSAL WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND GUIDELINES.

Q. DEMOLITION SHALL FOLLOW THE CONSTRUCTION SCHEDULE PROVIDED IN THE SPECIFICATIONS.

R. PRECAUTIONS SHALL BE TAKEN TO SEPARATE STUDENTS, SCHOOL STAFF, AND VISITORS FROM DEMOLITION, AND CONSTRUCTION EFFORTS, ACTIVITIES, AND WORK, TO PROTECT THEIR HEALTH AND SAFETY.

S. ADDITIONAL MATERIALS, WHERE CONSTRUCTION ADJOINS EXISTING, NOT SPECIFICALLY IDENTIFIED IN THE DEMOLITION PLANS, WILL BE REMOVED AS REQUIRED TO COMPLETE THE CONSTRUCTION. THESE MATERIALS TYPICALLY INCLUDE MATERIAL PROJECTION BEYOND THE FACE OF THE WALL, INCLUDING BRICK SILLS, OTHER PROJECTIONS, AND ROOF FLASHINGS, GUTTERS, AND TRIMS. REFER TO WALL SECTIONS FOR SPECIFIC CONDITIONS.

T. INVESTIGATE EACH WALL SUBJECT TO DEMOLITION TO DETERMINE IF IT IS USED FOR BEARING. COORDINATE WITH CONSTRUCTION SEQUENCE AND PROVIDE SHORING AT ANY WALL CARRYING STRUCTURAL LOAD TO PREVENT COLLAPSE UNTIL NEW STRUCTURE IS IN PLACE.

U. OWNER RESERVES FIRST RIGHT TO RETAIN AND KEEP ANY EXISTING ITEMS REMOVED AS A PART OF THE DEMOLITION WORK.

V. GENERAL CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL TECHNOLOGY AND COMMUNICATION DEVICES INCLUDING INTERCOM SPEAKERS, CLOCKS, WIRELESS ACCESS POINTS, DEVICES, CAFETERIA SPEAKERS, PROJECTORS, PROJECTOR PLATES, AUDIO-VIDEO CABLING, INTELLIGENT BOARDS, SCREENS, ETC WITH THE SOUND, INTERCOM AND TECHNOLOGY CONTRACTORS. THIS WORK MUST BE DONE PRIOR TO REMOVAL OF CEILING TILE OR OTHER CEILING AND PLENUM WORK.

W. GATHER AND TEMPORARILY NEATLY AND LOOSELY COIL AND SUSPEND ALL EXISTING-TO-REMAIN PLENUM-RELATED CABLING FROM EXISTING STRUCTURE.

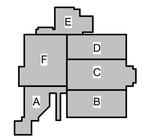
X. ALL TECHNOLOGY AND LOW-VOLTAGE CABLING IN THE PLENUM SHALL REMAIN IN PLACE. ANY DAMAGE TO THIS CABLING SHALL HAVE NEW CABLING PLACED BY THE PROPER TRADE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR THAT DAMAGED THE CABLING. ALL CABLES HAVE BEEN TESTED PRIOR TO RENOVATION WORK AND ALL WILL BE TESTED AFTER THE WORK IS COMPLETED.

DEMOLITION GENERAL NOTES

═══	EXISTING PARTITION TO BE REMOVED. INCLUDING BASE, DOORS, WINDOWS, OUTLETS, DEVICES, SWITCHES, CHALK/TACK BOARDS, POWER POLES, WALL CAPS AND ANY ITEM ATTACHED TO OR ASSOCIATED WITH THE PARTITION. CONTRACTOR WILL VERIFY ELECTRICAL, MECHANICAL & PLUMBING IN EXISTING WALLS & TERMINATE OR RELOCATE AS REQUIRED FOR CONTRACT WORK. PATCH, REPAIR & CLEAN ALL ADJACENT WALLS AND PREPARE TO RECEIVE NEW PARTITION WALLS AS SHOWN ON FLOOR PLANS.
	EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS OTHERWISE NOTED.
- - -	EXISTING ITEM TO BE REMOVED AS NOTED.
═══	EXISTING WALL / PARTITION TO REMAIN.
	EXISTING DOOR, FRAME, AND HARDWARE TO REMAIN.

DEMOLITION LEGEND

PLAN N / TRUE N



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WOLF
TX 24611
STATE OF TEXAS
10/24/2025

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DEMOLITION MASTER PLAN

Job No. 1821-13-01	Sheet No. 100% QC AD1.01
Drawn By: CS	
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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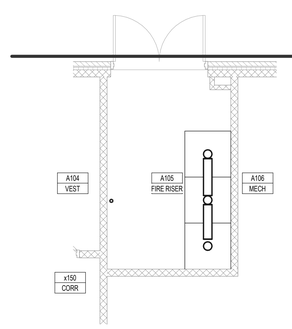
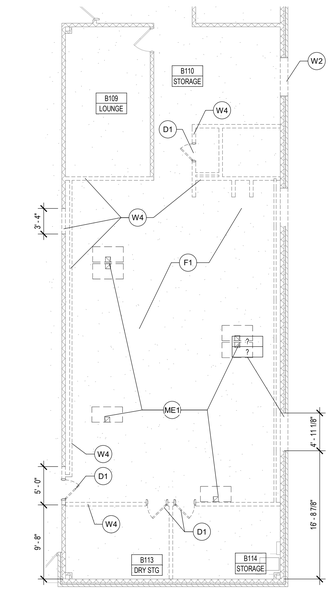
PLAN N

TRUE

1 DEMOLITION PLAN - SECTION A
1/8" = 1'-0"



3 ENLARGED DEMO PLAN - FIRE RISER ROOM (SECTION F)
1/4" = 1'-0" BACK REF: AD1.01



2 ENLARGED DEMO PLAN - CULINARY ROOM (SECTION B)
1/8" = 1'-0" BACK REF: AD1.01

EXTERIOR

E1. SAW CUT & REMOVE EXISTING CONC SIDEWALK, CURB OR FLAT WORK

FLOORS

F1. REMOVE EXISTING TILE FLOORING & BASE DOWN TO EXISTING SUBSTRATE. PATCH AND/OR REPAIR EXISTING SUBSTRATE. APPLY LEVELING COMPOUND AS REQ'D. FOR NEW SCHEDULED FINISH.

WALLS

W1. REMOVE CASEWORK AND ANY OTHER ITEMS MOUNTED TO WALLS TO RECEIVE NEW EXTERIOR STOREFRONT. STORE/PROTECT AND REINSTALL AS DIRECTED BY OWNER.

W2. SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. PREPARE FOR INSTALLATION OF STOREFRONT/DOOR. PAINT INTERIOR WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

W3. REMOVE EXISTING MASONRY WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF OR TERMINATE UTILITIES THEREIN

W4. REMOVE EXISTING WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN.

CEILINGS

C1. REMOVE EXISTING CEILING GRID, TILE, GRILLES, DIFFUSERS, LIGHTING, EQUIPMENT, DEVICES, AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. REMOVE ANY CEILING TRIM WHERE OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN ON REFLECTED CEILING PLANS. REF. ELEC.

C2. REMOVE EXISTING CEILING GRID, TILE AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C3. REMOVE EXISTING HARD CEILING AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C4. REMOVE EXISTING CEILING AND PAINT ALL WALLS UP TO DECK.

DOORS & WINDOWS

D1. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO REPLACE DOOR AS SHOWN ON FLOOR PLANS.

D2. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO INFILL OPENING AS SHOWN ON FLOOR PLANS.

MISCELLANEOUS

M1. UNINSTALL/RELOCATE AND STORE/PROTECT EXISTING CASEWORK AND ACCESSORIES AS NEEDED TO COMPLETE SCOPE OF WORK. REINSTALL AS DIRECTED, COORDINATE WITH OWNER.

M2. COORDINATE WITH OWNER'S VENDOR TO RELOCATE INSTRUMENT STORAGE CASEWORK.

MECHANICAL

ME1. REMOVE EXISTING KITCHEN HOOD, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. MECHANICAL.

PLUMBING

P1. REMOVE EXISTING PLUMBING FIXTURES, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. PLUMBING.

ROOF

R1. REMOVE PORTION OF EXISTING ROOF AND DECK AND PREPARE ADJACENT AREAS FOR NEW CONSTRUCTION AS SHOWN.

STRUCTURAL

S1. REMOVE EXISTING CONCRETE COLUMN. REF. STRUCTURAL DRAWINGS FOR BRACING AND COLUMN REPLACEMENT IF APPLICABLE.

NOTES BY SYMBOL

A. BIDDERS SHALL VISIT SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO EXISTING DIMENSIONS, EQUIPMENT, LOCATIONS, SIZES, QUANTITIES, AND MATERIALS.

B. EXISTING ELECTRICAL POWER SERVING THE EXISTING FACILITY SHALL REMAIN ON LINE. DISRUPTIONS REQUIRED FOR CONSTRUCTION TO BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

C. EXISTING DRAIN LINES SERVING THE EXISTING FACILITY SHALL REMAIN FUNCTIONAL. ANY DISRUPTIONS REQUIRED FOR NEW TIE-INS DURING CONSTRUCTION MUST BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

D. CONTRACTOR SHALL COORDINATE EXACT SIZES AND LOCATIONS FOR MECHANICAL, PLUMBING, ELECTRICAL, AND TECHNOLOGY PENETRATIONS REQUIRED FOR NEW WORK WITH EACH RESPECTIVE TRADE.

E. CONTRACTOR SHALL KEEP OPENINGS TO THE EXTERIOR TEMPORARILY COVERED FOR PROTECTION FROM WATER.

F. CONTRACTOR SHALL KEEP OPENINGS TEMPORARILY COVERED FOR PEDESTRIAN SAFETY.

G. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF TEMPORARY SHORING AND BRACING REQUIRED FOR DEMOLITION.

H. REFER TO MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING SHEETS FOR ADDITIONAL PENETRATIONS AND OTHER RELATED DEMOLITION OR EQUIPMENT REMOVAL.

I. EXISTING CONSTRUCTION IS SHOWN BASED UPON OWNER FURNISHED PLANS, OWNER FURNISHED SURVEYS, AND ONSITE OBSERVATIONS. DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE REPORTED TO THE ARCHITECT/ENGINEER/PROJECT MANAGER PRIOR TO PROCEEDING WITH WORK.

J. EXISTING CONSTRUCTION ADJACENT TO DEMOLITION WORK WILL BE PATCHED AND REPAIRED TO MATCH ORIGINAL CONDITION.

K. DEMOLITION WORK TIMES SHALL BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

L. THIS EXISTING FACILITY SHALL REMAIN FUNCTIONAL DURING THE COURSE OF THE DEMOLITION WORK. CONTRACTOR WILL MAINTAIN DUST BARRIERS, BARRICADES, PEDESTRIAN PROTECTION, WATER PROTECTION, AND SAFETY DEVICES IN PLACE AT ALL TIMES DURING AND AFTER DEMOLITION UNTIL NEW WORK IS INSTALLED.

M. CONTRACTOR SHALL MAINTAIN SITE DRAINAGE DEVICES AND COMPONENTS DURING THE COURSE OF DEMOLITION AND UP UNTIL NEW WORK IS IN PLACE. THIS INCLUDES, BUT IS NOT LIMITED TO, EXISTING SUB-SOIL DRAINAGE.

N. REFER TO MECHANICAL, ELECTRICAL, ROOF PLAN, AND OTHER DISCIPLINE DRAWINGS FOR ADDITIONAL DEMOLITION NOT SPECIFICALLY COVERED BY ARCHITECTURAL DEMOLITION PLANS, ESPECIALLY RELATIVE TO MODIFICATIONS TO EXISTING H.V.A.C. SYSTEMS.

O. DEMOLITION, AS NOTED, CONSISTS OF COMPLETE REMOVAL OF THE LISTED ITEMS, RELATED FASTENERS, AND ATTACHMENT MATERIALS LEAVING A CLEAN SURFACE READY TO RECEIVE NOTED MATERIALS OR SCHEDULED FINISHES.

P. UNLESS NOTED OTHERWISE, MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED OF AT CONTRACTOR'S EXPENSE, DISPOSAL WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND GUIDELINES.

Q. DEMOLITION SHALL FOLLOW THE CONSTRUCTION SCHEDULE PROVIDED IN THE SPECIFICATIONS.

R. PRECAUTIONS SHALL BE TAKEN TO SEPARATE STUDENTS, SCHOOL STAFF, AND VISITORS FROM DEMOLITION, AND CONSTRUCTION EFFORTS, ACTIVITIES, AND WORK, TO PROTECT THEIR HEALTH AND SAFETY.

S. ADDITIONAL MATERIALS, WHERE CONSTRUCTION ADJOINS EXISTING, NOT SPECIFICALLY IDENTIFIED IN THE DEMOLITION PLANS, WILL BE REMOVED AS REQUIRED TO COMPLETE THE CONSTRUCTION. THESE MATERIALS TYPICALLY INCLUDE MATERIAL PROJECTION BEYOND THE FACE OF THE WALL, INCLUDING BRICK SILLS, OTHER PROJECTIONS, AND ROOF FLASHINGS, GUTTERS, AND TRIMS. REFER TO WALL SECTIONS FOR SPECIFIC CONDITIONS.

T. INVESTIGATE EACH WALL SUBJECT TO DEMOLITION TO DETERMINE IF IT IS USED FOR BEARING. COORDINATE WITH CONSTRUCTION SEQUENCE AND PROVIDE SHORING AT ANY WALL CARRYING STRUCTURAL LOAD TO PREVENT COLLAPSE UNTIL NEW STRUCTURE IS IN PLACE.

U. OWNER RESERVES FIRST RIGHT TO RETAIN AND KEEP ANY EXISTING ITEMS REMOVED AS A PART OF THE DEMOLITION WORK.

V. GENERAL CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL TECHNOLOGY AND COMMUNICATION DEVICES INCLUDING INTERCOM SPEAKERS, CLOCKS, WIRELESS ACCESS POINTS, DEVICES, CAFETERIA SPEAKERS, PROJECTORS, PROJECTOR PLATES, AUDIO-VIDEO CABLING, INTELLIGENT BOARDS, SCREENS, ETC WITH THE SOUND, INTERCOM AND TECHNOLOGY CONTRACTORS. THIS WORK MUST BE DONE PRIOR TO REMOVAL OF CEILING TILE OR OTHER CEILING AND PLENUM WORK.

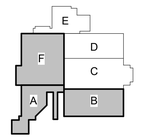
W. GATHER AND TEMPORARILY NEATLY AND LOOSELY COIL AND SUSPEND ALL EXISTING-TO-REMAIN PLENUM-RELATED CABLING FROM EXISTING STRUCTURE.

X. ALL TECHNOLOGY AND LOW-VOLTAGE CABLING IN THE PLENUM SHALL REMAIN IN PLACE. ANY DAMAGE TO THIS CABLING SHALL HAVE NEW CABLING PLACED BY THE PROPER TRADE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR THAT DAMAGED THE CABLING. ALL CABLES HAVE BEEN TESTED PRIOR TO RENOVATION WORK AND ALL WILL BE TESTED AFTER THE WORK IS COMPLETED.

DEMOLITION GENERAL NOTES

- EXISTING PARTITION TO BE REMOVED. INCLUDING BASE, DOORS, WINDOWS, OUTLETS, DEVICES, SWITCHES, CHALK/TACK BOARDS, POWER POLES, WALL CAPS AND ANY ITEM ATTACHED TO OR ASSOCIATED WITH THE PARTITION. CONTRACTOR WILL VERIFY ELECTRICAL, MECHANICAL, & PLUMBING IN EXISTING WALLS & TERMINATE OR RELOCATE AS REQUIRED FOR CONTRACT WORK. PATCH, REPAIR & CLEAN ALL ADJACENT WALLS AND PREPARE TO RECEIVE NEW PARTITION WALLS AS SHOWN ON FLOOR PLANS.
- EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS OTHERWISE NOTED.
- EXISTING ITEM TO BE REMOVED AS NOTED.
- EXISTING WALL / PARTITION TO REMAIN.
- EXISTING DOOR, FRAME, AND HARDWARE TO REMAIN.

DEMOLITION LEGEND



KEY PLAN - 1ST FLOOR
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DEMOLITION FLOOR PLAN - SECTION A, PARTIAL B & F

Job No. 1821-13-01	Sheet No. 100% QC AD1.11
Drawn By: CS	
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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1 DEMOLITION REFLECTED CEILING PLAN - MASTER PLAN
1" = 20'-0"

EXTERIOR

E1. SAW CUT & REMOVE EXISTING CONC SIDEWALK, CURB OR FLAT WORK

FLOORS

F1. REMOVE EXISTING TILE FLOORING & BASE DOWN TO EXISTING SUBSTRATE. PATCH AND/OR REPAIR EXISTING SUBSTRATE. APPLY LEVELING COMPOUND AS REQ'D. FOR NEW SCHEDULED FINISH.

WALLS

W1. REMOVE CASEWORK AND ANY OTHER ITEMS MOUNTED TO WALLS TO RECEIVE NEW EXTERIOR STOREFRONT. STORE/PROTECT AND REINSTALL AS DIRECTED BY OWNER.

W2. SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. PREPARE FOR INSTALLATION OF STOREFRONT/DOOR. PAINT INTERIOR WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

W3. REMOVE EXISTING MASONRY WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF OR TERMINATE UTILITIES THEREIN

W4. REMOVE EXISTING WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN.

CEILINGS

C1. REMOVE EXISTING CEILING GRID, TILE, GRILLES, DIFFUSERS, LIGHTING, EQUIPMENT, DEVICES, AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. REMOVE ANY CEILING TRIM WHERE OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN ON REFLECTED CEILING PLANS. REF. ELEC.

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C3. REMOVE EXISTING HARD CEILING AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

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DOORS & WINDOWS

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D2. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL) PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO INFILL OPENING AS SHOWN ON FLOOR PLANS.

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M2. COORDINATE WITH OWNER'S VENDOR TO RELOCATE INSTRUMENT STORAGE CASEWORK.

MECHANICAL

ME1. REMOVE EXISTING KITCHEN HOOD, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. MECHANICAL.

PLUMBING

P1. REMOVE EXISTING PLUMBING FIXTURES, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. PLUMBING.

ROOF

R1. REMOVE PORTION OF EXISTING ROOF AND DECK AND PREPARE ADJACENT AREAS FOR NEW CONSTRUCTION AS SHOWN.

STRUCTURAL

S1. REMOVE EXISTING CONCRETE COLUMN. REF. STRUCTURAL DRAWINGS FOR BRACING AND COLUMN REPLACEMENT IF APPLICABLE.

NOTES BY SYMBOL

A. BIDDERS SHALL VISIT SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO EXISTING DIMENSIONS, EQUIPMENT, LOCATIONS, SIZES, QUANTITIES, AND MATERIALS.

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J. EXISTING CONSTRUCTION ADJACENT TO DEMOLITION WORK WILL BE PATCHED AND REPAIRED TO MATCH ORIGINAL CONDITION.

K. DEMOLITION WORK TIMES SHALL BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

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N. REFER TO MECHANICAL, ELECTRICAL, ROOF PLAN, AND OTHER DISCIPLINE DRAWINGS FOR ADDITIONAL DEMOLITION NOT SPECIFICALLY COVERED BY ARCHITECTURAL DEMOLITION PLANS, ESPECIALLY RELATIVE TO MODIFICATIONS TO EXISTING H.V.A.C. SYSTEMS.

O. DEMOLITION, AS NOTED, CONSISTS OF COMPLETE REMOVAL OF THE LISTED ITEMS, RELATED FASTENERS, AND ATTACHMENT MATERIALS LEAVING A CLEAN SURFACE READY TO RECEIVE NOTED MATERIALS OR SCHEDULED FINISHES.

P. UNLESS NOTED OTHERWISE, MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED OF AT CONTRACTOR'S EXPENSE. DISPOSAL WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND GUIDELINES.

Q. DEMOLITION SHALL FOLLOW THE CONSTRUCTION SCHEDULE PROVIDED IN THE SPECIFICATIONS.

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T. INVESTIGATE EACH WALL SUBJECT TO DEMOLITION TO DETERMINE IF IT IS USED FOR BEARING. COORDINATE WITH CONSTRUCTION SEQUENCE AND PROVIDE SHORING AT ANY WALL CARRYING STRUCTURAL LOAD TO PREVENT COLLAPSE UNTIL NEW STRUCTURE IS IN PLACE.

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W. GATHER AND TEMPORARILY NEATLY AND LOOSELY COIL AND SUSPEND ALL EXISTING-TO-REMAIN PLENUM-RELATED CABLING FROM EXISTING STRUCTURE.

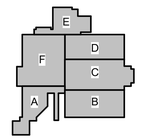
X. ALL TECHNOLOGY AND LOW-VOLTAGE CABLING IN THE PLENUM SHALL REMAIN IN PLACE. ANY DAMAGE TO THIS CABLING SHALL HAVE NEW CABLING PLACED BY THE PROPER TRADE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR THAT DAMAGED THE CABLING. ALL CABLES HAVE BEEN TESTED PRIOR TO RENOVATION WORK AND ALL WILL BE TESTED AFTER THE WORK IS COMPLETED.

DEMOLITION GENERAL NOTES

= = =	EXISTING PARTITION TO BE REMOVED, INCLUDING BASE, DOORS, WINDOWS, OUTLETS, DEVICES, SWITCHES, CHALKTACK BOARDS, POWER POLES, WALL CAPS AND ANY ITEM ATTACHED TO OR ASSOCIATED WITH THE PARTITION. CONTRACTOR WILL VERIFY ELECTRICAL, MECHANICAL & PLUMBING IN EXISTING WALLS & TERMINATE OR RELOCATE AS REQUIRED FOR CONTRACT WORK. PATCH, REPAIR & CLEAN ALL ADJACENT WALLS AND PREPARE TO RECEIVE NEW PARTITION WALLS AS SHOWN ON FLOOR PLANS.
	EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS OTHERWISE NOTED.
	EXISTING ITEM TO BE REMOVED AS NOTED.
	EXISTING WALL / PARTITION TO REMAIN.
	EXISTING DOOR, FRAME, AND HARDWARE TO REMAIN.

DEMOLITION LEGEND

PLAN NORTH TRUE



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DEMOLITION REFLECTED CEILING PLAN - MASTER

Job No. 1821-13-01	Sheet No. 100% QC AD2.10
Drawn By: Author	
Date: 04.02.2025	

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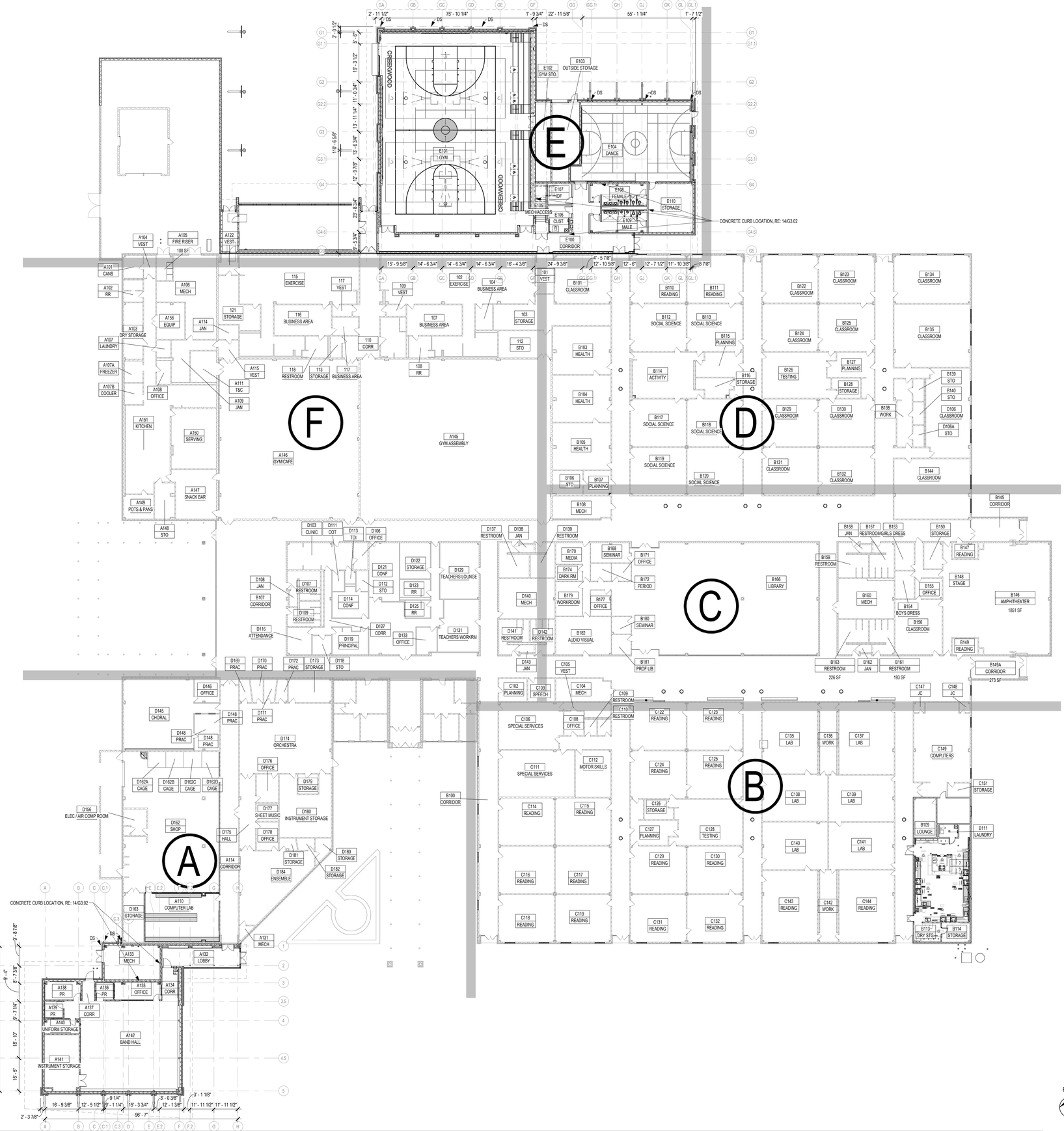
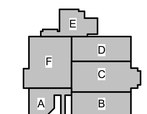


1 MASTER PLAN
1" = 20'-0"

PLAN
N
TRUE



KEY PLAN - 1ST FLOOR
N.T.S

THE MASTER FLOOR PLAN SHOWS THE OVERALL BUILDING CONFIGURATION AND THE RELATIONSHIP OF THE PLAN AREAS WHICH FOLLOW. REFER TO LARGER SCALE FLOOR PLANS AND PLAN DETAILS FOR ADDITIONAL INFORMATION AND CONSTRUCTION REQUIREMENTS. MASTER PLAN LEGENDS ALSO APPLY TO 1/8" SCALE FLOOR PLAN AREAS.

MASTER FLOOR PLAN

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Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISA
TX 24614
STATE OF TEXAS
10/24/2025

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MASTER FLOOR PLAN

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A1.01
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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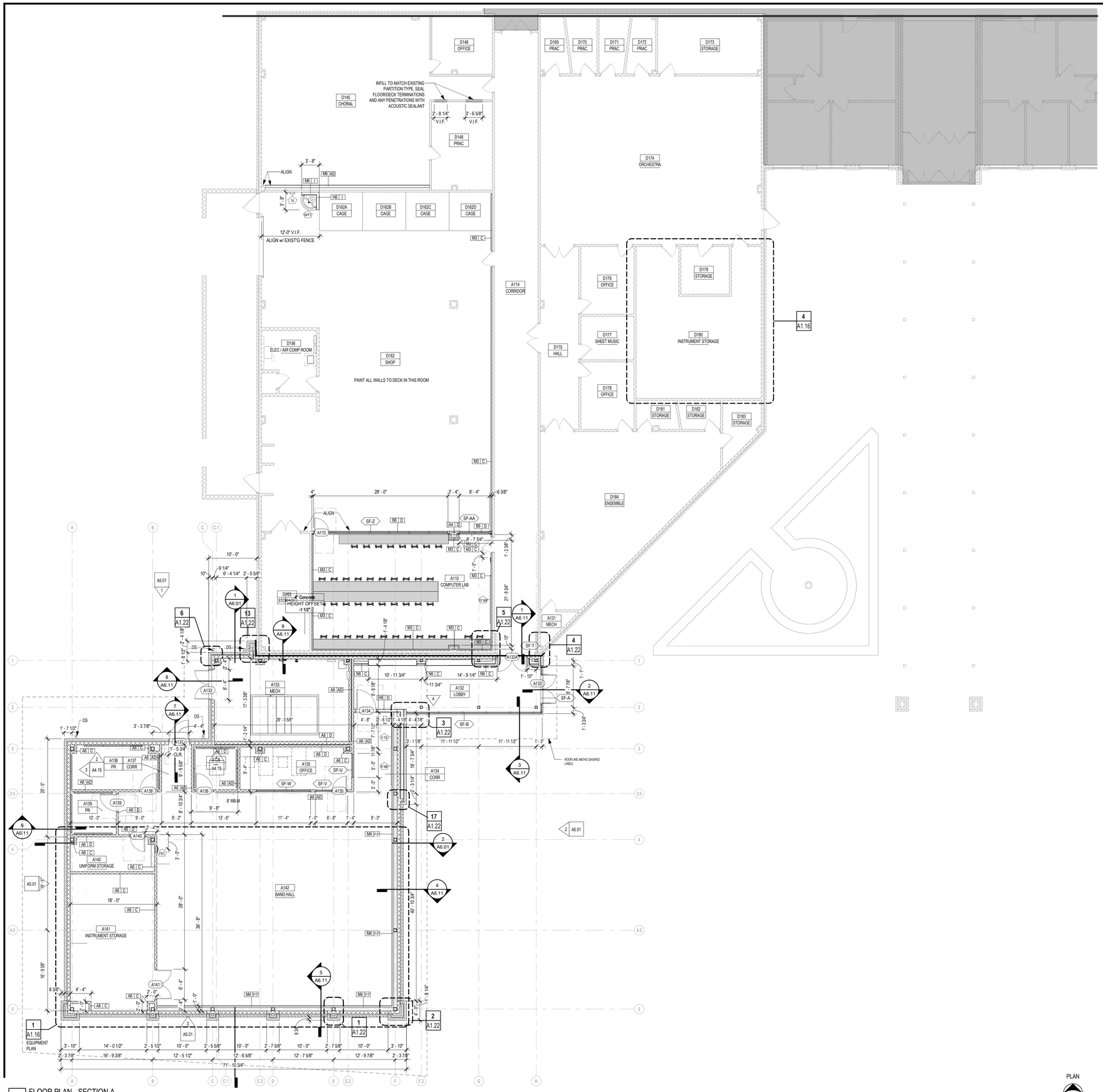
D146 OFFICE
D169 PRAC
D170 PRAC
D171 PRAC
D172 PRAC
D173 STORAGE
D145 CHORAL
INFILL TO MATCH EXISTING PARTITION TYPE, SEAL FLOOR/DECK TERMINATIONS AND ANY PENETRATIONS WITH ACOUSTIC SEALANT
2' - 8 1/4" V.I.F.
3' - 6 5/8" V.I.F.
D148 PRAC
D174 ORCHESTRA
3' - 8"
ALIGN
M6 AD
M6
H6
3' - 8"
T3
WF3
D162A CAGE
D162B CAGE
D162C CAGE
D162D CAGE
12'-0" V.I.F.
ALIGN w/ EXIST'G FENCE
M3 C
A114 CORRIDOR
D176 OFFICE
D179 STORAGE
D177 SHEET MUSIC
D180 INSTRUMENT STORAGE
4 A1.16
D175 HALL
D156 ELEC / AIR COMP ROOM
D162 SHOP
PAINT ALL WALLS TO DECK IN THIS ROOM
D178 OFFICE
D181 STORAGE
D182 STORAGE
D183 STORAGE
D184 ENSEMBLE
4"
28' - 0"
2' - 4"
6' - 4"
6 3/8"
ALIGN
SF-Z
B6 D
SF-AA
A4 D
B6 D
A110
H6 D
6' - 7 3/4"
M3 C
M3 C
1' - 2 3/8"
10' - 0"
9 1/4"
10"
6' - 4 1/4"
2' - 0 5/8"
A5.01
1
A6.01
D163 STORAGE
4" Concrete HEIGHT OFFSET -1 1/2"
M3 C
A110 COMPUTER LAB
M3 C
1' - 0"
12 MB
21' - 9 3/4"
6
A1.22
13
A1.22
9
A6.11
DS
DS
A3
A6 AD
1' - 6 1/2"
2' - 4 1/8"
5
A1.22
1
A6.11
A131 MECH
4
A1.22
SF-T
A132A
1' - 10"
A132
1' - 7"
8
A6.11
A133 MECH
M6 C
10' - 11 3/4"
M6 C
14' - 9 1/4"
M6 C
11' - 11 3/4"
A132 LOBBY
2' - 7 7/8"
SF-A
2
A6.11
7
A6.11
DS
DS
1' - 7 1/2"
3' - 3 7/8"
4' - 4"
A6 C
A6 C
A6 AD
A6 AD
A6 C
A6 D
A6 D
A6 AD
A6 AD
A6 C
A6 C
A6 AD
A6 AD
A6 AD

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REF A1.14 FOR CONTINUATION



NOTES:

1) THE CONTRACT DOCUMENTS ARE COMPRISED OF BOTH THE DRAWINGS AND THE SPECIFICATIONS.

2) ALL ARCHITECTURAL FLOOR PLAN DIMENSIONS SHOWN ARE TO FACE OF C.F.M.F, MASONRY OR CONCRETE, U.N.O.

3) SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.

4) SEE SPECIFICATIONS AND G3 SHEETS FOR ADDITIONAL MASONRY AND CFMF PARTITION REQUIREMENTS.

5) SEE PLUMBING PLANS AND ENLARGED FLOOR PLANS FOR LOCATIONS OF FIXTURES.

6) REF. DOOR SCHEDULES AND DETAILS FOR MASONRY ROUGH OPENING SIZES.

7) VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).

8) PROVIDE WD BLOCKING IN ALL GYP BD WALLS AS REQ'D AT LOCATIONS INCLUDING, BUT NOT LIMITED TO; HANDRAILS, TOILET ACCESSORIES, PROJECTORS, CASEWORK, TACK BD'S, MARKER BD'S, WALL STOPS & DOOR HOLDERS.

GENERAL FLOOR PLAN NOTES

F.E. **FIRE EXTINGUISHER (WALL MOUNTED)** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C. **FIRE EXTINGUISHER CABINET** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

P.S. **PROJECTION SCREEN** REF. TYP. DET. ON A4 SHEETS

X' M.B. **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

SO1.01 **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 **CALLOUT REFERENCE**

1 / A101 SIM **WALL SECTION REFERENCE** XX / A101

XXX' - X" FIN FLOOR **ELEVATION REFERENCE**

1-01 ROOM **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

APPLIES TO SECTION PLANS

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

MASONRY VENEER

STANDARD CMU

CFMF PARTITION

EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 | D

WALL ASSEMBLY IN PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES. WALL TAGS WITHOUT LETTERS TO RIGHT REFER TO ELEVATIONS FOR HEIGHT.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION
I	VARIES - REF INTERIOR ELEVATION & SECTION

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

1 - 7/8" HAT CHANNEL
2 - 1 5/8" CFMF
3 - 2 1/2" CFMF
4 - 3 5/8" CFMF OR CMU
6 - 6" CFMF OR 5 5/8" CMU
8 - 8" CFMF OR 7 5/8" CMU
10 - 9 5/8" CMU
12 - 11 5/8" CMU

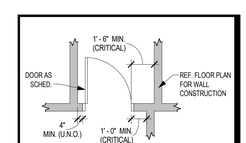
PARTITION NOTES:

1) ALL INTERIOR PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

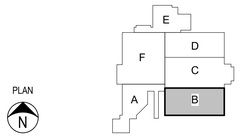
2) UNTAGGED PARTITIONS AND COLUMN FURRINGS SHOULD BE ASSUMED TO BE **"TYPICAL"** FOR BIDDING PURPOSES. THE "TYPICAL" **GYP BOARD PARTITION** IS TYPE M4, ACOUSTICAL, TO DECK, AND THE "TYPICAL" GYP BOARD **COLUMN FURRING** AND CHASES IS M4, NON-ACOUSTICAL, TO 8" ABOVE CEILING U.N.O.
THE "TYPICAL" **MASONRY PARTITION** IS TYPE A8, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS A6, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

PARTITION LEGEND



DOOR LOCATION



PLAN N

KEY PLAN - 1ST FLOOR
N.T.S

1 FLOOR PLAN - SECTION B
1/8" = 1'-0"

Revision / Date

Project: CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FLOOR PLAN - SECTION B

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Drawn By: CS
Date: 04.02.2025
Sheet No. 100% QC A1.12

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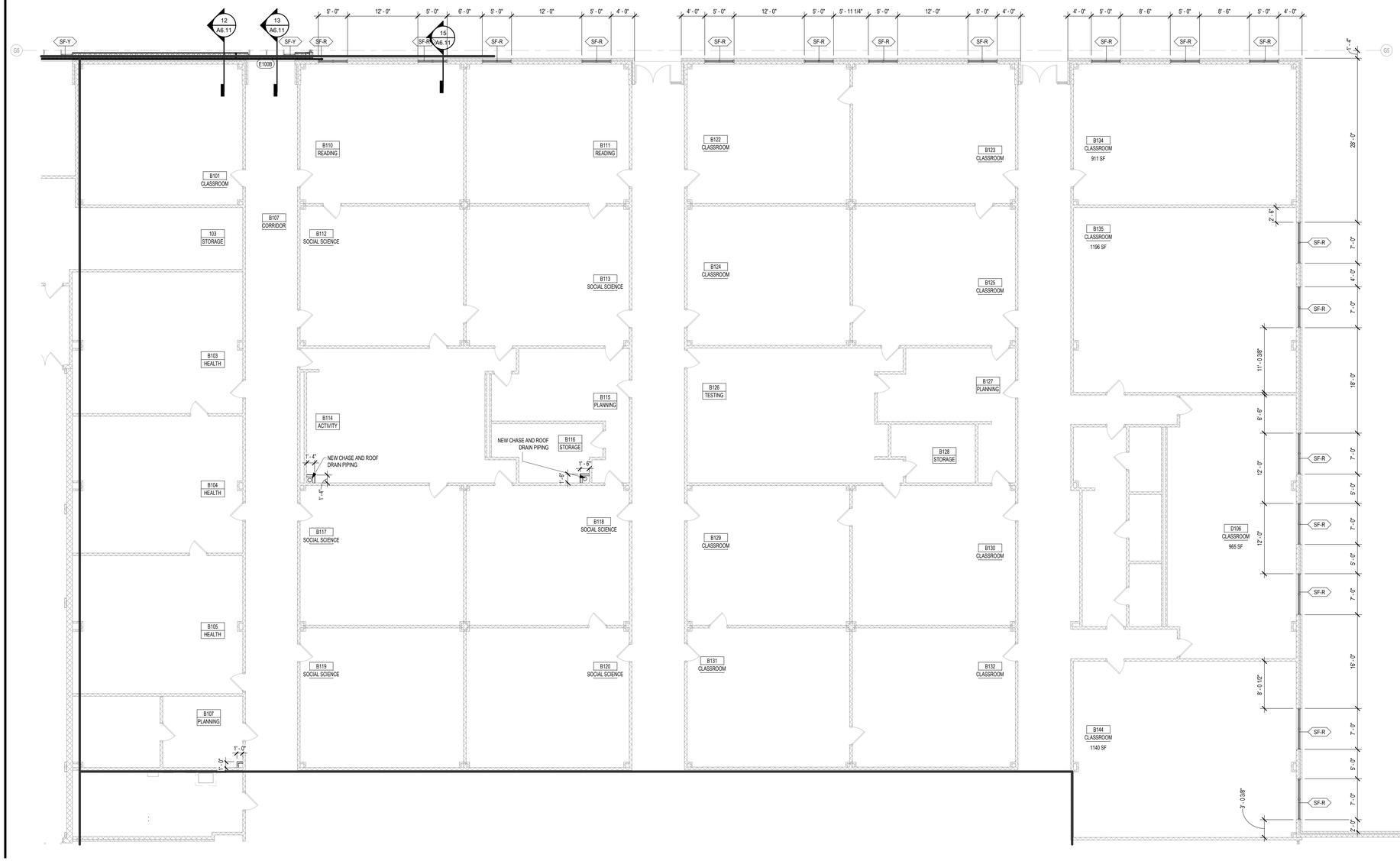
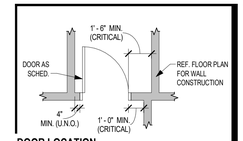


1 FLOOR PLAN - SECTION D
1/8" = 1'-0"



DOOR LOCATION

NOTES:

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7) VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).

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GENERAL FLOOR PLAN NOTES

F.E. **FIRE EXTINGUISHER (WALL MOUNTED)** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C. **FIRE EXTINGUISHER CABINET** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

P.S. **PROJECTION SCREEN** REF. TYP. DET. ON A4 SHEETS

X' M.B. **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

SO1.01 **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 **CALLOUT REFERENCE**

1 / A101 SIM / XX / A101 **WALL SECTION REFERENCE**

XXX' - X" FIN FLOOR **ELEVATION REFERENCE**

1-01 ROOM **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

APPLIES TO SECTION PLANS

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

MASONRY VENEER

STANDARD CMU

CFMF PARTITION

EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 / D — WALL ASSEMBLY IN PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES. WALL TAGS WITHOUT LETTERS TO RIGHT REFER TO ELEVATIONS FOR HEIGHT.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION
I	VARIES - REF INTERIOR ELEVATION & SECTION

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10 - 9 5/8" CMU
12 - 11 5/8" CMU

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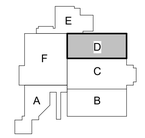
THE "TYPICAL" **MASONRY PARTITION** IS TYPE **A8**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING, AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS **A6**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

PARTITION LEGEND



KEY PLAN - 1ST FLOOR
N.T.S

PLAN N

Date
Revision /

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FLOOR PLAN - SECTION D

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Drawn By: CS	
Date: 04.02.2025	

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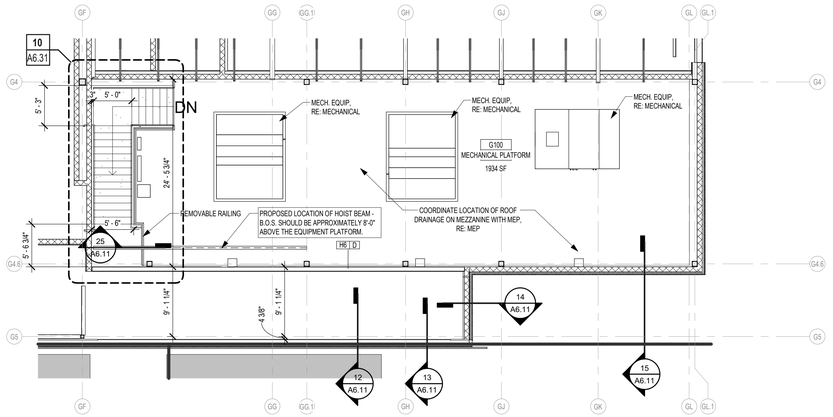
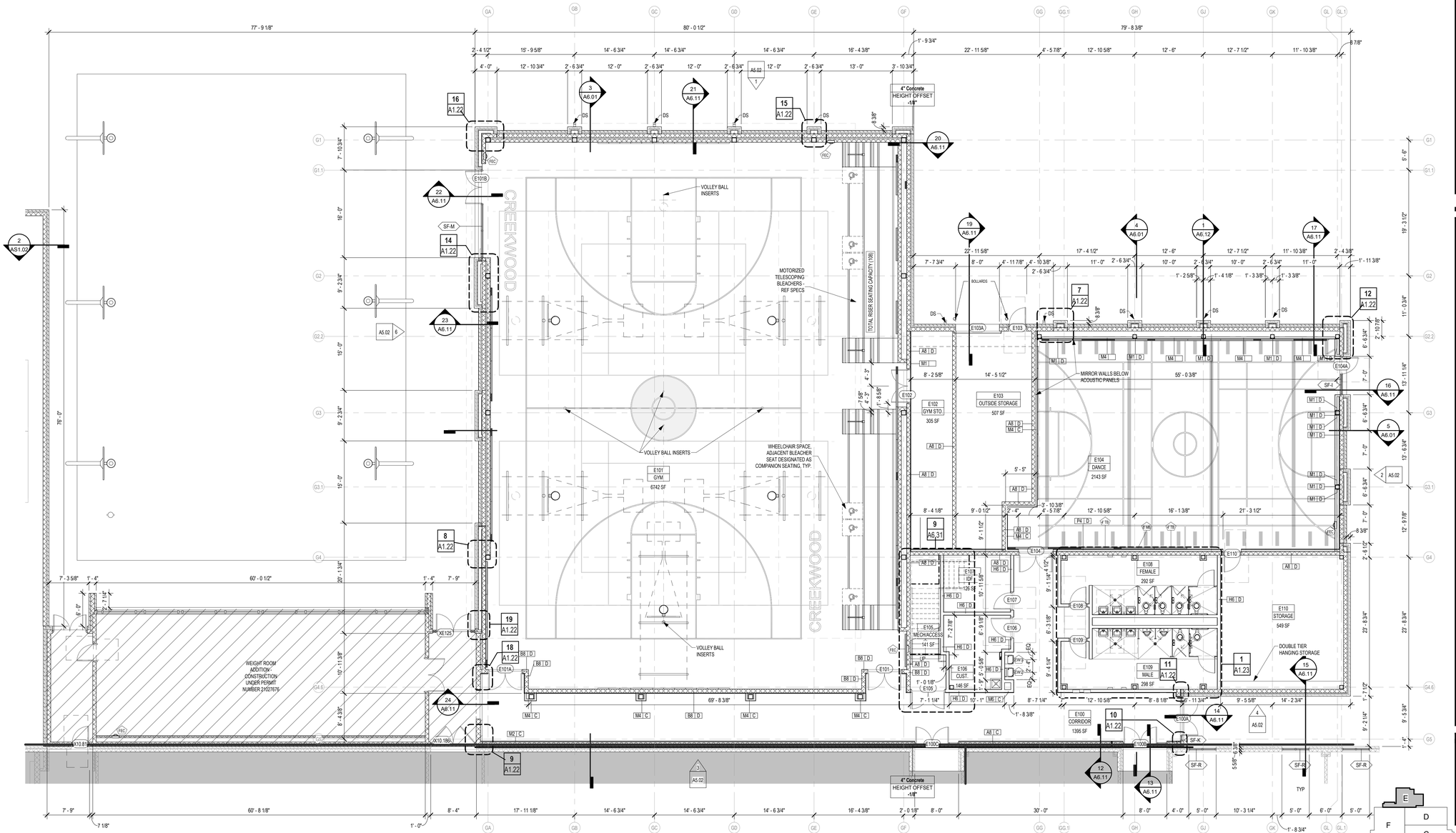
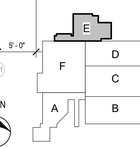


2 MECHANICAL MEZZANINE PLAN - SECTION G
1/8" = 1'-0"



1 FLOOR PLAN - SECTION E
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

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1.01 **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

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SO1.01 **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 **CALLOUT REFERENCE**

1 / A101 SIM **WALL SECTION REFERENCE** XX / A101

XXX' - X" FIN FLOOR **ELEVATION REFERENCE**

1-01 ROOM **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

APPLIES TO SECTION PLANS

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

MASONRY VENEER

STANDARD CMU

CFMF PARTITION

EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 D

WALL ASSEMBLY'N PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES. WALL TAGS WITHOUT LETTERS TO RIGHT REFER TO ELEVATIONS FOR HEIGHT.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
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GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION
I	VARIES - REF INTERIOR ELEVATION & SECTION

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THE "TYPICAL" **MASONRY PARTITION** IS TYPE A6, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS A6, NON-ACOUSTICAL TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

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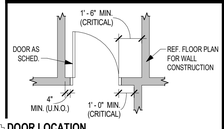
PARTITION LEGEND



DOOR LOCATION

Date

Revision /

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24611
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10/24/2025

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FLOOR PLAN - SECTION E & G

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A1.15
Date: 04.02.2025	

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NEW INSTRUMENT STORAGE SCHEDULE

A141 INSTRUMENT STORAGE

MARK	QTY	MANUFACTURER	DESCRIPTION
3A	1	WENGER CORPORATION	GEARBOSS SHELF STARTER BAY
3B	3	WENGER CORPORATION	GEARBOSS SHELF ADD-ON BAY
	12	WENGER CORPORATION	GEARBOSS SHELF WORK SURFACE
	12	WENGER CORPORATION	GEARBOSS SHELF, 30 1/2"
TOTAL	28		

EXISTING INSTRUMENT STORAGE SCHEDULE

TO BE REPOSITIONED AS INDICATED

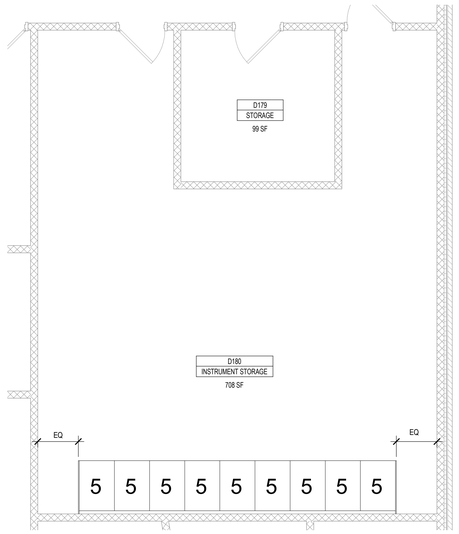
A141 INSTRUMENT STORAGE & A142 BAND HALL

MARK	QTY	DESCRIPTION
1	6	#01 ACOUSTICABINET
2	6	#02 ACOUSTICABINET
4N	4	#04N ACOUSTICABINET
5	4	#05 ACOUSTICABINET
5N	1	#05N ACOUSTICABINET
7N	1	#07N ACOUSTICABINET
10N	6	#10N ACOUSTICABINET
11	4	#11 ACOUSTICABINET
11N	3	#11N ACOUSTICABINET
12	1	#12 ACOUSTICABINET
14N	1	#14N ACOUSTICABINET
TOTAL	37	

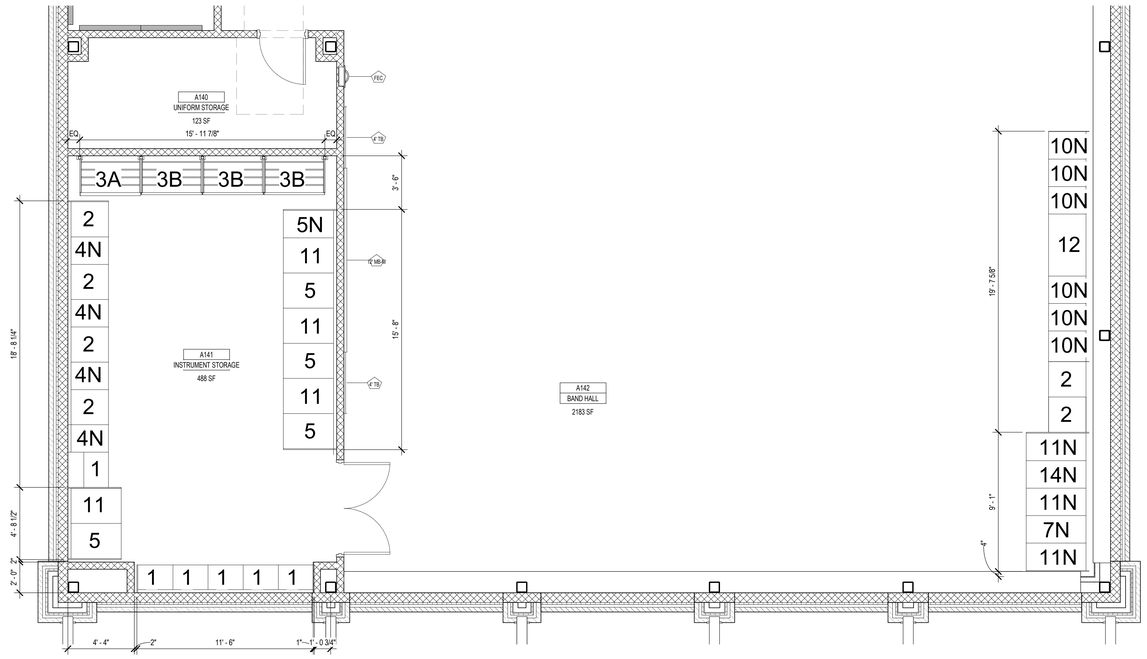
NEW INSTRUMENT STORAGE SCHEDULE

D180 INSTRUMENT STORAGE

MARK	QTY	MANUFACTURER	DESCRIPTION
5	9	WENGER CORPORATION	#05 ACOUSTICABINET
TOTAL	9		



4 FLOOR PLAN - SECTION A - Callout 2
1/4" = 1'-0" BACK REF: A1.11



1 EQUIPMENT PLAN - A141/A142
1/4" = 1'-0" BACK REF: A1.11

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISH
TX 24612
STATE OF TEXAS
10/24/2025

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EQUIPMENT PLANS - INSTRUMENT STORAGE

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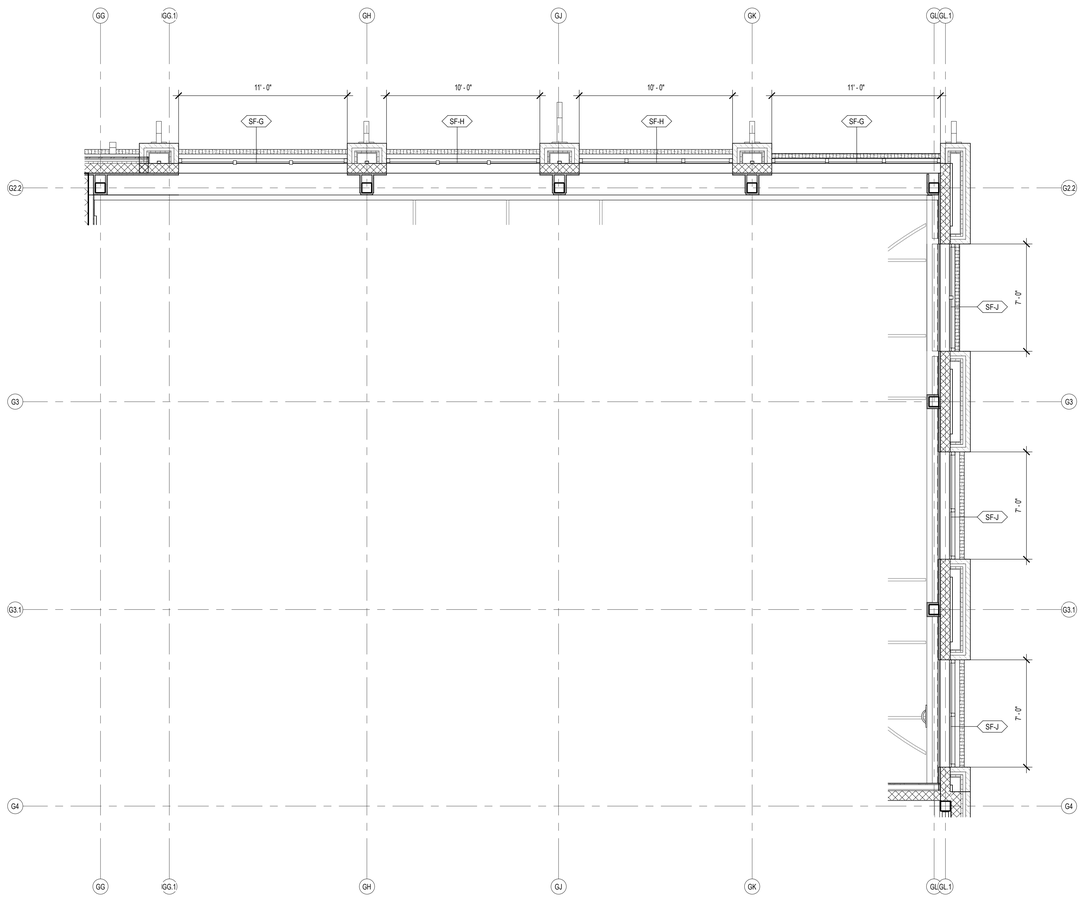

2 CLERESTORY PLAN - DANCE
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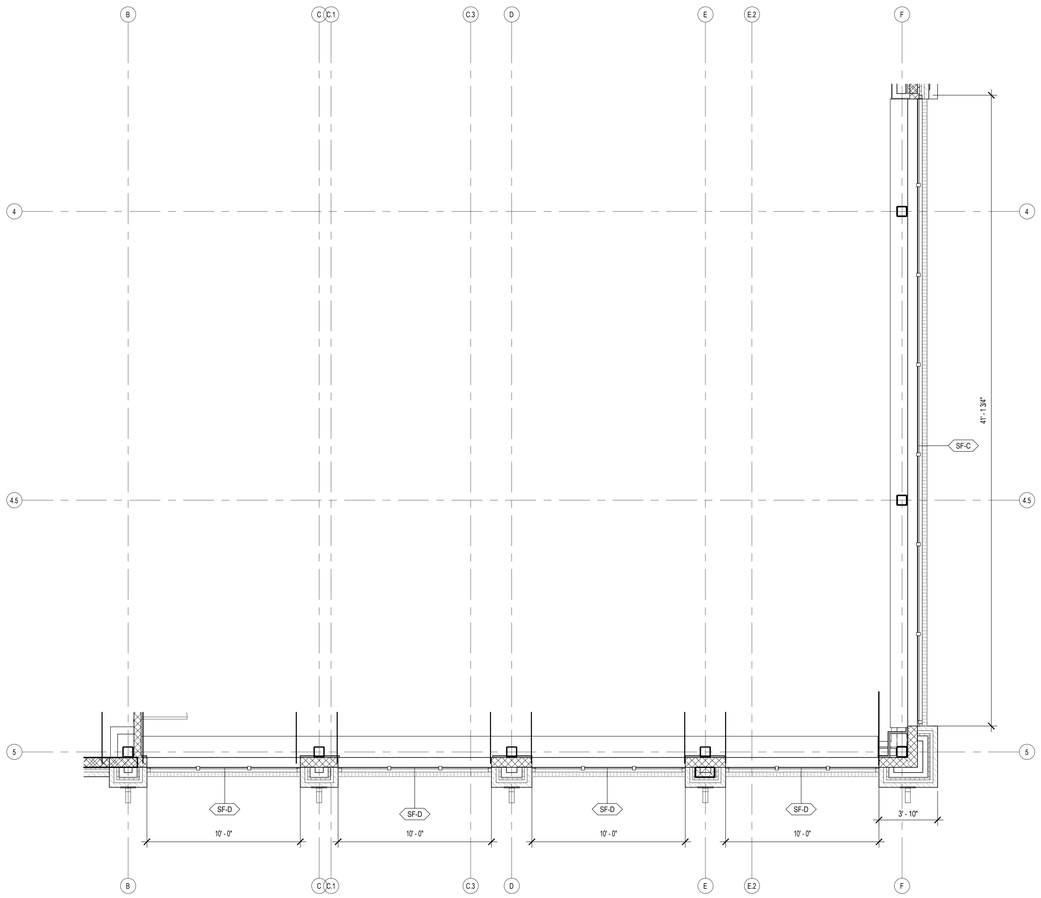

1 CLERESTORY PLAN - BAND HALL
1/4" = 1'-0" BACK REF:

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CLERESTORY PLANS

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FOR
HUMBLE ISD
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REGISTERED ARCHITECT
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TX 24618
STATE OF TEXAS
10/20/2025

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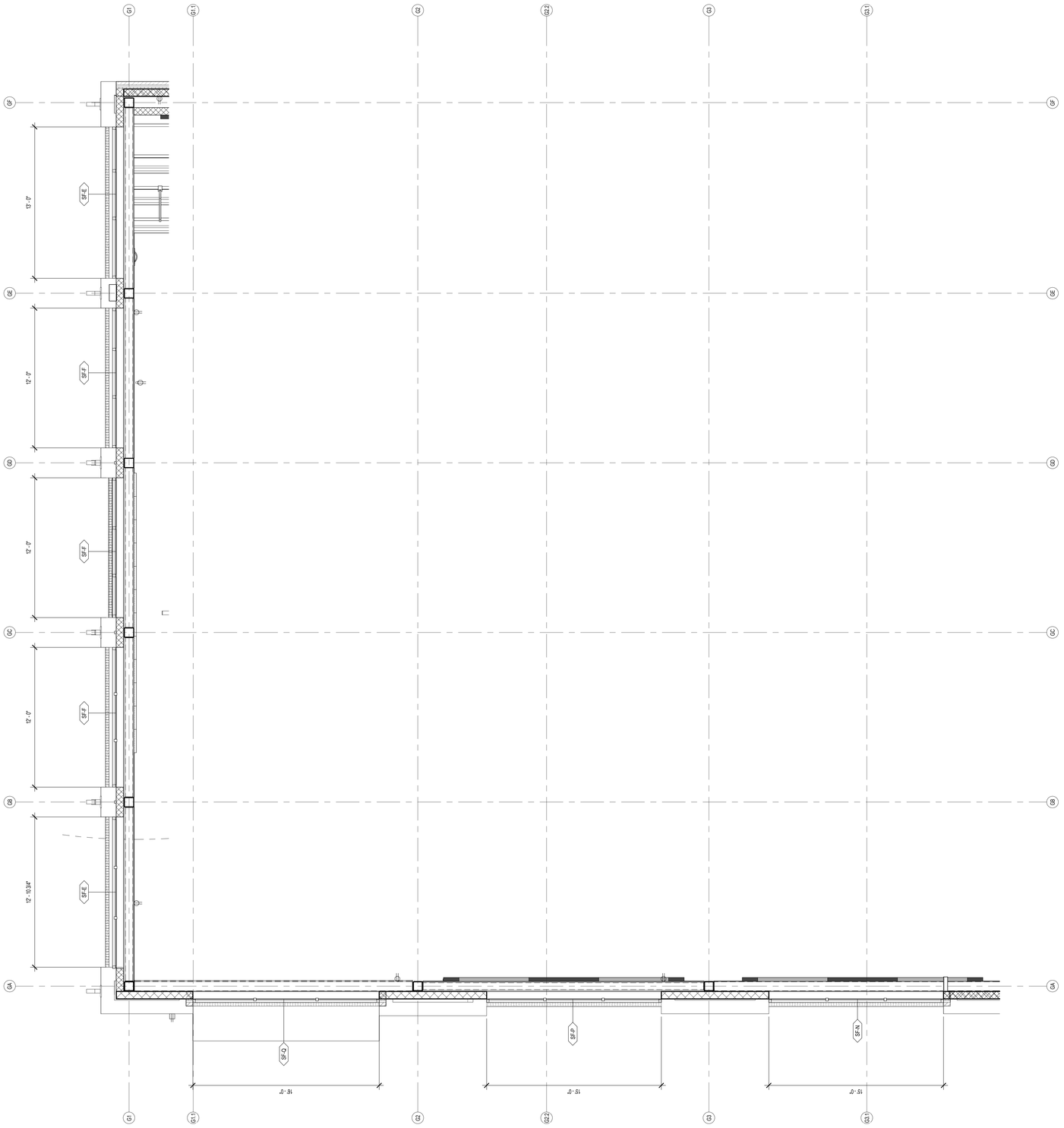
CLERESTORY PLANS

Job No. 18211-13-01
Drawn By: CS
Date: 04.02.2025
Sheet No. 100% QC
A1.21



1 CLERESTORY PLAN - GYM
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BACK REF:

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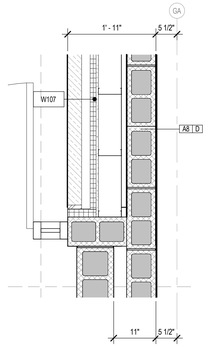
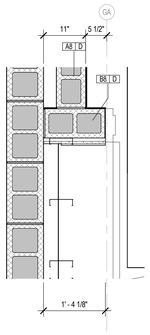


19 DANCE/GYM - PLAN DETAIL 19
3/4" = 1'-0" BACK REF: A1.15



18 DANCE/GYM - PLAN DETAIL 18
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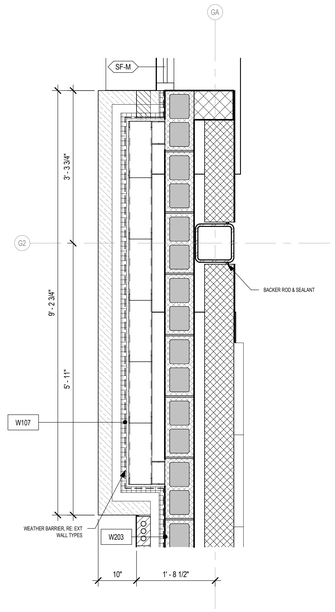

14 DANCE/GYM - PLAN DETAIL 14
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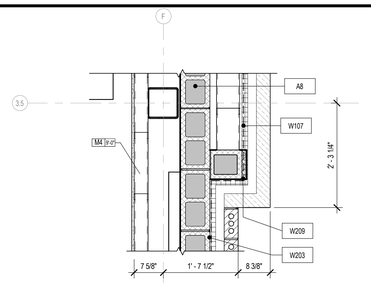

17 BAND HALL - PLAN DETAIL 17
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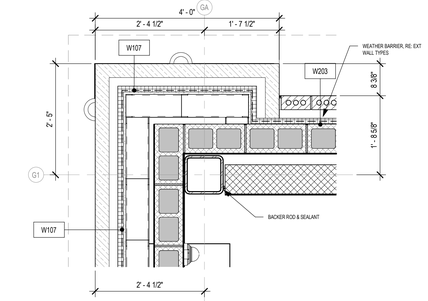

16 DANCE/GYM - PLAN DETAIL 16
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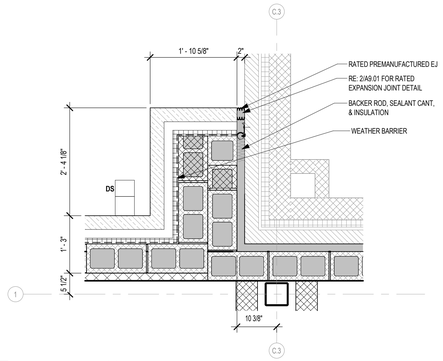
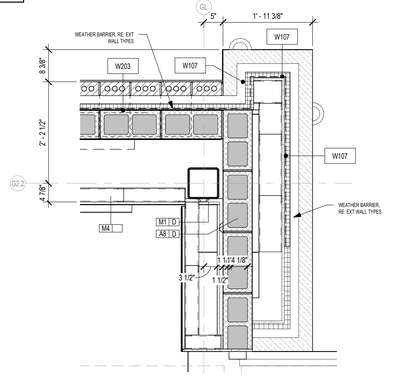


13 BAND HALL - NW CORNER PLAN DETAIL 13
3/4" = 1'-0" BACK REF: A1.11



12 DANCE/GYM - PLAN DETAIL 12
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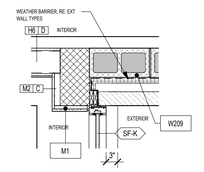
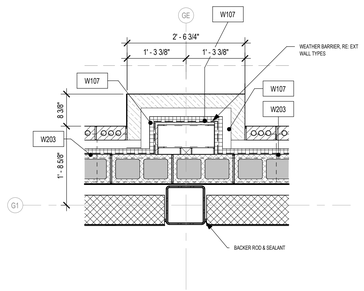


11 CORRIDOR - PLAN DETAIL 11
3/4" = 1'-0" BACK REF: A1.15



15 DANCE/GYM - PLAN DETAIL 15
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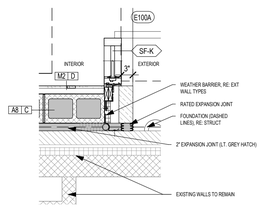

10 DANCE/GYM - PLAN DETAIL 10
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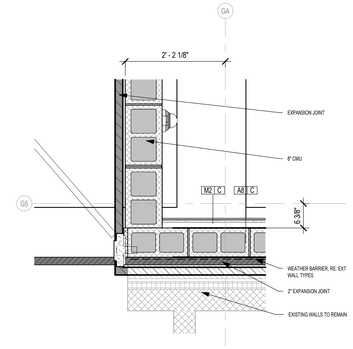

9 DANCE/GYM - PLAN DETAIL 09
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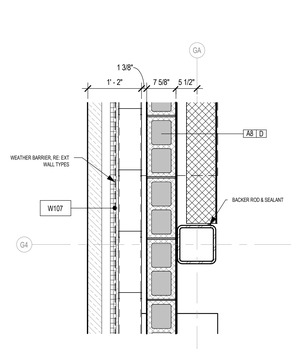

8 DANCE/GYM - PLAN DETAIL 08
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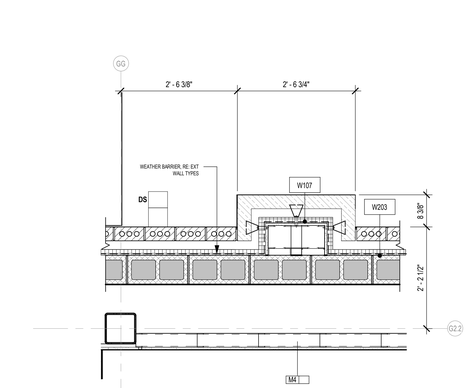

7 DANCE/GYM - PLAN DETAIL 07
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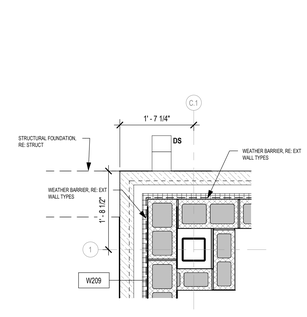

6 BAND HALL - PLAN DETAIL 06
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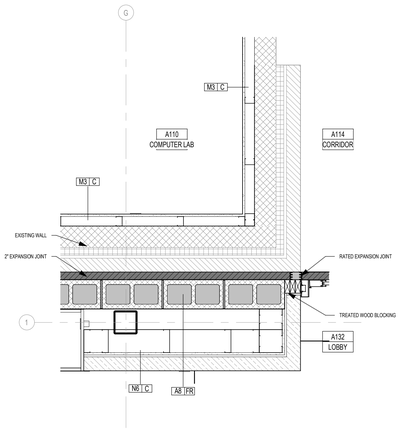

5 BAND HALL/LOBBY - PLAN DETAIL 05
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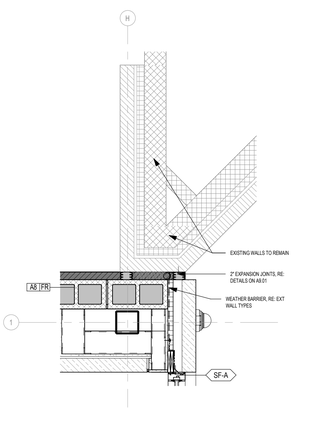
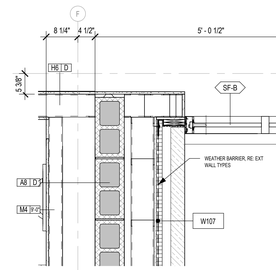


4 BAND HALL - PLAN DETAIL 04
3/4" = 1'-0" BACK REF: A1.11



3 BAND HALL - PLAN DETAIL 03
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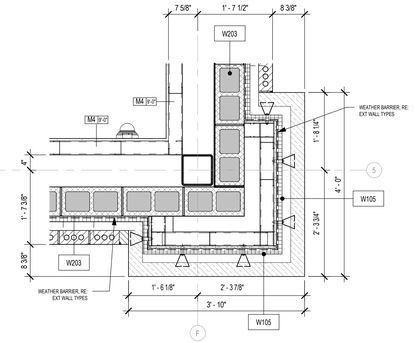

2 BAND HALL - PLAN DETAIL 02
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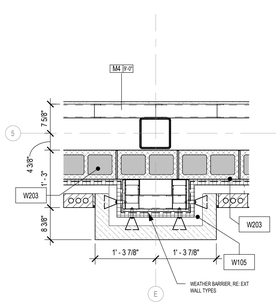

1 BAND HALL - PLAN DETAIL 01
3/4" = 1'-0" BACK REF: A1.11

PLAN DETAIL LEGEND

- **COLUMN** - REFER TO STRUCTURAL DRAWINGS.
- **WINDOW FRAME** - REFER TO A3 SHEETS FOR SCHEDULE AND DETAILS.
- **DOOR FRAME** - REFER TO A3 SHEETS FOR SCHEDULE AND DETAILS.
- **GROUT FILLED CMU CELL** FILL SOLID WITH GROUT - REF. STRUCT. FOR REINF.
- **CMU**
- **GROUND FACE CMU**
- **FACE BRICK**
- **WEATHER BARRIER**
- **I.C.F. WALL SYSTEM**
- **CFMF WALL** 5/8" GYP. BD. ON EACH SIDE OF 3-5/8" MTL. STUDS @ 16" O.C. U.N.O. W/ BATT INSUL. WHERE SHOWN OR SPECIFIED.
- **E.J. DETAILS** - REF. A9 SHEETS.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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PLAN DETAILS

Job No. 1821-13-01
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30" x 48" CLEAR FLOOR SPACE PER ACCESSIBILITY REQUIREMENTS

5' - 0" DIAMETER TURNING SPACE PER ACCESSIBILITY REQUIREMENTS

PLAN LEGEND

1) FOR ACCESSIBLE FIXTURES & ACCESSORIES REFER TO SHEET A1.26 "TOILET ACCESSORIES AND PLUMBING FIXTURES" FOR MOUNTING HEIGHTS & ACCESSIBILITY REQUIREMENTS. THE ACCESSORIES ARE CALLED OUT IN THE INDIVIDUAL STALL / ROOM TYPES / SHOWER TYPES.

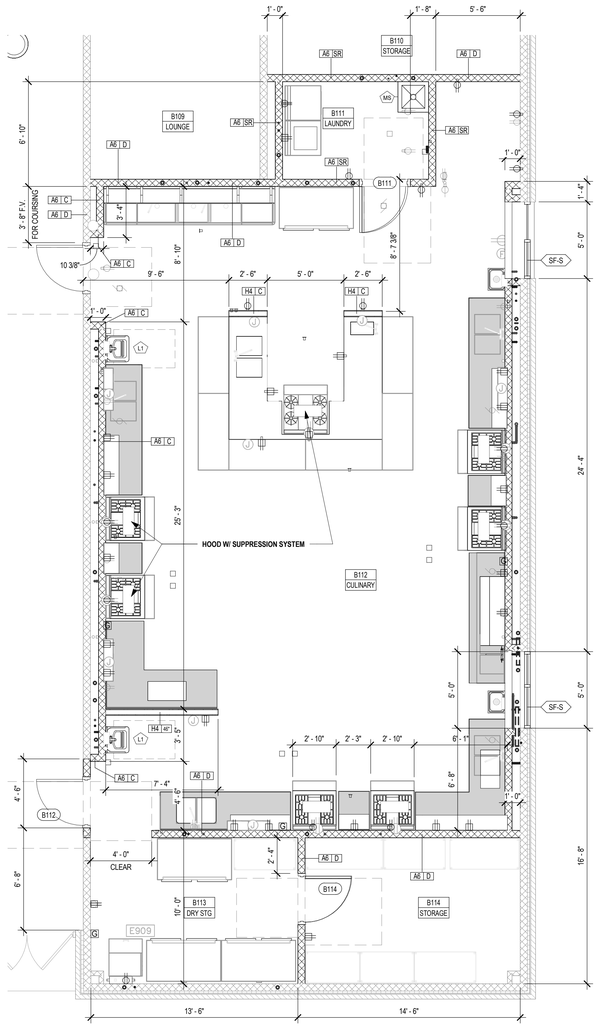
S1 T1 SH1

2) FIXTURES THAT STAND ALONE WILL BE TAGGED W/ A SYMBOL; LAVS, URINAL'S & EWCS

L01 U1

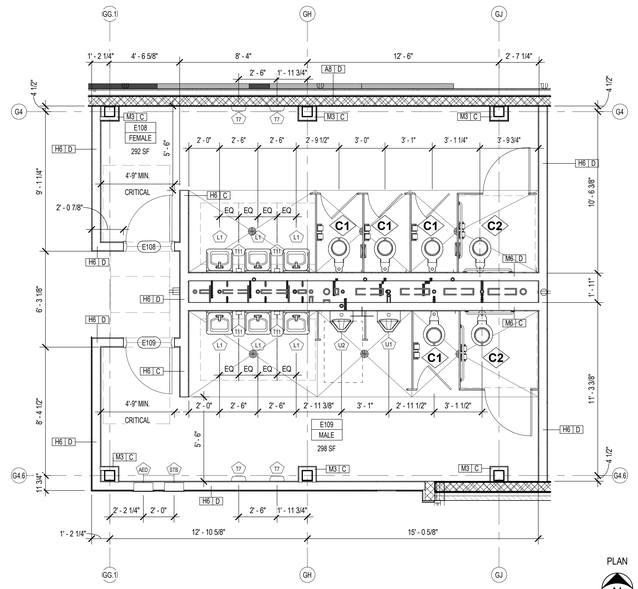
3) PROVIDE PIPE INSULATION AS SPECIFIED AT ALL EXPOSED PIPING AND DRAIN AT ACCESSIBLE LAVATORIES.

GENERAL NOTES



2 ENLARGED PLAN - CULINARY
1/4" = 1'-0" BACK REF: A1.12

REF QF1.03 FOR FOOD SERVICES EQUIPMENT INFORMATION



1 ENLARGED RESTROOM PLAN - SECTION D MALE/FEMALE
1/4" = 1'-0" BACK REF: A1.15

PLAN N

Project:
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KINGWOOD, TX

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REGISTERED ARCHITECT SUSAN F. WINN 24614 STATE OF TEXAS
10/24/2025

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ENLARGED PLANS

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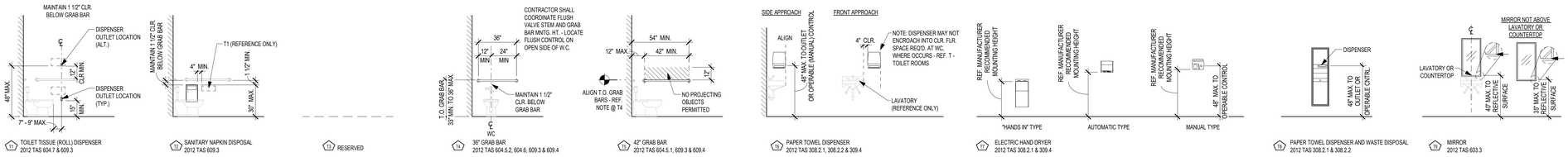


T1 TOILET TISSUE (ROLL) DISPENSER
2012 TAS 604.7 & 609.3

T2 SANITARY NAPKIN DISPOSAL
2012 TAS 609.3

T3 RESERVED

T4 36" GRAB BAR
2012 TAS 604.5.2, 604.6, 609.3 & 609.4

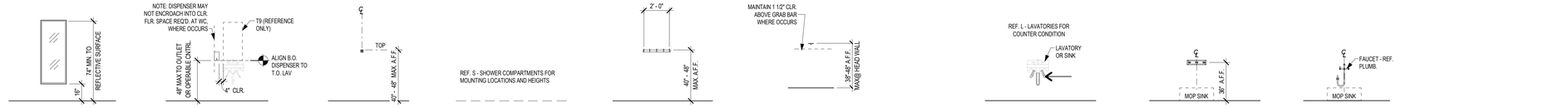
T5 42" GRAB BAR
2012 TAS 604.5.1, 609.3 & 609.4

T6 PAPER TOWEL DISPENSER
2012 TAS 308.2.1, 308.2.2 & 309.4

T7 ELECTRIC HAND DRYER
2012 TAS 308.2.1 & 309.4

T8 PAPER TOWEL DISPENSER AND WASTE DISPOSAL
2012 TAS 308.2.1 & 308.2.2

T9 MIRROR
2012 TAS 603.3



T10 MIRROR (FULL-LENGTH)
2012 TAS ADVISORY 603.3

T11 SOAP DISPENSER
2012 TAS 308.2.1, 308.2.2 & 309.4

T12 SOAP DISPENSER, DECK-MOUNT
REF. L - LAVATORIES

T13 COAT/CLOTHES HOOK
2012 TAS 308 & 603.4

T14 24" GRAB BAR

T15 L-SHAPED 15" X 28" GRAB BAR

T15A L-SHAPED 24" X 36" GRAB BAR

T16 48" GRAB BAR

T19 TOWEL BAR
2012 TAS 308 & 603.4

T22 SOAP DISH
2012 TAS 308.2.1 & 308.2.2

T23 UNDER-SINK PIPING COVERS
2012 TAS 606.5

T24 MOP AND BROOM HOLDER

T24A HOSE AND HOSE HOLDER

T# PLAN DESIGNATION

T - TOILET ACCESSORIES

1. THIS SHEET PROVIDES GUIDANCE FOR MOUNTING LOCATIONS AND HEIGHTS RELATIVE TO TEXAS ACCESSIBILITY STANDARDS. NOT ALL TYPES SCHEDULED MAY BE USED. REFER TO ENLARGED FLOOR PLANS FOR QUANTITIES AND LOCATIONS.

2. CONFIGURATIONS ON THIS SHEET ARE DIAGRAMMATIC. IN THE EVENT A PROJECT-SPECIFIC CONDITION DOES NOT COMPLY WITH CLEARANCES INDICATED, NOTIFY THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.

3. TOILET ACCESSORIES: REFER TO SPECIFICATION SECTION 10 2800 TOILET, BATH AND LAUNDRY ACCESSORIES FOR ADDITIONAL INFORMATION.

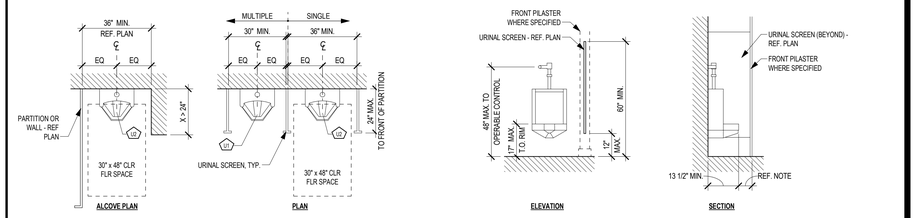
4: FIXTURES: REFER TO PLUMBING PLANS FOR SCHEDULED TYPE AND DIVISION 22 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

5. AT METAL STUD PARTITIONS, PROVIDE FIRE-RETARDANT TREATED WOOD BLOCKING FOR ANCHORAGE OF GRAB BARS, WALL-MOUNTED SEATS AND BENCHES, BABY CHANGING STATIONS, AND OTHER SUCH WALL-MOUNTED ACCESSORIES WHERE ADDITIONAL LOADS ARE ANTICIPATED.

GENERAL NOTES

PLUMBING FIXTURE LEGEND	
ITEM	DESCRIPTION
EW1	ELECTRIC WATER COOLER, WALL-MOUNTED, ACCESSIBLE
EW2	ELECTRIC WATER COOLER, WALL-MOUNTED, ACCESSIBLE, WITH BOTTLE FILLER
EW3	ELECTRIC WATER COOLER, WALL-MOUNTED
L1	LAVATORY, WALL-MOUNTED, ACCESSIBLE
L2	LAVATORY, COUNTER-MOUNTED, ACCESSIBLE
MS	MOP SINK
U1	URINAL
U2	URINAL, ACCESSIBLE
WC1	WATER CLOSET
WC2	WATER CLOSET, ACCESSIBLE
WF1	WASH FOUNTAIN

TOILET ACCESSORY LEGEND	
ITEM	DESCRIPTION
T1	TOILET TISSUE DISPENSER
T2	SANITARY NAPKIN DISPOSAL
T3	(NOT USED)
T4	36" GRAB BAR
T5	42" GRAB BAR
T6	PAPER TOWEL DISPENSER
T7	ELECTRIC HAND DRYER
T8	COMBINATION PAPER TOWEL DISPENSER AND WASTE DISPOSAL
T9	MIRROR
T10	MIRROR, FULL-LENGTH
T11	SOAP DISPENSER
T12	SOAP DISPENSER, DECK-MOUNT ON COUNTER OR VANITY
T13	COAT/CLOTHES HOOK
T14	24" GRAB BAR
T15	L-SHAPED 15" X 28" GRAB BAR
T15A	L-SHAPED 24" X 36" GRAB BAR
T16	48" GRAB BAR
T19	TOWEL BAR
T22	RECESSED SOAP DISH
T23	UNDERSINK PIPING COVERS
T24	MOP AND BROOM HOLDER
T24A	MOP BASIN HOSE AND BRACKET



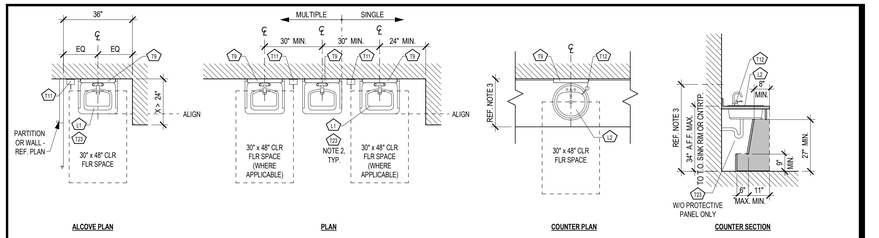
ALCOVE PLAN | PLAN | ELEVATION | SECTION

NOTE:
PARTITION SHALL EXTEND MINIMUM 18 INCHES OR TO A POINT NOT LESS THAN 6 INCHES BEYOND THE OUTERMOST FRONT LIP OF THE URINAL MEASURED FROM THE FINISHED BACK WALL SURFACE, WHICHEVER IS GREATER (2018 IPC 405.3.5 URINAL PARTITIONS)

U# PLAN DESIGNATION

U1 URINAL (NON-ACCESSIBLE)
U2 ACCESSIBLE URINAL
2012 TAS 605 & 305.7.1

U - URINALS



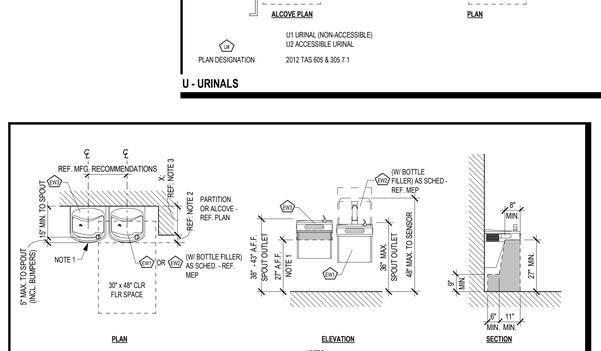
L# PLAN DESIGNATION

L1 WALL-MOUNTED LAVATORY
L2 COUNTER-MOUNTED SINK
2012 TAS 606 & 306

NOTES:
1. MOUNT 34" A.F.F. TO TOP OF FRONT RIM OF LAVATORY
2. PROVIDE AT EACH LAVATORY
3. COUNTER DEPTH > 20-25" MAX. REDUCE T.A. MNTG. HEIGHTS TO OPERABLE CONTROLS TO 44" A.F.F. FOR OBSTRUCTED HIGH REACH

ALCOVE PLAN | PLAN | COUNTER PLAN | COUNTER SECTION

L - LAVATORIES



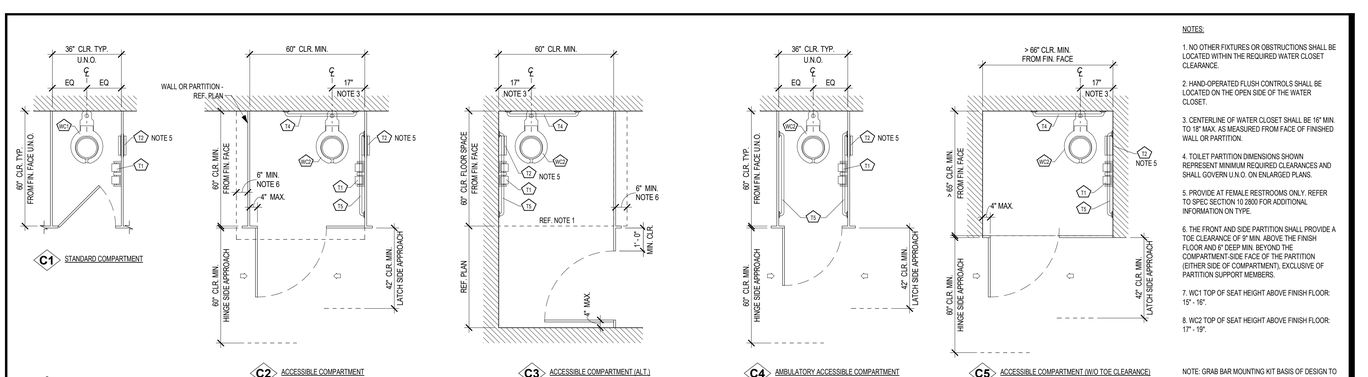
PLAN | ELEVATION | SECTION

EW# PLAN DESIGNATION

EW1 ACCESSIBLE WATER COOLER (LOW)
EW2 ACCESSIBLE WATER COOLER W/ BOTTLE FILLER (LOW)
EW3 STANDING PERSONS WATER COOLER (HIGH)
2012 TAS 211, 602, 305.7.1 & 306

NOTES:
1. PROVIDE CANE DETECTION APRON. MUST NOT IMPEDE CLEAR FLOOR SPACE REQUIREMENT FOR ADJACENT UNIT.
2. WHERE LOCATED IN ALCOVES, CANE DETECTION APRON NOT REQUIRED WHEN PROTRUSION IS 4" OR LESS
3. WHERE ALCOVE DEPTH >24", MIN. WIDTH SHALL BE INCREASED TO 36" X 48" CLEAR FLOOR SPACE.

EW - ELECTRIC WATER COOLERS



C1 STANDARD COMPARTMENT

C2 ACCESSIBLE COMPARTMENT
2012 TAS 404.2.4.1 & 604.8

C3 ACCESSIBLE COMPARTMENT (ALT.)
2012 TAS 604.8

C4 AMBULATORY ACCESSIBLE COMPARTMENT
2012 TAS 404.2.4.1 & 604.8.2

C5 ACCESSIBLE COMPARTMENT (W/O TOE CLEARANCE)
2012 TAS 604.8.1.4 EXCEPTION

C# PLAN DESIGNATION

NOTES:

1. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

2. HAND-OPERATED FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.

3. CENTERLINE OF WATER CLOSET SHALL BE 16" MIN. TO 18" MAX. AS MEASURED FROM FACE OF FINISHED WALL OR PARTITION.

4. TOILET PARTITION DIMENSIONS SHOWN REPRESENT MINIMUM REQUIRED CLEARANCES AND SHALL GOVERN U.N.O. ON ENLARGED PLANS.

5. PROVIDE AT FEMALE RESTROOMS ONLY. REFER TO SPEC SECTION 10 2800 FOR ADDITIONAL INFORMATION ON TYPE.

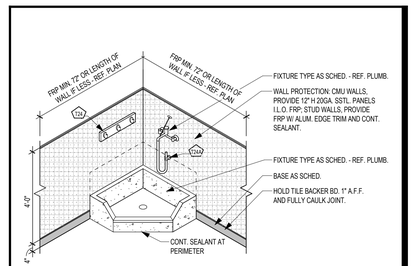
6. THE FRONT AND SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9" MIN. ABOVE THE FINISH FLOOR AND 6" DEEP MIN. BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION (EITHER SIDE OF COMPARTMENT), EXCLUSIVE OF PARTITION SUPPORT MEMBERS.

7. WC1 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 15" - 16"

8. WC2 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 17" - 19".

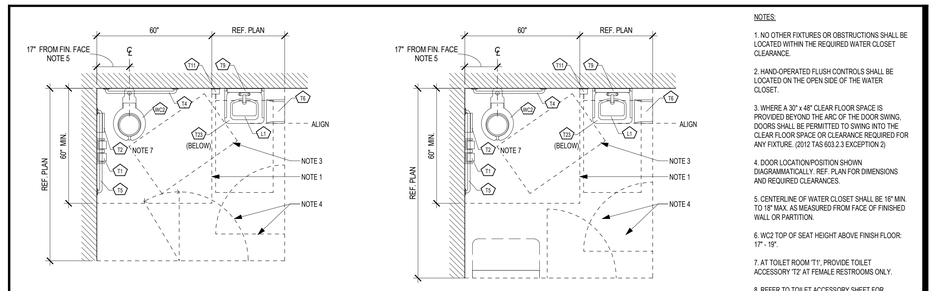
NOTE: GRAB BAR MOUNTING KIT BASIS OF DESIGN TO BE 252-30 BY BOBRICK AND MUST MEET PERFORMANCE CRITERIA OF 250 LBS SECTION 609.8 "STRUCTURAL STRENGTH" OF TAS CHAPTER 6 PLUMBING ELEMENTS AND FACILITIES AND AS PER SECTION 1607.7.2 OF IBC 2015

C - TOILET COMPARTMENTS



MS PLAN DESIGNATION

MS - MOP SINK



T1 SINGLE-USER TOILET ROOM
2012 TAS 603 & 604

T2 SINGLE-USER OR FAMILY TOILET ROOM
2012 TAS 213.2.1, 603, 604 & 902

T# PLAN DESIGNATION

NOTES:

1. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

2. HAND-OPERATED FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.

3. WHERE A 30" x 48" CLEAR FLOOR SPACE IS PROVIDED BEYOND THE ARC OF THE DOOR SWING, DOORS SHALL BE PERMITTED TO SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE. (2012 TAS 603.2.3 EXCEPTION 2)

4. DOOR LOCATION/POSITION SHOWN DIAGRAMMATICALLY. REF. PLAN FOR DIMENSIONS AND REQUIRED CLEARANCES.

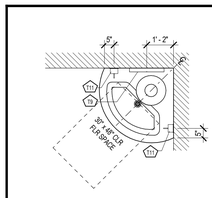
5. CENTERLINE OF WATER CLOSET SHALL BE 16" MIN. TO 18" MAX. AS MEASURED FROM FACE OF FINISHED WALL OR PARTITION.

6. WC2 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 17" - 19".

7. AT TOILET ROOM 'T1', PROVIDE TOILET ACCESSORY 'T2' AT FEMALE RESTROOMS ONLY.

8. REFER TO TOILET ACCESSORY SHEET FOR MOUNTING HEIGHTS AND ADDITIONAL INFORMATION.

T - TOILET ROOMS



NOTES:
1. MOUNT 34" A.F.F. TO TOP OF FRONT RIM
2. ACCESSIBLE UNITS MUST COMPLY WITH KNEE AND TOE CLEARANCES AS SHOWN FOR LAVATORIES
3. REFER TO MEP FOR FIXTURE TYPE

WF PLAN DESIGNATION

WF1 WASH FOUNTAIN
2012 TAS 606 & 306

WF - WASH FOUNTAINS

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WICK
TX 24617
STATE OF TEXAS
10/24/2025

Huckabee
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TOILET ROOMS,COMPARTMENTS, ACCESSORIES & PLUMBING FIXTURES

Job No. 1821-13-01
Drawn By: VL
Date: 04.02.2025
Sheet No. 100% QC
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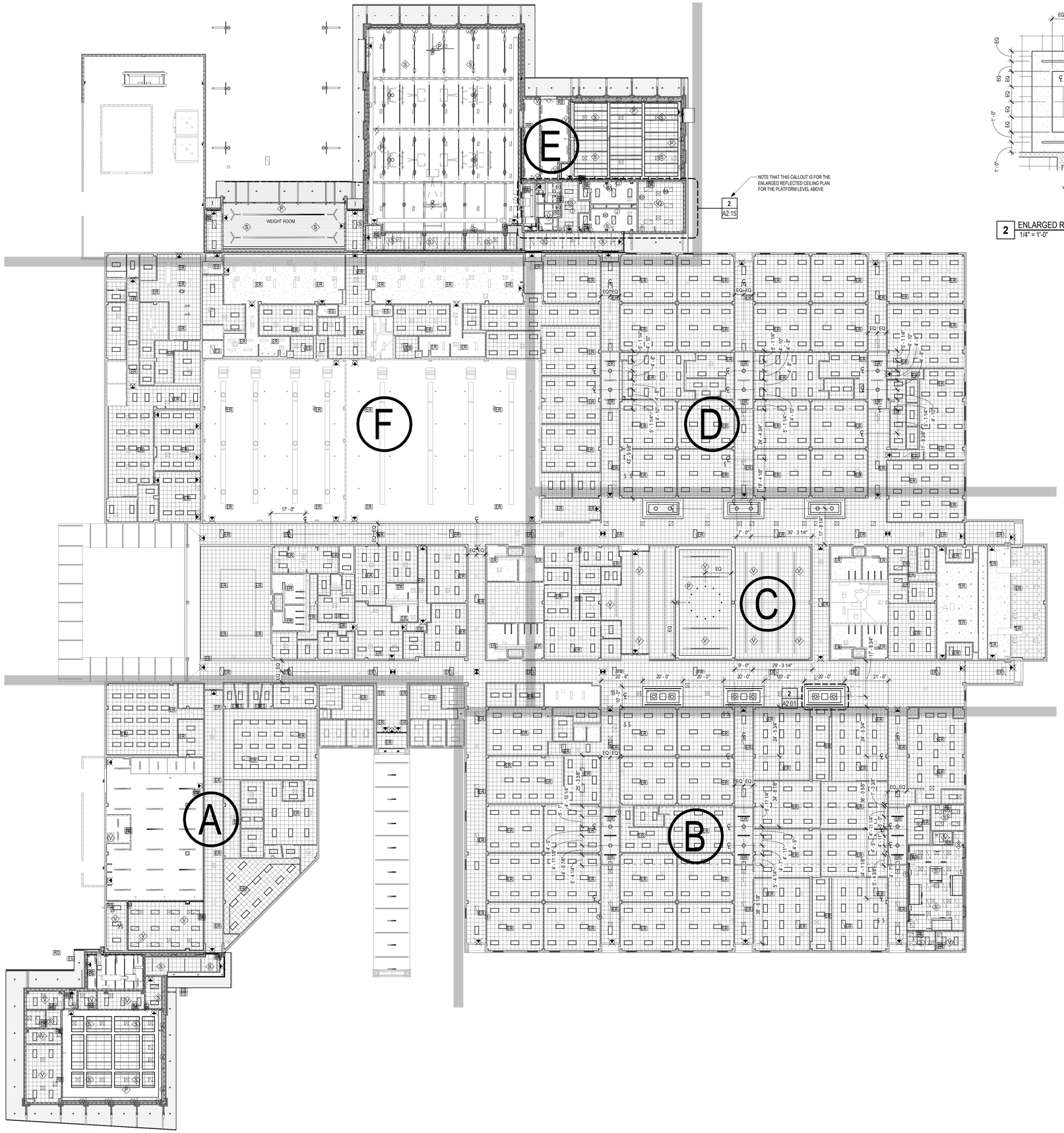
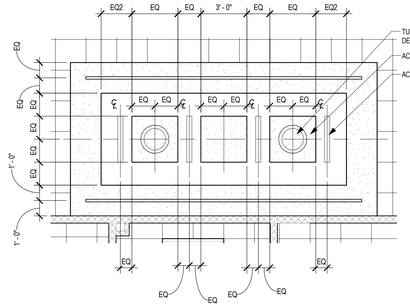


1 MASTER REFLECTED CEILING PLAN
1" = 20'-0"



2 ENLARGED RCP - COLLAB TUBULAR DAYLIGHTING DEVICES
1/4" = 1'-0"

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYPI** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
- **L3** - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
- **L4** - TYPE IV 24" x 24" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED) (FOODSERVICE)
- **L5** - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'REFLECTIVE')
- **L6** - TYPE VI 24" x 48" LAY-IN SUSPENDED CEILING TILE WITH CONCEALED GRID (ACOUSTICAL 'ABSORPTIVE') (GLASS FIBER)
- **L7** - TYPE VII 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE' - GEN. USE)
- **L8** - TYPE VIII 24" x 24" LAY-IN SUSPENDED CEILING TILE (UL FIRE RESISTANT)
- **L9** - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

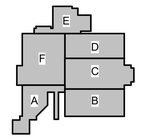
CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED (C.J.)
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED (C.J.)
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS (P.S.)
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**
  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**
  WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND

PLAN NORTH — TRUE



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

SUSAN F. WISH — REGISTERED ARCHITECT — TX 24614 — STATE OF TEXAS
10/24/2025

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MASTER REFLECTED CEILING PLAN

Job No. 1821-13-01	Sheet No. 100% QC A2.01
Drawn By: CS	
Date: 04.02.2025	

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1 REFLECTED CEILING PLAN - SECTION A
1/8" = 1'-0"

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE CX — ROOM NUMBER
CEILING HEIGHT 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYPI** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
- **L3** - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
- **L4** - TYPE IV 24" x 24" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED) (FOODSERVICE)
- **L5** - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'REFLECTIVE')
- **L6** - TYPE VI 24" x 48" LAY-IN SUSPENDED CEILING TILE WITH CONCEALED GRID (ACOUSTICAL 'ABSORPTIVE') (GLASS FIBER)
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- **L8** - TYPE VIII 24" x 24" LAY-IN SUSPENDED CEILING TILE (UL FIRE RESISTANT)
- **L9** - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

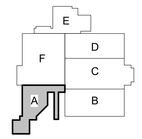
- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**

  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**

WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND

PLAN N TRUE



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT SUSAN F. WIRA TX 24614 STATE OF TEXAS
10/24/2025

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REFLECTED CEILING PLAN - SECTION A

Job No.	Sheet No.
1821-13-01	100% QC A2.11
Drawn By: CS	
Date: 04.02.2025	

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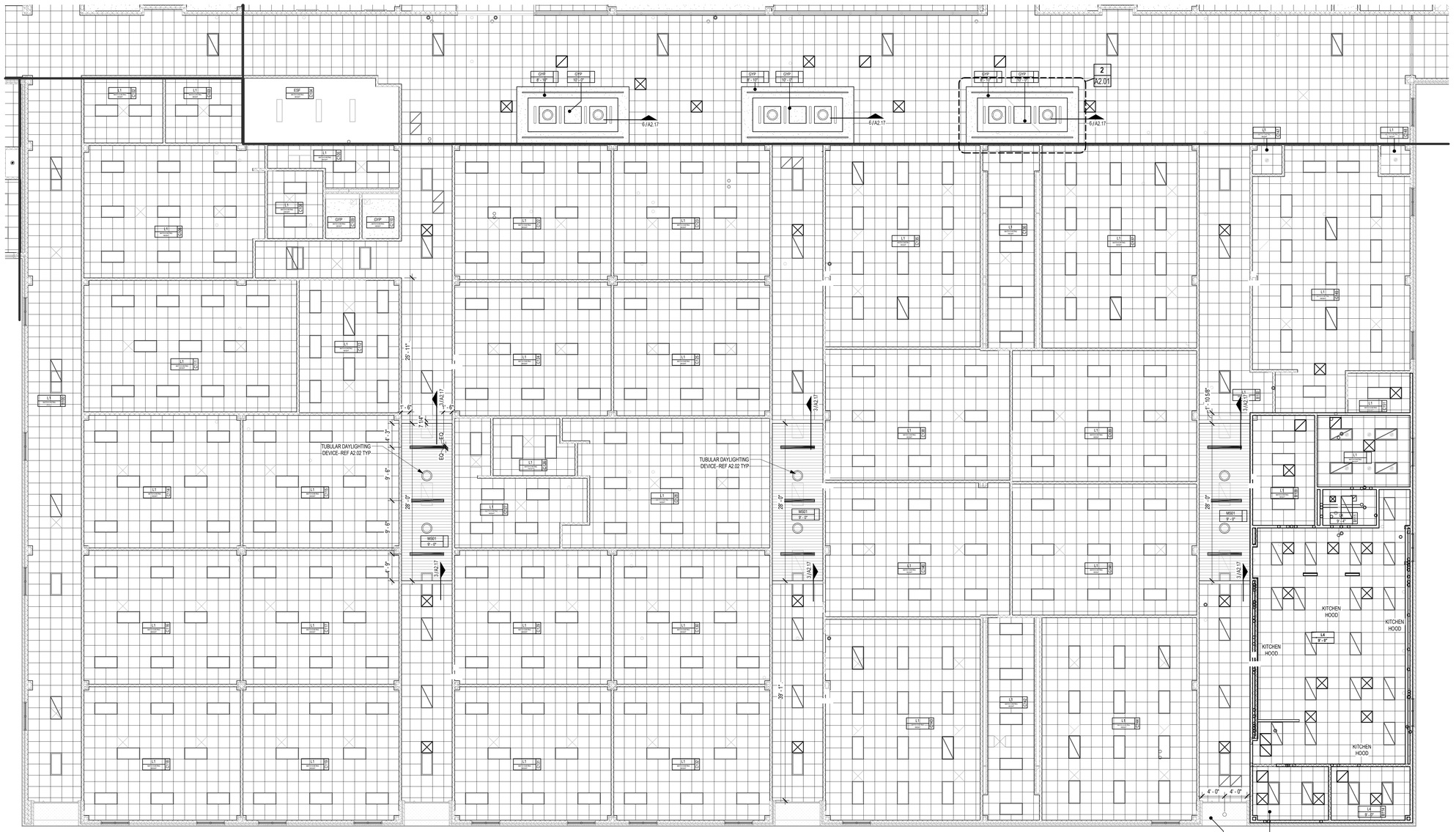


1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9' - 0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYP1** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
- **L3** - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
- **L4** - TYPE IV 24" x 24" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED) (FOODSERVICE)
- **L5** - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'REFLECTIVE')
- **L6** - TYPE VI 24" x 48" LAY-IN SUSPENDED CEILING TILE WITH CONCEALED GRID (ACOUSTICAL 'ABSORPTIVE') (GLASS FIBER)
- **L7** - TYPE VII 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE' - GEN. USE)
- **L8** - TYPE VIII 24" x 24" LAY-IN SUSPENDED CEILING TILE (UL FIRE RESISTANT)
- **L9** - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

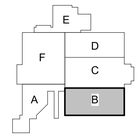
CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

- **LAY-IN CEILING**
- C.J. **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- C.J. **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- P.S. P.S. **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**
  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**
  WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND

PLAN NORTH — TRUE NORTH



KEY PLAN - 1ST FLOOR
N.T.S

1 REFLECTED CEILING PLAN - SECTION B
1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WEN
TX 24614
STATE OF TEXAS
10/24/2025

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REFLECTED CEILING PLAN - SECTION B

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A2.12
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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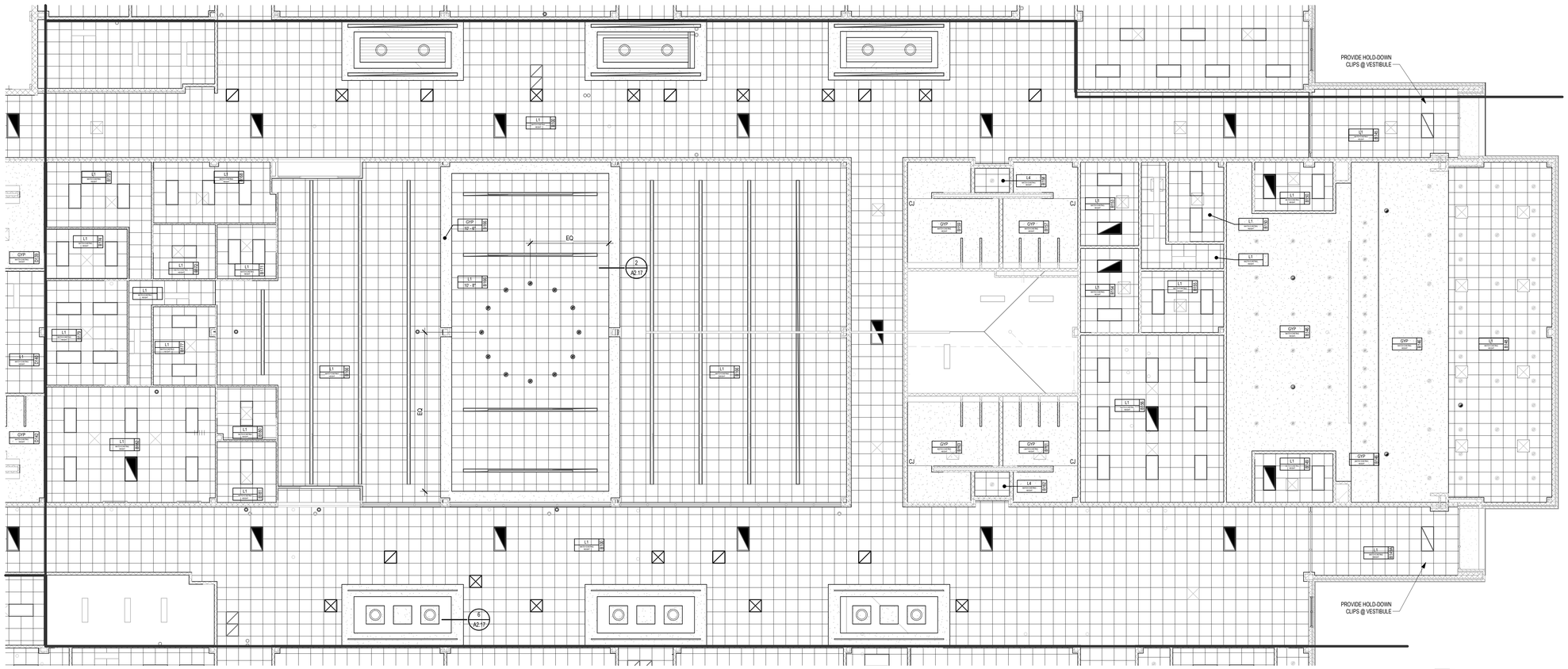

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0" — 01

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYP1** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL 601)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
- **L3** - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
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- **L9** - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

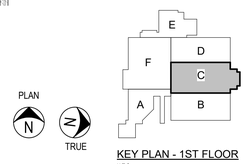
CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- P.S. P.S. **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**

  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**

WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND



KEY PLAN - 1ST FLOOR
N.T.S

1 REFLECTED CEILING PLAN - SECTION C
1/8" = 1'-0"

Revision /	Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISA
TX 24614
STATE OF TEXAS
10/24/2025

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REFLECTED CEILING PLAN - SECTION C

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1821-13-01	100% QC
Drawn By: CS	A2.13
Date: 04.02.2025	

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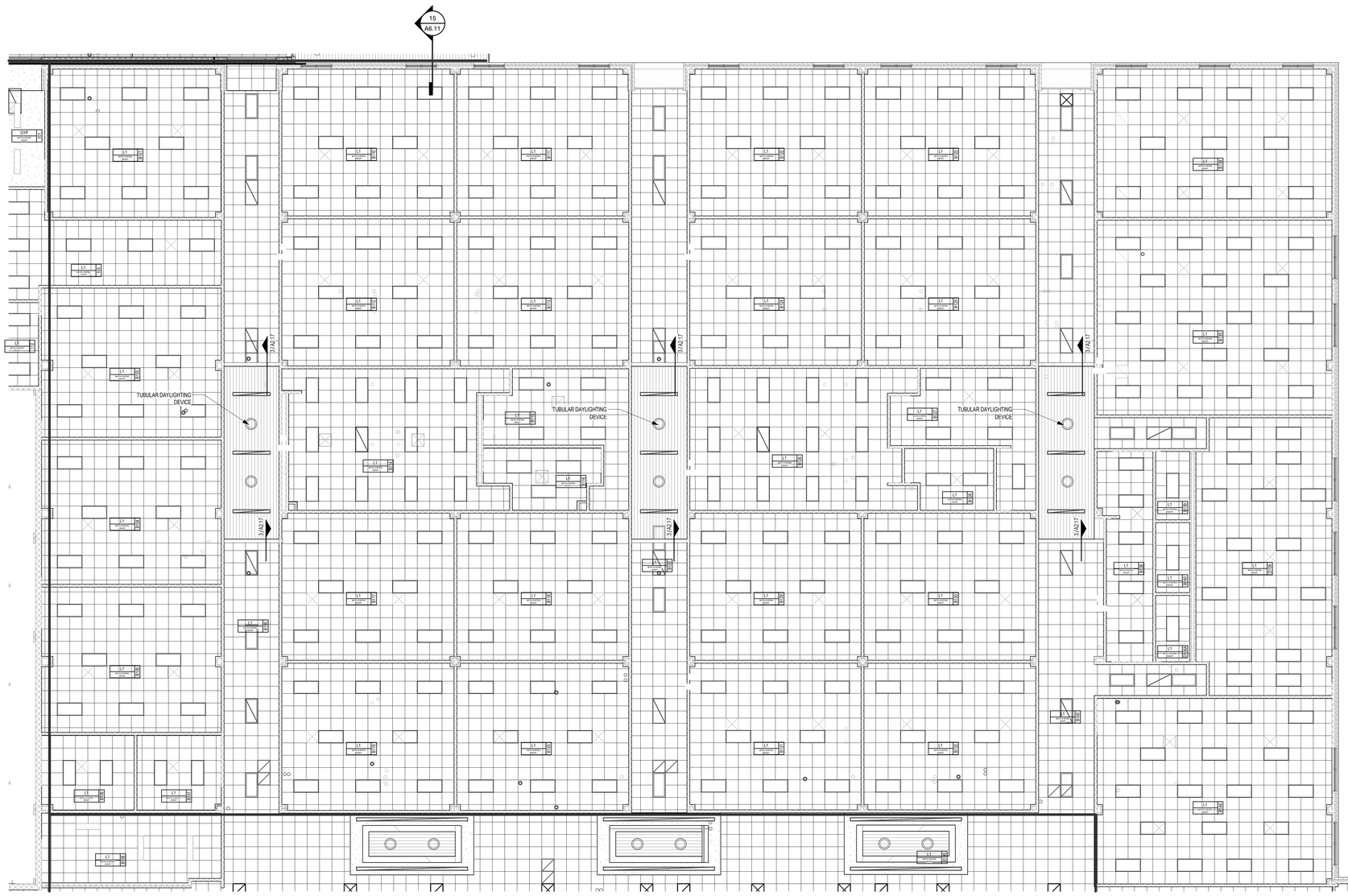

1 REFLECTED CEILING PLAN - SECTION D
1/8" = 1'-0"

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0" —

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYPI** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
- **L3** - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
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- **L5** - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'REFLECTIVE')
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- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

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CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**
  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**
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REFLECTED CEILING LEGEND

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISH
TX 24614
STATE OF TEXAS
10/24/2025

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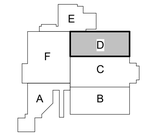
PLAN N — TRUE



KEY PLAN - 1ST FLOOR
N.T.S

REFLECTED CEILING PLAN - SECTION D

Job No. 1521-13-01	Sheet No. 100% QC A2.14
Drawn By: CS	
Date: 04.02.2025	

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1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
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- **MCS** - METAL CEILING SYSTEM
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DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
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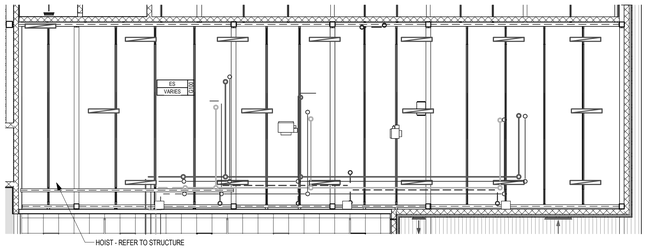
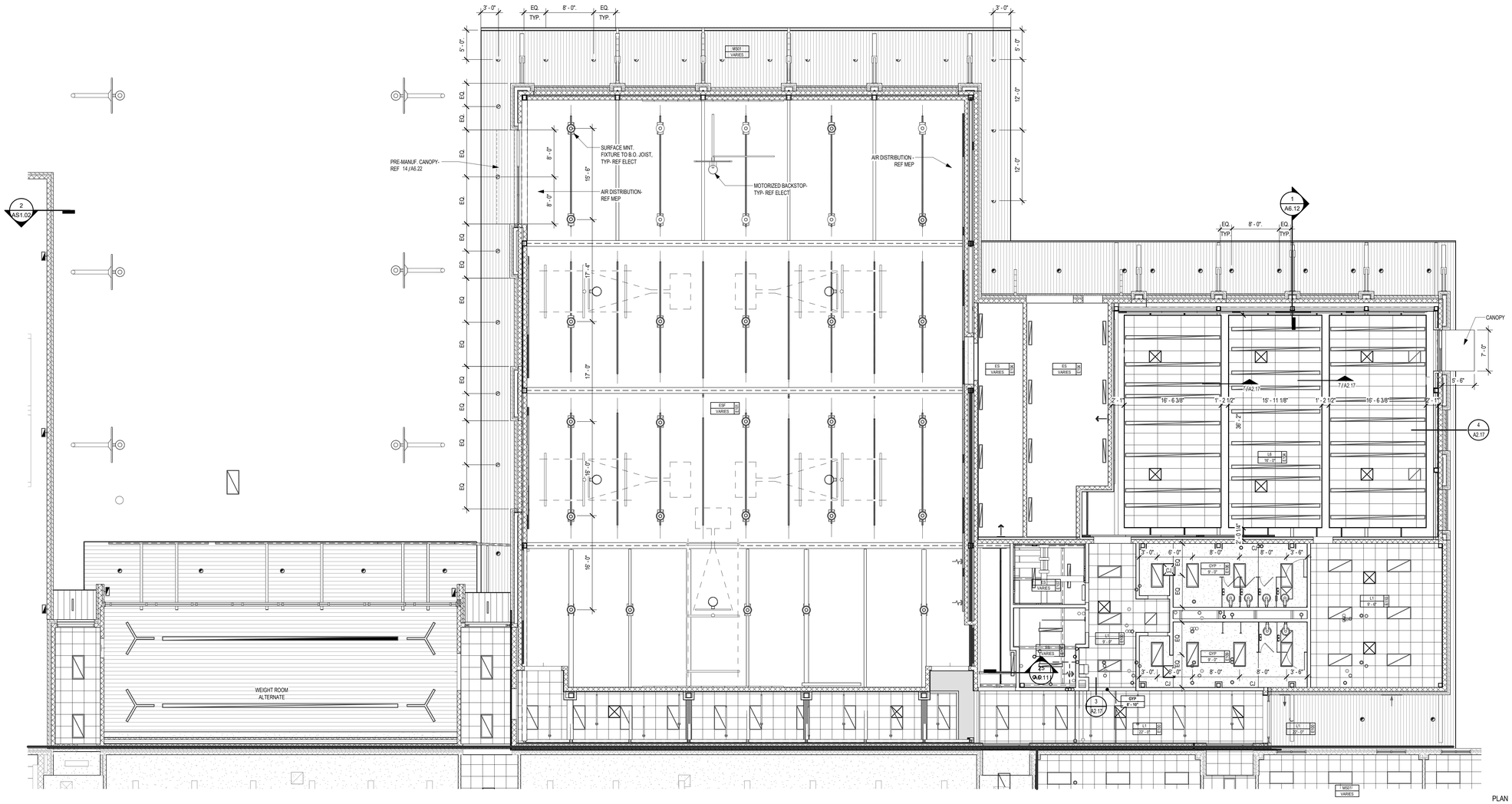
REFLECTED CEILING LEGEND

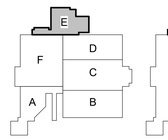


2 ENLARGED REFLECTED CEILING PLAN - PLATFORM (SECTION G)
1/8" = 1'-0"

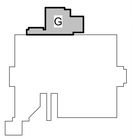


1 REFLECTED CEILING PLAN - SECTION E
1/8" = 1'-0"

PLAN N — TRUE



KEY PLAN - 1ST FLOOR
N.T.S



KEY PLAN - PLATFORM
N.T.S

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date



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REFLECTED CEILING PLAN - SECTION E & ENLARGED PLATFORM (SECTION G)

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A2.15
Date: 04.02.2025	

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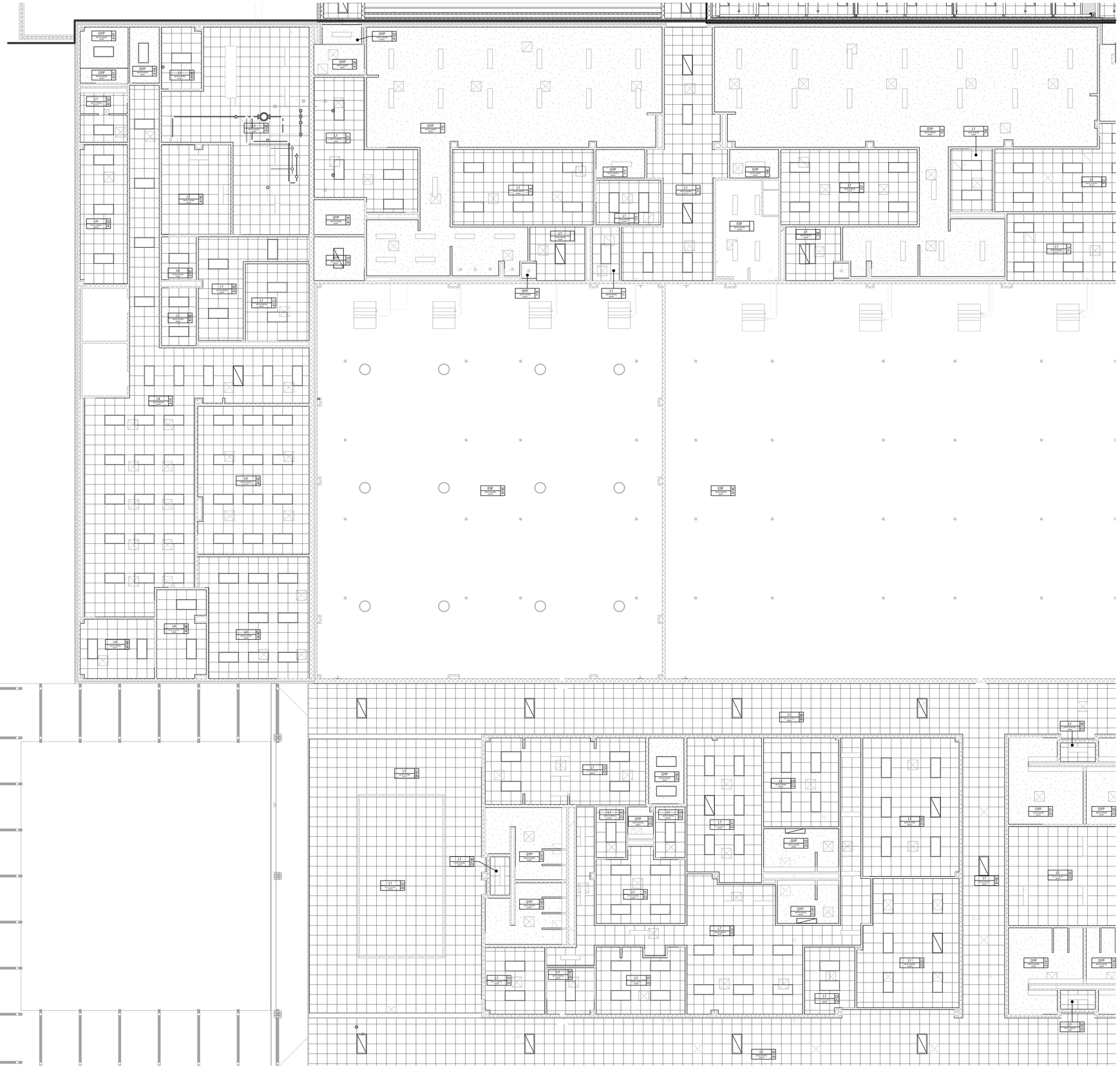

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYP-** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
- **L3** - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
- **L4** - TYPE IV 24" x 24" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED) (FOODSERVICE)
- **L5** - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'REFLECTIVE')
- **L6** - TYPE VI 24" x 48" LAY-IN SUSPENDED CEILING TILE WITH CONCEALED GRID (ACOUSTICAL 'ABSORPTIVE') (GLASS FIBER)
- **L7** - TYPE VII 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE' - GEN. USE)
- **L8** - TYPE VIII 24" x 24" LAY-IN SUSPENDED CEILING TILE (UL FIRE RESISTANT)
- **L9** - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

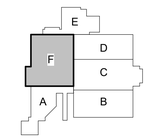
- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS: FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**

  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**

WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND

PLAN NORTH / TRUE NORTH



KEY PLAN - 1ST FLOOR
N.T.S

1 REFLECTED CEILING PLAN - SECTION F
1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX



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REFLECTED CEILING PLAN - SECTION F

Job No.	Sheet No.
1821-13-01	100% QC A2.16
Drawn By: CS	
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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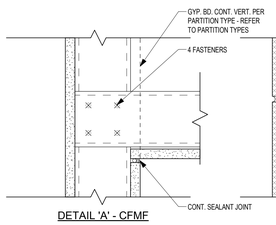
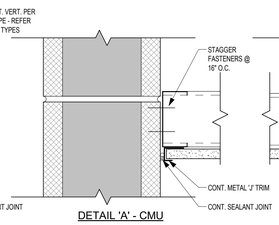
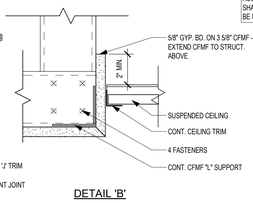


DETAIL 'A' - CFMF



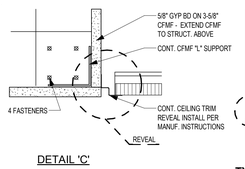
DETAIL 'A' - CMU



DETAIL 'B'

NOTE: WHERE GYP CEILING AND LAY-IN CEILING TILES ARE SCHEDULED TO BE AT THE SAME HEIGHT A.F.F., A DRYWALL ACOUSTICAL REVEAL (ARMSTRONG SHADOW MODLING 7897 OR EQUAL) SHALL BE USED



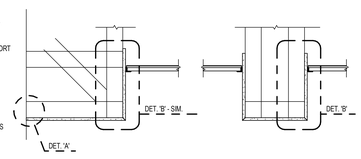


DETAIL 'C'

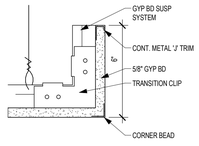
TYPICAL BULKHEAD DETAILS

GENERAL NOTES - ALL BULKHEADS, PLASTER AND GYP. CEILINGS

1. ALL BULKHEADS SHALL BE CONSTRUCTED OF 5/8" GYP. BD. ON 3-5/8" MTL. STUDS AT 16" O.C. U.N.O.
2. FINISH ALL BULKHEADS TO CODE 115, U.N.O.
3. PROVIDE CONTROL JOINTS (CJ) IN BULKHEADS AT 15'-0" O.C. OR AS SHOWN ON PLAN AND AS SPEC.
4. ALL SECTION PROFILES SHOWN IN THIS SCHEDULE SHALL BE DETAILED AS SHOWN UNDER TYPICAL DETAILS.
5. PROVIDE BRACING IN ALL BULKHEADS AT 48" O.C.
6. PROVIDE CONTROL JOINTS (CJ) IN ALL PLASTER CLGS., SOFFITS AT MAX. 18'-0" OR AS SHOWN ON PLAN.
7. PROVIDE STOP CONT. WHERE PLASTER SOFFIT MEETS VERTICAL SURFACE AND CAULK CONT.



TYPICAL BULKHEAD PROFILES
N.T.S.



TYP SUSP CLOUD EDGE DETAIL
N.T.S.

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

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CEILING TYPE / **CEILING HEIGHT** — CX / 9'-0" — ROOM NUMBER

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- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- P.S. P.S. **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
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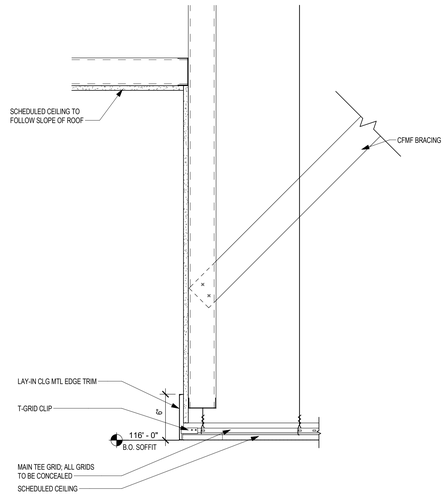
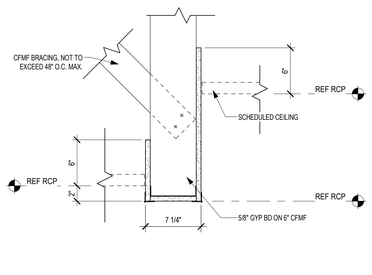
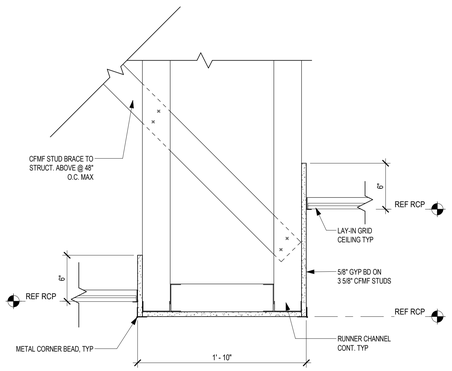
REFLECTED CEILING LEGEND



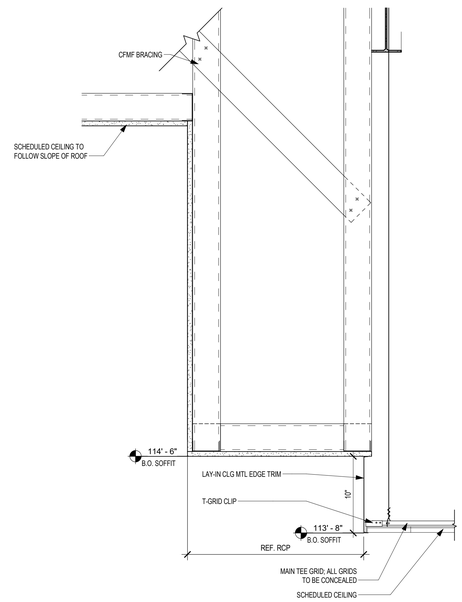
4 CEILING DETAIL AT DANCE
1 1/2" = 1'-0" BACK REF: A2.15



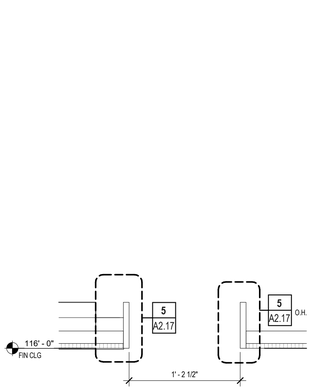
3 CLG DTL - GYP BULKHEAD
1 1/2" = 1'-0"



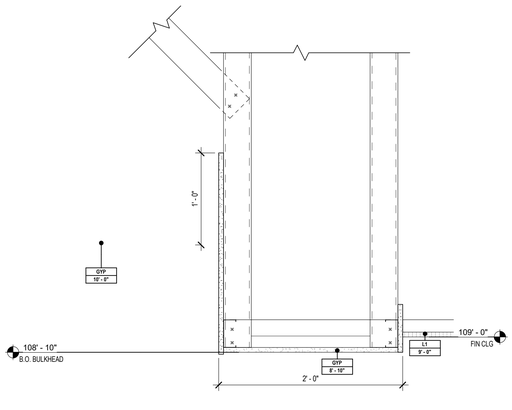
2 CLG DTL - LAY-IN TO BULK HEAD TO LAY-IN
1 1/2" = 1'-0"



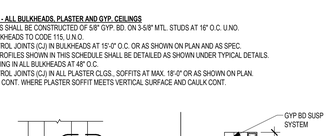
1 CEILING DETAIL AT BAND HALL
1 1/2" = 1'-0" BACK REF: A2.11



7 CEILING DETAIL- DANCE
1 1/2" = 1'-0" BACK REF: A1.17



6 CEILING DETAIL- CORRIDOR
1 1/2" = 1'-0" BACK REF: A1.12



5 LAY-IN MTL EDGE DETAIL
3" = 1'-0"

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Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WIRA
TX 24611
STATE OF TEXAS
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CEILING DETAILS

Job No.	Sheet No.
1821-13-01	100% QC A2.17
Drawn By: CS	
Date: 04.02.2025	

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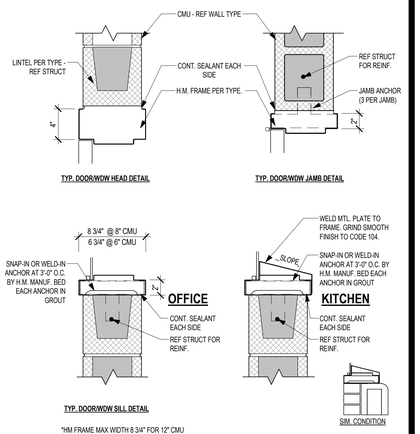
UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN INTERIOR MASONRY SHALL CONFORM TO THESE DETAILS

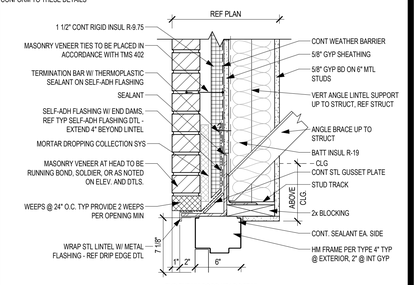


*HM FRAME MAX WIDTH 8 3/4" FOR 12" CMU OR DOUBLE WYTHE, SET TO ONE SIDE

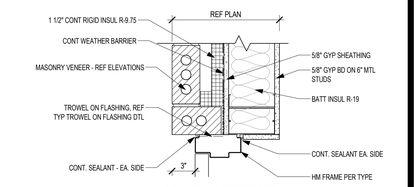
TYPICAL INTERIOR MASONRY DETAILS (T.I.M.)

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



TYP EXT HM DOOR HEAD DETAIL

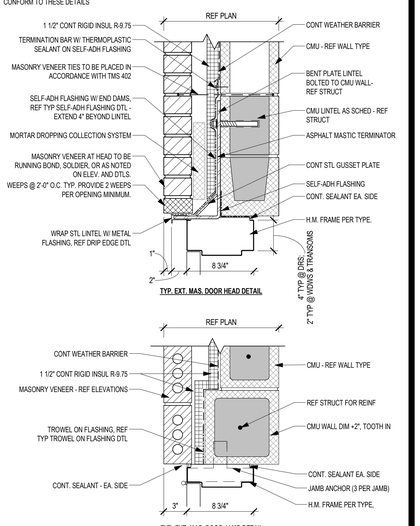


TYP EXT WALL HM DOOR JAMB DETAIL

TYP EXTERIOR STUD H.M. DETAILS (T.E.S.M.) - UTILITY

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



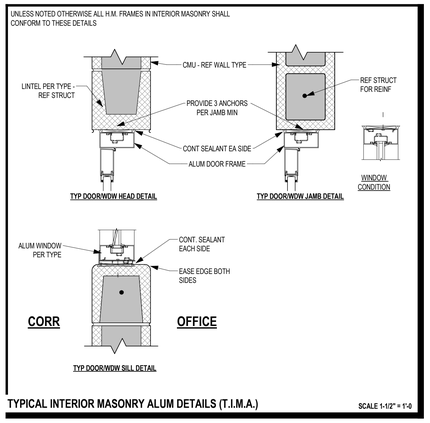
TYP. EXT. MAS. DOOR HEAD DETAIL

TYP. EXT. MAS. DOOR JAMB DETAIL

TYP EXTERIOR MASONRY DETAILS (T.E.M.) - UTILITY

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN INTERIOR MASONRY SHALL CONFORM TO THESE DETAILS

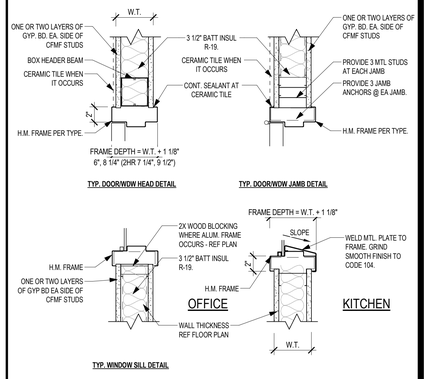


TYPICAL INTERIOR MASONRY ALUM DETAILS (T.I.M.A.)

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN DRYWALL SHALL CONFORM TO THESE DETAILS

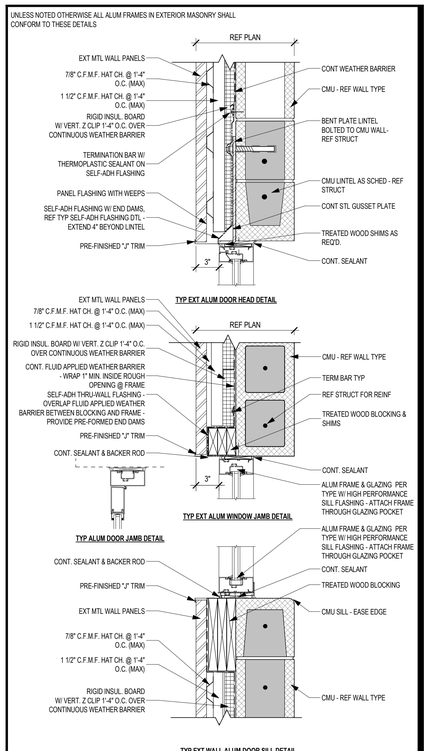
VERIFY PARTITION THICKNESS TO DETERMINE FRAME SIZES.



TYPICAL DRYWALL DETAILS (T.D.W.)

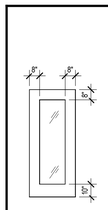
SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS

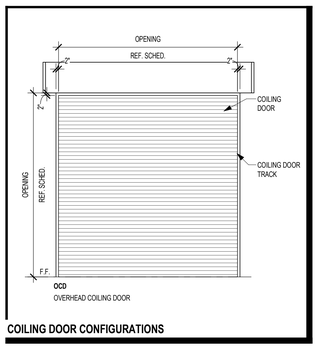


TYP EXT. MASONRY ALUM. DETAILS AT MTL. PANELS (T.E.M.P.)

SCALE 1-1/2" = 1'-0

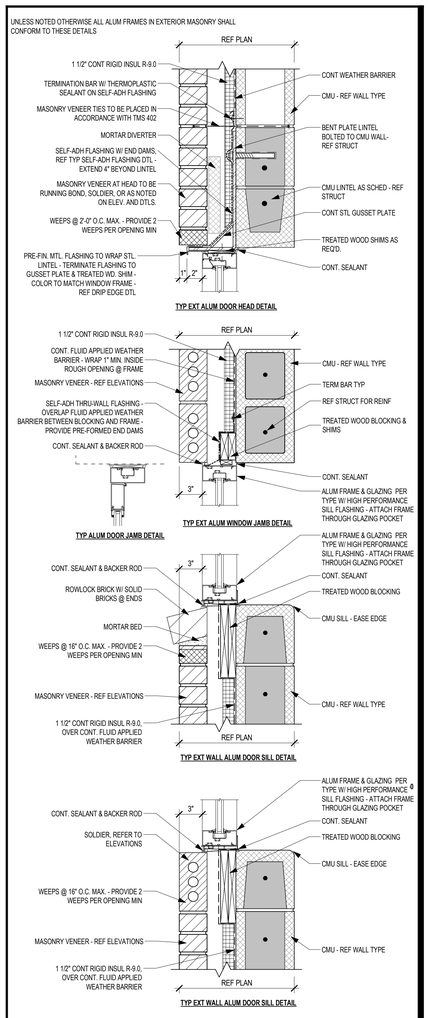


DOOR CONFIGURATIONS - ALUMINUM FRAMES



COILING DOOR CONFIGURATIONS

UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS

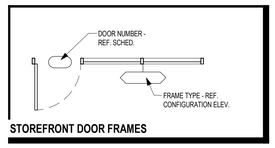


TYP EXTERIOR MASONRY ALUM DETAILS (T.E.M.A.) - UTILITY

SCALE 1-1/2" = 1'-0

A3 - DOOR SCHEDULE

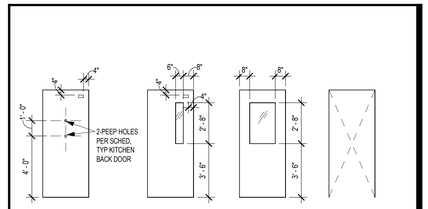
OPENING NUMBER	OPENING HARDWARE SET	OPENING FIRE RATING	OPENING EXTERIOR	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR DR GLAZING	DOOR PANIC HARDWARE	FRAME MATERIAL	FRAME TYPE	NOTES
A110			No	3' - 0"	7' - 2"	AL-SF	GTC	No	AL		
A132		1 HOUR	Yes	3' - 0"	7' - 0"	AL-1L (PR)	IGFPSE	Yes	AL		CARD READER, SEE 2/A3.02 FOR MAX THRESHOLD LEVEL CHANGE
A132A		2 HOUR	No	3' - 0"	7' - 0"	AL-1L (PR)	GFRR	Yes	AL		LOCATED IN 2 HOUR FIRE WALL
A133			Yes	3' - 0"	7' - 0"	HM-FL (PR)		No	HM	B	CARD READER, SEE 2/A3.02 FOR MAX THRESHOLD LEVEL CHANGE
A134			No	4' - 0"	7' - 0"	SC-NL	GTC	Yes	HM	B	
A135			No	3' - 0"	7' - 0"	AL-1L	GTC	No	AL		
A136			No	3' - 6"	7' - 0"	SC-HL	GTC	No	HM	B	
A137			Yes	4' - 0"	7' - 0"	HM-FL		Yes	HM	B	CARD READER, SEE 2/A3.02 FOR MAX THRESHOLD LEVEL CHANGE
A138			No	3' - 6"	7' - 0"	SC-HL	GTC	No	HM	B	
A139			No	3' - 6"	7' - 0"	SC-HL	GTC	No	HM	B	
A140			No	3' - 0"	7' - 0"	SC-FL		No	HM	B	
A141			No	3' - 0"	7' - 0"	SC-NL (PR)	GTC	No	HM	B	
B111			No	3' - 0"	7' - 0"	HM-HL	GTC	No	HM	B	
B112			No	3' - 0"	8' - 0"	SC-NL	GTC	No	HM	B	
B112A			No	3' - 0"	7' - 0"	SC-NL	GTC		HM	B	
B114			No	3' - 0"	7' - 0"	HM-FL		No	HM	B	
E100A		1 HOUR	Yes	3' - 0"	7' - 0"	AL-1L (PR)	IGFPSE	Yes	AL		CARD READER
E100B		2 HOUR	No	3' - 0"	7' - 0"	AL-1L (PR)	GFRR	Yes	AL		LOCATED IN 2 HOUR FIRE WALL
E100C		2 HOUR	No	3' - 0"	7' - 0"	AL-1L (PR)	GFRR	Yes	AL		LOCATED IN 2 HOUR FIRE WALL
E101			No	3' - 0"	7' - 0"	SC-NL (PR)	GLSA	Yes	HM	B	
E101A			No	3' - 0"	7' - 0"	SC-NL (PR)	GLSA	Yes	HM	B	SEE 2/A3.02 FOR MAX THRESHOLD LEVEL CHANGE
E101B			Yes	3' - 0"	7' - 0"	AL-1L (PR)	IGSEF	Yes	AL		CARD READER, SEE 2/A3.02 FOR MAX THRESHOLD LEVEL CHANGE
E102			No	3' - 0"	7' - 0"	SC-FL (PR)		No	HM	B	
E103			Yes	3' - 0"	7' - 0"	HM-FL		No	HM	B	CARD READER, SEE 2/A3.02 FOR MAX THRESHOLD LEVEL CHANGE
E103A			Yes	8' - 0"	8' - 0"	OCD-ST		No	STL		
E104			No	3' - 0"	7' - 0"	SC-NL (PR)	GTC	No	HM	B	
E104A			Yes	3' - 0"	7' - 0"	AL-SF	IGSEF	No	AL		CARD READER, SEE 2/A3.02 FOR MAX THRESHOLD LEVEL CHANGE
E105			No	3' - 0"	7' - 0"	HM-FL (PR)		No	HM	B	
E106			No	3' - 6"	7' - 0"	SC-FL		No	HM	B	
E107			No	3' - 0"	7' - 0"	SC-FL		No	HM	B	
E108			No	3' - 0"	7' - 0"	SC-FL		No	HM	B	
E109			No	3' - 0"	7' - 0"	SC-FL		No	HM	B	
E110			No	3' - 0"	7' - 0"	SC-FL		No	HM	B	
E112			No	3' - 0"	7' - 0"	AL-SF	GTC	No	AL		
E113				12' - 0"	4' - 2"	CL GATE (PR)					
E130			No	3' - 0"	7' - 0"	EXIST	---		EXIST	EXIST	



STOREFRONT DOOR FRAMES

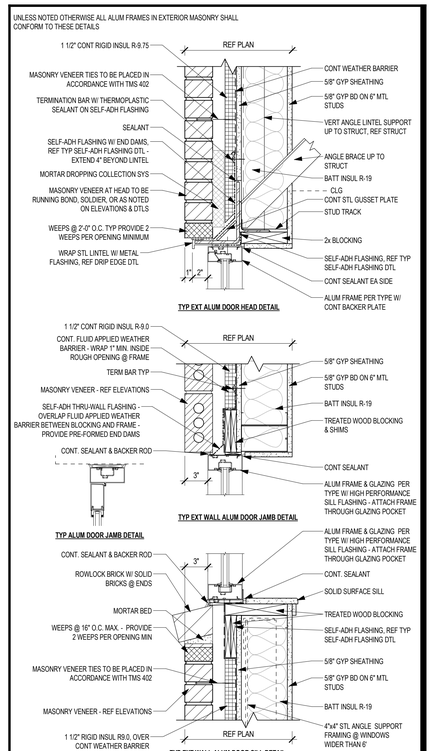
A3 - LOUVER SCHEDULE

FR TYPE	FRAME DESCRIPTION FRAME WDTH	FRAME DESCRIPTION FRAME HT	DETAILS AND NOTES NOTES
U	9' - 0"	6' - 0"	
U	9' - 0"	6' - 0"	



DOOR CONFIGURATIONS - HOLLOW METAL FRAMES

UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



TYP EXTERIOR STUD ALUM DETAILS (T.E.S.A.) - UTILITY

SCALE 1-1/2" = 1'-0

DEFAULT DOORS

IF A DOOR ASSEMBLY APPEARS ON THE FLOOR PLANS BUT IS NOT IDENTIFIED BY A SCHEDULE NUMBER, THE DOOR SHALL BE INCLUDED IN THE BID AS LISTED BELOW. THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE ARCHITECT TO DETERMINE WHAT THE ACTUAL DOOR AND FRAME TYPE AND HARDWARE REQUIREMENTS WILL BE. ADJUSTMENTS IN CONTRACT PRICE WILL BE BASED ON THE DIFFERENCE BETWEEN ACTUAL REQUIREMENTS AND THE DEFAULT DOOR VALUE.

THE DEFAULT EXTERIOR DOOR SHALL BE A TYPE "HM-FL" (SINGLE OR PAIR PER PLAN) IN A TYPE "B" ("B1" AT EXTERIOR MASONRY WALL) FRAME WITH DEFAULT HARDWARE PER SPECIFICATIONS AND FRAME DETAILING PER TYPICAL DETAILS FOR EXTERIOR DOORS.

THE DEFAULT INTERIOR DOOR SHALL BE A TYPE "SC-FL" (SINGLE OR PAIR PER PLAN) IN A TYPE "B" FRAME WITH DEFAULT HARDWARE PER SPECIFICATIONS AND FRAME DETAILING PER TYPICAL DETAILS FOR INTERIOR DOORS.

TYPICAL NOTES

A) DOOR TYPES ARE INDICATED AS A MATERIAL-CONFIGURATION CODE. THE MATERIAL CODE DESIGNATES MATERIALS AND FINISHES AS SPECIFIED. REFER TO SPECIAL NOTES FOR NON-TYPICAL FINISHES. THE CONFIGURATION CODE REFERS TO TYPICAL OR SPECIAL CONFIGURATIONS AS DRAWN.

B) DOOR ASSEMBLIES ARE NUMBERED BY ASSEMBLY. MULTIPLE SETS OF DOORS MAY OCCUR IN THE SAME FRAME ASSEMBLY (REFER TO SCHEDULE AND PLAN FOR QUANTITY). DOORS MAY OCCUR IN PAIRS (REFER TO SCHEDULE AND PLAN FOR INCIDENCE).

C) FRAME CONFIGURATION IS DIAGRAMMATIC AND NOMINAL. DIMENSIONS SHALL BE ADJUSTED TO ACCOMMODATE DOOR SIZES AS SCHEDULED. WITHIN ANY HOLLOW METAL ASSEMBLY, THE WIDTH OF SIDELITES SHALL BE EQUAL AND SHALL NOT EXCEED 3'-0" U.N.O.

D) ALTERNATE FINISHES CAN SOMETIMES HAVE AN IMPACT ON DETAILING (E.G. HALF OR OFFSET SADDLES EMPLOYED IN LIEU OF STANDARD SADDLES WHEN ADJACENT TO THICKER FLOOR FINISHES SUCH AS TERRAZZO OR QUARRY TILE). COORDINATE DETAILS WITH FINAL FINISH SELECTIONS.

E) GLAZED FRAMES ASSOCIATED WITH 20-MINUTE, 45-MINUTE, AND/OR 60-MINUTE FIRE-RATED DOORS SHALL BE FIRE-RATED 1-HOUR. GLAZED FRAMES ASSOCIATED WITH 90-MINUTE FIRE-RATED DOORS SHALL BE FIRE-RATED 2-HOUR. GLAZING MUST MEET CODE REQUIREMENTS, INCLUDING SIZE LIMITATIONS, IN FIRE-RATED FRAMES. REF. IBC TABLE 716.1 (2).

F) PROVIDE 2x WOOD BLOCKING @ CFMF STUD WALLS FOR WALL MOUNTED ITEMS LIKE WALL STOPS, HOLD OPENS, ETC.

G) REFER TO FLOOR PLANS AND EXTERIOR ELEVATIONS FOR ALUMINUM FRAME LOCATIONS.

H) OVERHEAD COILING DOORS ARE MOTORIZED UNLESS NOTED OTHERWISE.

SPECIAL NOTES:
1. MAGNETIC HOLD OPEN - REF. FIRE ALARM SHEETS.
2. MANUAL HOLD OPEN.
3. SOUND CONTROL DOOR ASSEMBLY STC50.
4. SOUND SEAL W/ DOOR BOTTOM STC 40-42.
5. DOOR & FRAME PROVIDED AS PART OF SOUND-ISOLATION ROOM.
6. PROVIDE (2) PEEPHOLES IN DOOR PANEL: (1) LOCATED AT STANDARD HEIGHT AND (1) AT 42" AFF.
7. TORNADO RESISTANT DOOR AND FRAME ASSEMBLY.
8. NO LATCH, PUSH OPEN.
9. NO CLOSER.
10. PANIC BUTTON EMERGENCY OPEN.
11. FAIL SAFE IN OPEN POSITION.
12. FAIL SAFE IN CLOSED POSITION.
13. MANUAL OPERATION.

DOOR ASSEMBLY NOTES

AL - ALUMINUM

HM - HOLLOW METAL

SC - SOLID CORE WOOD

CL - CHAIN LINK (VINYL-COATED)

DMF - DECORATIVE METAL FENCING

DOOR/FRAME MATERIALS

IGE - INSULATED GLASS ETCHED

IGLSA - INSULATED GLASS LAMINATED SAFETY

IGCP - INSULATED GLASS-CLAD POLYCARBONATE

IGDF - INSULATED GLASS DECORATIVE FILM

IGFPSE - INSULATED GLASS FIRE PROTECTION RATED SECURITY

IGS - INSULATED GLASS SPANDREL

IGSE - INSULATED GLASS SECURITY

IGSEF - INSULATED GLASS SECURITY FILM

IGSS - INSULATED GLASS STRUCTURAL SILICONE GLAZED

IGU - INSULATED GLASS UNIT

GCP - GLASS-CLAD POLYCARBONATE

GDF - GLASS DECORATIVE FILM

GE - GLASS ETCHED

GEBG - GLASS EXTERIOR BUTT JOINT

GFRR - GLASS FIRE-RESISTANCE-RATED

GFPR - GLASS FIRE-PROTECTION-RATED

GIBJG - GLASS INTERIOR BUTT JOINT

GLSA - GLASS LAMINATED SAFETY

GLSE - GLASS LAMINATED SECURITY

GSEF - GLASS SECURITY FILM

GTC - GLASS TEMPERED CLEAR

MIP - METAL INSULATED PANEL

MIR - UNFRAMED MIRROR

MIRT - TRANSPARENT ONE-WAY MIRROR

TWRA - TRANSLUCENT WALL & ROOF ASSEMBLIES

1.) ALL GLAZING IS 1/4" THICK (U.N.O.). INSULATED GLASS SHALL CONSIST OF AN EXTERIOR LAYER OF GLASS, TINTED AS SPECIFIED, AN INTERIOR LAYER OF CLEAR GLASS, FACTORY SEALED WITH A 1/2" AIR SPACE. WHERE TEMPERED GLASS IS SPECIFIED, BOTH LAYERS OF INSULATED GLASS SHALL BE TEMPERED.

2.) ANY WINDOW OR GLAZING PANELS LOCATED AT A INTERSTITIAL SPACE OR NOT READILY VISIBLE SHALL HAVE SPANDREL GLASS INSTALLED, REGARDLESS OF ANY NOTATION ELSEWHERE.

GLAZING LEGEND

TEM - TYP EXT MASONRY DETAIL - HM

TEMA - TYP EXT MASONRY DETAIL - ALUM

TICF - TYP EXT INSUL CONC FORMS - HM

TICFA - TYP EXT INSUL CONC FORMS - ALUM

TIM - TYP INTERIOR MASONRY DETAIL - HM

TIMA - TYP INTERIOR MASONRY DETAIL - ALUM

TDW - TYP DRYWALL PARTITION DETAIL - HM

TDWA - TYP DRYWALL PARTITION DETAIL - ALUM

HO - DOOR HOLD OPEN (MAGNETIC OR MANUAL - SEE SPECIAL NOTES FOR MORE INFO)

TH - THRESHOLD

SEC - SECURITY CONTACTS (REF. ELEC. AND TECH.)

OH - DENOTES OPPOSITE HAND CONFIGURATION

SCHEDULE ABBREVIATIONS

Date

Revision /

Project:

CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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KINGWOOD, TX

REGISTERED ARCHITECT
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DOOR SCHEDULE, DOOR AND WINDOW DETAILS

Job No.	Sheet No.
1821-13-01	100% QC A3.01
Drawn By: CS	
Date: 04.02.2025	

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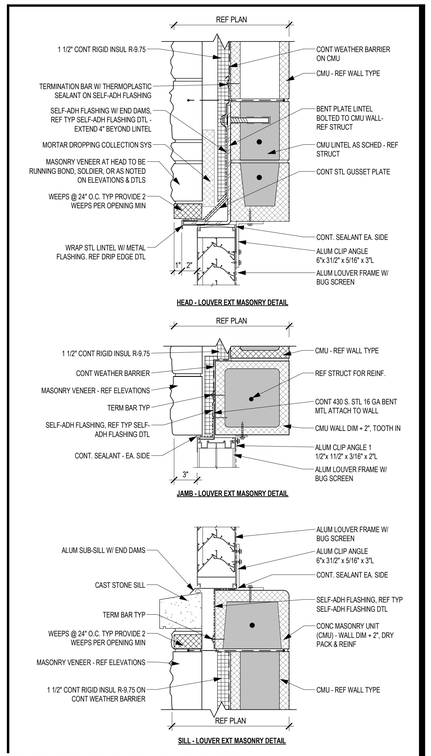
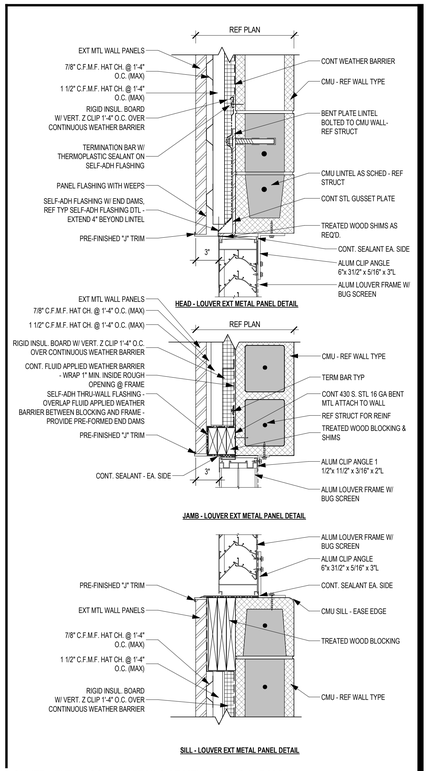
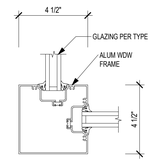


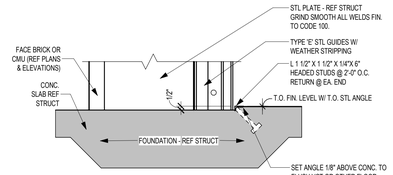
LOUVER - EXT MASONRY DETAILS (L.E.M.S.) - STONE SCALE 1-1/2" = 1'-0



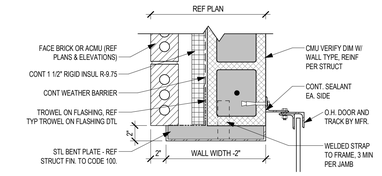
LOUVER - EXT MASONRY DETAILS AT MTL. PANELS (L.E.M.P.) SCALE 1-1/2" = 1'-0



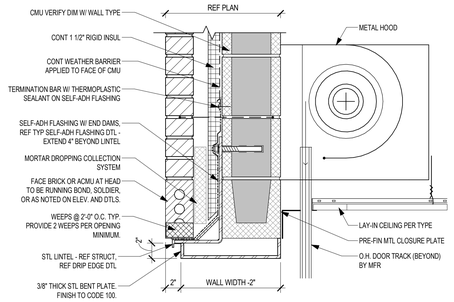
18 JAMB DETAIL - CORNER STOREFRONT
3" = 1'-0"



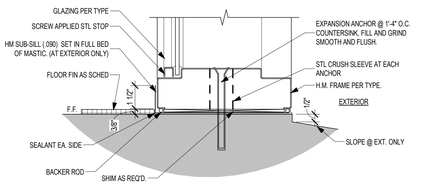
17 TYP. OCD RECESSED SILL
1 1/2" = 1'-0"



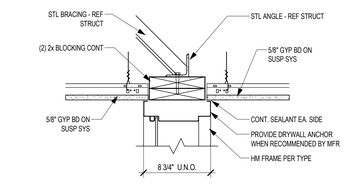
16 JAMB DTL - OCD - CMU / INSUL / MODULAR BRICK
1 1/2" = 1'-0"



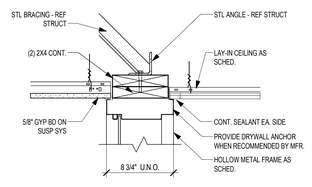
15 HEAD DTL - OCD - CMU / INSUL / MODULAR BRICK
1 1/2" = 1'-0"



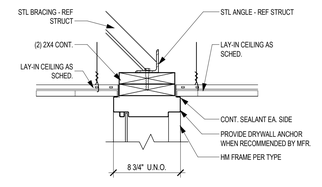
14 DOOR AND WINDOW DETAIL - SILL
3" = 1'-0"



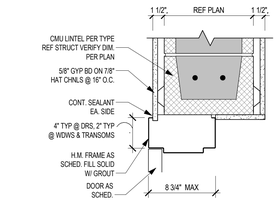
13 HEAD DETAIL - GYP BD / GYP BD
1 1/2" = 1'-0"



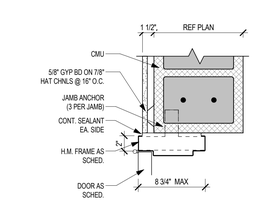
12 HEAD DETAIL - GYP BD / LAY-IN
1 1/2" = 1'-0"



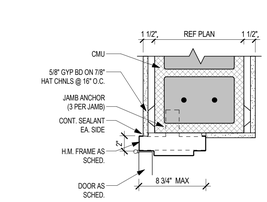
11 HEAD DETAIL - LAY-IN / LAY-IN
1 1/2" = 1'-0"



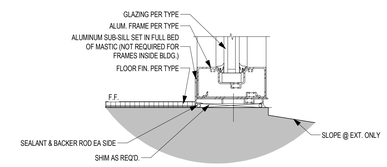
10 HEAD DETAIL - GYP/CMU/GYP
1 1/2" = 1'-0"



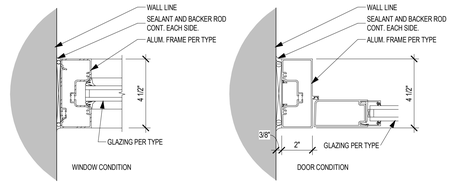
9 JAMB DETAIL - CMU/GYP
1 1/2" = 1'-0"



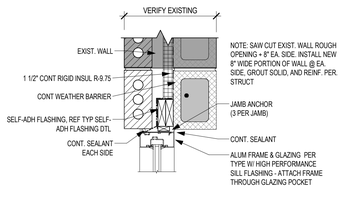
8 JAMB DETAIL - GYP/CMU/GYP
1 1/2" = 1'-0"



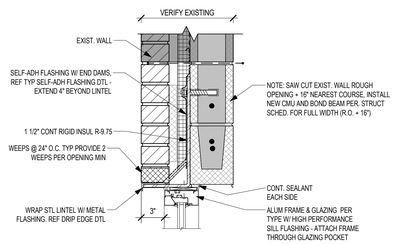
7 DOOR AND WINDOW DETAIL - SILL
3" = 1'-0"



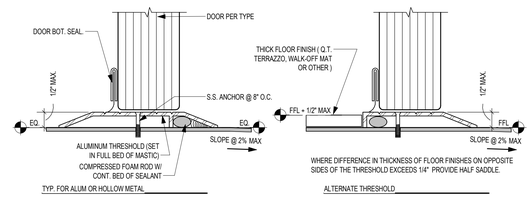
6 DOOR AND WINDOW DETAIL - JAMB (INT USE ONLY)
3" = 1'-0"



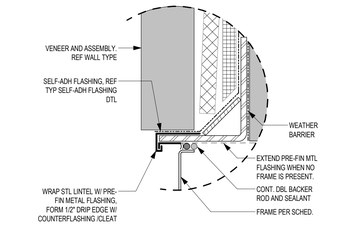
4 JAMB DETAIL - EXIST CMU / BRICK WALL
1 1/2" = 1'-0"



3 HEAD DETAIL - EXIST CMU / BRICK WALL
1 1/2" = 1'-0"



2 TYP THRESHOLDS
6" = 1'-0"



1 TYP DRIP EDGE DTL
3" = 1'-0"

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FOR
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KINGWOOD, TX

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DOOR AND WINDOW DETAILS

Job No.	Sheet No.
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Drawn By: CS	
Date: 04.02.2025	

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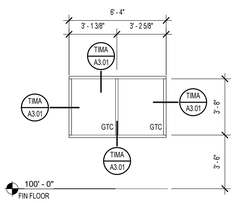
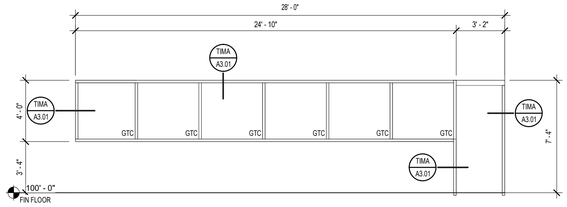
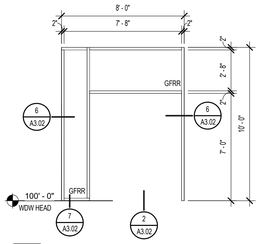


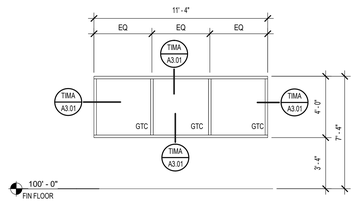
26 SF-AA
1/4" = 1'-0"



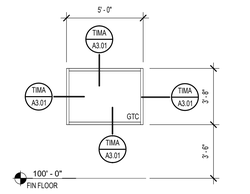
25 SF-Z
1/4" = 1'-0"



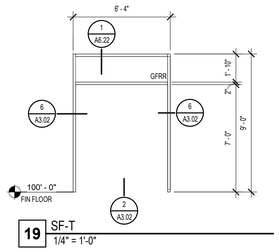
24 SF-Y
1/4" = 1'-0"



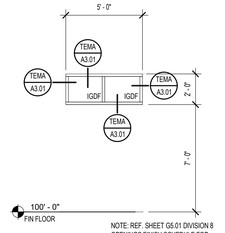
22 SF-W
1/4" = 1'-0"



20 SF-U
1/4" = 1'-0"

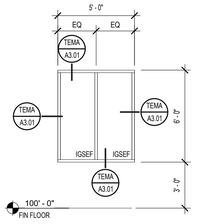


19 SF-T
1/4" = 1'-0"

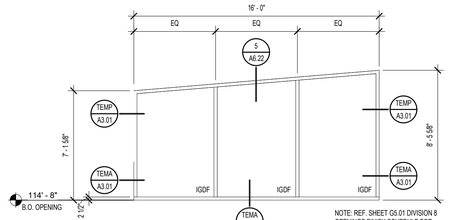


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

18 SF-S
1/4" = 1'-0"



17 SF-R
1/4" = 1'-0"



NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

16 SF-Q
1/4" = 1'-0"

GLAZING LEGEND

IGE - INSULATED GLASS ETCHED

IGLSA - INSULATED GLASS LAMINATED SAFETY

IGCP - INSULATED GLASS-CLAD POLYCARBONATE

IGDF - INSULATED GLASS DECORATIVE FILM

IGFPSE - INSULATED GLASS FIRE PROTECTION RATED SECURITY

IGS - INSULATED GLASS SPANDREL

IGSE - INSULATED GLASS SECURITY

IGSEF - INSULATED GLASS SECURITY FILM

IGSS - INSULATED GLASS STRUCTURAL SILICONE GLAZED

IGU - INSULATED GLASS UNIT

GCP - GLASS-CLAD POLYCARBONATE

GDF - GLASS DECORATIVE FILM

GE - GLASS ETCHED

GEBG - GLASS EXTERIOR BUTT JOINT

GFRR - GLASS FIRE-RESISTANCE-RATED

GFPR - GLASS FIRE-PROTECTION-RATED

GIBJ - GLASS INTERIOR BUTT JOINT

GLSA - GLASS LAMINATED SAFETY

GLSE - GLASS LAMINATED SECURITY

GSEF - GLASS SECURITY FILM

GTC - GLASS TEMPERED CLEAR

MIP - METAL INSULATED PANEL

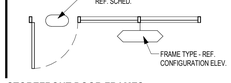
MIR - UNFRAMED MIRROR

MIRT - TRANSPARENT ONE-WAY MIRROR

TWRA - TRANSLUCENT WALL & ROOF ASSEMBLIES

1.) ALL GLAZING IS 1/4" THICK (U.N.O.). INSULATED GLASS SHALL CONSIST OF AN EXTERIOR LAYER OF GLASS, TINTED AS SPECIFIED, AN INTERIOR LAYER OF CLEAR GLASS, FACTORY SEALED WITH A 1/2" AIR SPACE. WHERE TEMPERED GLASS IS SPECIFIED, BOTH LAYERS OF INSULATED GLASS SHALL BE TEMPERED.

2.) ANY WINDOW OR GLAZING PANELS LOCATED AT A INTERSTITIAL SPACE OR NOT READILY VISIBLE SHALL HAVE SPANDREL GLASS INSTALLED, REGARDLESS OF ANY NOTATION ELSEWHERE.



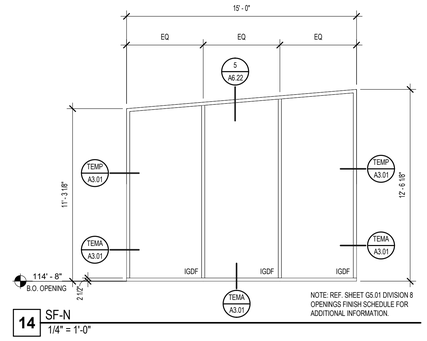
STOREFRONT DOOR FRAMES

REQUIRED U-FACTOR FOR ALL EXTERIOR GLAZING AT WINDOWS/DOORS TO BE .29
REQUIRED SHGC TO BE .23

DOOR/WINDOW GLAZING

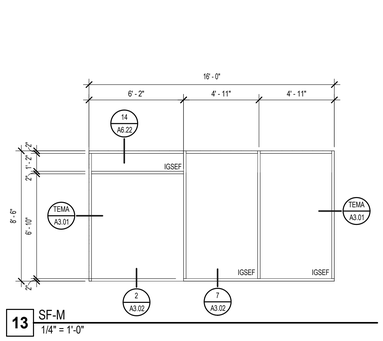
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

15 SF-P
1/4" = 1'-0"

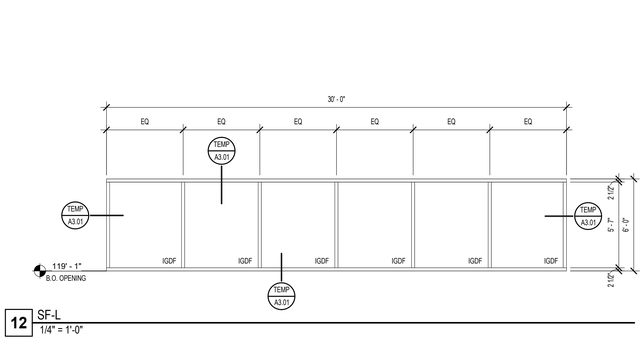


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

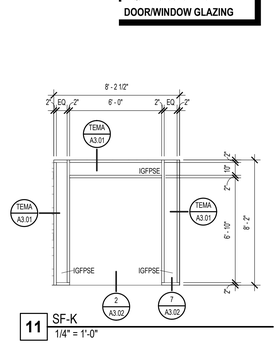
14 SF-N
1/4" = 1'-0"



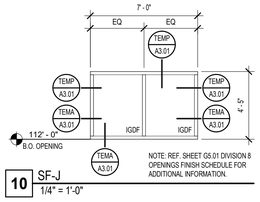
13 SF-M
1/4" = 1'-0"



12 SF-L
1/4" = 1'-0"

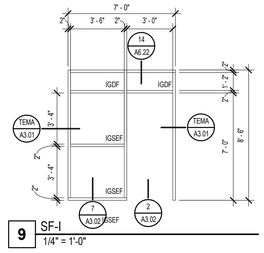


11 SF-K
1/4" = 1'-0"

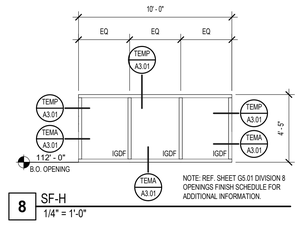


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

10 SF-J
1/4" = 1'-0"

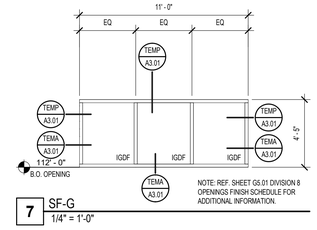


9 SF-I
1/4" = 1'-0"



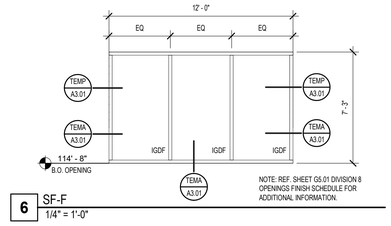
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

8 SF-H
1/4" = 1'-0"



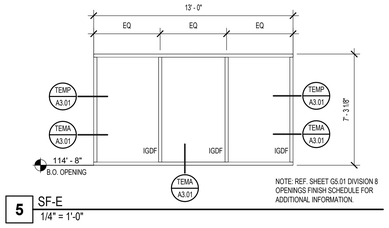
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

7 SF-G
1/4" = 1'-0"



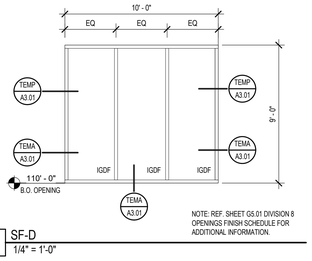
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

6 SF-F
1/4" = 1'-0"



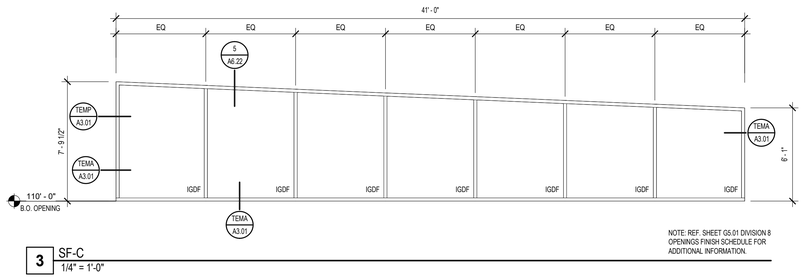
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

5 SF-E
1/4" = 1'-0"



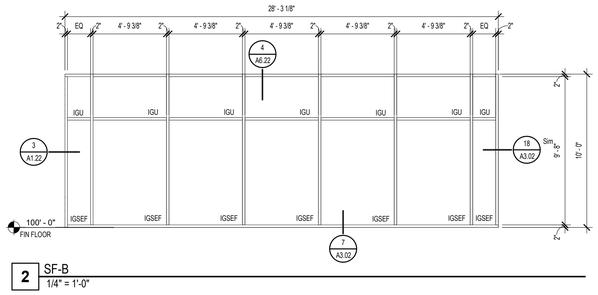
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

4 SF-D
1/4" = 1'-0"

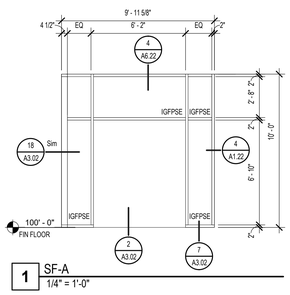


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

3 SF-C
1/4" = 1'-0"



2 SF-B
1/4" = 1'-0"



1 SF-A
1/4" = 1'-0"

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date



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STOREFRONT CONFIGURATIONS

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A3.03
Date: 04.02.2025	

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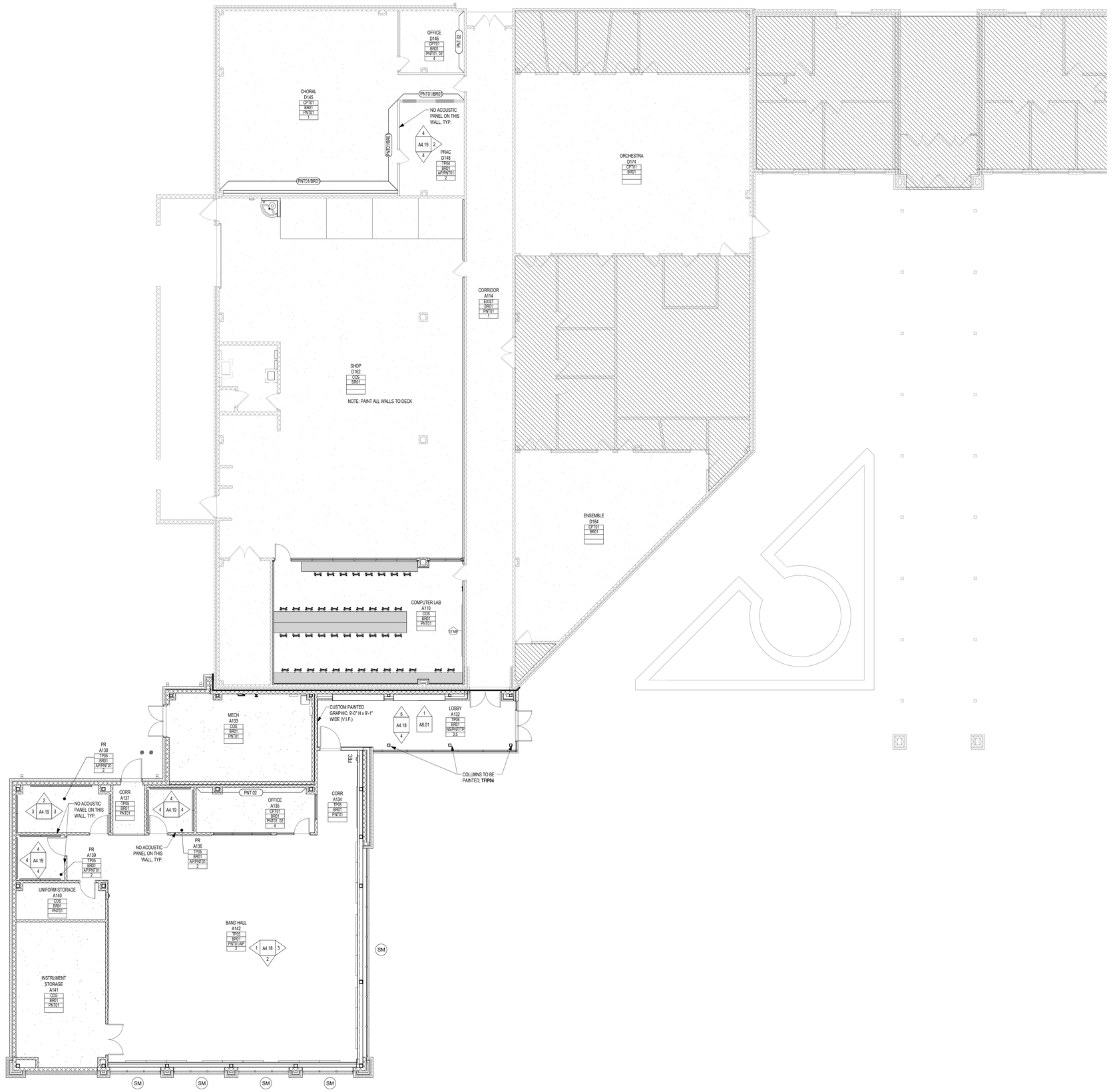


1 FINISH PLAN - SECTION A
1/8" = 1'-0"

A1.1 ELEVATION REFERENCE

1 / A1.1 CALLOUT REFERENCE

SIM / A101 WALL SECTION REFERENCE

B
B - HORIZONTAL BLINDS
C - CURTAIN HUNG BY SUSPENDED TRACK
SMB - MOTORIZED SHADES - BLACKOUT
SB - WINDOW SHADES - BLACKOUT
SM - MOTORIZED SHADES
S - WINDOW SHADES

FLOOR INSTALLATION DIRECTION

FLOOR TRANSITION

FINISH WALL FINISH TAG

NOT IN SCOPE

FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

1. REFER TO PLAN FOR EXTENTS OF PAINT AND RUBBER BASE.
2. REFER TO INTERIOR ELEVATIONS FOR EXTENTS OF ACOUSTIC PANEL.
3. REFER TO SHEET G5.01/G5.02 AND INTERIOR ELEVATIONS FOR EXTENTS OF CUSTOM DIGITAL WALLCOVERING.
4. REFER TO FINISH PLAN FOR LOCATION OF ACCENT WALL PAINTED, **PNT02.**
5. REFER TO FINISH PLAN FOR EXTENTS OF **NS01, TP01, PNT01, AND PNT04.**
6. REFER TO INTERIOR ELEVATIONS FOR EXTENT OF **BTP, TP,** AND **TM** IN RESTROOMS.

FINISH REMARKS

A. ALL DIMENSIONS SHOW ON FINISH FLOOR PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

B. PROVIDE **WT** AND **TZ** FLOOR FINISHES, AS DEFINED ABOVE, IN LOCATIONS INDICATED ON PLANS.

C. PROVIDE **TZ** AND **TZP** ON STAIR TREADS AND RISERS, AS DEFINED ABOVE, IN LOCATIONS INDICATED ON PLANS.

D. PROVIDE **BR4** AT **WT** FLOOR FINISH AND **BTZP** AT **TZ** FLOOR FINISH, AS DEFINED ABOVE, IN LOCATIONS INDICATED ON PLANS.

E. PROVIDE **PNT** AND **TC** (WAINSCOT) WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.

F. PROVIDE **PNT** AND **TC** (WAINSCOT) WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.

G. PROVIDE **BM** AND/OR **FB**, **PNT** AND **CFB** WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.

H. PROVIDE 3/8" MIN SEALANT JOINT WHERE FULL HT TILE MEETS GYP CLG (MATCH CLG COLOR) OR LAY-IN GRID (WHITE)

I. PROVIDE SEALANT JT'S @ INSIDE CORNERS OF TILED WALLS

J. VERIFY EXACT FLOOR TILE PATTERN FOR ALL TOILET ROOMS. COORDINATE WITH ARCHITECT.

FINISH PLAN GENERAL NOTES

ALL SCHEDULED WALL FINISH DIRECTIONS ARE DIRECTIONS PER PLAN NORTH OF THE FINISH PLANS, NOT TRUE NORTH OF THE PROJECT SITE

REFER TO G5.01 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CLASSROOM 025 — ROOM NAME / ROOM NUMBER

TYP FLOOR FINISH	LVT01
WALL BASE FINISH	BR01
TYP WALL FINISH	PNT01
REMARKS	1

*REMARKS NUMBERS COORDINATED WITH FINISH REMARKS LEGEND LOCATED ON ALL FINISH FLOOR PLAN SHEETS

REFER TO PROJECT SPECIFICATIONS SECTION 01 6210 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

XY ## — MATERIAL TYPE / FINISH COLOR AND MATERIAL SIZE AS NOTED IN SPEC. SECTION 01 6210

ACMU - ARCHITECTURAL CONCRETE MASONRY UNIT

AL - ALUMINUM

AP - ACOUSTICAL PANELS

BP - BASE, PORCELAIN TILE

BRES - BASE, RESINOUS INTEGRAL

BRK - BRICK

BR - BASE, RUBBER

BRV - BASE, RUBBER VENTED

BTC - BASE, TILE, CERAMIC

BTZ - BASE, TERRAZZO PRECAST

BWD - BASE, WOOD

CCPS - CERAMIC CLADDING PANEL SYSTEM

CDAP - CUSTOM DIGITALLY PRINTED ACOUSTIC PANEL

CDW - CUSTOM DIGITAL WALLCOVERINGS

COP - CONCRETE POLISHED

COS - CONCRETE SEALED

CPT - CARPET, SHEET

CS - CAST STONE

CSM - CONCRETE STONE MASONRY

CT - CARPET, TILED

CWF - CUSTOM WINDOW FILM

EBWS - EPOXY BASED WALL SYSTEM

EPNT - EPOXY PAINT

FRP - FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM

GFRC - GLASS FIBER REINFORCED CONCRETE

GRF - GROUND FACE CMU (BURNISHED)

LVT - LUXURY VINYL TILE

MB - MARKER BOARD

MCM - METAL COMPOSITE MATERIAL

MP - METAL WALL PANEL

MS - METAL SOFFIT

NB - NO BASE

NS - NATURAL STONE

PL - PLASTIC LAMINATE

PLP - PLASTIC LAMINATE PANEL SYSTEM

PNT - PAINT

QTZ - QUARTZ SURFACING

RAFF - RESILIENT ATHLETIC FLUID FLOORING

RAFP - RESILIENT ATHLETIC FLOORING POLYURETHANE

RAFS - RUBBER FLOORING SHEET

RAFV - RESILIENT ATHLETIC FLOORING VINYL

RES - RESINOUS FLOORING

RT - RUBBER TILE

RTR - RUBBER TREADS AND RISERS

SPEC - SPECIAL FINISHES, REF. ROOM FINISH SCHEDULE & INTERIOR ELEVATIONS

SPF - SPLIT-FACE CONCRETE MASONRY UNIT

SSM - SOLID SURFACE MATERIAL

SVT - SOLID VINYL TILE

TB - TACK BOARD

TC - TILE, CERAMIC

TP - TILE, PORCELAIN

TQ - TILE, QUARRY

TS - TACKABLE SURFACE

TZ - TERRAZZO

TZP - TERRAZZO, PRECAST STAIR TREADS AND RISERS

TZT - TERRAZZO TILE

UP - UPHOLSTERY

VCT - TILE, VINYL COMPOSITION

VSF - VINYL SHEET FLOORING

WMP - WOOD (MAPLE) STRIP AND PLANK FLOORING

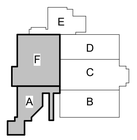
WMS - MASONITE WOOD FLOORING

WOM - WALK-OFF MAT

WOT - WALK-OFF TILE

(NOT ALL ABBREVIATIONS MAY BE USED)

FINISH KEY



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX



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FINISH PLAN - SECTION A, F

Job No. 1821-13-01	Sheet No. 100% QC A4.11
Drawn By: CS	
Date: 04.02.2025	

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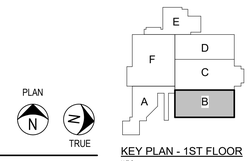
1 FINISH PLAN - SECTION B
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

PLAN
N
TRUE

THE ROOM FINISH LEGEND HAS BEEN OMITTED FROM THIS SHEET DUE TO SPACE LIMITATIONS. REFER TO OTHER FINISH PLAN SHEETS FOR FULL ROOM FINISH SCHEDULE, SPECIAL FINISH NOTES AND DEFAULT FINISHES.

ROOM FINISH LEGEND

A1.1 1 — ELEVATION REFERENCE

1 / A1.1 — CALLOUT REFERENCE

1 / A101 SIM — WALL SECTION REFERENCE

B
- B - HORIZONTAL BLINDS
- C - CURTAIN HUNG BY SUSPENDED TRACK
- SMB - MOTORIZED SHADES - BLACKOUT
- SB - WINDOW SHADES - BLACKOUT
- SM - MOTORIZED SHADES
- S - WINDOW SHADES

FLOOR INSTALLATION DIRECTION

FLOOR TRANSITION

FINISH — WALL FINISH TAG

NOT IN SCOPE

FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

1. REFER TO PLAN FOR EXTENTS OF PAINT AND RUBBER BASE.
2. REFER TO INTERIOR ELEVATIONS FOR EXTENTS OF ACOUSTIC PANEL.
3. REFER TO SHEET G5.01/G5.02 AND INTERIOR ELEVATIONS FOR EXTENTS OF CUSTOM DIGITAL WALLCOVERING.
4. REFER TO FINISH PLAN FOR LOCATION OF ACCENT WALL PAINTED, **PNT02.**
5. REFER TO FINISH PLAN FOR EXTENTS OF **NS01, TP01, PNT01, AND PNT04.**
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FINISH REMARKS

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISH
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FINISH PLAN- SECTION B

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Date: 04.02.2025	

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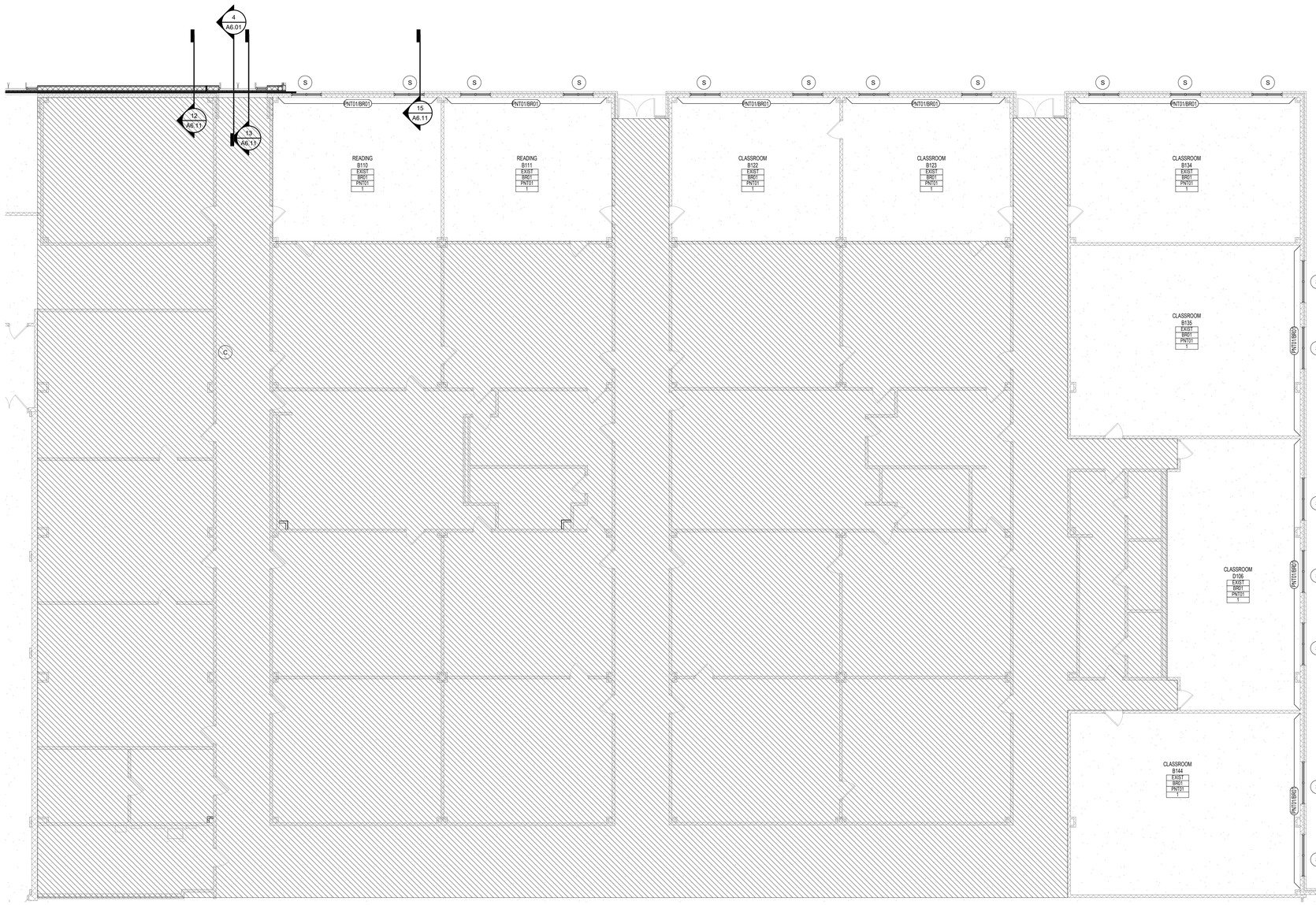

1 FINISH PLAN - SECTION D
1/8" = 1'-0"

THE ROOM FINISH LEGEND HAS BEEN OMITTED FROM THIS SHEET DUE TO SPACE LIMITATIONS. REFER TO OTHER FINISH PLAN SHEETS FOR FULL ROOM FINISH SCHEDULE, SPECIAL FINISH NOTES AND DEFAULT FINISHES.

ROOM FINISH LEGEND

A1.1 1 — ELEVATION REFERENCE

1 / A1.1 — CALLOUT REFERENCE

1 / A101 SIM — WALL SECTION REFERENCE

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- SM - MOTORIZED SHADES
- S - WINDOW SHADES

FLOOR INSTALLATION DIRECTION

FLOOR TRANSITION

FINISH — WALL FINISH TAG

NOT IN SCOPE

FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

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4. REFER TO FINISH PLAN FOR LOCATION OF ACCENT WALL PAINTED, **PNT02.**
5. REFER TO FINISH PLAN FOR EXTENTS OF **NS01, TP01, PNT01, AND PNT04.**
6. REFER TO INTERIOR ELEVATIONS FOR EXTENT OF **BTP, TP,** AND **TM** IN RESTROOMS.

FINISH REMARKS

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
HUMBLE ISD
KINGWOOD, TX



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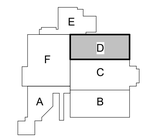
PLAN N — TRUE



KEY PLAN - 1ST FLOOR
N.T.S

FINISH PLAN - SECTION D

Job No. 1821-13-01	Sheet No. 100% QC A4.14
Drawn By: CS	
Date: 04.02.2025	

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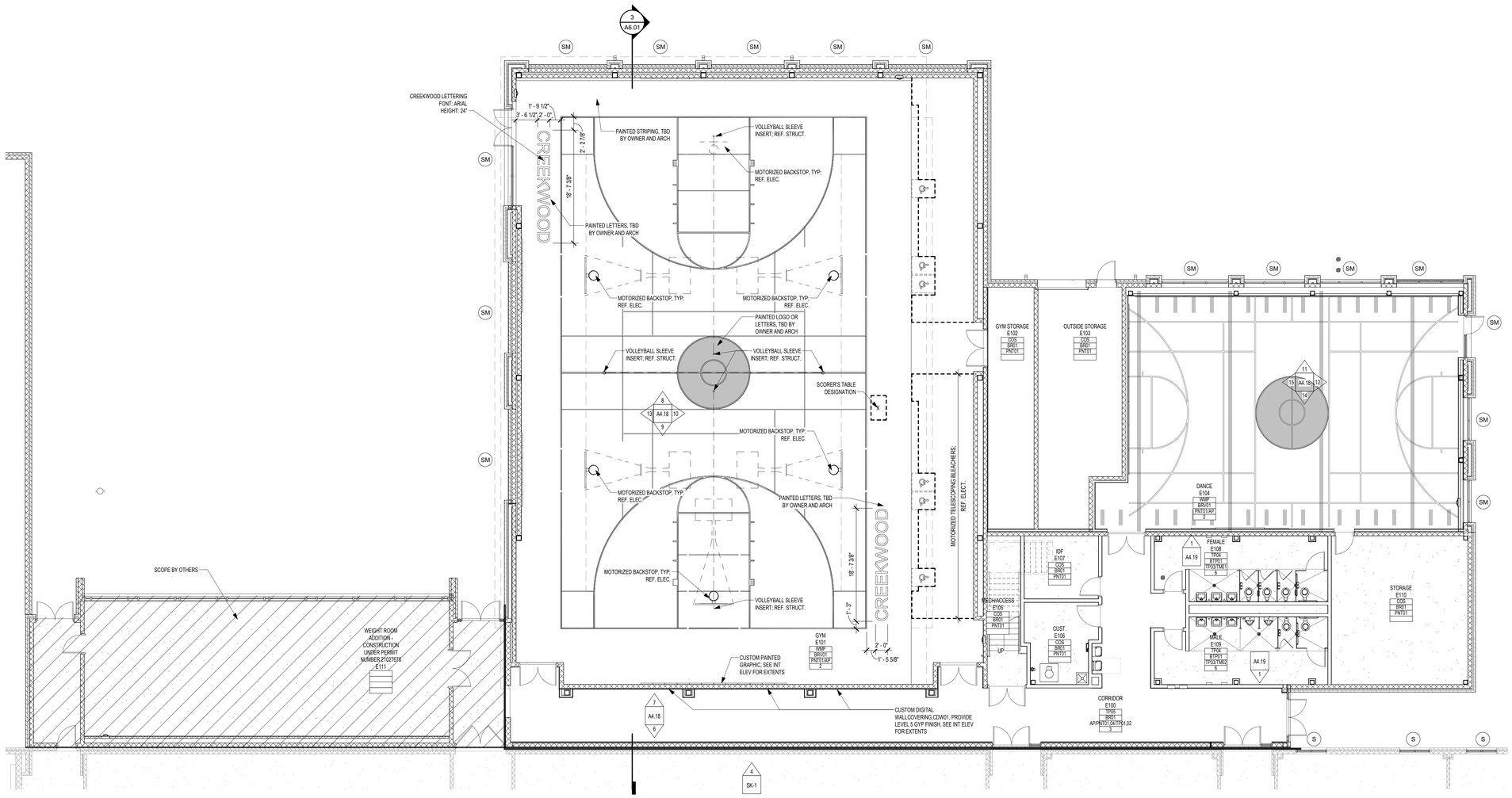

THE ROOM FINISH LEGEND HAS BEEN OMITTED FROM THIS SHEET DUE TO SPACE LIMITATIONS. REFER TO OTHER FINISH PLAN SHEETS FOR FULL ROOM FINISH SCHEDULE, SPECIAL FINISH NOTES AND DEFAULT FINISHES.

ROOM FINISH LEGEND

- ELEVATION REFERENCE
- CALLOUT REFERENCE
- WALL SECTION REFERENCE
- B - HORIZONTAL BLINDS
- C - CURTAIN HUNG BY SUSPENDED TRACK
- SMB - MOTORIZED SHADES - BLACKOUT
- SB - WINDOW SHADES - BLACKOUT
- SM - MOTORIZED SHADES
- S - WINDOW SHADES
- FLOOR INSTALLATION DIRECTION
- FLOOR TRANSITION
- WALL FINISH TAG
- NOT IN SCOPE

FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

1. REFER TO PLAN FOR EXTENTS OF PAINT AND RUBBER BASE.
2. REFER TO INTERIOR ELEVATIONS FOR EXTENTS OF ACOUSTIC PANEL.
3. REFER TO SHEET G5.01/G5.02 AND INTERIOR ELEVATIONS FOR EXTENTS OF CUSTOM DIGITAL WALLCOVERING.
4. REFER TO FINISH PLAN FOR LOCATION OF ACCENT WALL PAINTED, **PNT02.**
5. REFER TO FINISH PLAN FOR EXTENTS OF **NS01, TP01, PNT01, AND PNT04.**
6. REFER TO INTERIOR ELEVATIONS FOR EXTENT OF **BTP, TP,** AND **TM** IN RESTROOMS.

FINISH REMARKS

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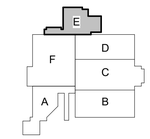
FINISH PLAN - SECTION E

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A4.15
Date: 04.02.2025	

1 FINISH PLAN - SECTION E
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

PLAN N
TRUE

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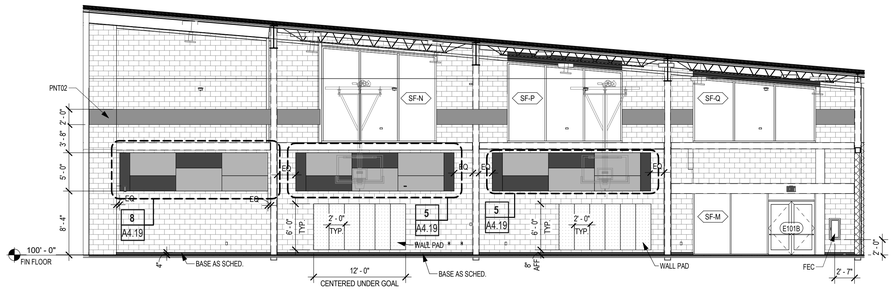
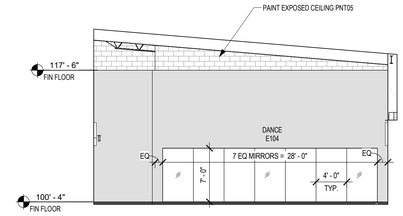
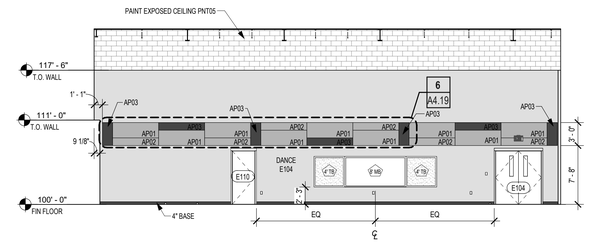


13 INTERIOR ELEVATION - GYMNASIUM
1/8" = 1'-0"



15 INT ELEVATION - DANCE
1/8" = 1'-0"



14 INTERIOR ELEVATION - DANCE
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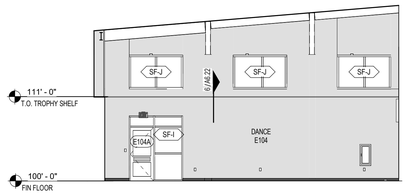
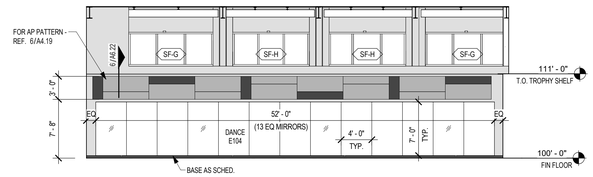
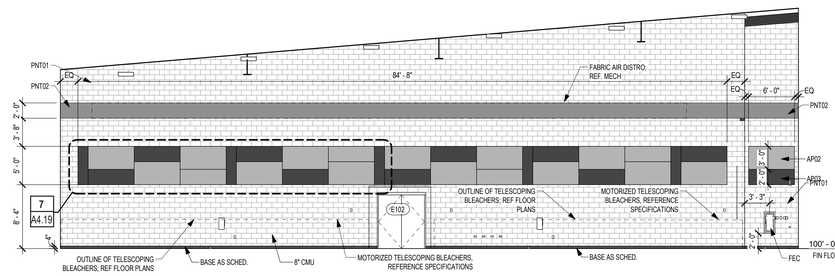


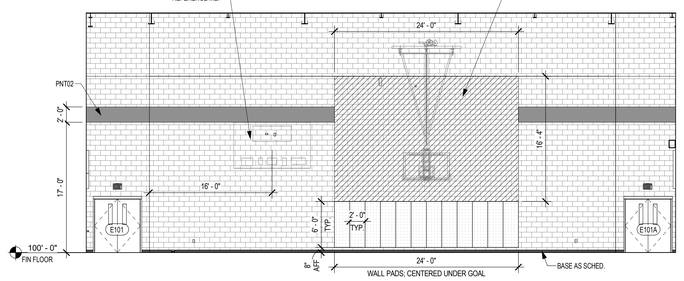
12 INT ELEVATION - DANCE
1/8" = 1'-0"



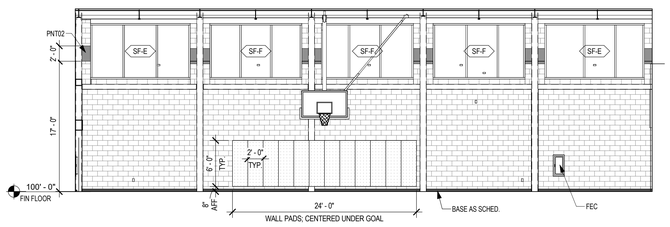
11 INTERIOR ELEVATION - DANCE
1/8" = 1'-0"



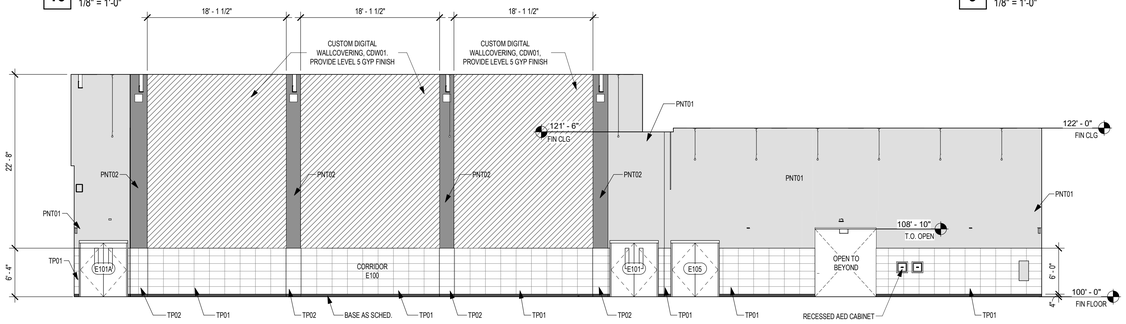
10 INTERIOR ELEVATION - GYMNASIUM
1/8" = 1'-0"



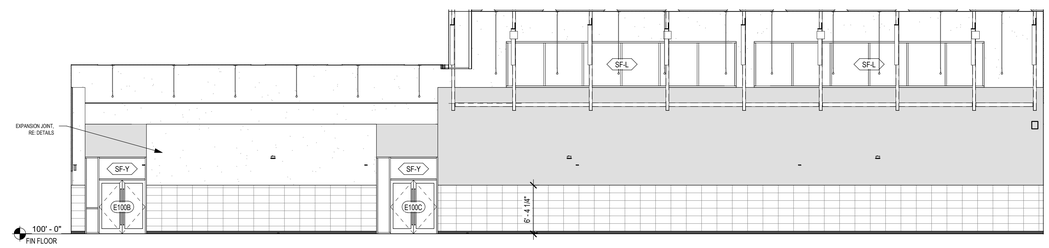
9 INTERIOR ELEVATION - GYMNASIUM
1/8" = 1'-0"



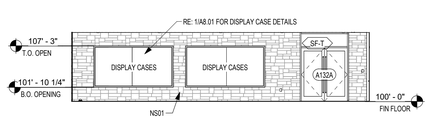
8 INTERIOR ELEVATION - GYMNASIUM
1/8" = 1'-0"



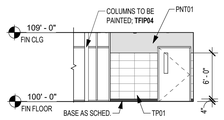
7 INTERIOR ELEVATION - CORRIDOR
1/8" = 1'-0"



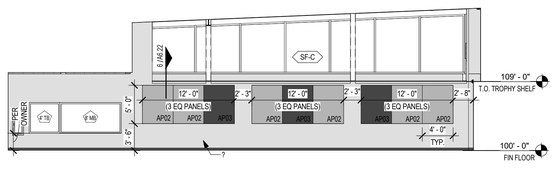
6 INTERIOR ELEVATION - CORRIDOR
1/8" = 1'-0"



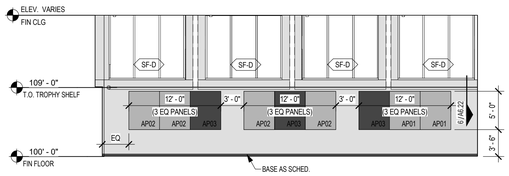
5 INTERIOR ELEVATION - LOBBY A132
1/8" = 1'-0"



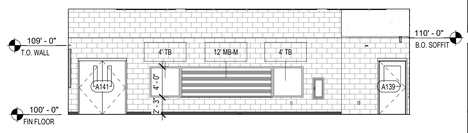
4 INT ELEVATION - LOBBY A132
1/8" = 1'-0"



3 INTERIOR ELEVATION - BAND HALL
1/8" = 1'-0"



2 INTERIOR ELEVATION - BAND HALL
1/8" = 1'-0"



1 INTERIOR ELEVATION - BAND HALL
1/8" = 1'-0"

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REGISTERED ARCHITECT
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INTERIOR ELEVATIONS

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS, MR	A4.18
Date: 04.02.2025	

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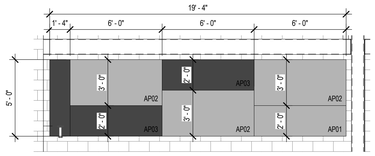
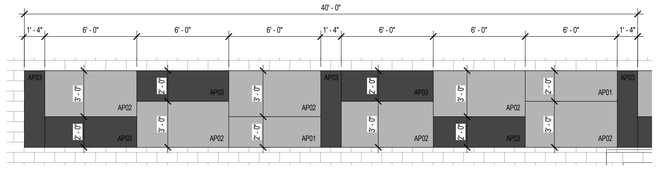
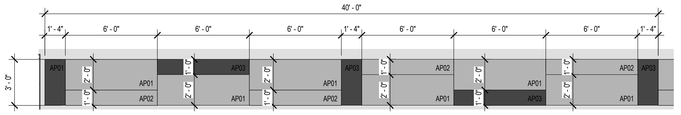


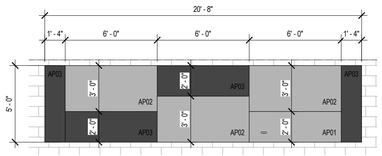
8 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN (GYM)
1/4" = 1'-0"



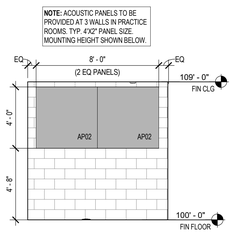
7 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN (GYM)
1/4" = 1'-0"



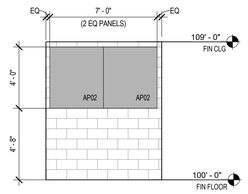
6 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN
1/4" = 1'-0"



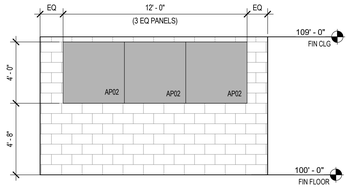
5 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN (GYM)
1/4" = 1'-0"



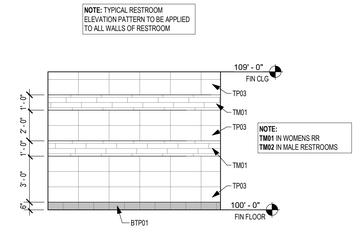
4 INT ELEVATION - TYP. PRACTICE ROOM
1/4" = 1'-0"



3 INT ELEVATION - PRACTICE ROOM
1/4" = 1'-0"



2 INTERIOR ELEVATION - PRACTICE ROOM
1/4" = 1'-0"



1 INT ELEVATION - TYPICAL RESTROOM
1/4" = 1'-0"

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INTERIOR ELEVATIONS

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Drawn By: CS
Date: 04.02.2025
Sheet No. 100% QC A4.19

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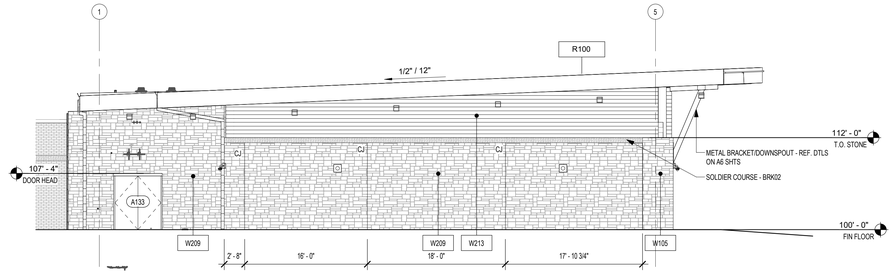
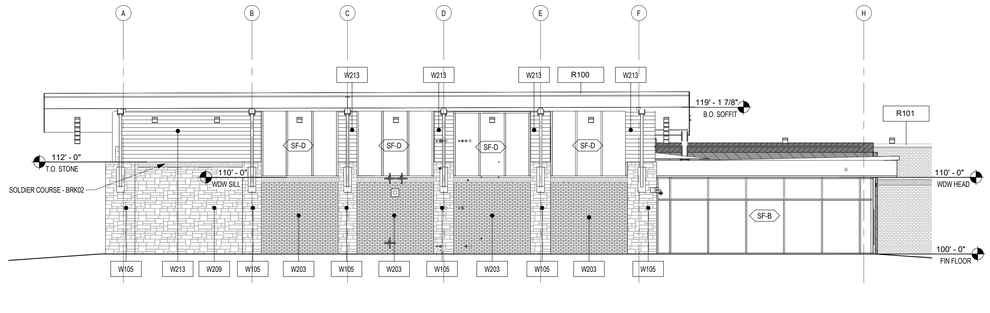
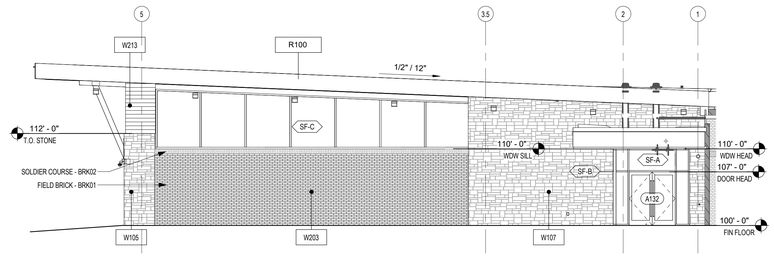


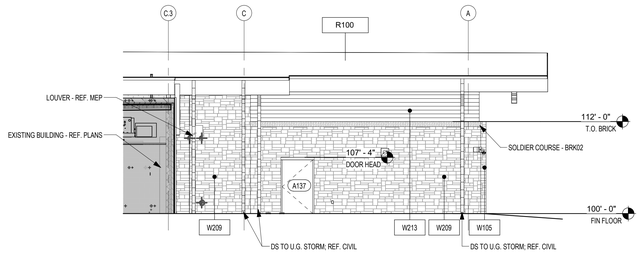
4 BAND HALL - WEST ELEVATION
1/8" = 1'-0"



3 BAND HALL - SOUTH ELEVATION
1/8" = 1'-0"



2 BAND HALL - EAST ELEVATION
1/8" = 1'-0"



1 BAND HALL - NORTH ELEVATION
1/8" = 1'-0"

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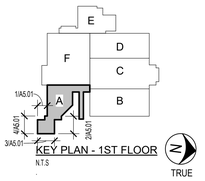

EXTERIOR ELEVATIONS

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Drawn By: CS	
Date: 04.02.2025	

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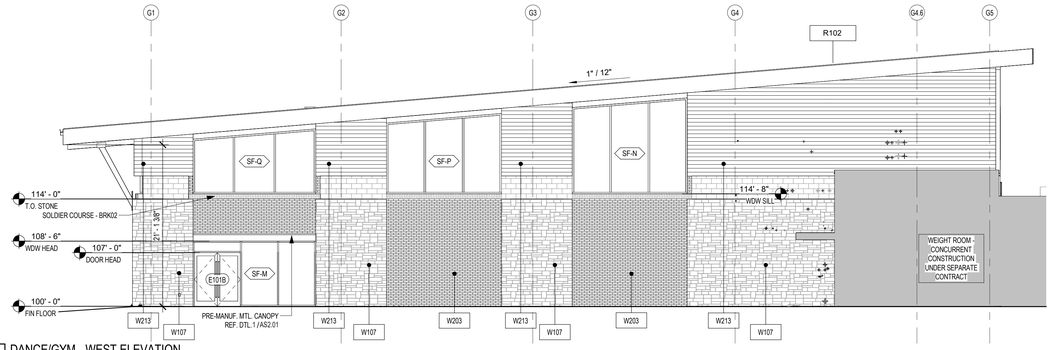
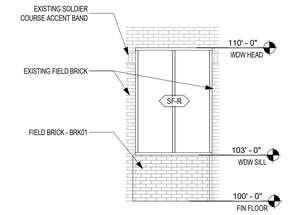
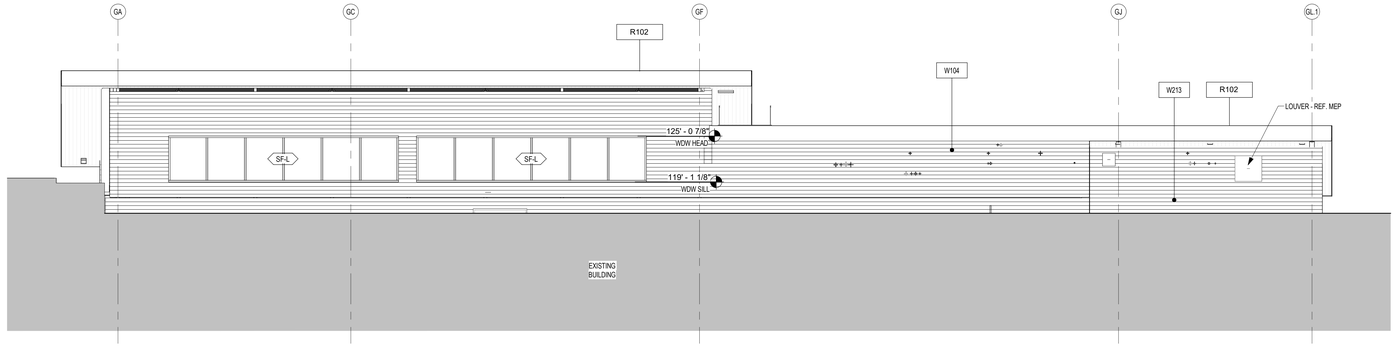


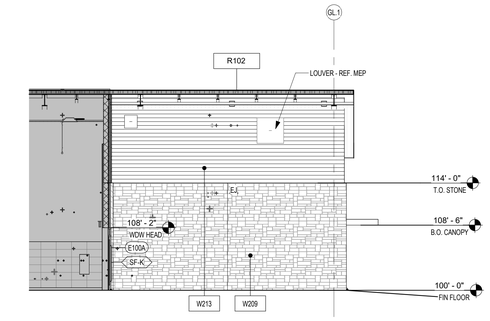
6 DANCE/GYM - WEST ELEVATION
1/8" = 1'-0"



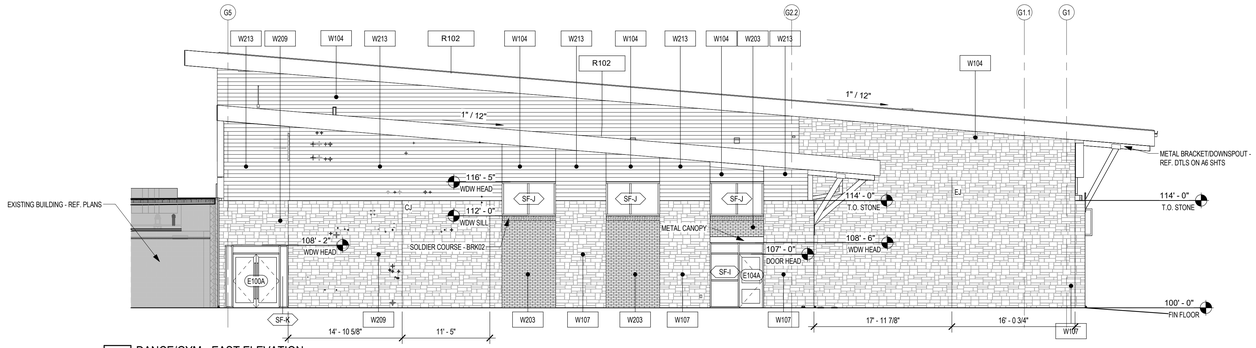
5 ENLARGED EXTERIOR ELEVATION - NEW WINDOW
1/4" = 1'-0"



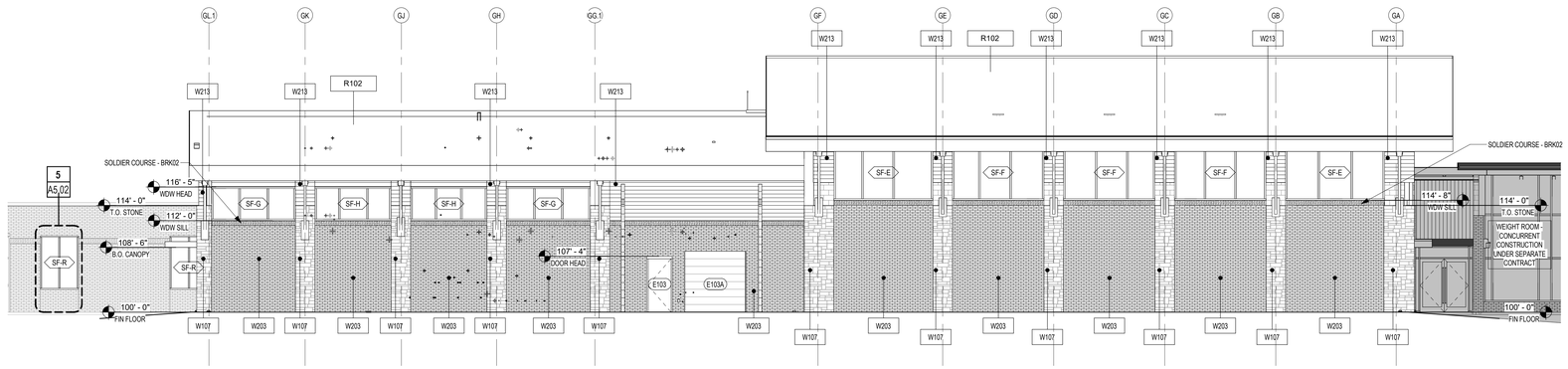
3 DANCE/GYM - SOUTH ELEVATION 01
1/8" = 1'-0"



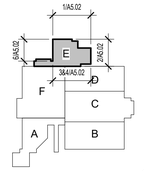
4 DANCE/GYM - SOUTH ELEVATION 02
1/8" = 1'-0"



2 DANCE/GYM - EAST ELEVATION
1/8" = 1'-0"



1 DANCE/GYM - NORTH ELEVATION
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

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KINGWOOD, TX

Revision / Date



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EXTERIOR ELEVATIONS

Job No.	Sheet No.
1821-13-01	100% DC
Drawn By: CS	A5.02
Date: 04.02.2025	

10/27/2023 3:39:23 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO\1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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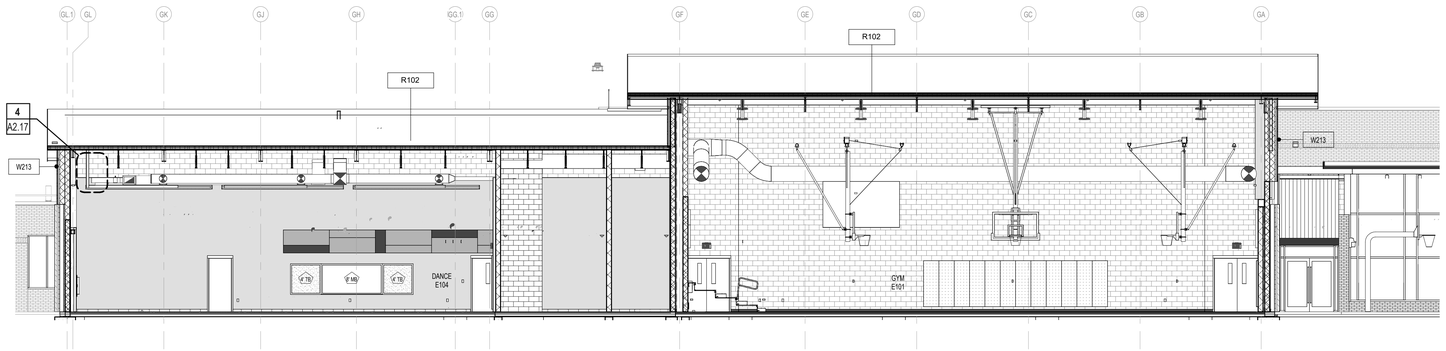
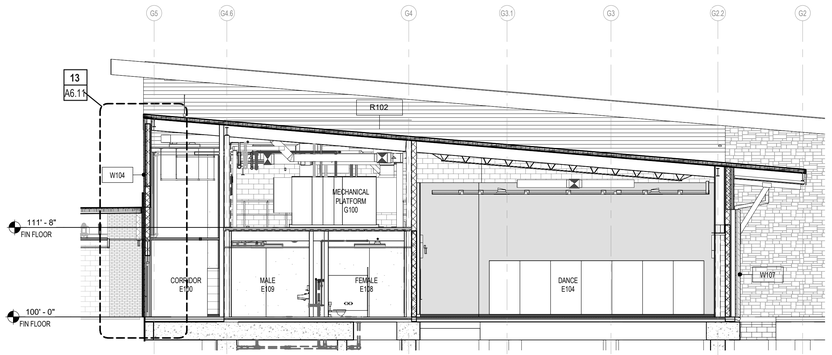
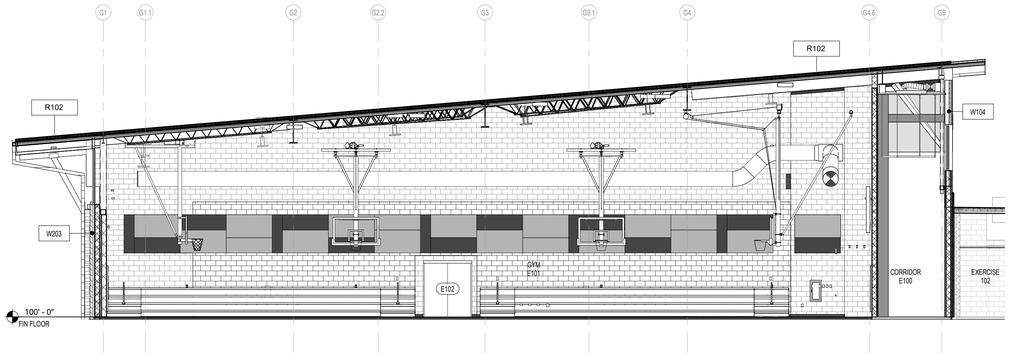


5 BUILDING SECTION - GYM/DANCE
1/8" = 1'-0"



4 BUILDING SECTION - GYM/DANCE
1/8" = 1'-0"



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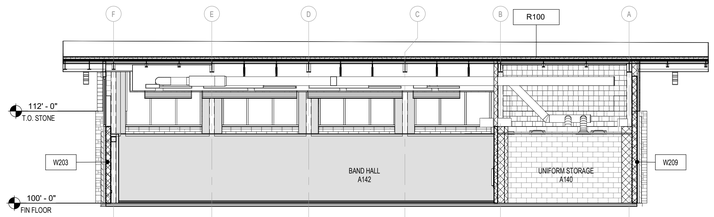
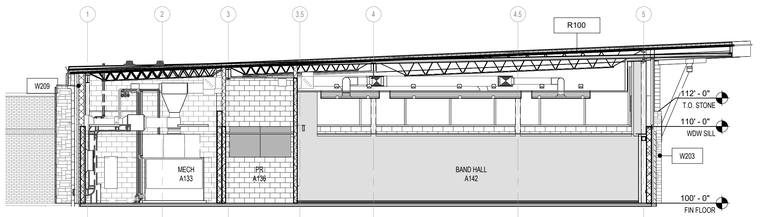
1/8" = 1'-0"



2 BUILDING SECTION - BAND HALL
1/8" = 1'-0"



1 BUILDING SECTION - BAND HALL
1/8" = 1'-0"

1) REFER ALSO TO G3 SHTS FOR WALL CONSTRUCTION DETAILS. TYPICAL DETAILS APPLY, AS NEEDED, TO ALL WALL SECTIONS U.N.O.

2) REINFORCING IN CONCRETE BEAMS, FOOTINGS, & PIERS HAS NOT BEEN INDICATED FOR CLARITY. REFER TO STRUCTURAL DRAWINGS FOR THIS REINFORCING.

3) CONTRACTOR SHALL VERIFY THE DIMENSIONAL CONDITIONS BETWEEN ALL STRUCTURAL ELEMENTS & THE ARCHITECTURAL ELEMENTS FOR CONFLICTS. IF DISCREPANCIES ARE ENCOUNTERED, NOTIFY THE ARCHITECT IMMEDIATELY.

4) AT ALL EXTERIOR WALLS, PLACE WEATHER BARRIER AT THE EXTERIOR FACE OF CMU OR SHEATHING. CONTRACTOR TO VERIFY CHEMICAL COMPATIBILITY OF WEATHER BARRIER & SELF-ADHESIVE FLASHING.

5) PROVIDE 3 STACKED BRICK HEADERS OR ONE SOLID BRICK AT ALL SOLDIER OUTSIDE CORNERS. (4"X4"X3 5/8")

6) PROVIDE A WEATHERED MORTAR JOINT AT ALL EXTERIOR CONDITIONS WHERE THE MASONRY COURSE BELOW THE JOINT PROJECTS BEYOND THE COURSE ABOVE.

7) WHERE CMU IS SHOWN SHADED, FILL CELL SOLID WITH GROUT UNLESS NOTED IN DETAILS AS MORTAR. COORDINATE ALL LOCATIONS WITH STRUCTURAL DRAWINGS.
IN CASES OF APPARENT CONFLICT, STRUCTURAL DRAWINGS SHALL GOVERN DESIGN. GROUT

8) FILL ALL OPEN CELLS OF CMU SOLID WITH FOAM INSULATION. AT ALL EXTERIOR CONDITIONS WHERE RIGID INSULATION IS NOT APPLIED IN THE CAVITY WALL.

9) PROVIDE THERMAL BATT INSULATION AT ALL EXTERIOR STUD WALLS & ACOUSTICAL BATT INSULLATION AT INTERIOR STUD WALLS AS DESCRIBED IN SECTION 07 21 00 OF THE SPECIFICATIONS.

10) REFER TO STRUCTURAL DRAWINGS FOR VERTICAL WALL REINFORCING.

11) ALL MASONRY WALLS SHALL BE REINFORCED WITH CONTINUOUS HORIZONTAL BED JOINT REINFORCING AS SPECIFIED, AT 16" VERTICAL SPACING. AT VENEER CONDITIONS PROVIDE TIES AS SPECIFIED AT 16" O.C.E.W.

12) INFORMATION SHOWN BEYOND IN WALL SECTIONS IS PROVIDED FOR INFORMATION ONLY & SHALL NOT LIMIT THE SCOPE OF WORK REQUIRED IN THIS PROJECT.

13) SMALLER SCALE DRAWINGS MAY NOT SHOW ALL CONNECTIONS & FINISHES. ALWAYS REFER TO ENLARGED DETAILS, WHERE PROVIDED, FOR ADDITIONAL INFORMATION. IN CASES OF APPARENT CONFLICT, THE LARGER SCALED DETAIL SHALL APPLY.

14) INTERIOR WALL FINISHES ARE NOT SHOWN ON WALL SECTIONS TO AVOID VISUAL CLUTTER. REFER TO A4 SHEETS FINISH SCHED & INTERIOR ELEVATIONS FOR REQUIRED MATERIALS & MATERIAL PATTERNS.

TYPICAL WALL SECTION NOTES

APPLICABLE TO ALL A6 SHEETS

LETTER INDICATES EXTERIOR WALL

W200 — WALL ASSEMBLY IN SECTION VIEW

NUMBER INDICATES BACKUP CONSTRUCTION AS FOLLOWS:
- **100** - CFMF
- **200** - CMU
- **300** - ICF
- **400** - STRUCTURAL CONC. PRECAST PANEL

REF. SHT. G3.01 FOR SPECIFIC WALL TYPES

EXTERIOR WALL TYPE LEGEND

LETTER INDICATES TYPE

NUMBER INDICATES CONSTRUCTION AS FOLLOWS:

- **R100** - BUILT-UP, INSUL., MTL. DECK
- **R101** - BUILT-UP, INSUL., MTL. DECK
- **R102** - SINGLE PLY, INSUL., MTL. DECK
- **R103** - SINGLE PLY, INSUL., MTL. DECK
- **R104** - STANDING SEAM, 3/4" TREATED PW SHEATHING, INSUL., MTL. DECK
- **R105** - STANDING SEAM, 3/4" TREATED PW SHEATHING, INSUL., MTL. DECK
- **R106** - BUILT-UP, INSUL., CONC. DECK
- **R107** - SINGLE-PLY, INSUL., CONC. DECK

REF. SHT. G3.01 FOR ROOF CONSTRUCTION TYPES

R100 — ROOF ASSEMBLY IN SECTION VIEW

ROOF TYPE LEGEND

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CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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SUSAN F. WISH
TX 24614
REGISTERED ARCHITECT
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BUILDING SECTIONS

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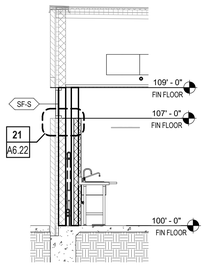
REFER TO OTHER A6 SHEETS FOR COMPLETE TYPICAL WALL SECTION NOTES.

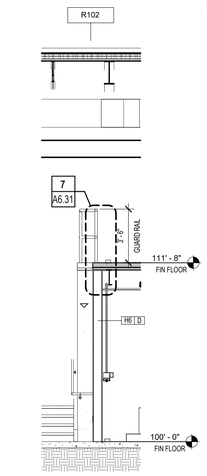
TYPICAL WALL SECTION NOTES APPLY TO ALL WALL SECTIONS UNLESS NOTED OTHERWISE.

APPLICABLE TO ALL A6 SHEETS

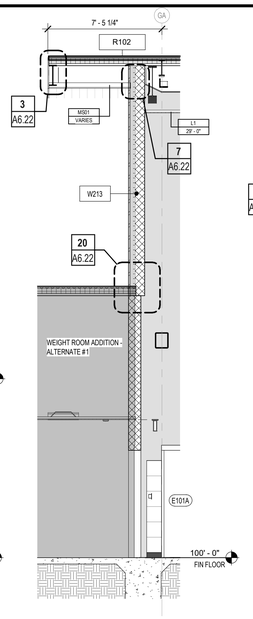
TYPICAL WALL SECTION NOTES



26 WALL SECTION - CULINARY
1/4" = 1'-0"



25 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



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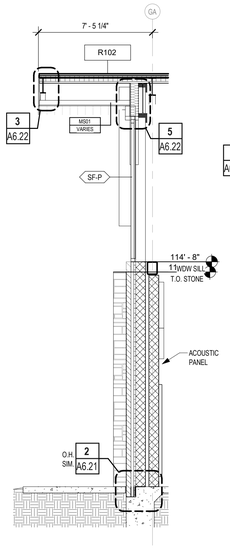

23 WALL SECTION - DANCE/GYM
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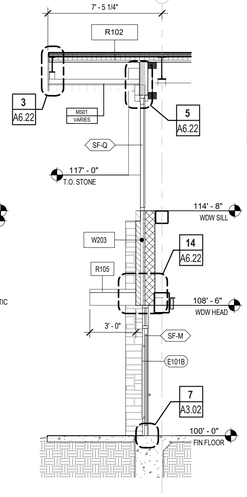

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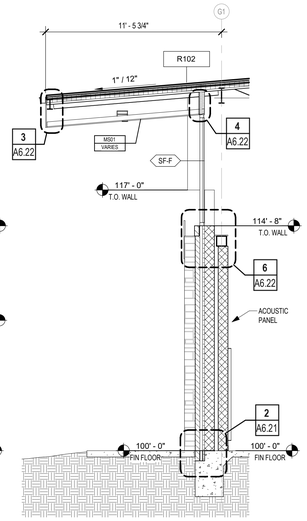
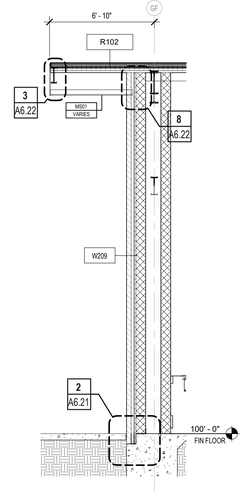
1/4" = 1'-0"



21 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



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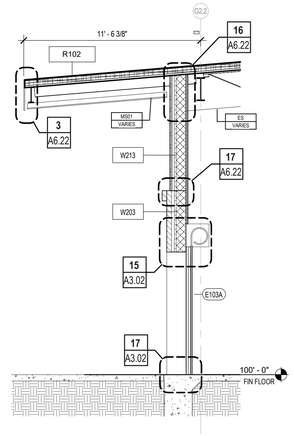
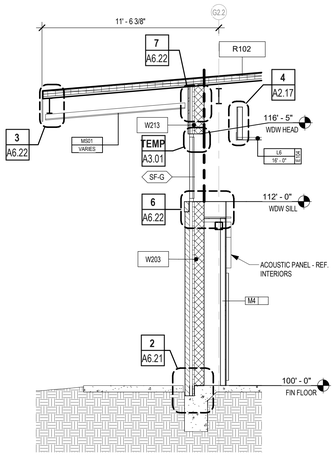
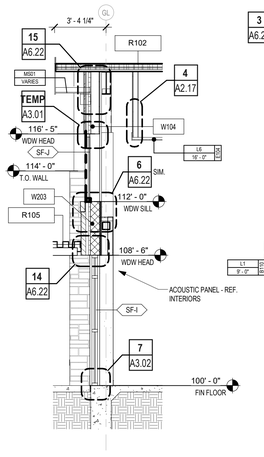


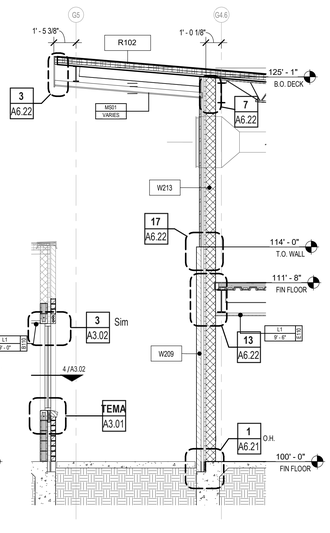
19 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



17 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



16 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



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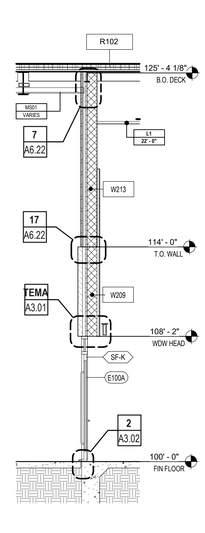
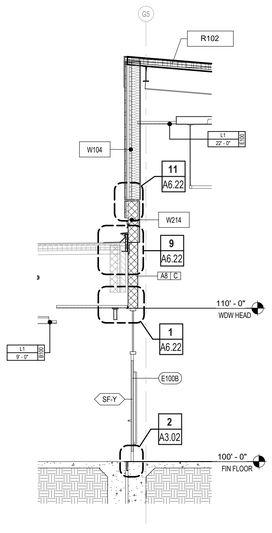
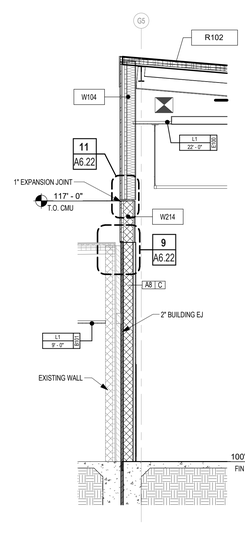
1/4" = 1'-0"



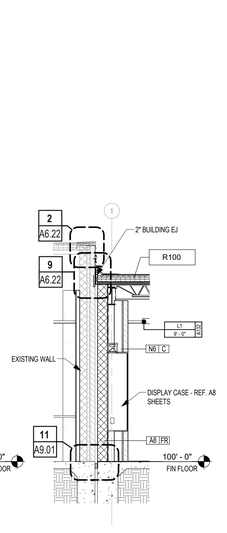
14 DANCE/GYM - WALL SECTION 03
1/4" = 1'-0"



13 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



12 WALL SECTION - BAND HALL
1/4" = 1'-0"



11 WALL SECTION - BAND HALL
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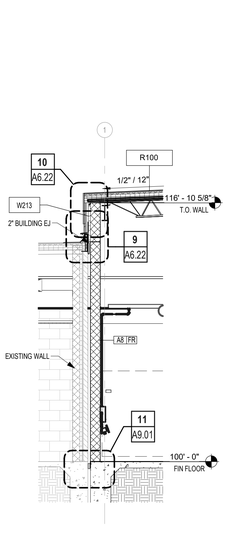

9 WALL SECTION - BAND HALL
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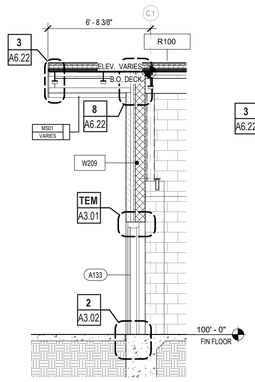
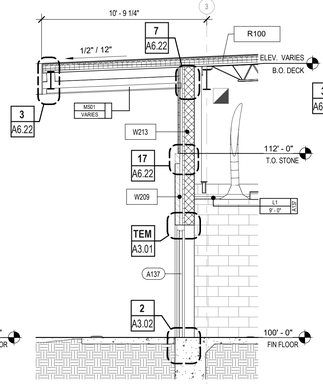


8 WALL SECTION - BAND HALL
1/4" = 1'-0"



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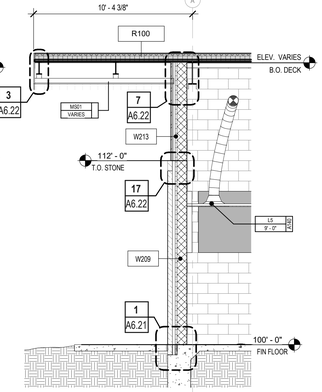
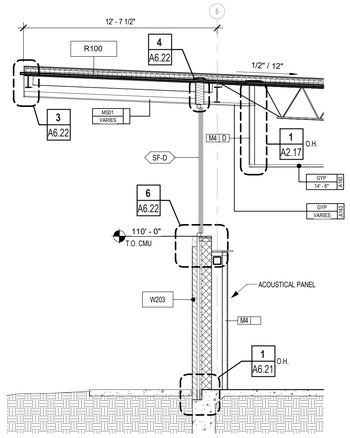


6 WALL SECTION - BAND HALL
1/4" = 1'-0"



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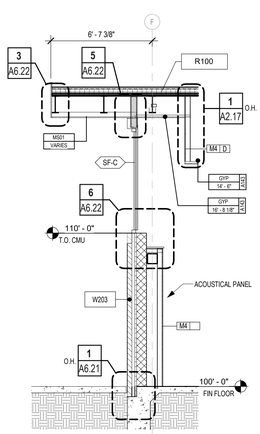
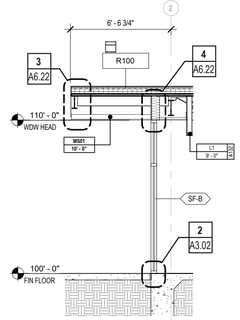
1/4" = 1'-0"



4 WALL SECTION - BAND HALL
1/4" = 1'-0"



3 WALL SECTION - BAND HALL
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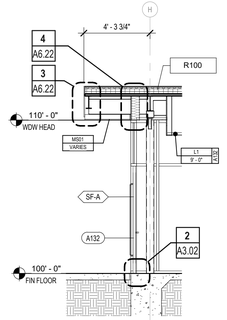
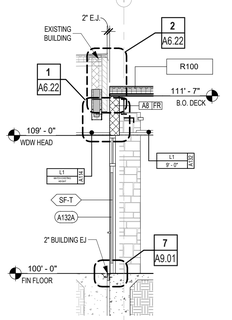


2 WALL SECTION - BAND HALL
1/4" = 1'-0"



1 WALL SECTION - BAND HALL
1/4" = 1'-0"

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

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REGISTERED ARCHITECT SUSAN F. WISH TX 24614 STATE OF TEXAS
10/24/2025

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WALL SECTIONS

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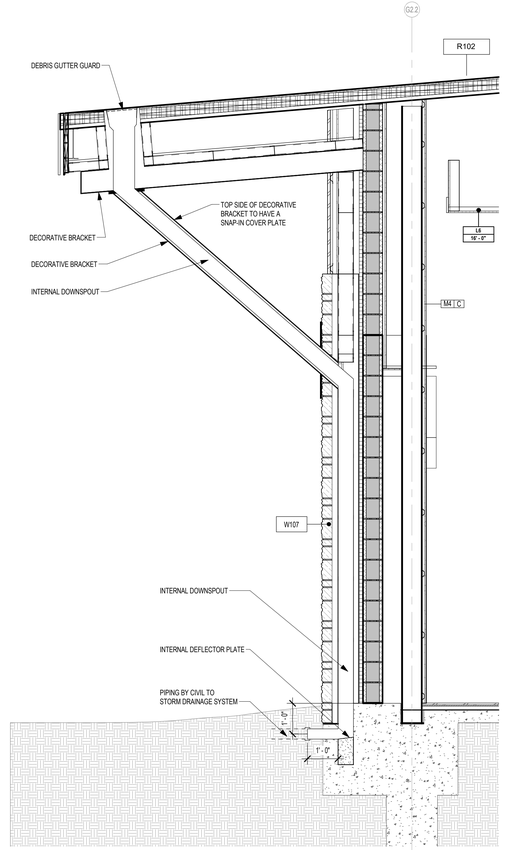

1 WALL SECTION - DOWNSPOUT/BRACKET
1/2" = 1'-0"

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REGISTERED ARCHITECT
SUSAN F. WISH
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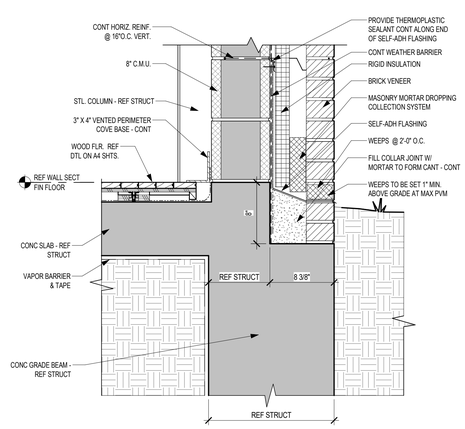
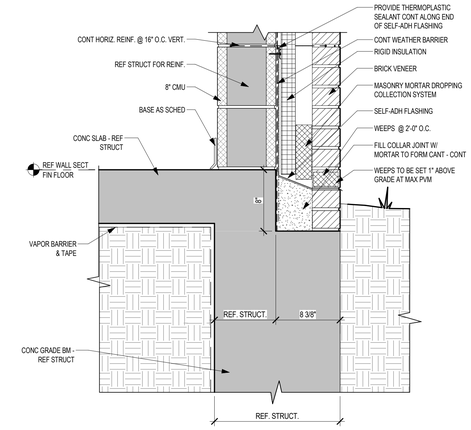


2 FOUNDATION DETAIL @ WOOD FLR. @ GROUND FACE CMU LEDGE & CMU WALL
1 1/2" = 1'-0"



1 FOUNDATION DETAIL @ BRICK LEDGE & CMU WALL
1 1/2" = 1'-0"

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FOUNDATION DETAILS

Job No. 1821-13-01	**Sheet No.** 100% QC A6.21
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KINGWOOD, TX

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WALL SECTION DETAILS

Job No.	Sheet No.
1821-1301	A6.22
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Date:	
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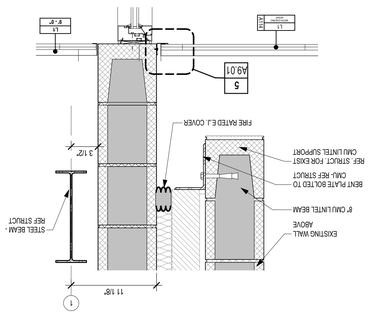
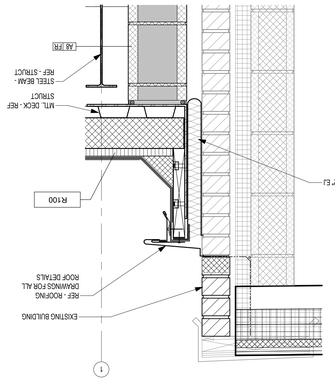
10/24/2025
SUSAN F. WIPFF
TX 24614
REGISTERED ARCHITECT
STATE OF TEXAS

10/27/2025 3:39:39 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD/RENO/1821-1301_CREEKWOOD MS ADDITION & RENOVATIONS - V22.rvt

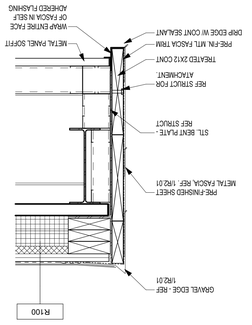
1 WALL SECTION DETAIL - WDW HEAD @ FIREWALL
1 1/2" = 1'-0" BACK REF: A3.03



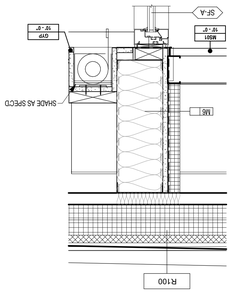
2 WALL SECTION DETAIL - LOW ROOF @ FIREWALL
1 1/2" = 1'-0" BACK REF: A6.11



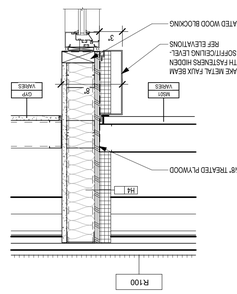
3 WALL SECTION DETAIL - SOFFIT/FASCIA
1 1/2" = 1'-0" BACK REF: A6.11



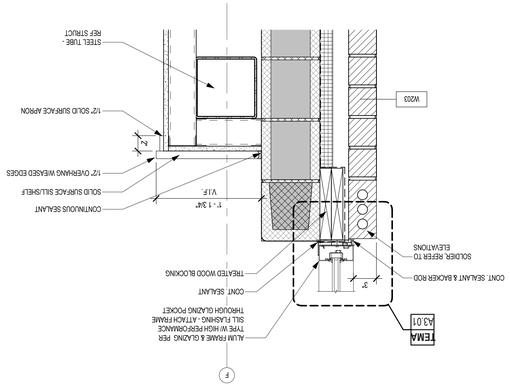
4 WALL SECTION DETAIL - STOREFRONT HEAD
1 1/2" = 1'-0" BACK REF: A3.03



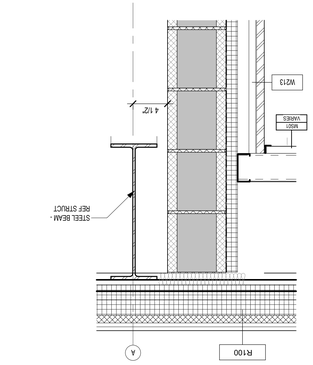
5 WALL SECTION DETAIL - SF HEAD
1 1/2" = 1'-0" BACK REF: A3.03



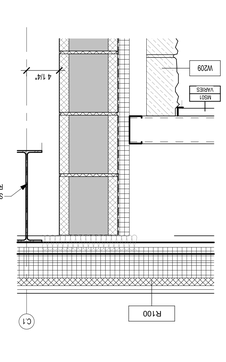
6 WALL SECTION DETAIL - SF SILL @ FURROUT
1 1/2" = 1'-0" BACK REF: A6.11



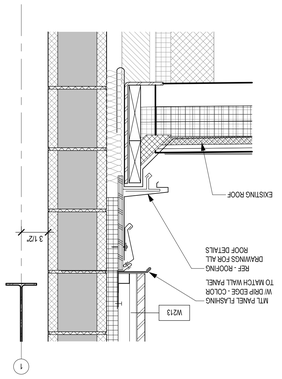
7 WALL SECTION DETAIL - SOFFIT TO WALL - CMU
1 1/2" = 1'-0" BACK REF: A6.11



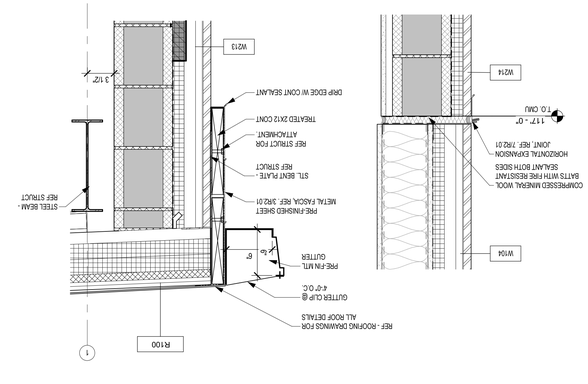
8 WALL SECTION DETAIL - SOFFIT TO STONE
1 1/2" = 1'-0" BACK REF: A6.11



9 WALL SECTION DETAIL - METAL PANEL TO EXIST ROOF
1 1/2" = 1'-0" BACK REF: A6.11

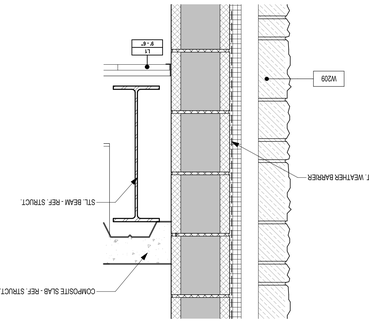


10 WALL SECTION DETAIL - FIREWALL TO ROOF
1 1/2" = 1'-0" BACK REF: A6.11

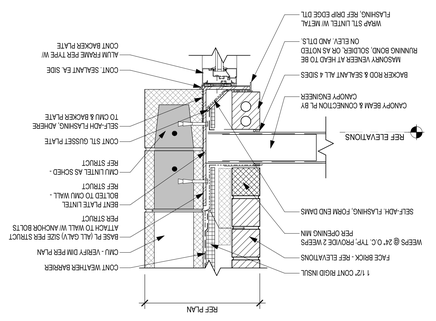


11 WALL SECTION DETAIL - HORIZ. EJ
1 1/2" = 1'-0" BACK REF: A6.11

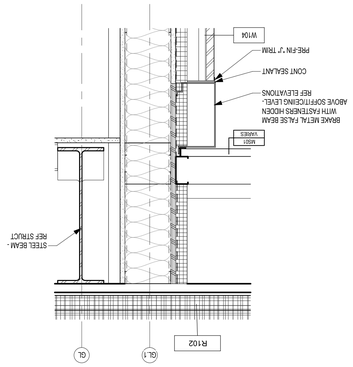
13 WALL SECTION DETAIL - CEILING TO CMU
1 1/2" = 1'-0" BACK REF: A6.11



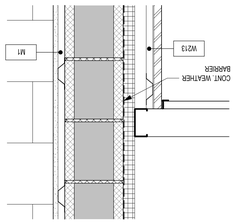
14 CANOPY DETAIL
1 1/2" = 1'-0"



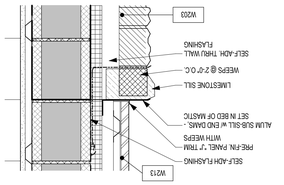
15 WALL SECTION DETAIL - SOFFIT TO WALL FALSE BEAM
1 1/2" = 1'-0" BACK REF: A6.11



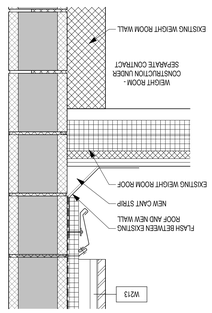
16 WALL SECTION DETAIL - WALL TO SOFFIT - CFMF
1 1/2" = 1'-0" BACK REF: A6.11



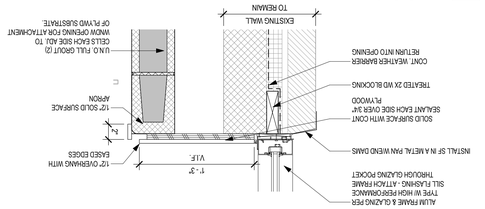
17 WALL SECTION DETAIL - MTL PANEL_STONE @ CFMF
1 1/2" = 1'-0" BACK REF: A6.11



20 WALL SECTION DETAIL - LOW ROOF TO WALL - CMU
1 1/2" = 1'-0" BACK REF: A6.11



21 WALL SECTION DETAIL - CULINARY SILL
1 1/2" = 1'-0" BACK REF: A6.11



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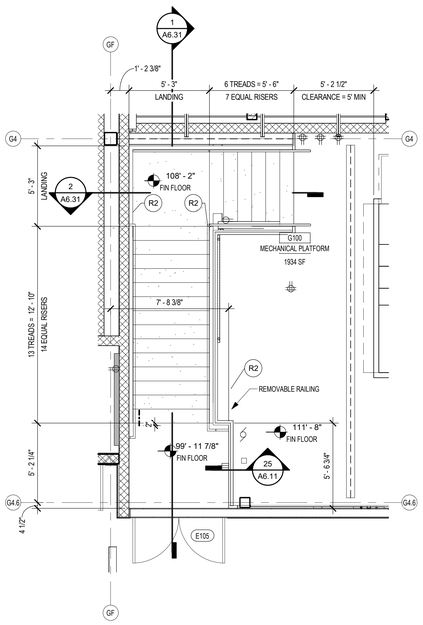
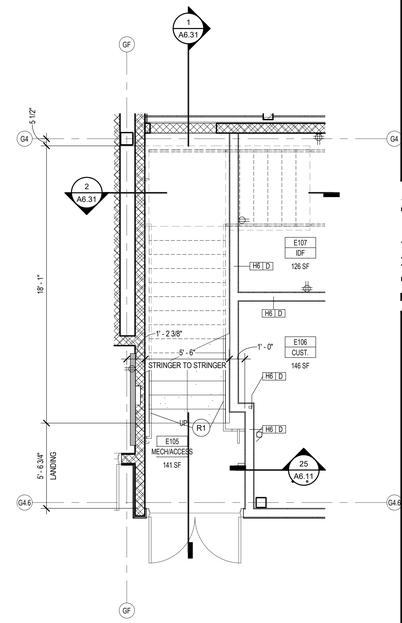
R1 METAL PIPE HANDRAIL - FREE STANDING - 3' - 0" HIGH
R2 METAL PIPE GUARDRAIL - FREE STANDING - 3' - 6" HIGH - NO HANDRAIL.

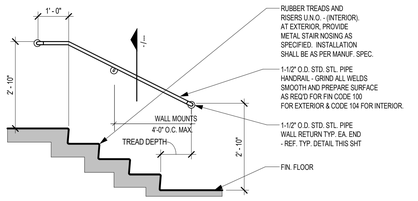
RAILING TYPE LEGEND



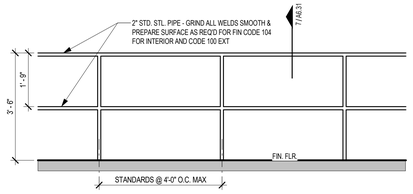
10 ENLARGED STAIR PLAN - SECTION G
1/4" = 1'-0" BACK REF: A1.15



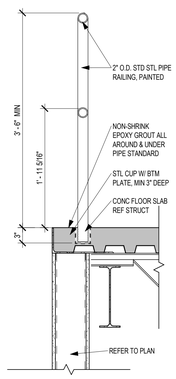
9 ENLARGED STAIR PLAN - SECTION E
1/4" = 1'-0" BACK REF: A1.15



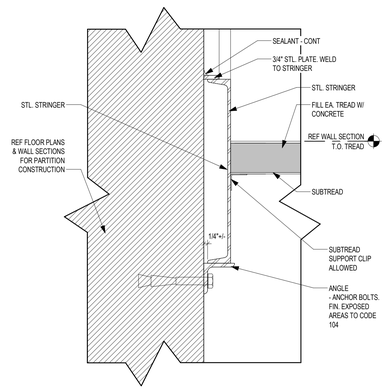
11 R1 - RAIL ELEVATION
1/2" = 1'-0"



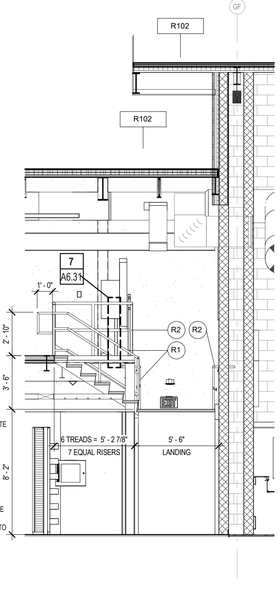
8 R2 - RAIL ELEVATION
1/2" = 1'-0"



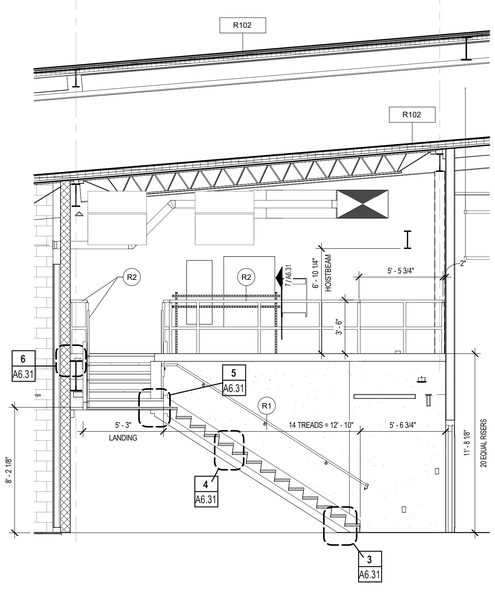
7 EDGE OF MEZZ GUARDRAIL - INSERTS
1" = 1'-0"



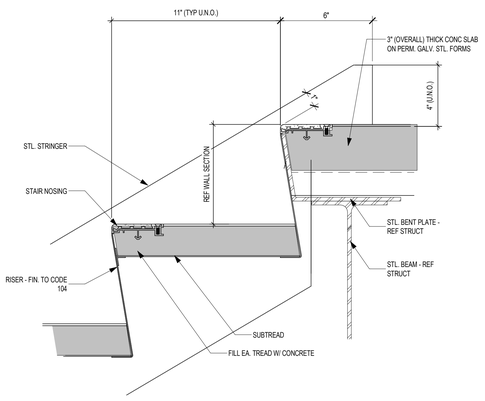
6 TYPICAL STAIR STRINGER DETAIL
3" = 1'-0"



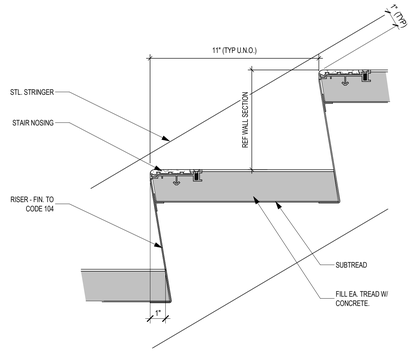
2 STAIR SECTION 02
1/4" = 1'-0"



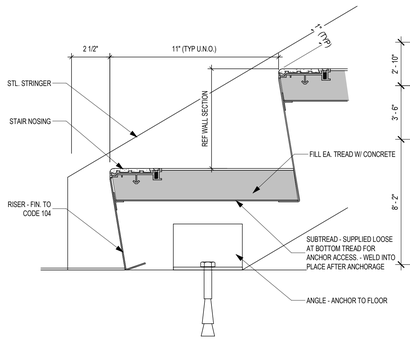
1 STAIR SECTION 01
1/4" = 1'-0"



5 TPICAL EGRESS STAIR RISER AND TREAD DETAIL
3" = 1'-0"



4 TYPICAL RISER AND TREAD DETAIL
3" = 1'-0"



3 TYPICAL BOTTOM RISER AND TREAD DETAIL
3" = 1'-0"

Date
Revision /

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT SUSAN E. WISE 24614 STATE OF TEXAS 10/24/2025

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STAIR SECTIONS, STAIR AND RAILING DETAILS

Job No.	Sheet No.
1821-13-01	100% DC
Drawn By: CS	A6.31
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOVI1821-13-01 - CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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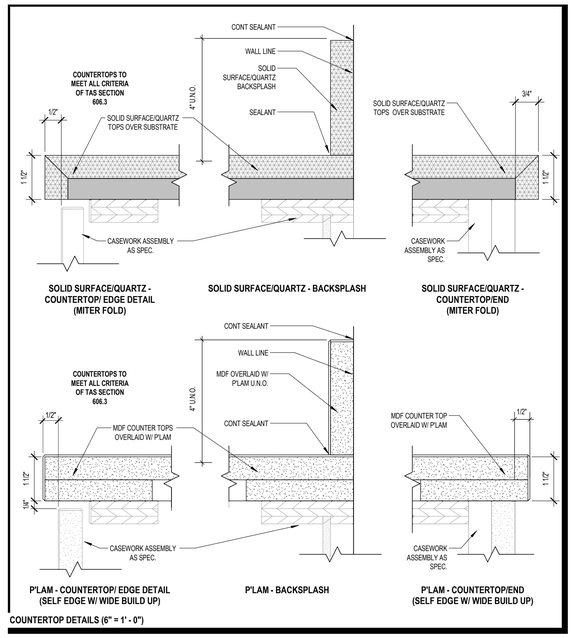
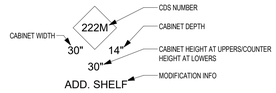


COUNTERTOP DETAILS (6" = 1' - 0")



ALL CASEWORK INDICATED WITH NUMERICAL TAGS REFER TO THE NORTH AMERICAN ARCHITECTURAL WOODWORK STANDARDS 4.0 CABINET DESIGN SERIES, WHICH IS A SET OF DESIGN STANDARDS PROVIDED AS A FREE RESOURCE TO ASSIST ARCHITECTS, DESIGN PROFESSIONALS AND CASEWORK USERS IN DESIGNING CABINETRY. ANY ITEMS DESIGNATED WITH A "M" AT THE END OF THE NUMBER INDICATES A MODIFICATION HAS BEEN MADE TO THAT UNIT AND THE MODIFICATION WILL APPEAR BELOW THE TAG.

CABINET DIMENSIONS INDICATE NOMINAL OUTSIDE DIMENSION (FLOOR TO TOP OF COUNTERTOP FOR HEIGHT AND FACE OF FINISHED WALL TO FACE OF CABINET DOOR FOR DEPTH.) MANUFACTURERS ARE PERMITED A TOLERANCE OF +/- 1/2" IN WIDTH ONLY.

THERE ARE 5 SERIES OF CABINET STYLES:

100 SERIES = BASE CABINETS W/OUT DRAWERS
200 SERIES = BASE CABINETS W/ DRAWERS
300 SERIES = WALL HUNG CABINETS
400 SERIES = TALL STORAGE CABINETS
500 SERIES = TALL WARDROBE CABINETS

CASEWORK TYPE TAGS

1. COORDINATE DIMENSIONS AND CLEARANCE REQUIREMENTS FOR ALL FILE CABINETS, APPLIANCES AND EQUIPMENT PROVIDED BY CONTRACTOR AND/OR OWNER.

2. COORDINATE PLUMBING AND/OR ELECTRICAL REQUIREMENTS FOR APPLIANCES AND EQUIPMENT WITH CASEWORK.

3. PROVIDE TRIM AND FILLER PANELS WHERE EQUIPMENT IS LOCATED WITHIN CABINET UNITS.

4. COUNTERTOPS TO MEET THE CRITERIA PER TAS SECTION 606.3. LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE HIGHER OF THE RIM OR COUNTER SURFACE 34 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.

5. CONTINUE COUNTERTOP BACKSPLASH TO SIDEWALLS WHERE SUCH CONDITIONS OCCUR, UNLESS NOTED OTHERWISE.

6. PROVIDE CABINET LOCKS AT ALL DOORS AND DRAWERS LOCATED WITHIN RECEPTION, CLINC, AND AT TEACHER CABINETS WITHIN CLASSROOMS.

7. PROVIDE STAMPED NUMBER ON CYLINDER LOCK FACE. COORDINATE NUMBERING REQUIREMENT WITH ARCHITECT.

8. PROVIDE COUNTERTOP SUPPORT BRACKETS AT 36" O.C. MAX. AT KNEE SPACES AND LAVATORY COUNTERS, UNLESS NOTED OTHERWISE.

9. PROVIDE 2" DIA. GROMMETS AT ALL WORKSTATIONS WITH KNEE SPACES AND WHERE ACCESS TO POWER AND/OR LOW VOLTAGE IS NEEDED. COORDINATE FINAL LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

10. PROVIDE BOTTOM CLOSURE FOR FILLER PANELS AT TOE SPACE AND TOP AND BOTTOM OF UPPER WALL CABINETS TO FINISH COMPLETELY.

11. EXPOSED CORNERS AT PLASTIC LAMINATE COUNTERTOPS TO HAVE 1" RADIUS CORNERS. EXPOSED CORNERS AT QUARTZ/SOLID SURFACE COUNTERTOPS TO HAVE 1/2" RADIUS CORNERS. EXCLUDES WATERFALL COUNTERTOP CONDITIONS.

12. PROVIDE WALL BASE FOR RECESSED TOE-KICKS AND BACK OF KNEE SPACE(S) UNLESS NOTED OTHERWISE.

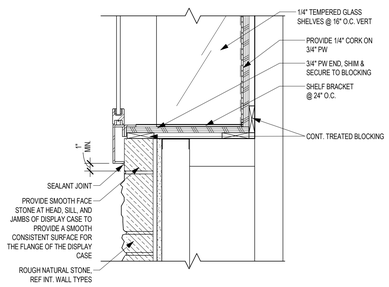
13. MILLWORK SHALL BE CAULKED TO WALLS.

14. CLOSE TOP AND BOTTOM VOIDS BETWEEN CORNER CABINETS AND FILLER PANELS WHERE BLIND CORNERS ARE NOT USED.

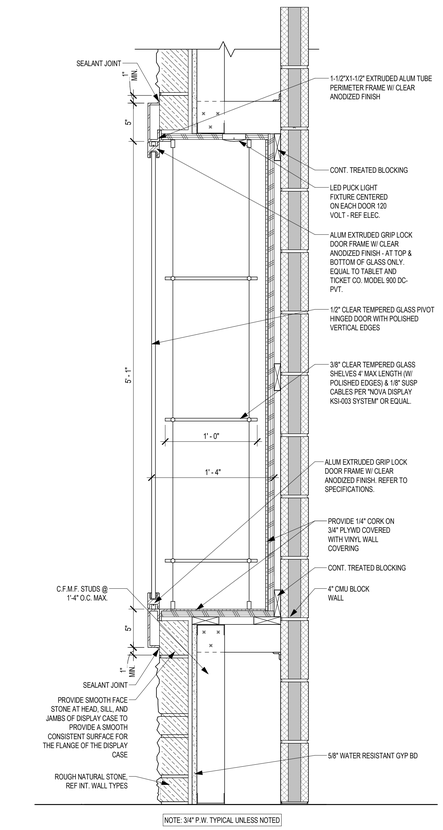
15. SPLICES ARE NOT PERMITTED ON COUNTERTOP LAMINATE MATERIAL LESS THAN 144" LONG.

16. ENSURE FILE DRAWERS ACCOMODATE 8 1/2"x11" PENDAFLEX HANGING FILES WITH TABS FRONT TO REAR, TYP.

GENERAL CASEWORK NOTES

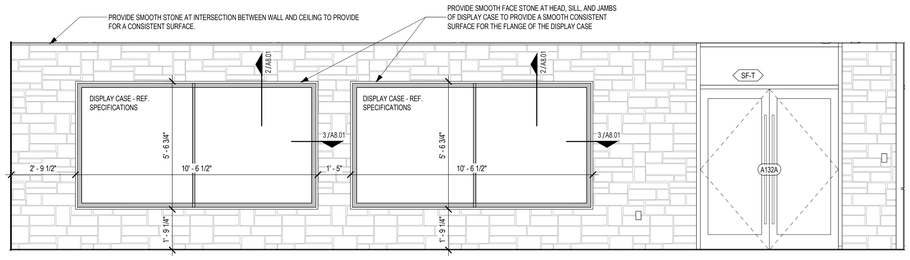


3 DISPLAY CASE JAMB
1 1/2" = 1'-0"



NOTE: 3/4" P.W. TYPICAL UNLESS NOTED

2 DISPLAY CASE 16" @ GYP WALL
1 1/2" = 1'-0"



1 INTERIOR ELEVATION - LOBBY A132
3/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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CASEWORK LEGENDS AND ELEVATIONS

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A8.01
Date: 04.02.2025	

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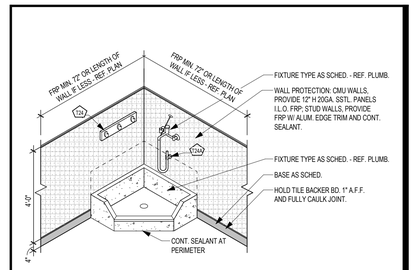
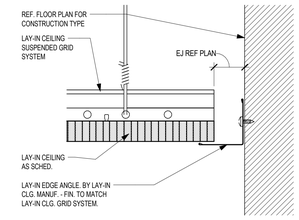
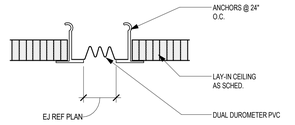


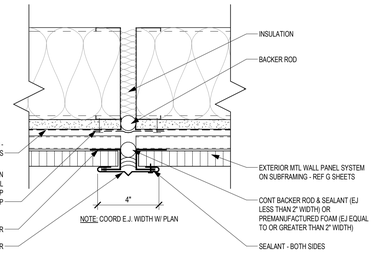
MS - MOP SINK



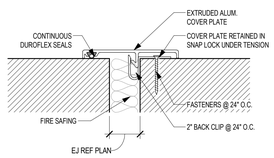
5 ACOUSTICAL CEILING TO WALL BLDG E.J.
6" = 1'-0"



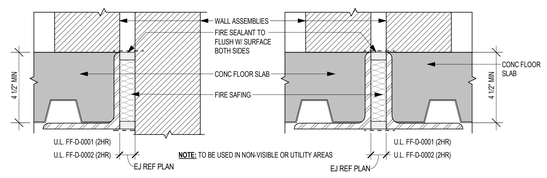
4 ACOUSTICAL CEILING TO CEILING BLDG E.J.
6" = 1'-0"



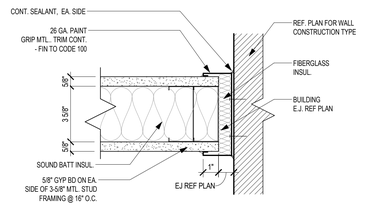
12 WALL TO WALL BLDG EXPANSION JOINT @ MTL. WALL PANEL
3" = 1'-0"



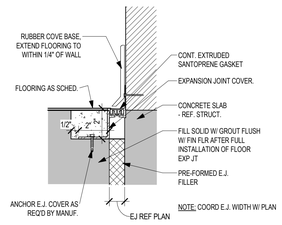
13 WALL TO WALL BLDG E.J. COVER (INTERIOR)
6" = 1'-0"



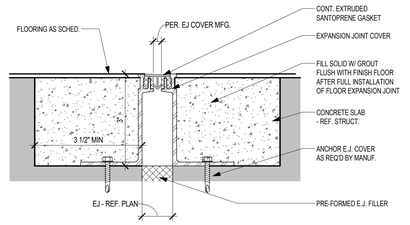
11 FLOOR E.J. RATED - HIDDEN LOCATIONS
3" = 1'-0"



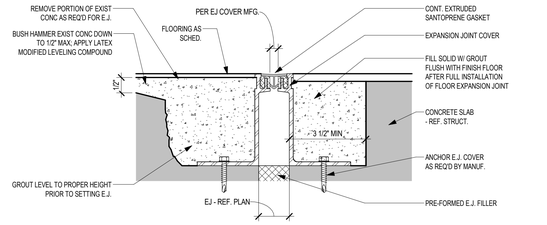
10 PLAN DETAIL @ BLDG E.J.
3" = 1'-0"



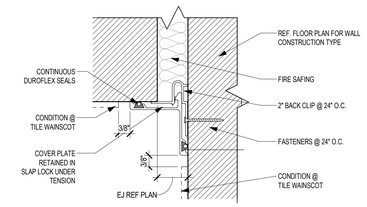
9 FLOOR TO WALL BLDG E.J. DETAIL
3" = 1'-0"



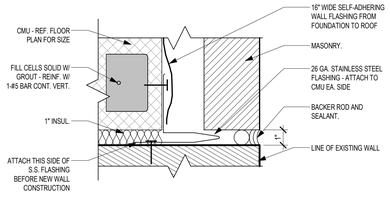
8 FLOOR TO FLOOR BLDG E.J. COVER
6" = 1'-0"



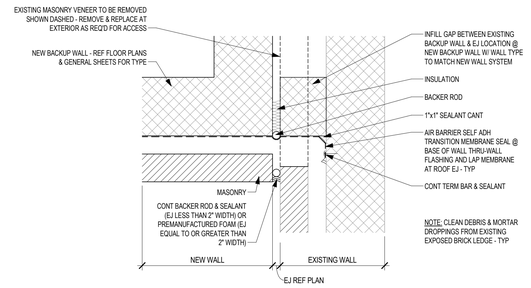
7 FLOOR TO FLOOR BLDG E.J. COVER @ EXISTING TO NEW SLAB TRANSITION
6" = 1'-0"



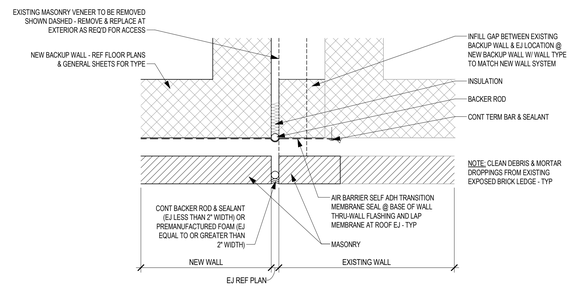
6 BLDG E.J. @ WALL TO WALL CORNER (INTERIOR)
6" = 1'-0"



3 WALL TO WALL BUILDING E.J. @ EXISTING WALL
3" = 1'-0"



2 TYP BLDG E.J. @ NEW BRICK WALL TO EXIST WALL - PERPENDICULAR
1 1/2" = 1'-0"



1 TYP BLDG E.J. @ NEW BRICK WALL TO EXIST WALL - PARALLEL
1 1/2" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT SUSAN F. WIRA 24611 STATE OF TEXAS
10/24/2025

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EXPANSION JOINT AND MISC DETAILS

Job No.	Sheet No.
1821-13-01	100% QC
Drawn By: CS	A9.01
Date: 04.02.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - V23.rvt

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EXISTING EQUIPMENT NOTES (IF EXISTING EQUIPMENT IS PROVIDED IN THIS PROJECT):

1. EXISTING EQUIPMENT NOT SCHEDULED FOR RE-USE TO BE RELOCATED BY THE K.E.C. COORDINATE WITH OWNER FOR NEW LOCATION.
2. ALL UTILITIES NOT SCHEDULED FOR RE-USE TO BE CAPPED & COVERED BY REQUIRED DISCIPLINE.
3. K.E.C. TO VERIFY ALL EXISTING UTILITY LOCATIONS & COORDINATE WITH ALL EQUIPMENT AS REQUIRED.

8 EXISTING EQUIPMENT NOTES2
NOT TO SCALE

ARCHITECT TO VERIFY/COORDINATE THE AESTHETIC OPTIONS BELOW (FOOD SERVICE COLOR, MATERIAL, OR SIGNAGE SELECTIONS) IF THESE ITEMS ARE PROVIDED IN THIS PROJECT:

1. COUNTERTOPS: STONE (STAINLESS STEEL IS PROVIDED UNLESS OTHERWISE SPECIFIED).
2. TRAY SLIDES: CORIAN OR STONE (STAINLESS STEEL IS PROVIDED UNLESS OTHERWISE SPECIFIED).
3. COUNTER FRONTS: CERAMIC TILE, 3 FORM, OR PLASTIC LAMINATE.
4. SNEEZE GUARDS: STONE INSETS.
5. GENERAL COLOR, MATERIAL AND GRAPHIC SELECTIONS:
   - A. DISPLAY AIR SCREEN MERCHANDISERS - COLOR SELECTION: POWDER COAT OR PLASTIC LAMINATE (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - B. BAKERY DISPLAY CASES - COLOR SELECTION: POWDER COAT OR PLASTIC LAMINATE (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - C. PASS THRU OR REACH IN HOLDING CABINETS - COLOR SELECTION: POWDER COAT (MFG.: TRUE) OR PLASTIC LAMINATE (MFG.: TRAULSEN) (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - D. HANGING HEAT LAMPS - TRACK AND FIXTURE COLOR SELECTION.
   - E. HEATED MERCHANDISERS.
   - F. PORTABLE GUIDE RAILS - STANCHION AND BELT COLOR SELECTION.
   - G. POPCORN MACHINE - SIGNAGE SELECTION.
   - H. BOTTLE COOLER - SIGNAGE SELECTION.
   - I. GRAPHICS PACKAGE INFORMATION.
   - J. HOT FOOD WELL COVERS.
6. ARCHITECT TO VERIFY/COORDINATE THE FINISHES BELOW:
   - A. WALLS: CERAMIC TILE, FLAT FRP, OR MOLDED FRP (SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE AS APPROVED BY LOCAL JURISDICTION).
   - B. CEILINGS: REMOVABLE VINYL FACE TILE (SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE AS APPROVED BY LOCAL JURISDICTION).
   - C. FLOORS: TILE, EPOXY, OR RUBBERIZED FLOORING SYSTEM (SMOOTH, IMPERVIOUS, EASILY CLEANABLE AND SLIP RESISTANT AS APPROVED BY LOCAL JURISDICTION) (COORDINATE FLOOR TILE TRANSITION AT SERVING LINES).
   - D. FLOORS: WALK-IN ASSEMBLY - EXTEND KITCHEN FLOOR FLUSH INTO WALK-IN ASSEMBLY WITH COVED BASE.
   - E. FURR DOWNS ABOVE SERVING COUNTERS.

5 ARCHITECTURAL COORDINATION NOTES1
NOT TO SCALE

REFER TO FOODSERVICE DESIGN PROFESSIONALS SPECIFICATIONS AND SUBSEQUENT SHEETS FOR ADDITIONAL COORDINATION INFORMATION

CRITICAL NOTES:

1. CONTRACTOR MUST COORDINATE AND VERIFY ALL DIMENSIONS WITH FOOD SERVICE EQUIPMENT SHOP DRAWINGS AND MANUFACTURER'S DATA. DIMENSIONS SHOWN ARE FOR DESIGN AND BIDDING PURPOSES ONLY.
2. WALK-IN ASSEMBLY DOORS MUST BE LEFT OPEN WHILE INTERIOR CONCRETE FLOOR CURES.
3. INSTALL PROTECTIVE COVER ON WALK-IN ASSEMBLY WALL PANELS BEFORE INSTALLING CONCRETE FLOORS AND CURBS.
4. REFER TO GENERAL SPECS - DIVISION 27 TO PROVIDE CONDUIT, DATA, AND INTERCONNECT THE PANIC ALARM INSIDE FREEZER TO THE BUILDING AUTOMATION SYSTEM FOR NOTIFICATION TO DISTRICT PERSONNEL IN THE EVENT OF STAFF ENTRAPMENT.
5. PIPING AND DRAINAGE SYSTEMS (SANITARY AND GREASE-LADEN). SYSTEMS MUST BE CLEANED AND FLUSHED BEFORE THE FINAL CONNECTION WITH FOOD SERVICE EQUIPMENT - CRITICAL (DIV. 22).

7 CRITICAL NOTES1
NOT TO SCALE

DIVISION 26 (ELECTRICAL) IS RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE FOLLOWING LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL ELECTRICAL REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. ROUGH-IN AND FINAL CONNECTION OF ELECTRICAL SYSTEMS TO FOOD SERVICE EQUIPMENT, WALK-IN ASSEMBLIES, AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR). ACCESSORIES PROVIDED LOOSE WITH FOOD SERVICE EQUIPMENT BY SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 26.
6. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS REFRIGERANT FOR PIPING TO REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
7. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR INTERCONNECT INTERCONNECT CABLES BETWEEN LAN AND POS TERMINALS, CHANGE-MAKERS, PRE-CHECK UNITS, PRINTERS, CPUS, ETC. DIVISION 26 TO VERIFY WHERE THE CONDUIT IS TO RUN FOR POS SYSTEM (I.E., MANAGER'S OFFICE OR IDF ROOM).
8. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR FIRE SUPPRESSION SYSTEMS. INTERCONNECT FIRE PROTECTION SYSTEM TO PANEL BOX SHUNT TRIPS AND BUILDING ALARM.
9. WALK-IN LIGHT FIXTURE INSTALLATION (PROVIDED LOOSE BY SECTION 11 40 00) (IF WALK-IN IS PROVIDED IN THIS PROJECT).
10. TABLE LIMIT SWITCH (PROVIDED LOOSE BY SECTION 11 40 00) (IF DISHMACHINE IS PROVIDED IN THIS PROJECT) - INSTALL AND INTERCONNECT TO DISHMACHINE .
11. ELECTRICAL MATERIALS AND DEVICES (SHUNT-TRIP BREAKERS, SURGE PROTECTORS, LIGHTING CONTROL DEVICES, CONDUIT, WIRE, ETC.).
12. SWITCHES AND STAINLESS STEEL DISCONNECTS AS REQUIRED (PROVIDE, LOCATE, AND INSTALL – TO BE IN AN ACCESSIBLE LOCATION).
13. CHARGING STATIONS FOR FORKLIFTS, PALLET STACKERS, AND PALLET JACKS (SIZE, PROVIDE, LOCATE, AND INSTALL) (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
14. INTERCONNECTION BETWEEN CONDENSATE FAN AND DISHMACHINE CONTROL PANEL (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
15. INTERCONNECTION BETWEEN EXHAUST HOOD FANS AND SWITCH (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
16. INTERCONNECTION BETWEEN EXHAUST HOOD LIGHTS AND SWITCH (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
17. DOOR HEATERS, LIGHTS, COILS, AND PRESSURE RELIEF PORTS PRE-WIRED TO JUNCTION BOX AT TOP OF WALK-IN ASSEMBLIES (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) PROVIDED BY SECTION 11 40 00. FINAL CONNECTION BY DIV. 26.
18. IF ANY ELECTRICAL ACCESSORIES, FITTINGS, AND CORD/PLUGS ARE PROVIDED LOOSE WITH EQUIPMENT BY 11 40 00, DIV.26 IS TO ATTACH TO EQUIPMENT AND PROVIDE FINAL CONNECTION.
19. PROVIDE WATERPROOF RECEPTACLES IN WET AREAS.
20. ALL ELECTRICAL LIGHTING, POWER, AND DISTRIBUTION SYSTEMS.
21. ALL ELECTRICAL CONNECTIONS BENEATH EXHAUST HOODS (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) TO EXTEND TO SHUNT TRIP BREAKERS WITH ELECTRICAL PANEL BOX FOR SHUTDOWN DURING FIRE MODE.
22. RECEPTACLES ARE TO BE PRE-WIRED TO THE JUNCTION BOX OR LOAD CENTER FOR FINAL CONNECTION BY DIVISION 26.
23. DO NOT INTERCONNECT MORE THAN THREE (3) CONVENIENCE OUTLETS ON ONE (1) BREAKER.
24. OTHER THAN CONVENIENCE OUTLETS, ALL ELECTRICAL CONNECTIONS SHOWN ON FOOD SERVICE PLANS ARE DEDICATED BREAKERS.
25. DOORBELL AT RECEIVING DOOR (PROVIDE AND INSTALL – TO BE AUDIBLE THROUGHOUT KITCHEN, OFFICE, AND DRY STORAGE ROOM).
26. ADEQUATE LIGHTING AT RECEIVING DOOR.
27. (IF WALK-IN IS PROVIDED IN THIS PROJECT) WALK-IN MANUFACTURER IS TO PROVIDE TWO (2) EDWARDS 860 SERIES (OR EQUAL) RED LENS, SURFACE-MOUNTED XENON EMERGENCY STROBE BEACONS. WALK-IN MANUFACTURER WILL INSTALL ONE(1) LOCATED IN THE KITCHEN ABOVE WALK-IN FREEZER DOOR (OR COOLER DOOR WHEN FREEZER IS WITHIN COOLER IN AN 'INLINE' ASSEMBLY), AND PROVIDE THE SECOND UNIT LOOSE FOR INSTALLATION BY DIVISION 26 LOCATED IN THE CAFETORIUM (DIVISION 26 TO COORDINATE LOCATION WITH OWNERS AND ARCHITECT). DIVISION 26 IS TO PROVIDE ALL CONDUIT AND WIRING REQUIRED AND INTERCONNECT THE ILLUMINATED PUSH BUTTON PANIC ALARM IN THE WALK-IN FREEZER TO BOTH STROBE BEACONS (CRITICAL). COORDINATE WITH DIVISION 27. REFER TO GENERAL SPECIFICATIONS FOR ADDITIONAL DETAILS.
28. DEDICATED CIRCUIT FOR HEATED DRAIN LINE CONNECTION IN WALK-IN FREEZER AT EACH COIL (IF WALK-IN IS PROVIDED IN THIS PROJECT).
29. GFCI BREAKER FOR ALL RECEPTACLES UNDER EXHAUST HOODS (IF HOODS ARE PROVIDED IN THE PROJECT), AND HOLDING CABINETS (IF HOLDING CABINETS ARE PROVIDED IN THIS PROJECT), TO BE LOCATED WITHIN KITCHEN'S ELECTRICAL BREAKER PANEL AND NOT AT THE RECEPTACLES.
30. REMOTE GFCI RESET SWITCHES TO BE ACCESSIBLE TO USER.
31. ALL ELECTRICAL BELOW EXHAUST HOOD (IF HOODS ARE PROVIDED IN THE PROJECT) ARE TO HAVE SHUNT TRIP BREAKERS.
32. INTERCONNECT TEMP SENSOR TO EXHAUST / SUPPLY FANS (IF HOODS ARE PROVIDED IN THE PROJECT).

NOTE: ELECTRICAL CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 26. FOR ADDITIONAL REQUIREMENTS, REFER TO THE ELECTRICAL ENGINEER'S DRAWINGS AND FOOD SERVICE GENERAL SPECS.

6 ELECTRICAL COORDINATION NOTES2
NOT TO SCALE

DIVISION 22 (PLUMBING) RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH-IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL PLUMBING REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. EMPTY PVC CONDUIT WITH WIDE-SWEEP BENDS FOR REFRIGERANT PIPING TO BEVERAGE LINES, CO2 LINES, AND REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
6. ROUGH-IN AND FINAL PLUMBING CONNECTIONS TO FOOD SERVICE EQUIPMENT AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR). ACCESSORIES PROVIDED LOOSE WITH FOOD SERVICE EQUIPMENT BY SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 22. THIS INCLUDES BUT IS NOT LIMITED TO INSTALLATION OF ALL FAUCETS (WATER FILL FAUCETS, PRE-RINSE FAUCETS, ETC.), HOSES, GAS DISCONNECTS, AND DRAINS FROM EQUIPMENT POINT OF CONNECTION TO BUILDING PLUMBING SYSTEMS. ALL DRAIN LINES ARE PROVIDED AND INSTALLED BY DIV. 22.
7. KITCHEN EQUIPMENT CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FAUCETS (WATER FILL FAUCETS, PRE-RINSE FAUCETS, ETC.), DRAIN FITTINGS, MIXING VALVES, CONTROL VALVES, WATER PRESSURE REGULATORS, VACUUM BREAKERS, AND ALL ACCESSORIES FOR EQUIPMENT SPECIFIED UNDER 11 40 00. DIVISION 22 IS RESPONSIBLE FOR INSTALLATION.
8. INDIRECT DRAIN LINE RUNS FROM EQUIPMENT TO NEAREST DRAIN OR FLOOR SINK. LINES TO BE TYPE 'K' COPPER.
9. IF ANY PLUMBING ACCESSORIES OR FITTINGS ARE PROVIDED LOOSE WITH EQUIPMENT BY 11 40 00, DIV. 22 IS TO ATTACH TO EQUIPMENT AND PROVIDE FINAL CONNECTION.
10. GAS SUPPLY SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM.
11. WATER SUPPLY SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM.
12. COMPRESSED AIR SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM (IF REQUIRED FOR THIS PROJECT).
13. PIPING AND DRAINAGE SYSTEMS (SANITARY AND GREASE-LADEN). SYSTEMS MUST BE CLEANED AND FLUSHED BEFORE THE FINAL CONNECTION WITH FOOD SERVICE EQUIPMENT - CRITICAL.
14. FLOOR SINKS (PROVIDE AND INSTALL). FLANGE AND GRATES TO BE FLUSH WITH FINISHED FLOOR.
15. FLOOR DRAINS (PROVIDE AND INSTALL). FLANGE AND GRATES TO BE FLUSH WITH FINISHED FLOOR.
16. TRENCH DRAINS (PROVIDE AND INSTALL). TRENCH LINERS PROVIDED BY 11 40 00. FLANGE AND LINERS TO BE FLUSH WITH FINISHED FLOOR.
17. GREASE TRAPS AS REQUIRED. VERIFY WITH LOCAL CODES TO BYPASS OR PIPE THRU GREASE TRAP AND/OR INTERCEPTOR.
18. P-TRAPS AS REQUIRED (INCLUDING ALL DISPOSERS).
19. INTERCONNECT WATER THRU WATER FILTER (FILTER PROVIDED BY 11 40 00 UNLESS OTHERWISE SPECIFIED) TO EQUIPMENT.
20. GAS QUICK DISCONNECT INSTALLATION (QUICK DISCONNECT PROVIDED BY 11 40 00).
21. SAFETY RESTRAINT CABLE INSTALLATION (SAFETY RESTRAINT CABLE PROVIDED BY 11 40 00).
22. SPECIFIED COUPLINGS AND PIPING TO ALL EQUIPMENT FURNISHED BY 11 40 00.
23. AIR COMPRESSORS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
24. WATER SOFTENERS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
25. PRESSURE BOILERS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
26. HAND SINKS (PROVIDE (UNLESS OTHERWISE SPECIFIED) AND INSTALL). PROVIDE HOT WATER TEMPERING VALVE IF REQUIRED. WATER TEMPERATURE TO BE AT LEAST 100 DEGREES AND FLOW FOR AT LEAST 20 SECONDS.
27. ICE BIN DRAIN INSULATION (IF ICE MACHINE IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
28. UNIONS AT DISPOSER SOLENOID VALVES (IF DISPOSER IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
29. BACK FLOW PREVENTION AS REQUIRED (PROVIDE AND INSTALL - INCLUDING ALL DISPOSERS). BACK- SIPHONAGE SHALL BE INSTALLED AT ALL FIXTURES AND EQUIPMENT WHERE BACKFLOW AND/OR BACK-SIPHONAGE MAY OCCUR AND WHERE A MINIMUM AIR GAP CANNOT BE PROVIDED BETWEEN THE WATER TO THE FIXTURE OR EQUIPMENT AT ITS FLOOD/LEVEL RIM. VACUUM BREAKERS, WHEN FURNISHED WITH EQUIPMENT, SHALL OVERRIDE THE ABOVE, IF ACCEPTABLE WITH APPLICABLE CODES. DIVISION 22 RESPONSIBLE FOR VERIFYING REQUIREMENT WITH LOCAL CODES.
30. JANITOR SINK WITH FAUCET (PROVIDE AND INSTALL).
31. FREEZE PROOF HYDRANT AT EXTERIOR OF BUILDING BY RECEIVING DOOR (PROVIDE AND INSTALL).
32. REVERSE OSMOSIS SYSTEMS (SIZE, PROVIDE (UNLESS OTHERWISE SPECIFIED), LOCATE AND INSTALL).
33. ALL PIPING WITHIN COUNTER BODY OR UNDER FABRICATED COUNTERS TO BE RUN TO A CONNECTION POINT BELOW COUNTER BODY BY SECTION 11 40 00. FINAL CONNECTION BY DIVISION 22.
34. EXHAUST HOOD CONDENSATE DRAIN CONNECTIONS (IF EXHAUST HOOD IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
35. INTERCONNECTION OF 1/2" CW TO PRE-RINSE AND DISPOSERS CONE/BODY INLETS PIPED THROUGH SOLENOID AND VACUUM BREAKER (IF DISPOSER IS PROVIDED IN THIS PROJECT).
36. FIRE SYSTEM PIPING. EXPOSED PIPING TO BE CHROME PLATED.
37. PIPE 1/2" COLD WATER TO SWIRL INLETS AT DISPOSERS (IF DISPOSER IS PROVIDED IN THIS PROJECT).
38. WATER TREATMENT FOR ICE BUILDERS (NON-CHLORINATED WATER WITH A PH LEVEL OF 10 OR HIGHER) AND ANY DRAINS AND OVERFLOWS. PIPING FROM ICE BUILDERS TO TUMBLE CHILLERS BY DIV. 23 (IF ICE BUILDERS AND TUMBLE CHILLERS ARE PROVIDED IN THIS PROJECT).

NOTE: WATER AND DRAIN CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 22. FOR ADDITIONAL REQUIREMENTS, REFER TO THE PLUMBING ENGINEER'S DRAWINGS AND FOOD SERVICE GENERAL SPECS.

4 PLUMBING COORDINATION NOTES2
NOT TO SCALE

DIVISION 23 (MECHANICAL) RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH-IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE FOLLOWING LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL MECHANICAL REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR REFRIGERANT PIPING TO REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
6. ROUGH-IN AND FINAL CONNECTION OF MECHANICAL SYSTEMS TO FOOD SERVICE EQUIPMENT, WALK-IN ASSEMBLIES, AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR).
7. TESTING AND BALANCING FOR ROOMS AND EXHAUST HOODS TO BE PERFORMED BY MECHANICAL CONTRACTOR. BALANCE REPORT FOR FOOD SERVICE EXHAUST HOODS TO BE PROVIDED TO FOODSERVICE DESIGN PROFESSIONALS (FDP) IMMEDIATELY UPON COMPLETION (SEND TO HOUSTON.SUBMITTAL@FDP.ORG FOR HOUSTON OFFICE AND DALLAS.SUBMITTAL@FDP.ORG FOR DALLAS OFFICE) AND MUST BE SUBMITTED WITH O&M MANUALS.
8. EXHAUST HOODS, CONDENSATE HOODS, FIRE SUPPRESSION SYSTEMS, CONNECTIONS AND CONTROLS (PROVIDE AND INSTALL – *UNLESS OTHERWISE SPECIFIED*). PROVIDE TEMPERED AIR AT ALL SUPPLY DUCTS.
   - A. IF EXHAUST/CONDENSATE HOODS AND FIRE SUPPRESSION SYSTEMS ARE SPECIFIED UNDER SECTION 11 40 00, DIVISION 23 IS RESPONSIBLE FOR ALL EXHAUST AND CONDENSATE HOOD CONNECTIONS (PROVIDE AND INSTALL).
9. VFD SYSTEM AND CONTROLLERS, WHEN REQUIRED BY CODE (PROVIDE AND INSTALL).
10. PROVIDE AND INSTALL ALL VENTILATION (DIRECT OR INDIRECT), AIR CONDITIONING AND HEATING SYSTEMS (UNLESS OTHERWISE SPECIFIED).
11. COORDINATE SUPPLY AND RETURN DUCTS ABOVE SERVING COUNTERS OR OPEN-AIR REFRIGERATED MERCHANDISERS. NO COLD AIR TO BLOW DIRECTLY ON HOT FOOD COUNTERS.
12. COORDINATE SUPPLY AND RETURN DUCTS AWAY FROM EQUIPMENT WITH TOP MOUNTED REFRIGERATION. NO COLD AIR TO BLOW DIRECTLY ON COMPRESSORS.
13. MECHANICAL CONTRACTOR TO LOCATE TEMPERATURE MONITORS WITHIN RETURN DUCTS.
14. CIRCULATING AIR ABOVE WALK-IN ASSEMBLIES (PROVIDE AND INSTALL).
15. CIRCULATING AIR ABOVE AND IN AIR GAPS AT WAREHOUSE COLD STORAGE ASSEMBLIES (PROVIDE AND INSTALL).
16. WATER CHILLERS AS REQUIRED (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) (PROVIDE, SIZE AND LOCATE).
17. PIPING FROM ICE BUILDERS TO TUMBLE CHILLERS (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) (PROVIDE, SIZE AND LOCATE).

NOTE: MECHANICAL CONNECTIONS INDICATED ARE THOSE REQUIRED FORTHE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 23. FOR ADDITIONAL REQUIREMENTS, REFER TO THE MECHANICAL ENGINEER'S DRAWINGS AND FOOD SERVICE GENERAL SPECS.

3 MECHANICAL COORDINATION NOTES2
NOT TO SCALE

GENERAL CONTRACTOR RESPONSIBLE FOR BUT NOT LIMITED TO:

1. ANY WALL PENETRATION REQUIRED FOR FOOD SERVICE EQUIPMENT UTILITIES. ESCUTCHEON PLATES OR S/S SLEEVES TO BE PROVIDED AND INSTALLED AS NEEDED.
2. BULK FREEZER VENTILATION PIPE (IF BULK FREEZER IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL, UNLESS OTHERWISE SPECIFIED).
3. CORE DRILLING FOR GUIDE RAILS (IF GUIDE RAILS ARE PROVIDED IN THIS PROJECT).
4. REFRIGERATION ROOF CURBS / ROOF JACK (IF REFRIGERATION SYSTEM IS PROVIDED IN THIS PROJECT AND LOCATED ON ROOF).
5. INTERIOR BOLLARDS (IF REQUIRED FOR THIS PROJECT) – TO BE EPOXY PAINTED PER LOCAL CODES (PROVIDE AND INSTALL).
6. FURNISH AND INSTALL 3/4" PLYWOOD BLOCKING IN THE WALL FOR MOUNTING EQUIPMENT FURNISHED BY SECTION 11 40 00 AS REQUIRED.
7. WALK-IN DEPRESSIONS (TO BE DEAD LEVEL) AND SAND LEVELING BED (IF WALK-IN IS PROVIDED IN THIS PROJECT AND RECESS IS SHOWN).
8. STRUCTURAL BRACING FOR BULK WALK-IN CEILING PANELS IF REQUIRED.
9. MENU SYSTEM VIDEO MONITORS IN SERVERY (UNLESS OTHERWISE SPECIFIED).
10. STRUCTURAL BRACING FOR MENU SYSTEM VIDEO MONITORS IF REQUIRED.
11. INTERIOR/EXTERIOR REFRIGERATION PENETRATIONS AND SLEEVES AT BUILDING PENETRATIONS.
12. DOORSCOPE VIEWER (PEEPHOLE) WITH WIDE VIEWING ANGLE AT RECEIVING DOOR.
13. CANOPY AT RECEIVING DOOR. COORDINATE HEIGHT WITH THE HEIGHT OF RECEIVING DOOR (8') AND THE MOUNTING HEIGHT OF AIR SCREEN ABOVE THE DOOR.
14. SOAP AND TOWEL DISPENSER PROVIDED BY OWNER. G.C. RESPONSIBLE FOR INSTALLATION.
15. WASHER AND DRYER (PROVIDE AND INSTALL, UNLESS OTHERWISE SPECIFIED).
16. DWARF WALL AT EXPOSED FRONT/ENDS OF CAFETERIA SERVING COUNTERS WITH FINISH AS SELECTED BY ARCHITECT (IF REQUIRED IN THIS PROJECT).

2 GENERAL CONTRACTOR COORDINATION NOTES2
NOT TO SCALE

HEALTH DEPARTMENT REQUIREMENTS (VERIFY WITH LOCAL JURISDICTIONS):

1. FLOORS: VERIFY WITH DIVISION 9. FLOORS TO BE SMOOTH, IMPERVIOUS, EASILY CLEANABLE AND SLIP RESISTANT.
2. WALLS: VERIFY WITH ARCHITECTURAL DOCUMENTS. WALLS TO BE SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE.
3. CEILING: LAY-IN TILES. CEILING TILES TO BE SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE.
4. EMPLOYEE TOILET: TO BE LOCATED OFF MAIN CORRIDOR AND ADJACENT TO MAIN KITCHEN. RESTROOM MUST HAVE A VESTIBULE AND NOT OPEN TO KITCHEN / PREP AREAS. TOILETS TO BE WELL VENTILATED.
5. LAVATORIES: WALL HUNG LAVATORIES LOCATED WITHIN ALL FUNCTIONAL WORKING AREAS.
6. UTENSIL CLEANING/SANITIZING: ACCOMPLISHED IN UTENSIL WASH AREA WITH (3) 2'-0" x 2'-2" x 15" MINIMUM DEEP SINKS AND WAREWASH MACHINE.
7. MECHANICAL CLEANING/SANITIZING OF TABLEWARE: ACCOMPLISHED BY WAREWASH MACHINE.
8. STOREROOMS: AMPLE DAILY STORAGE PROVIDED IN ENCLOSED STORE ROOMS. STORE ROOMS TO BE VENTILATED AND MAINTAIN PROPER TEMPERATURE.
9. WATER HEATER: LOCATED IN THE MECHANICAL ROOM ADJACENT TO KITCHEN. TO BE SIZED TO PROVIDE AMPLE WATER TO MAINTAIN PROPER WATER TEMPERATURE THROUGHOUT HOURS OF OPERATION.
10. GREASE TRAP: LOCATED AT EXTERIOR OF BUILDING. REFER TO ENGINEER'S DRAWINGS.
11. FOOD SERVICE EQUIPMENT: ALL FLOOR-MOUNTED EQUIPMENT IS TO BE SEALED TO THE FLOOR TO PROVIDE AN EASILY CLEANABLE SURFACE AND PREVENT SEEPAGE. EQUIPMENT NOT MOUNTED TO THE FLOOR IS TO BE WALL MOUNTED ON WALL CARRIERS, OR ELEVATED ON LEGS TO PROVIDE AT LEAST A SIX-INCH CLEARANCE BETWEEN FLOOR AND EQUIPMENT.
12. MOP SINK: LOCATED IN JANITOR CLOSET OFF MAIN KITCHEN CORRIDOR, AND LOCATED IN CLOSE PROXIMITY TO THE WAREWASH AREA.
13. EXHAUST HOODS: EXHAUST HOODS PROVIDED OVER COOKING EQUIPMENT WITH LIQUID CHEMICAL ANSUL FIRE EXTINGUISHING SYSTEM.
14. LIGHTING AND PROTECTIVE SHIELDING: RECESSED CEILING-MOUNTED FLUORESCENT LIGHT FIXTURES FITTED WITH CLEAR LEXAN DIFFUSERS.
15. GARBAGE AND REFUSE: CENTRAL TRASH COLLECTION PROVIDED FOR BUILDING LOCATED NEAR RECEIVING AREA ON SMOOTH CONCRETE SURFACE.
16. POISONOUS AND TOXIC MATERIAL STORAGE: LOCATED IN RESPECTIVE JANITOR CLOSETS WITH LOCKING HARDWARE.

1 HEALTH DEPARTMENT COORDINATION NOTES1
NOT TO SCALE

Revision / Date

Project: CREEKWOOD MS ADDITION & RENOVATIONS FOR HUMBLE ISD HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCS 48854119
PROFESSIONAL MEMBER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO: 48854119 ON: 10/29/2025

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FDP FOODSERVICE DESIGN PROFESSIONALS

FS GENERAL COORDINATION NOTES

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. QF1.00
Drawn By: MM	ISSUE FOR BID
Date: 10/29/2025	

Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO1821-1341_CREEKWOOD MS ADDITION & RENOVATIONS - FOODSERVICE - V23.rvt
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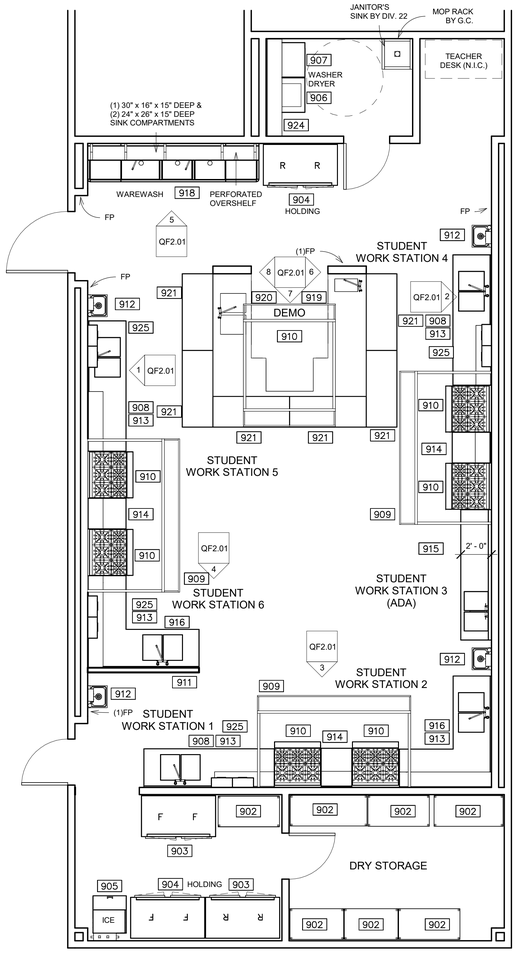
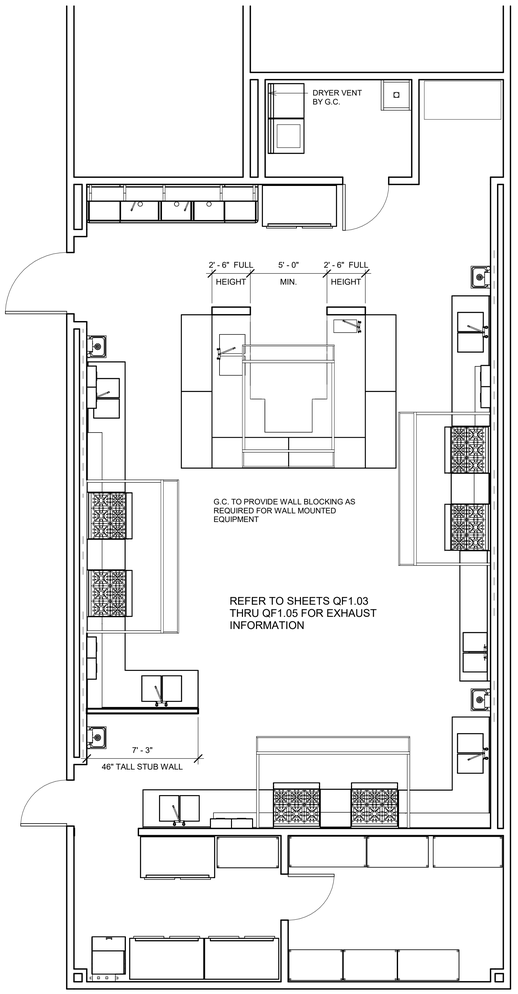
FOODSERVICE DRAWING INDEX	
SHEET NUMBER	SHEET NAME
QF1.00	FS GENERAL COORDINATION NOTES
QF1.01	FS EQUIPMENT PLAN
QF1.02	FS PLUMBING & ELECTRICAL PLANS
QF1.03	FS EXHAUST HOODS
QF1.04	FS EXHAUST HOODS
QF1.05	FS EXHAUST HOODS
QF2.01	FS ELEVATIONS
QF3.01	FS SECTIONS & DETAILS
QF3.02	FS DETAILS

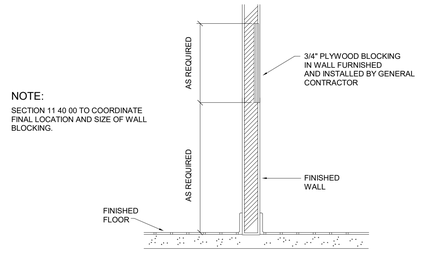


1 FOODSERVICE EQUIPMENT PLAN
1/4" = 1'-0"

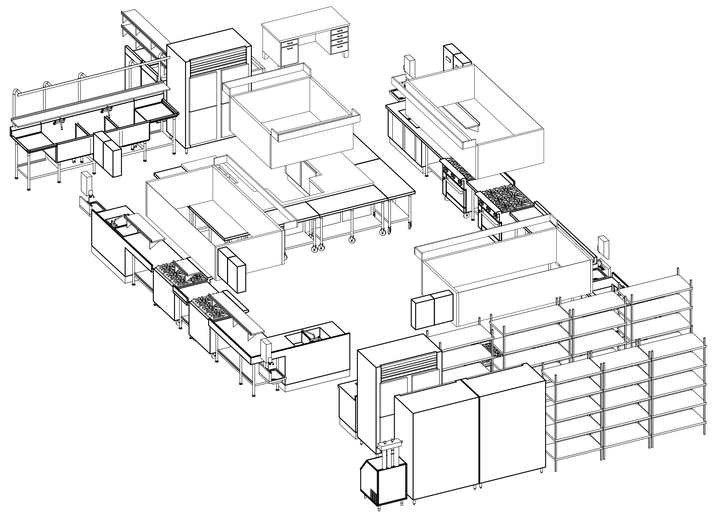


4 FOODSERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

FOODSERVICE EQUIPMENT SCHEDULE					
FDP ITEM	QTY	FDP DESCRIPTION	FDP REMARKS	Manufacturer	Model
902	7	SHELVING		METRO	METRO MAX Q
903	2	REACH-IN FREEZER		TRAUSLEN	ALT-232WUT
904	2	REACH-IN REFRIGERATOR		TRAUSLEN	AHT-232WUT
905	1	ICE MAKER		MANIITOWOC	UYF310A
906	1	CLOTHES WASHER	OWNER FURNISHED		
907	1	CLOTHES DRYER	OWNER FURNISHED		
908	3	STUDENT WORK STATION		CUSTOM FABRICATE	
909	3	EXHAUST HOOD	TYPE I; RE: QF1.03	MODUSERVE	W-CPB
910	7	RANGE		WOLF	JBR-2-12GT-2
911	1	S/S WALL CAP		CUSTOM FABRICATE	
912	4	HAND SINK	PROVIDED BY SECTION 11 4000 INSTALLED BY DIV. 22	ADVANCED TABCO	7-PS-50
913	5	WALL SHELVING		TABCO	WCS SERIES
914	3	STUDENT WORK STATION		CUSTOM FABRICATE	
915	1	STUDENT WORK STATION (ADA)		CUSTOM FABRICATE	
916	2	STUDENT WORK STATION		CUSTOM FABRICATE	
918	1	THREE COMPARTMENT SINK		CUSTOM FABRICATE	
919	1	EXHAUST HOOD	ISLAND HOOD - TYPE I; RE: QF1.03	MODUSERVE	W-CPB
920	1	DEMO COUNTER	CLOSED BASE	CUSTOM FABRICATE	
921	6	STUDENT WORK TABLES		CUSTOM FABRICATE	
924	1	WALL SHELVING		TABCO	WCS SERIES
925	4	FIRE PROTECTION SYSTEM		ANSUL	

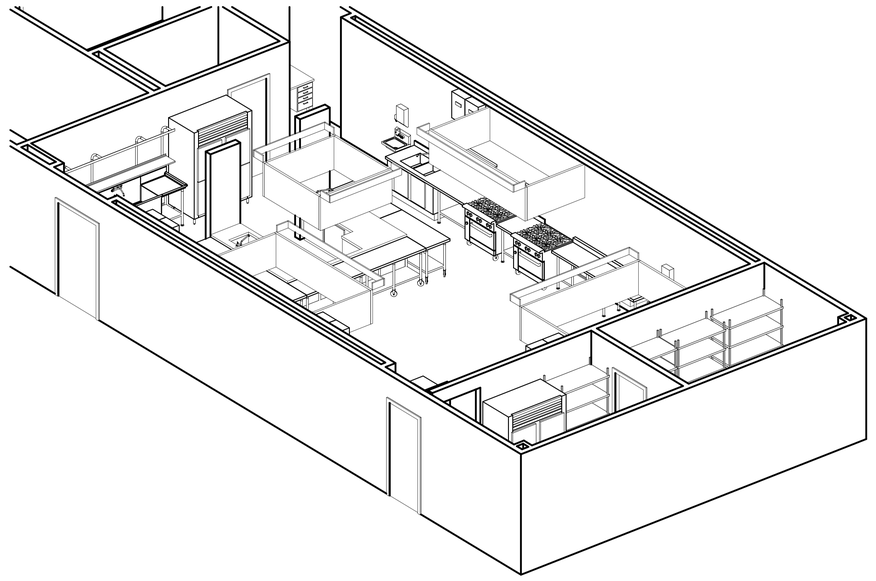


5 WALL BLOCKING DETAIL
NOT TO SCALE



3 FS EQUIPMENT MODEL

ISOMETRIC VIEWS WITHIN THIS DRAWING ARE NOT TO SCALE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY. ISOMETRIC VIEWS ARE NOT INTENDED FOR REGULATORY APPROVAL, PERMITTING, NOR CONSTRUCTION. REFER TO FLOOR PLANS AND DETAILS FOR SPECIFIC PROJECT INFORMATION.



2 FS FACILITY MODEL

REFER TO SHEET QF1 FOR GENERAL CONTRACTOR AND HEALTH DEPARTMENT COORDINATION NOTES

0' 2' 4' 8' 16'

FOODSERVICE DESIGN PROFESSIONALS

Revision / Date

Project:
CREEKWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCSI 48854119
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ON: 10/29/2025

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FS EQUIPMENT PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. ISSUE FOR BID QF1.01
Drawn By: MM	
Date: 10/29/2025	

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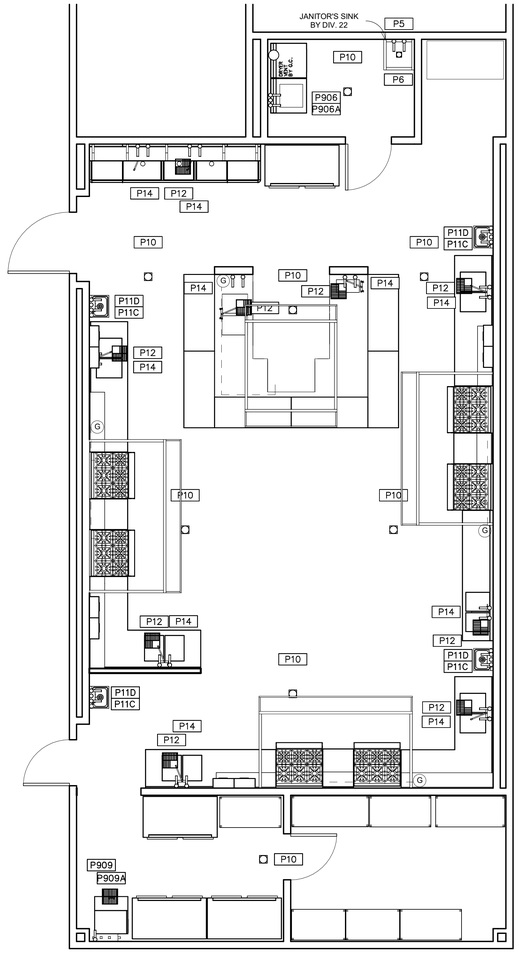
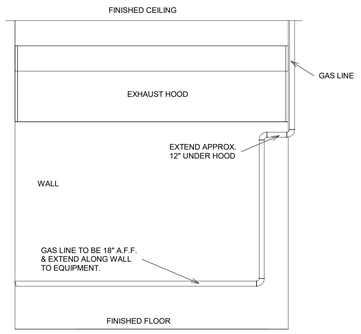
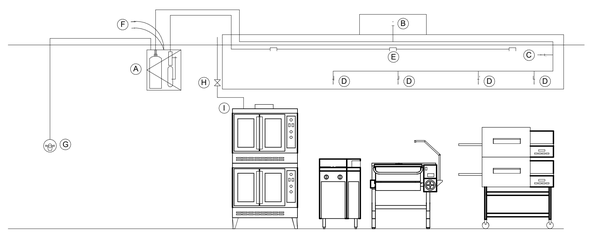


1 FOODSERVICE PLUMBING PLAN
1/4" = 1'-0"



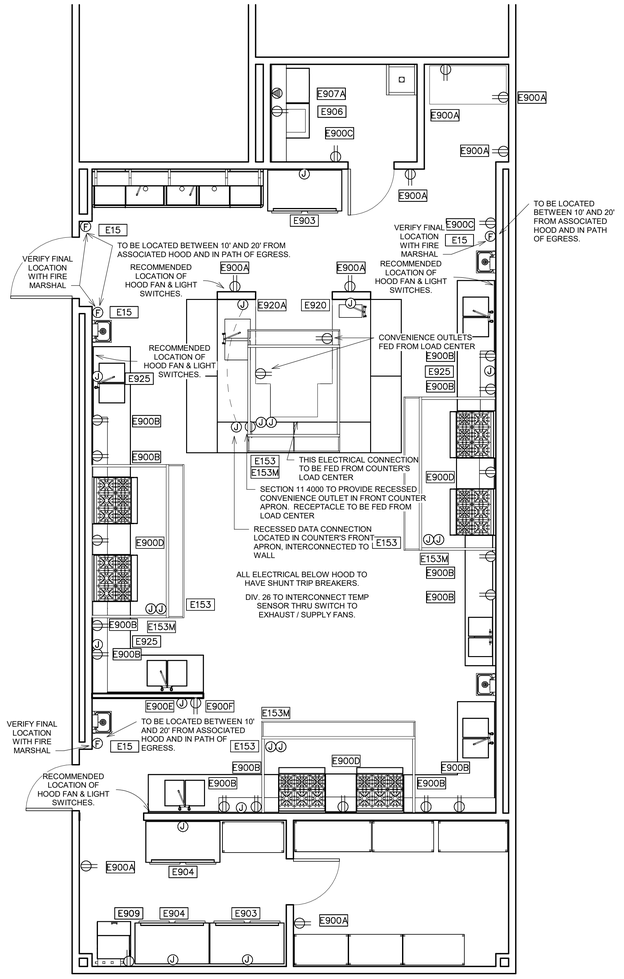
5 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE

NOTE:
REFER TO FDP EQUIPMENT PLAN
FOR SPECIFIC COMPONENTS UNDER HOOD.
ALL EQUIPMENT SHOWN HERE FOR GRAPHICAL
REPRESENTATION ONLY.



- (A) S/S ENCLOSURE W/AGENT TANK AND NITROGEN CARTRIDGE
- (B) DUCT NOZZLE(S)
- (C) PLENUM NOZZLE(S)
- (D) SURFACE PROTECTION NOZZLE(S)
- (E) FUSIBLE LINK(S)
- (F) (2) WIRES FROM FIRE SYSTEM TO SHUNT TRIP BREAKERS FOR SHUT DOWN OF ELECTRICAL CONNECTIONS LOCATED BENEATH EXHAUST HOOD DURING FIRE MODE
- (G) REMOTE FIRE PULL
- (H) GAS VALVE
- (I) GAS SUPPLY (AS REQUIRED)

6 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



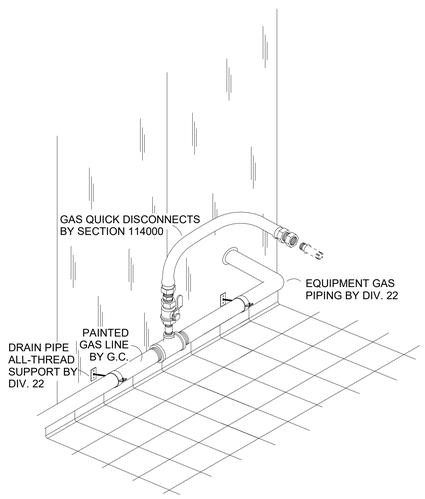
3 FOODSERVICE ELECTRICAL PLAN
1/4" = 1'-0"

FOODSERVICE PLUMBING SCHEDULE

FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	LOCATE PER ENGINEER'S DRAWING
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P14	3/4"	H & C WATER	FAUCET	WALL	18"	BTC; S/S FLEX HOSE TO MIXING VALVE
P906	3/4"	H & C WATER	CLOTHES WASHER	WALL	48"	BTC; VALVE BOX
P906A	2"	INDIRECT DRAIN	CLOTHES WASHER	WALL	48"	VALVE BOX
P909	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P909A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE

HW	HOT WATER	IW	INDIRECT WASTE (EXTEND TO F.D.)		
CW	COLD WATER	FFD	FUNNEL FLOOR DRAIN		
HTW	180 F HOT WATER	EVC	EXHAUST VENT CONNECTION		
CWS	CHILLED WATER	SVC	SUPPLY VENT CONNECTION		
G	GAS SUPPLY	FR	DIRECT-CONNECTED FLUE RISER		
SS	STEAM SUPPLY	PS	PIPE SLEEVE		
CR	CONDENSATE RETURN	AFF	ABOVE FINISHED FLOOR		
DR	DRAIN	ST	STUB UP/OUT		
FD	FLOOR DRAIN	BTC	BRANCH TO CONN. ON EQUIP		
FS	FLOOR SINK	DFA	DROP FROM ABOVE		
		CA	COMPRESSED AIR		

2 PLUMBING SYMBOLS
NOT TO SCALE



7 GAS DISCONNECT DETAIL
NOT TO SCALE

FOODSERVICE ELECTRICAL SCHEDULE

FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E15	JB	---	---	--	REMOTE FIRE PULL	WALL	48"	RE: NOTE #11 - RECESSED JB - EXTEND TO FIRE SYSTEM FOR HOOD
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC
E153M	JB	10.0A	120	1	HEAT SENSOR	CLG	DFA	BTC
E900A	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	24"	---
E900B	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	47"	---
E900C	WPR	16.0A	120	1	CONVENIENCE OUTLET	WALL	18"	---
E900D	DR	16.0A	120	1	CONVENIENCE	WALL	44"	SHUNT TRIP BREAKER
E900E	JB	---	---	--	DATA CONNECTION	WALL	24"	DATA CONNECTION FOR MOBILE TEACHING DISPLAY
E900F	DR	20.0A	120	1	MOBILE TEACHING DISPLAY	WALL	24"	DEDICATED CIRCUIT
E903	JB	14.9A	120	1	FREEZER	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E904	JB	8.2A	120	1	REFRIGERATOR	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E906	DR	16.0A	120	1	CLOTHES WASHER	WALL	48"	--
E907A	SR	30.0A	208	1	CLOTHES DRYER	WALL	48"	VERIFY NEMA PLUG RECEPTACLE
E909	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E920	JB	60.0A	240	1	LOAD CENTER	WALL	24"	BTC
E920A	JB	---	---	--	DATA CONNECTION	WALL	24"	EXTEND TO FRONT OF COUNTER WITHIN COUNTER BODY
E925	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC

SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES	
CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT	
DR	20 AMP DUPLEX RECEPTACLE (MOUNT HORIZONTAL)		WPR	20 AMP WEATHERPROOF RECEPTACLE (SPRING COVER)	
SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER	
SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT	
FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE	
PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR	
DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL	
JB	JUNCTION BOX ON CEILING		SW	SWITCH	
JB	JUNCTION BOX IN WALL		D	DATA	
JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26		JB/DS	CONDUIT STUB-UP WITH DISCONNECTION BY DIV.26	

4 ELECTRICAL SYMBOLS
NOT TO SCALE

REFER TO SHEET QF1.00 FOR DIVISION 22 COORDINATION NOTES

FOODSERVICE DESIGN PROFESSIONALS

REVIEW COMMENTS

Revision / Date
1 02/16/24

Project:
CREEKWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
Melissa Moore
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 10/29/2025

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FS PLUMBING & ELECTRICAL PLANS

PACKAGE	VOLUME
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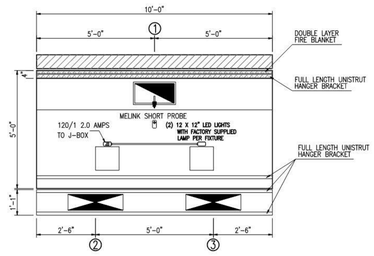
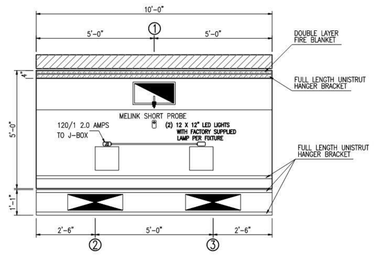


HOOD WGT. – 1050 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 909A
SCALE 3/8"=1'-0"

EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 20"	210	2100	1512	.50"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 28"	189	945	608	.30"
3	8" X 28"	189	945	608	.30"

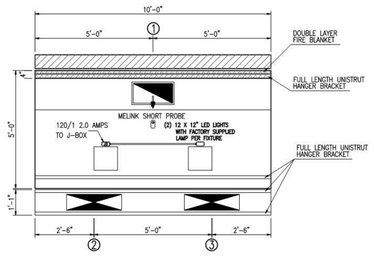


HOOD WGT. – 1050 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 909B
SCALE 3/8"=1'-0"

EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 20"	210	2100	1512	.50"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 28"	189	945	608	.30"
3	8" X 28"	189	945	608	.30"

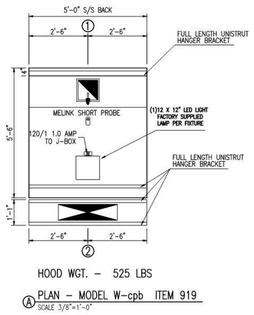


HOOD WGT. – 1050 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 909C
SCALE 3/8"=1'-0"

EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 20"	210	2100	1512	.50"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 28"	189	945	608	.30"
3	8" X 28"	189	945	608	.30"



HOOD WGT. – 525 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 919
SCALE 3/8"=1'-0"

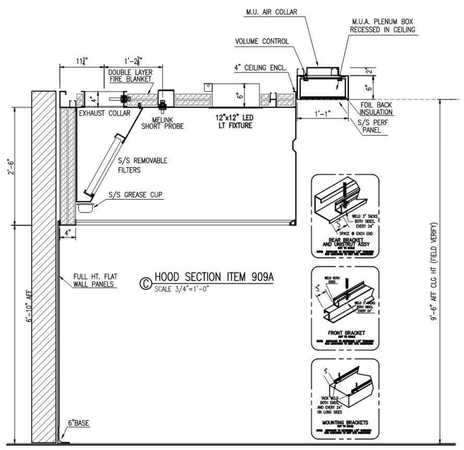
EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 14"	300	1500	1542	.65"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 30"	270	1350	810	.30"

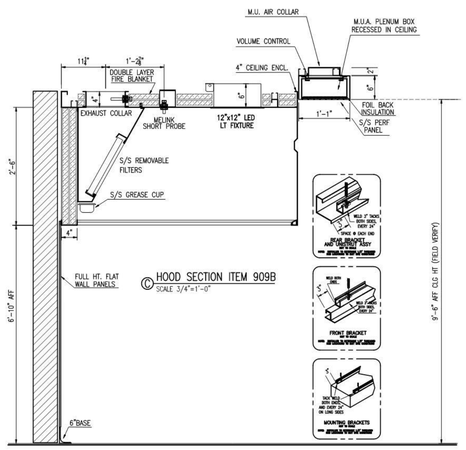
HOODS DESIGNED TO MEET TO THE 2015 IECC C403.2.8 AND 2018 IECC C403.7.5 USING OPTION 2 PROVIDED BY THE CODES.

NOTE TO G.C. AND CEILING GRID INSTALLERS :

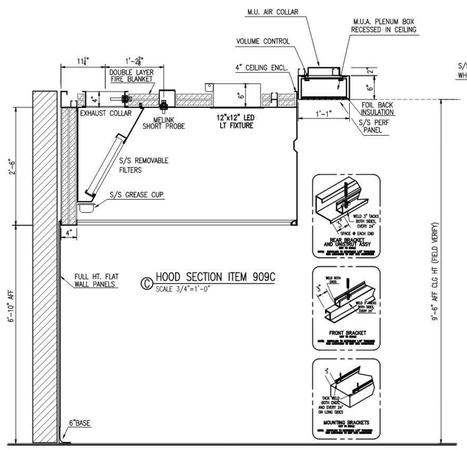
FASTENERS FOR CEILING GRID SURROUNDING KITCHEN HOOD MUST NOT PENETRATE HOOD CAPTURE AREA OR HOOD GREASE PLENUM. IMPROPER PENETRATIONS THROUGH HOOD IN THESE AREAS VIOLATE HOOD U.L. PROCEDURE AND LOCAL MECHANICAL CODE.



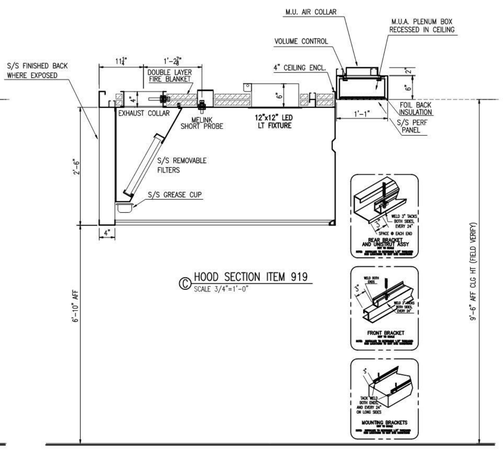
Ⓒ HOOD SECTION ITEM 909A
SCALE 3/4"=1'-0"



Ⓒ HOOD SECTION ITEM 909B
SCALE 3/4"=1'-0"



Ⓒ HOOD SECTION ITEM 909C
SCALE 3/4"=1'-0"



Ⓒ HOOD SECTION ITEM 919
SCALE 3/4"=1'-0"

UL FILE # MH 30031
MOD-U-SERVE
NSF Air Systems
2320 PEYTON ROAD
HOUSTON, TEXAS 77032
281 442 8001

HUMBLE ISD-CREEKWOOD MS **FDP**

THIS DRAWING IS THE PROPERTY OF MOD-U-SERVE AND CAN BE REPRODUCED ONLY BY PERMISSSION, IN WHICH CASE, ALL DRAWINGS MUST BEAR THE NAME MOD-U-SERVE.

COMMERCIAL KITCHENS INC.

2320 PEYTON ROAD
HOUSTON, TEXAS 77032
281 442 8001

NO.	DATE	REVISION	BY
909	10.30.23	90% M.U.A. Melink system added	ADC
919			

DRAWING # D23-2093-1.909
DRAWN BY ADC
CHECKED BY
DATE June 16, 2023

SHEET 1 OF 1 SHEET

Revision / Date

Project: CREEKWOOD MS ADDITION & RENOVATIONS FOR HUMBLE ISD HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
48854119
PROFESSIONAL MEMBER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 10/29/2025

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FS EXHAUST HOODS

PACKAGE	VOLUME
Job No. 1521-13-01	Sheet No. ISSUE FOR BID
Drawn By: MM	QF1.03
Date: 10/29/2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1521-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - FOODSERVICE - V23.rvt

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INSTALLATION REQUIREMENTS

1. THERE SHALL BE NO SUBSTITUTIONS OF ANY COMPONENTS ON MELINK INTELLI-HOOD CONTROLS UNLESS APPROVED BY MELINK.
2. MELINK CERTIFIED STARTUP CONTRACTOR IS NOT RESPONSIBLE FOR HIGH VOLTAGE ELECTRICAL WIRING.
3. MELINK CERTIFIED STARTUP CONTRACTOR IS NOT RESPONSIBLE FOR INSTALLING LOW VOLTAGE CONTROL CABLES LONGER THAN 50'. ONLY MELINK CABLES SHALL BE USED.
4. MELINK CERTIFIED STARTUP CONTRACTOR IS NOT RESPONSIBLE FOR INSTALLING LOW VOLTAGE CABLES IF ACCESS TO THE TOP OF THE HOOD IS LIMITED DUE TO OBSTRUCTIONS (LOW CEILING, DUCTWORK, PIPING, ETC.) CALL MELINK FOR MORE INSTRUCTIONS IF NECESSARY.
5. MELINK CERTIFIED CONTRACTOR IS NOT RESPONSIBLE FOR INSTALLING ANY MELINK CONTROL CABLE IN CONDUIT IF REQUIRED OR MAKING ANY CEILING, FLOOR OR WALL PENETRATIONS.
6. MELINK INTELLI-HOOD LITERATURE WILL BE INCLUDED IN THE SHIPMENT OF EACH SYSTEM. CALL MELINK WITH ANY QUESTIONS @ 1-(513)-965-7300.
7. ALL MOTORS MUST BE 3 PHASE, INVERTER DUTY RATED AS SPECIFIED IN NEMA STANDARD MG 1 PART 31.
8. DV/DT FILTERS MUST BE USED WHEN THE DISTANCE FROM VFD TO FAN IS OVER 200' FOR 230V, 70' FOR 460V, OR 40' FOR 575V.
9. OPTION: MELINK RECOMMENDS A CERTIFIED AIR BALANCE ON THE KITCHEN VENTILATION SYSTEM FOR OPTIMAL ENERGY SAVINGS.

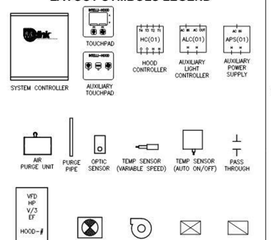
AGENCY APPROVALS

THE MELINK INTELLI-HOOD CONTROLS ARE UL & CUL LISTED, & CONFORM WITH ALL APPLICABLE CODES & STANDARDS INCLUDING:

1. UL710 – STANDARD FOR EXHAUST HOODS FOR COMMERCIAL COOKING EQUIPMENT
2. UL2017– STANDARD FOR GENERAL PURPOSE SIGNALING DEVICES AND SYSTEMS.
3. CE – MEETS REQUIREMENTS OF APPLICABLE EC DIRECTIVES
4. ROHS – MEETS THE RESTRICTION OF HAZARDOUS SUBSTANCES DIRECTIVE 2002/95/EC
5. NFPA 96 – STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS
6. IMC – INTERNATIONAL MECHANICAL CODE
7. BOCA – BUILDING OFFICIALS CODE ADMINISTRATORS
8. SBCCI – SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL
9. ICBO – INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS

ASHRAE 90.1-2013 CERTIFIED

LAYOUT SYMBOLS LEGEND



SHEET INDEX

SHEET #	SHEET DESCRIPTION
1 – 1	INTELLI-HOOD DRAWING SHEETS

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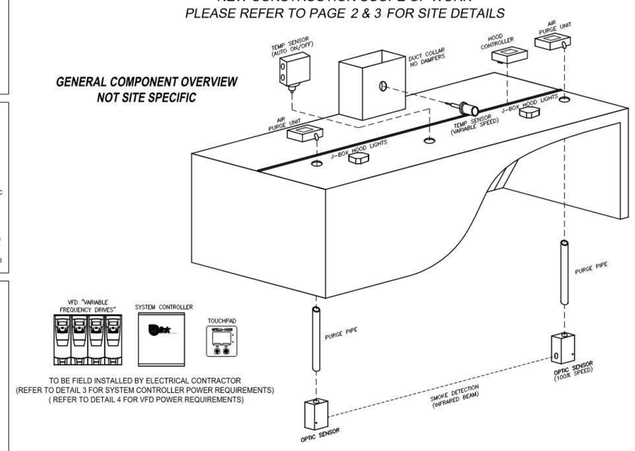
INTELLI-HOOD®

NEW CONSTRUCTION SCOPE OF WORK

PLEASE REFER TO PAGE 2 & 3 FOR SITE DETAILS

GENERAL COMPONENT OVERVIEW NOT SITE SPECIFIC



TO BE FIELD INSTALLED BY ELECTRICAL CONTRACTOR
(REFER TO DETAIL 3 FOR SYSTEM CONTROLLER POWER REQUIREMENTS)
(REFER TO DETAIL 4 FOR VFD POWER REQUIREMENTS)

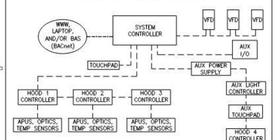
SEQUENCE OF OPERATION

1. PRESS THE FAN SWITCH ON THE TOUCHPAD TO TURN THE FANS ON IN THE AUTO MODE.
   A. SYSTEM CONTROLLER STARTS THE FANS AT MINIMUM SPEED AND AUTOMATICALLY ADJUSTS EXHAUST AIR FLOW BASED ON THE ACTUAL COOKING LOADS AS SENSED BY THE TEMPERATURE AND OPTIC SENSORS MOUNTED IN THE HOODS. (SYSTEM CONTROLLER WILL SEND A RUN COMMAND AND SPEED REFERENCE SIGNAL TO THE VARIABLE FREQUENCY DRIVES (VFD'S).)
   B. SYSTEM CONTROLLER WILL CONTROL MAKE UP AIR FAN VFD(S). SYSTEM CONTROLLER WILL SEND A 2-24VDC SIGNAL TO THE MUA UNIT TO ENERGIZE THE CONTROL CIRCUIT. IN THE EVENT THE MUA UNIT GOES INTO HEATING MODE, THE MUA UNIT WILL PROVIDE A DRY CLOSURE SIGNAL TO THE SYSTEM CONTROLLER TO INCREASE THE MINIMUM AIR FLOW ACROSS THE BURNER OR HEAT EXCHANGER.
   B. SYSTEM CONTROLLER WILL PROVIDE A START/STOP AND 0–10VDC OR 4–20MA SIGNAL TO THE BAS TO CONTROL MUA.
2. PRESS THE FAN SWITCH AGAIN TO TURN THE FANS OFF.
3. PRESS THE LIGHT SWITCH ON THE TOUCHPAD TO TURN THE HOOD LIGHTS ON. THE TERMINALS OF THE SYSTEM CONTROLLER OR AUXILIARY LIGHTS CONTROLLERS. (LIGHTS MAY BE OPERATED BY OTHER CONTROLS OR BAS.)
4. IF THE AUTO ON/OFF TEMP SENSOR DETECTS HEAT LEVELS ABOVE 90'F/32'C WHEN THE FANS ARE NOT ON, THE FANS WILL TURN ON AUTOMATICALLY.
5. IN THE EVENT OF FIRE MODE, POWER IS TURNED OFF TO THE SYSTEM CONTROLLER, THE EXHAUST FAN VFD WILL RUN AT FULL SPEED, AND MUA VFD WILL STOP. SEE DETAILS 3 AND 4.

US PATENTS – 6,170,480 ; 7,048,199 ; 9,810,437 CANADA PATENT –297682

PLUG-N-PLAY CABLE CONNECTIONS

GENERAL WIRING OVERVIEW, NOT SITE SPECIFIC



NOTE: CAN SPECIFY 1–30 HOOD CONTROLLERS PER SYSTEM CONTROLLER

ELECTRICAL SCOPE OF WORK

1. WIRE THE SYSTEM CONTROLLER INSIDE THE INTELLI-HOOD CONTROL CABINET, OR OTHER SPECIFIED LOCATION, WITH AN INPUT OF 90/250VAC FROM A DEDICATED CIRCUIT. THIS CIRCUIT MUST LOSE POWER WHEN THE FIRE SUPPRESSION SYSTEM IS ACTIVATED. PURPOSE IS TO SHUT OFF HOOD LIGHTS AND SEND EXHAUST FANS TO FULL SPEED. THE OUTPUT WIRING TO BE CONNECTED TO THE HOOD LIGHTS (15 AMPS MAX). SEE DETAIL 3.
2. ELECTRICAL CONTRACTOR SHALL WIRE A DEDICATED SINGLE PHASE CIRCUIT TO THE MUA UNIT TO ENERGIZE THE MUA CONTROLS. DO NOT USE VFD OUTPUT TO ENERGIZE THIS CIRCUIT. SEE DETAIL 6.

NOTES:
- THE INSTALLATION OF ANY WIRE, CABLE, OR CONDUIT IF REQUIRED DOES NOT FALL WITHIN MELINK SCOPE OF WORK.

MECHANICAL SCOPE OF WORK

1. CONNECT PLUG-N-PLAY CABLES FROM SYSTEM CONTROLLER TO THE HOOD CONTROLLERS, SENSORS, TOUCHPADS, AUX POWER SUPPLIES, AND AUX LIGHT CONTROLLERS. HOOD MANUFACTURER SHALL LOCATE HOOD SENSOR CABLES IN EITHER INTELLI-HOOD CONTROL CABINET OR ON TOP OF HOOD(S). SEE SYSTEM LAYOUT SHEETS.
2. INSTALL LOW VOLTAGE WIRING FROM SYSTEM CONTROLLER TO KEF-1 AND KEF-2. SEE DETAIL 4. ALSO FROM SYSTEM CONTROLLER TO MUA UNIT (OR BAS). SEE DETAIL 5.
3. START-UP THE SYSTEM BY PRESSING THE LIGHT AND FAN SWITCH ON TOUCHPAD TO VERIFY THE HOOD LIGHTS TURN ON AND THE FANS GO TO MINIMUM SPEED. CORRECT FAN ROTATION IF NECESSARY. SEE SEQUENCE OF OPERATION.
4. INSTALL ETHERNET CABLE FROM BUILDING NETWORK TO THE SYSTEM CONTROLLER. CONFIGURE BUILDING NETWORK TO ENABLE SYSTEM TO COMMUNICATE WITH MELINK HEADQUARTERS SECURE INTELLI-HOOD SERVER. IF APPLICABLE, CONFIGURE THE BUILDING'S BACnet AUTOMATION SYSTEM TO COMMUNICATE WITH SYSTEM CONTROLLER. SEE DETAIL 1. A CELLULAR MODEM HAS BEEN SUPPLIED AS WELL IN THE EVENT THE BUILDING NETWORK WILL NOT ALLOW THE SYSTEM CONTROLLER ACCESS TO THE MELINK HEADQUARTERS SERVER. SEE DETAIL 7
5. PRESS THE HOOD SWITCH ON TOUCHPAD TO OPERATE THE VFDS AT FULL SPEED FOR 10 MINUTES. VERIFY THAT THE DRIVES DO NOT TRIP OUT ON OVER CURRENT. CORRECT DRIVE FULL LOAD AMPS IF NECESSARY. SEE VFD QUICK START GUIDE.

NOTES:
- THE INSTALLATION OF ANY WIRE, CABLE, OR CONDUIT IF REQUIRED DOES NOT FALL WITHIN MELINK SCOPE OF WORK.

MELINK SCOPE OF WORK

1. MAKE FINAL CABLE CONNECTIONS AT THE SYSTEM CONTROLLER.
2. VERIFY CONTROL WIRING TO MUA UNIT, BAS, OR OTHER CONTROL PANELS.
3. VERIFY SYSTEM CONTROLLER AND VFD PROGRAMMING. (IF VFD'S ARE PROVIDED BY MELINK)
4. VERIFY SYSTEM FUNCTIONALITY PER SEQUENCE OF OPERATION.
5. TRAIN OPERATORS AND/OR FACILITIES PERSONNEL FOR EACH SYSTEM.
6. SUBMIT INTELLI-HOOD START-UP REPORT TO CUSTOMERS. PLEASE CALL MELINK WITH ANY QUESTIONS @ 1-(513)-965-7300.

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INTELLI-HOOD MANUFACTURED BY: MELINK CORPORATION 5757 CENTRAL AVENUE BOULDER, CO 80301, USA (303) 449-9595 WWW.MELINKCORP.COM

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PROJECT: **CREEKWOOD MIDDLE SCHOOL**
KINGWOOD, TX
HUMBLE ISD
SUBMITTAL DRAWING DATE: **10-20-25** DRAWN BY: **DJS**
DRAWING RELEASE DATE: **XX-XX-XX** RELEASED BY: **XXX**
DRAWING APPROVAL DATE: **XX-XX-XX** APPROVED BY: **XXX**

REVISIONS:

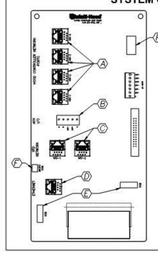
REV.#	DATE	REV. BY

SCALE: NOT TO SCALE

MELINK PROJECT SO#: **3542272**
SERIAL NUMBER: **SUBMITTAL**

SHEET: 1 – 1

DETAIL 1: SYSTEM CONTROLLER BASE BOARD



A) 4 HOOD NETWORK PORTS ARE INTERCHANGEABLE. ANY OF THEM CAN BE USED TO CONNECT HOOD CONTROLLERS OR TOUCHPADS IN A SERIES CHAIN. CABLE LENGTH LIMITATIONS DO APPLY. REFER TO THE INSTALLATION MANUAL. PORTS ARE POWER-LIMITED.

B) AUXILIARY I/O PORT FOR FUTURE EXPANSION. CURRENTLY NOT USED.

C) 2 VFD PORTS ARE USED TO CONNECT AND COMMUNICATE WITH VFDS VIA SERIAL MODBUS PROTOCOL. THE VFD PORTS ARE INTERCHANGEABLE, HOWEVER, ONLY SIEMENS VFD TYPE CAN BE CONNECTED TO EACH PORT. IF AN INSTALLATION IS TO USE TWO DIFFERENT BRANDS OF VFDS, THEN ONE PORT SHOULD BE DEDICATED TO EACH BRAND.

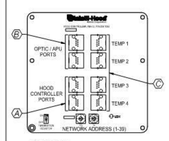
D) ETHERNET PORT IS USED TO CONNECT THE SYSTEM CONTROLLER TO THE GLOBAL INTERNET SUCH THAT THE INTELLI-HOOD SYSTEM CAN COMMUNICATE WITH MELINK HEADQUARTERS. ALSO, THIS PORT CAN BE USED BY THE BUILDING AUTOMATION SYSTEM TO COMMUNICATE VIA BACnet PROTOCOL.

E) USB PORTS. ONE USED FOR DATALOG THUMB DRIVE; OTHER FOR FUTURE EXPANSION.

F) NOT FOR USER CONNECTION

IMPORTANT:
USE THE CORRECT PORTS ON THE SYSTEM CONTROLLER BASE BOARD

DETAIL 2: HOOD CONTROLLER BOARD



A) 2 HOOD NETWORK PORTS ARE USED TO WIRE THE HOOD CONTROLLERS, AND OTHER HOOD NETWORK DEVICES IN SERIES FROM THE SYSTEM CONTROLLER.

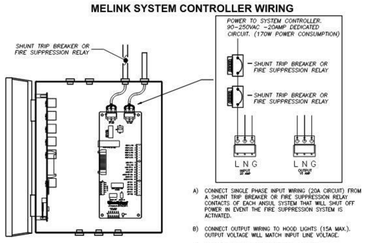
B) CABLES FROM THE OPTIC APUS ARE CONNECTED TO THE OPTIC APU PORTS. THESE PORTS ARE INTERCHANGEABLE. EMITTER OR RECEIVER CAN BE PLUGGED INTO EITHER ONE.

C) 4 TEMPERATURE PORTS ARE USED TO CONNECT THE TEMPERATURE SENSORS. PORTS MAY BE USED FOR VARIOUS PURPOSES SUCH AS EXHAUST DUCT, EXHAUST CANOPY, OR SUPPLY AIR. FOR CORRECT OPERATION, THE CORRECT PROBE MUST BE CONNECTED TO THE CORRECT PORT AS DEFINED BY THE SYSTEM CONTROLLER PROGRAMMING CONFIGURATION.

D) ROTARY DIAL AND DIP SWITCHES ARE USED TO DEFINE THE HOOD CONTROLLER'S ADDRESS (1 TO 39). THE TERMINATION RESISTOR SHOULD BE SWITCHED ON FOR THE LAST HOOD NETWORK DEVICES IN A SERIES CHAIN.

IMPORTANT:
USE THE CORRECT PORTS ON THE HOOD CONTROLLER BOARDS

DETAIL 3: MELINK SYSTEM CONTROLLER WIRING



A) CONNECT SINGLE PHASE INPUT WIRING (20A CIRCUIT) FROM A SHUNT TRIP BREAKER OR FIRE SUPPRESSION RELAY CONTACTS OF EACH HOOD'S SYSTEM THAT WILL SHUT OFF POWER IN EVENT THE FIRE SUPPRESSION SYSTEM IS ACTIVATED.

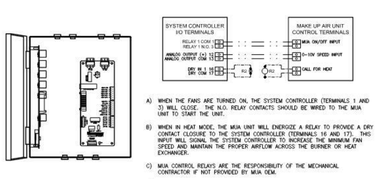
B) CONNECT OUTPUT WIRING TO HOOD LIGHTS (15A MAX.). OUTPUT VOLTAGE WILL MATCH INPUT LINE VOLTAGE.

C) ALLOWABLE WIRE SIZE IS 16AWG – 12AWG.

DETAIL 4: SEE DETAIL SHEET 2.1 (ELECTRICIANS SOW)

SEE SHEET 2.1

DETAIL 5: WIRING TO MUA UNIT



A) WHEN THE FANS ARE TURNED ON, THE SYSTEM CONTROLLER (TERMINALS 1 AND 3) WILL CLOSE. THE N.O. RELAY CONTACTS SHOULD BE WIRED TO THE MUA UNIT TO START THE UNIT.

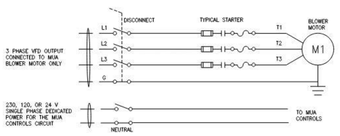
B) WHEN IN HEAT MODE, THE MUA UNIT WILL ENERGIZE A RELAY TO PROVIDE A DRY CONTACT CLOSURE TO THE SYSTEM CONTROLLER (TERMINALS 16 AND 17). THIS INPUT WILL SIGNAL THE SYSTEM CONTROLLER TO INCREASE THE MINIMUM FAN SPEED AND MAINTAIN THE PROPER AIRFLOW ACROSS THE BURNER OR HEAT EXCHANGER.

C) MUA CONTROL RELAYS ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR IF NOT PROVIDED BY MUA OEM.

D) 18AWG SHIELDED, PLENUM-RATED CABLE IS TYPICALLY RECOMMENDED. TERMINALS WILL ACCEPT 12–22AWG WIRING.

E) NOTE: RELAY TERMINALS HAVE A MAXIMUM CAPACITY OF 5A AT EITHER 120 OR 230VAC.

DETAIL 6: SEPARATION OF MUA UNIT MOTOR AND CONTROLS



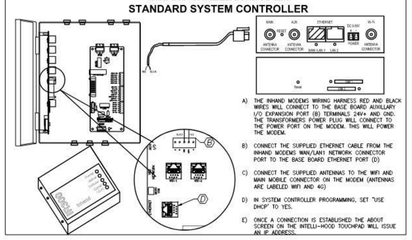
A) WIRE THREE-PHASE OUTPUT POWER FROM THE MUA VFD TO THE MUA UNIT TO POWER THE BLOWER MOTOR.

B) WIRE A DEDICATED SINGLE PHASE CIRCUIT TO THE MUA UNIT TO ENERGIZE THE MUA CONTROLS. DO NOT USE THE VFD OUTPUT TO ENERGIZE THIS CIRCUIT.

C) ENSURE 115V CIRCUIT IS IN A SEPARATE CONDUIT FROM THE OUTPUT VOLTAGE OF THE VFD.

D) IF A MOTOR STARTER IS PRESENT IN THE MUA UNIT, IF MAY BE REMOVED COMPLETELY IN SOME CASES DEPENDING ON THE CONTROLS SEQUENCE OF OPERATIONS. IF IT IS DESIRABLE TO LEAVE THE CONTRACTOR IN PLACE, THEN THE OVERLOADS SHOULD BE REMOVED. MOST OVERLOADS ARE NOT COMPATIBLE WITH VFDS.

DETAIL 7: WIRING FOR INHAND WIRELESS MODEM STANDARD SYSTEM CONTROLLER



A) THE INHAND MODEMS WIRING HARNESS RED AND BLACK WIRES WILL CONNECT TO THE BASE BOARD AUXILIARY I/O EXPANSION PORT (B) TERMINALS 24V+ AND GND. THE TRANSFORMERS POWER PLUG WILL CONNECT TO THE POWER PORT ON THE MODEM. THIS WILL POWER THE MODEM.

B) CONNECT THE SUPPLIED ETHERNET CABLE FROM THE INHAND MODEMS WAN/LAN1 NETWORK CONNECTOR PORT TO THE BASE BOARD ETHERNET PORT (D)

C) CONNECT THE SUPPLIED ANTENNAS TO THE WIFI AND MAIN MOBILE CONNECTOR ON THE MODEM (ANTENNAS ARE LABELED WIFI AND 4G)

D) IN SYSTEM CONTROLLER PROGRAMMING, SET "USE DHCP" TO YES.

E) ONCE A CONNECTION IS ESTABLISHED THE ABOUT SCREEN ON THE INTELLI-HOOD TOUCHPAD WILL ISSUE AN IP ADDRESS.

DETAIL 8: NOT USED

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PROJECT: **CREEKWOOD MIDDLE SCHOOL**
KINGWOOD, TX
HUMBLE ISD
SUBMITTAL DRAWING DATE: **10-20-25** DRAWN BY: **DJS**
DRAWING RELEASE DATE: **XX-XX-XX** RELEASED BY: **XXX**
DRAWING APPROVAL DATE: **XX-XX-XX** APPROVED BY: **XXX**

REVISIONS:

REV.#	DATE	REV. BY

SCALE: NOT TO SCALE

MELINK PROJECT SO#: **3542272**
SERIAL NUMBER: **SUBMITTAL**

SHEET: 1 – 2

Revision / Date

Project: CREEKWOOD MS ADDITION & RENOVATIONS FOR HUMBLE ISD HUMBLE, TX

ASSOCIATION OF FOODSERVICE CONSULTANTS INTERNATIONAL — MELISSA MOORE — FCS 488541119 — PROFESSIONAL MEMBER

Melissa Moore

THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 488541119 ON: 10/29/2025

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Date: 10/29/2025	

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10/28/2025 4:19:13 PM

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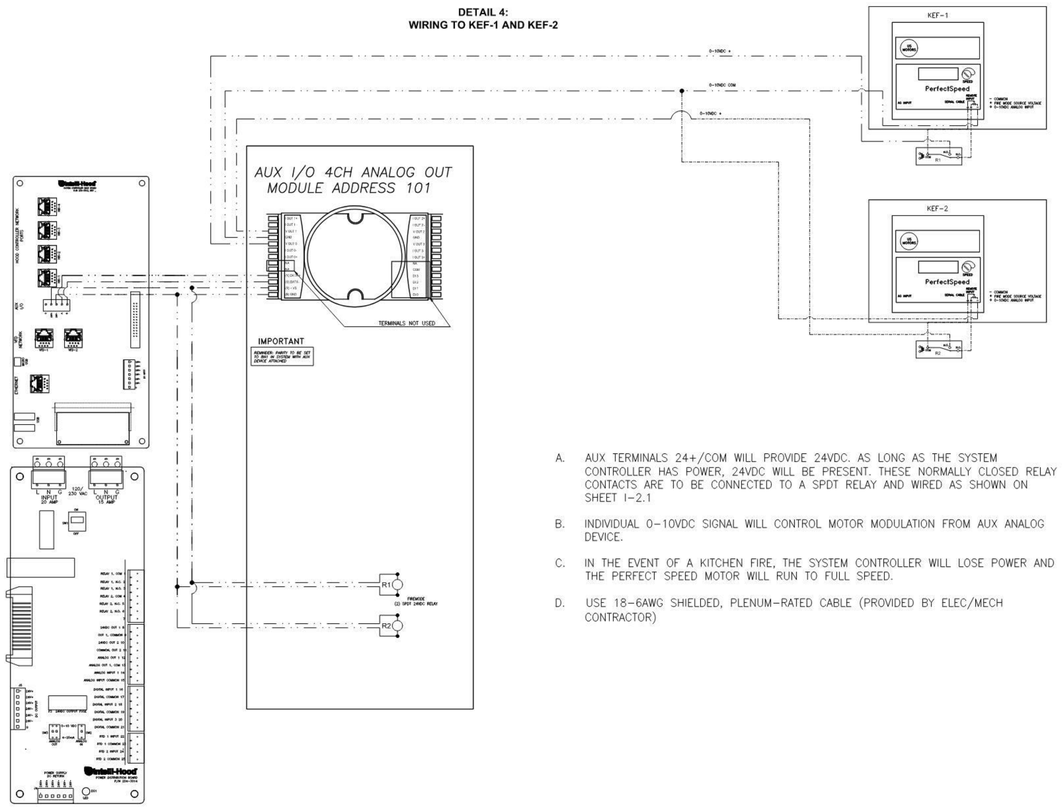
DETAIL 4:
WIRING TO KEF-1 AND KEF-2



A. AUX TERMINALS 24+/COM WILL PROVIDE 24VDC. AS LONG AS THE SYSTEM CONTROLLER HAS POWER, 24VDC WILL BE PRESENT. THESE NORMALLY CLOSED RELAY CONTACTS ARE TO BE CONNECTED TO A SPDT RELAY AND WIRED AS SHOWN ON SHEET I-2.1

B. INDIVIDUAL 0-10VDC SIGNAL WILL CONTROL MOTOR MODULATION FROM AUX ANALOG DEVICE.

C. IN THE EVENT OF A KITCHEN FIRE, THE SYSTEM CONTROLLER WILL LOSE POWER AND THE PERFECT SPEED MOTOR WILL RUN TO FULL SPEED.

D. USE 18-6AWG SHIELDED, PLENUM-RATED CABLE (PROVIDED BY ELEC/MECH CONTRACTOR)

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PROJECT:
CREEKWOOD MIDDLE SCHOOL
KINGWOOD, TX
HUMBLE ISD

SUBMITTAL: DRAWN BY: DJB
DRAWING RELEASE DATE:09-30-25 CHKD BY: DJB
DRAWING APPROVAL DATE:XX-XX-XX RELEASED BY: XXX
DRAWING APPROVAL DATE:XX-XX-XX APPROVED BY:XXX

REVISIONS:

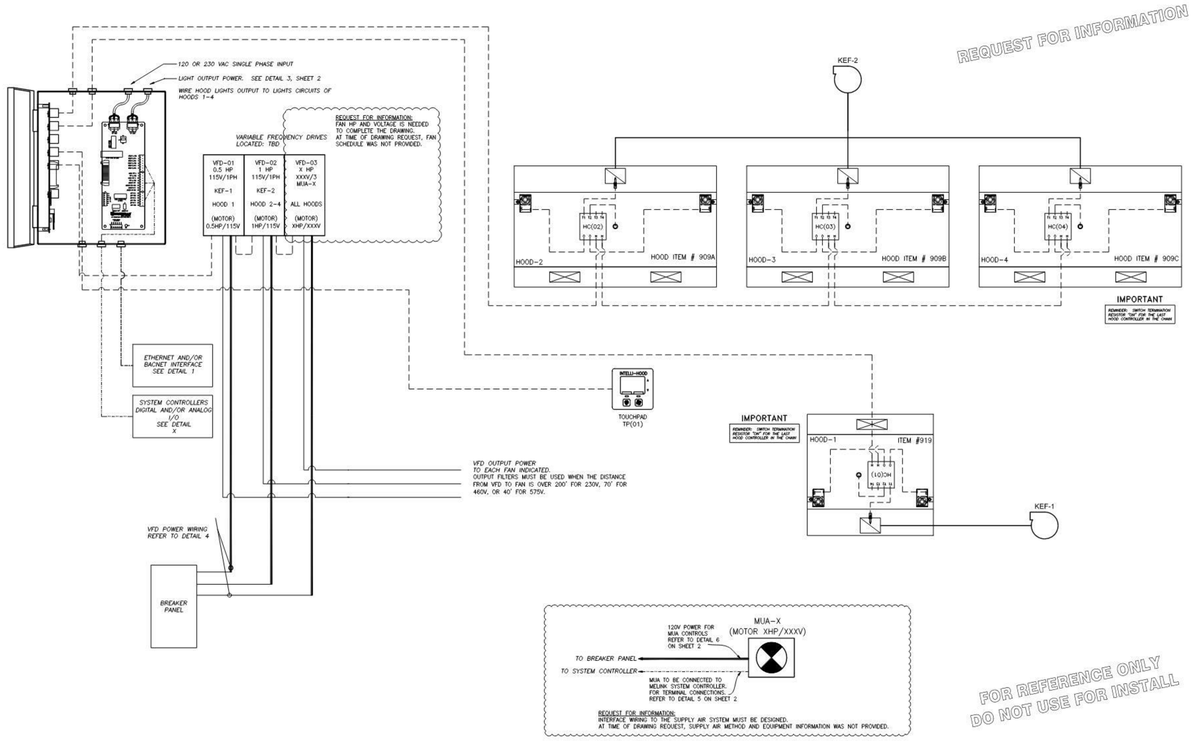
REV.#	DATE	REV. BY

SCALE: NOT TO SCALE

MELINK PROJECT SOL#: 3542272
SERIAL NUMBER: SUBMITTAL

SHEET: I-2.1

SHEET 3
CONTROL WIRING SCHEMATIC
FOR SYSTEM CONTROLLER #1



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DRAWING APPROVAL DATE:XX-XX-XX APPROVED BY:XXX

REVISIONS:

REV.#	DATE	REV. BY

SCALE: NOT TO SCALE

MELINK PROJECT SOL#: 3542272
SERIAL NUMBER: SUBMITTAL

SHEET: I-3

Revision / Date

Project:
CREEKWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCSI 48854119
PROFESSIONAL MEMBER
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FS EXHAUST HOODS

PACKAGE	VOLUME
Job No. 1521-13-01	Sheet No. ISSUE FOR BID
Drawn By: Author	QF1.05
Date: 10/29/2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD\ RENO\1521-13-01_CREEKWOOD MS ADDITION & RENOVATIONS - FOODSERVICE - V23.rvt

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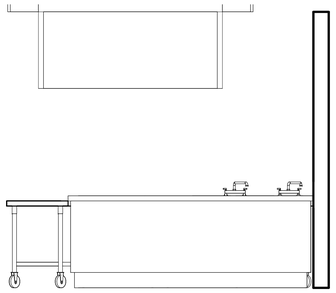
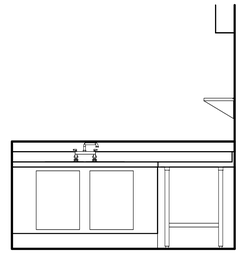
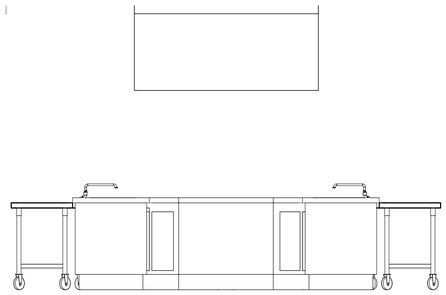


8 ELEVATION @ DEMO COUNTER (RIGHT)
1/2" = 1'-0"

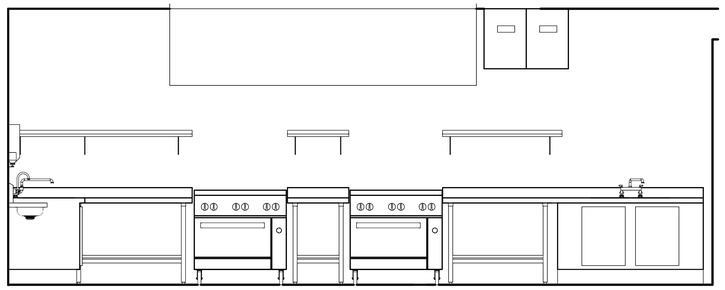
REFER TO SHEET QF1.01 FOR ITEM NUMBERS AND SHEETS QF3.01 & QF3.02 FOR SECTIONS AND DETAILS.



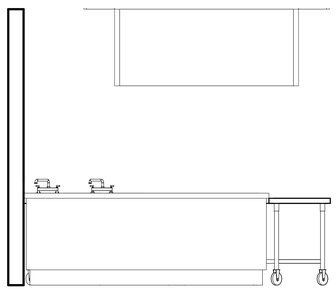
4 ELEVATION @ STUDENT WORK SINK A
1/2" = 1'-0"



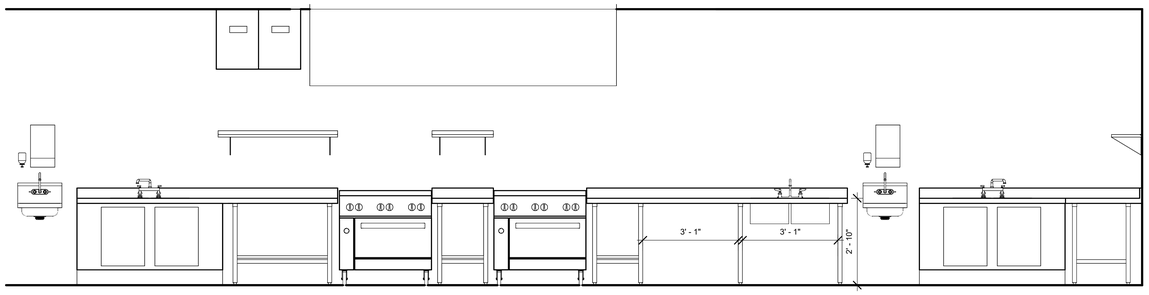
7 ELEVATION @ DEMO COUNTER (CENTER)
1/2" = 1'-0"



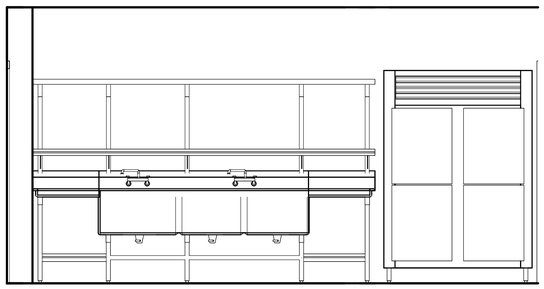
3 ELEVATION @ STUDENT WORK STATION C
1/2" = 1'-0"



6 ELEVATION @ DEMO COUNTER (LEFT)
1/2" = 1'-0"



2 ELEVATION @ STUDENT WORK STATION B
1/2" = 1'-0"



5 ELEVATION @ UTENSIL WASH SINK
1/2" = 1'-0"



1 ELEVATION @ STUDENT WORK STATION A
1/2" = 1'-0"

Revision / Date

Project:
CREEKWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCSI 48854119
PROFESSIONAL MEMBER
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FS ELEVATIONS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. QF2.01
Drawn By: MM	ISSUE FOR BID
Date: 10/29/2025	

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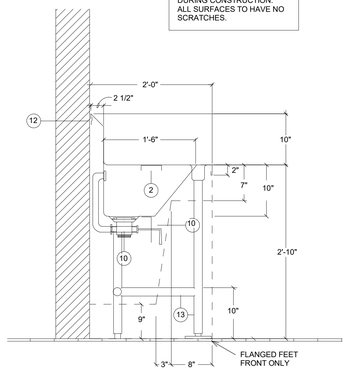
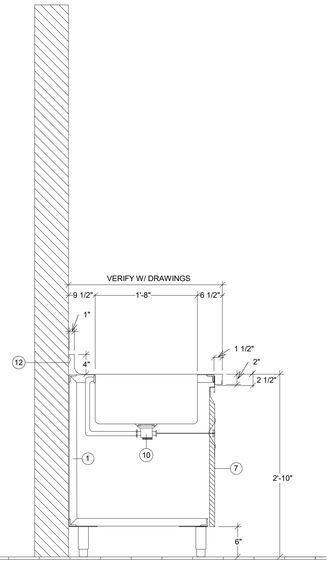
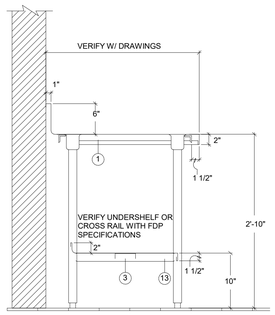
NOTE:
SECTION 11 40 00 TO PROVIDE PROTECTIVE COVERING ON SERVING COUNTER TOPS DURING CONSTRUCTION. ALL SURFACES TO HAVE NO SCRATCHES.



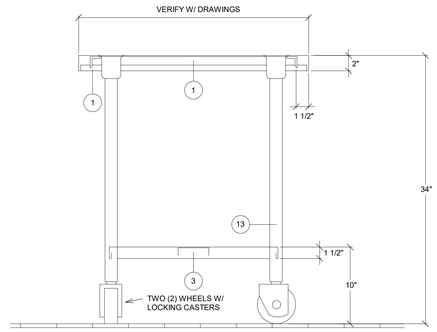
8 WORKTABLE W/ SINK SECTION
NOT TO SCALE



7 COUNTER - BACK CLOSED BASE W/ SINK SECTION
NOT TO SCALE



6 WORKTABLE W/O OVER SHELF SECTION
NOT TO SCALE



5 WORKTABLE - MOBILE SECTION
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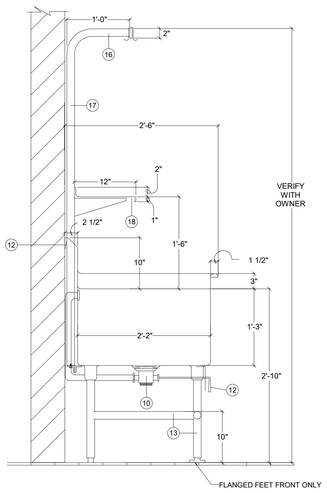
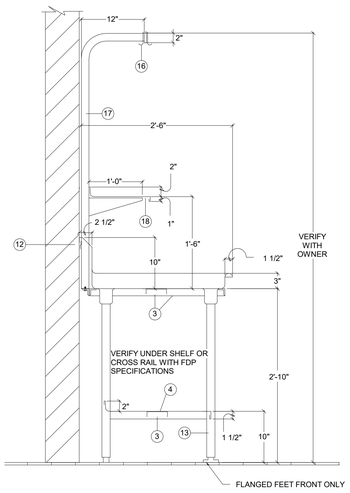
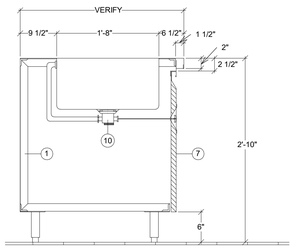


4 SINK - UTENSIL WASH SECTION
NOT TO SCALE



3 DRAINBOARD - UTENSIL WASH SECTION
NOT TO SCALE



2 COUNTER - DEMO W/ SINK SECTION
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1". ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS
    - A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    - B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    - C. #B62-1093 DOOR GUIDE.
    - D. #B60-1086 DOOR STOPS WHERE NEEDED.
    - E. #P62-1010 RECESS PULLS.

1 SECTION DETAIL NOTES
NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCS 48854119
PROFESSIONAL MEMBER
Melissa Moore
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FS SECTIONS & DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. ISSUE FOR BID QF3.01
Drawn By: MM	
Date: 10/29/2025	

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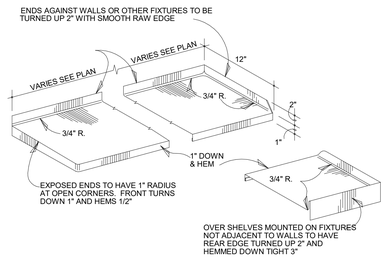
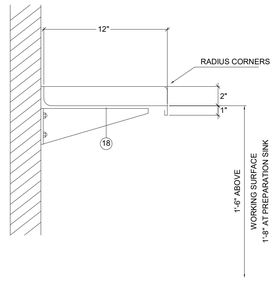
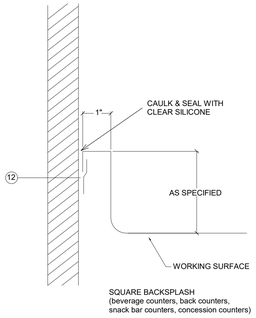
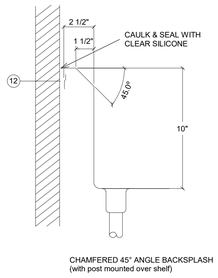
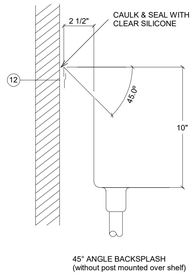




3 SHELF - WALL MTD SECTION
NOT TO SCALE

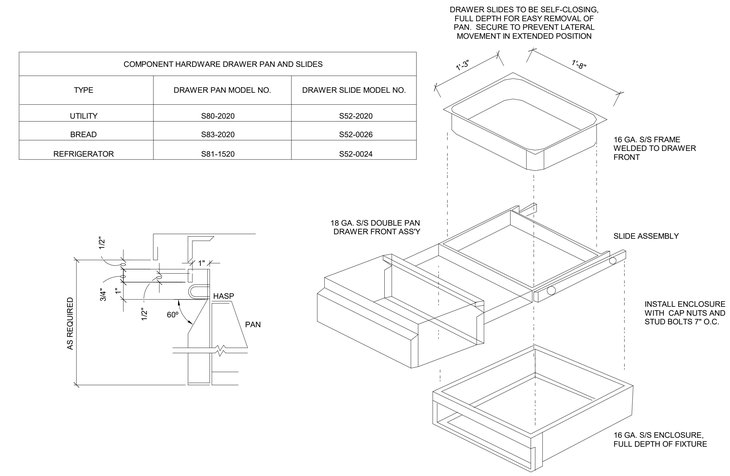






4 BACKSPLASH DETAILS
NOT TO SCALE

COMPONENT HARDWARE DRAWER PAN AND SLIDES		
TYPE	DRAWER PAN MODEL NO.	DRAWER SLIDE MODEL NO.
UTILITY	S80-2020	S52-2020
BREAD	S83-2020	S52-0026
REFRIGERATOR	S81-1520	S52-0024



6 DRAWER ASSEMBLY DETAIL
NOT TO SCALE

CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF THE FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAILS SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

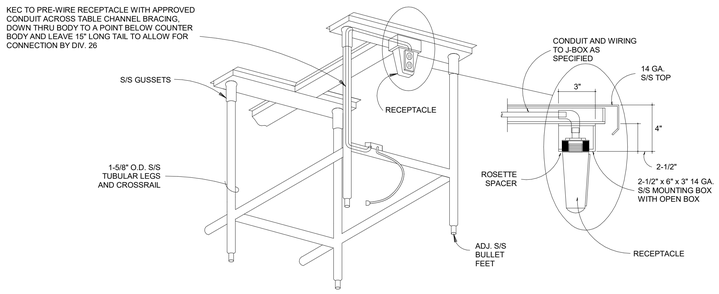
R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

1 CUSTOM FAB NOTES
NOT TO SCALE

NOTE:
COORDINATE ALL RECEPTACLES WITH ELECTRICAL CONTRACT DRAWING REQUIREMENTS, REFER TO ELECTRICAL PLAN



5 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE

2 EDGE DETAILS
NOT TO SCALE

11 UNDER SHELF DETAIL
NOT TO SCALE

12 FIRE PROTECTION SYSTEM FIRE PULL DETAIL
NOT TO SCALE

13 EXHAUST HOOD CLOSURE PANEL DETAIL
NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCSI 48854119
PROFESSIONAL MEMBER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 10/29/2025

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FDP
FOODSERVICE DESIGN PROFESSIONALS

FS DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. ISSUE FOR BID
Drawn By: MM	QF3.02
Date: 10/29/2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01 CREEKWOOD MS ADDITION & RENOVATIONS - FOODSERVICE - V23.rvt

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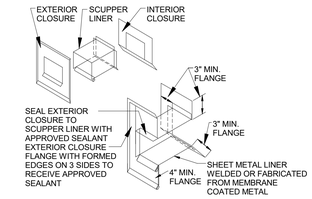
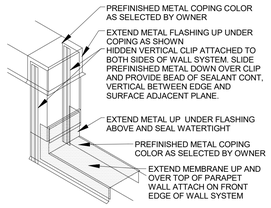
GENERAL ROOF NOTES:

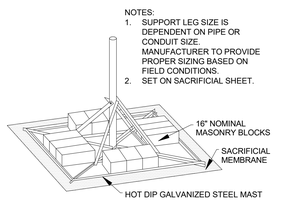
A. PROVIDE ALL REQUIRED UTILITY / STRUCTURAL COMPONENTS AND/OR CONNECTIONS FOR THE FUNCTIONAL USE OF ALL CONTRACTOR SUPPLIED EQUIPMENT OR APPLIANCES, REGARDLESS OF ANY OMISSIONS OR INCONSISTENCIES ENCOUNTERED IN THE CONSTRUCTION DOCUMENTS.
B. THE WORD 'PROVIDE' SHALL MEAN 'FURNISH AND INSTALL' COMPLETE AND READY TO USE.
C. IF DISCREPANCIES APPEAR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER QUALITY, QUANTITY, AND PRICE SHALL SUPERSEDE.
D. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BECOME FAMILIAR WITH THE PROJECT AND THE ON-SITE / OFF-SITE CONDITIONS PRIOR TO BIDDING OR COMMENCING WORK.
E. PROVIDE METAL END CLOSURE ON EXPANSION JOINTS WHERE THEY OCCUR AT THE EDGE OF THE ROOF.
F. ROOF SLOPES SHOWN ON DRAWINGS ARE GENERAL AND CONCEPTUAL ONLY. TAPER INSULATION IS SHOWN CONCEPTUALLY AND FOR INTENT ONLY; NOT TO SCALE AND SHOWN AS GRAPHIC REPRESENTATION ONLY TO SHOW SLOPE. INTENT IS TO PROVIDE POSITIVE DRAINAGE TO ALL ROOF DRAINS, SCUPPERS, AND GUTTERS. VERIFY INSULATION AND TAPER IN SHOP DRAWINGS AS REQUIRED TO MAINTAIN SLOPE PRIOR TO INSTALLATION. REFER TO STRUCTURAL (IF APPLIES) FOR EXACT TOS/BOD ELEVATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
G. PROVIDE TAPERED INSULATION CRICKETS (1/2"/FT. MIN. SLOPE) AT HIGH SIDE OF ALL MECHANICAL UNITS, SMOKE VENTS, ROOF HATCHES, AND OTHER MISC. ROOF PENETRATIONS, TO SHED WATER AROUND AND TO ENSURE POSITIVE ROOF DRAINAGE.
H. PROVIDE ADDITIONAL MANUFACTURER'S WALK PADS AS PROTECTION AT "SERVICE SIDE" OF ALL MECHANICAL EQUIPMENT - FIELD VERIFY LOCATIONS. AS WELL AS PROTECTION AT "ACCESS SIDE" OF ALL ROOF HATCHES AND ROOF ACCESS LADDERS - FIELD VERIFY LOCATIONS, AND AT DOWNSPOUT LOCATIONS.
I. ALL WOOD BLOCKING AT ROOF EDGES ARE TO BE FABRICATED FROM CONT. 2X6 FR-WD BOARDS. PROVIDE LARGER 2X FR-WD AS REQUIRED PER DIMENSIONED DETAILS OR AS FIELD CONDITIONS DICTATE. ALL COPING TO BE SLOPED TOWARD THE INTERIOR.
J. ALL EXPOSED FLASHING, COPING (IF APPLICABLE), AND THEIR ACCESSORIES SHALL BE AS SPECIFIED. PAINT ALL METAL FLASHING THAT IS NOT PREFINISHED (TYPICAL) AND VISIBLE FROM THE GROUND.
K. HEIGHT OF ALL NAILERS SHALL BE FLUSH WITH NEW INSULATION THICKNESS.
L. ALL THROUGH WALL FLASHING SYSTEMS TO ACCOMMODATE 8" MINIMUM FLASHING HEIGHT FROM FINISHED ROOF SURFACE. PROVIDE END DAMS AS CONDITIONS ALLOW. ALL FLASHING TO HAVE 4" LAP MINIMUM AND OR STEP.
M. ALL PITCH PANS SHALL BE DOUBLE SOLDERED STAINLESS STEEL AND RECEIVE EITHER MECHANICALLY ATTACHED GOOSENECKS OR METAL BONNETS. METAL BONNETS SHALL BE SECURED WITH CLAMPING RING AND SEALANT. SPECIAL CARE GIVEN TO WASH ALL METAL PRIOR TO INSTALLATION.
N. ALL INFIELD EXPANSION JOINTS SHALL HAVE LOW SLOPED STANDING SEAM JOINTS AND SHALL BE CHAMFERED AT TERMINATION AT ROOF EDGE TO MEET PROFILE OF PERIMETER.
O. ANY CRACKS OR VOIDS IN RISE WALLS ABOVE COUNTER FLASHING SHALL BE REPAIRED WITH COMPATIBLE SEALANT.
P. ALL VERTICAL MEMBRANE FLASHING SHALL BE MECHANICALLY FASTENED AND INSTALLED WITH NEW METAL COUNTER FLASHING UTILIZING A CONTINUOUS CLEAT. SLIDE METAL COVER PLATE DOWN OVER VERTICAL CLEAT AND SEAL.
Q. PROVIDE NEW CONCRETE SPLASH BLOCKS ON ROOF ELEVATION ON TOP OF A WALK PAD WHERE DOWNSPOUTS OCCUR.
R. ALL PIPES AND CONDUIT SHALL RECEIVE PIPE SUPPORTS AND RELATED SHIMS AND SHALL BE PLACED ON AN ADDITIONAL ADHERED ROOF MEMBRANE UNDER SPECIFIED WALK PAD PRIOR TO SURFACE APPLICATION. SUPPORTS TO OCCUR AT 10'-0" O.C. AND WITHIN 2'-0" OF ALL SLOPES, TEES AND CORNERS. ALL PIPES TO BE PAINTED PER BUILDING CODE REQUIREMENTS.
S. ALL METAL FLASHING SHALL EXTEND BEYOND ROOF EDGE MIN. 8" WHERE FLASHING ABUTS VERTICAL WALL SURFACE AS DETAILED. ALL FLASHING SHALL BE INSTALLED IN SHINGLE FASHION.
T. AT ALL LOCATIONS WHERE CONVERGENCE OF MULTIPLE PLANES OF ROOFING TO WALL OCCUR, FIELD FABRICATE THERMOPLASTIC BOOT TO BE INSTALLED OVER NEW ROOFING, COMPLETELY OVERLAYING THE TRANSITIONS OF ALL ROOF TO WALL ELEVATIONS, INSIDE AND OUTSIDE 90 DEGREE CORNERS, ETC. PRIOR TO METAL INSTALLATION.
U. ALL EQUIPMENT CURBS TO BE RAISED AS NECESSARY TO MAINTAIN 10" MINIMUM HEIGHT ABOVE FINISHED ROOF SURFACE.
V. MECHANICAL, ELECTRICAL, AND PLUMBING ROOF EQUIPMENT SHOWN ON THIS PLAN IS FOR GENERAL ARCHITECTURAL INFORMATION ONLY. REFER TO MEP DOCUMENTS (IF APPLIES) FOR ROOFTOP EQUIPMENT NOT SHOWN, AND FOR ADDITIONAL REQUIREMENTS AND COORDINATION.
W. FLASHING AND STRIPPING MATERIALS, BASE PLY SHEETS, MEMBRANES, INSULATION, AND ACCESSORIES SHOULD BE AS RECOMMENDED BY THE ROOFING SYSTEM MANUFACTURER FOR INTENDED USE AND COMPATIBILITY WITH THE MEMBRANE ROOFING SYSTEM.
X. WHERE WOOD BLOCKING EXCEEDS 6" IN VERTICAL THICKNESS AT TAPERED INSULATION, PROVIDE STEM WALL CONSTRUCTED OF 6" GALVANIZED COLD FORMED METAL FRAMING AT 16" O.C. WITH CONT. TRACK AT TOP AND BOTTOM AND WITH 3/4" FR-EXT GRADE PLYWOOD AT EACH SIDE, TOP TO SLOPE WITH TAPERED INSULATION.
Y. REFER TO MEP DOCUMENTS (IF APPLIES) FOR PIPE SUPPORT LOCATIONS, TYPE, AND DETAILS. PAD SHALL BE MIN 2" WIDER THAN SUPPORT IN ALL DIRECTIONS.
Z. PROVIDE STEP FLASHING AND COVER PLATE AT SLOPED ROOF HIGH/LOW CONDITIONS.
AA. GUTTERS SHALL BE PREFINISHED GALVANIZED STEEL, SIZE PER DRAWINGS, UNO. PROVIDE PREFINISHED 1/4"x1 1/2" GALVANIZED STEEL BENT PLATE BRACKETS AND PREFINISHED 1" GALVANIZED STEEL SPACERS AT 36" O.C. MAX, STAGGER WITH EACH OTHER AT 18" O.C.
BB. PROVIDE PREFINISHED GUTTER EXPANSION JOINTS 30'-0" O.C. MAX.
CC. DOWNSPOUTS SHALL BE 5"x6" PREFINISHED GALVANIZED STEEL UNO WHERE LOCATED ON ROOF PLAN. PROVIDE PREFINISHED 2" GALVANIZED STEEL HANGERS AT 36" O.C. COORDINATE LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
DD. PROVIDE CAST IRON BOOT (TYPICAL) AT ALL DOWNSPOUTS THAT ARE TO GRADE, CONNECT TO STORM SEWER.
EE. PROVIDE SPLASH BLOCKS AT ALL ROOF LEADER NOZZLES THAT SPILL ONTO GROUND.
FF. VERIFY ELEVATION OF ROOF DRAIN RELATIVE TO OVERFLOW SCUPPER PRIOR TO INSTALLATION OF SCUPPERS.
GG. LOCATE SCUPPERS AS INDICATED ON ELEVATIONS, EITHER CENTERED OVER WINDOWS/OPENINGS, OR CENTERED BETWEEN WINDOWS/OPENINGS, UNO. ADJUST PLACEMENT TO MEET MASONRY COURSING MODULES.



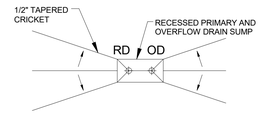
15 SCUPPER SHEET METAL
NOT TO SCALE



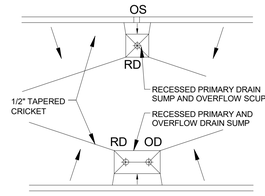
14 COPING END CAP
NOT TO SCALE



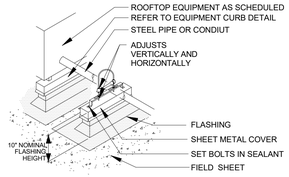
13 ANTENNA SUPPORT
NOT TO SCALE



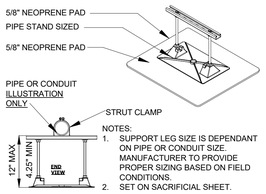
12 TAPERED SADDLES
NOT TO SCALE



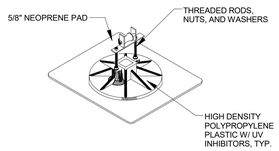
11 TAPERED CRICKET
NOT TO SCALE



10 PIPE STAND
NOT TO SCALE

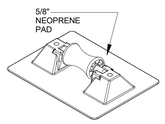


9 LARGE PIPE - PIPE STAND
NOT TO SCALE



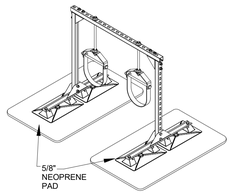
ROLLER AND SUPPORT LEG SIZE IS DEPENDENT ON PIPE OR CONDUIT SIZE. MANUFACTURER TO PROVIDE PROPER SIZING BASED ON FIELD CONDITIONS.

8 ROLLER PIPE SUPPORT
NOT TO SCALE

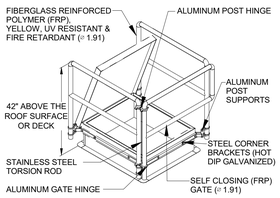


ROLLER AND SUPPORT LEG SIZE IS DEPENDENT ON PIPE OR CONDUIT SIZE. MANUFACTURER TO PROVIDE PROPER SIZING BASED ON FIELD CONDITIONS.

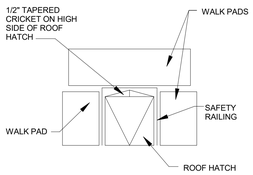
7 ROLLER PIPE SUPPORT
NOT TO SCALE



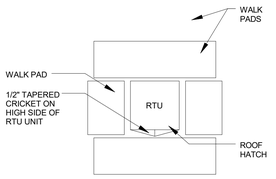
6 PIPE HANGER
NOT TO SCALE



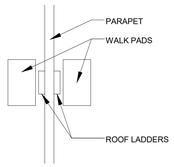
5 ROOF HATCH SAFETY RAILING
NOT TO SCALE



4 ROOF HATCH WALK PAD LAYOUT
NOT TO SCALE



3 ROOF TOP UNIT - WALK PAD LAYOUT
NOT TO SCALE



2 ROOF TO ROOF LADDER WITH WALK PADS
NOT TO SCALE

DO NOT MAKE REPAIRS OR ALTERATIONS TO THIS ROOF WITHOUT APPROVAL FROM THE DIRECTOR OF OPERATIONS AND MAINTENANCE OFFICE

PROJECT: *PROJECT NAME*
PROJECT ADDRESS
STATE

THIS ROOF IS GUARANTEED FROM *XX/XX/XX* UNTIL *XX/XX/XX*

PRIMARY ROOFING MATERIAL MANUFACTURER
MATERIAL MANUFACTURER NAME

MANUFACTURER: *MANUFACTURER NAME*
ADDRESS
STATE
NUMBER

ROOFING CONTRACTOR
CONTRACTOR NAME
ADDRESS
STATE
NUMBER

1 ROOF PLAQUE
NOT TO SCALE

CH CHILLER LINE
G GAS LINE
SST SPLASH PAN / SUPPORT PAD
RPH ROOF PENETRATION HOUSING
GUY WIRE
ANTENNA
SOIL / PLUMBING VENT
FLANGE MOUNTED EQUIPMENT
EDP ELECTRICAL DISTRIBUTION PANEL
HS HOT STACK
CURB MOUNTED VENT
RTU ROOF TOP UNIT
CURB MOUNTED EQUIPMENT
MISC. EQUIP. ON EQUIP. CURBS
RD PRIMARY ROOF DRAIN
OD OVERFLOW ROOF DRAIN
RD OD PRIMARY AND OVERFLOW ROOF DRAIN
DS/SB DOWNSPOUT/ SPLASHBLOCK
EJ EXPANSION JOINT
ME/G METAL EDGE W/GUTTER
ME METAL EDGE
RW RISE WALL
RME RAISED METAL EDGE
RW/EJ RISE WALL W/EXPANSION JOINT
CD CONDENSATE LINE
TEL / FO TELE / FIBER OPTICS
E ELECTRIC LINE
A ANCHOR STANCHION
V VENT STACK
W WATER HYDRANT
E ELECTRIC DISCONNECT PEDESTAL
SECURITY CAMERA
PITCH PAN
PROCESS VENT STACK
FLANGE MOUNTED VENT
SATELLITE DISH
MISC. EQUIPMENT
ROOF HATCH
SC THROUGH WALL SCUPPER
OS OVERFLOW SCUPPER
SC EDGE SCUPPER
DS/CH DOWNSPOUT/ COLLECTOR HEAD
DS DOWNSPOUT
ROOF ACCESS LADDER
P PARAPET
P/EJ EXPANSION JOINT AT PARAPET
SLOPE DIRECTION
SL SKYLIGHT

ROOF LEGEND

LOW SLOPE ROOF SYSTEM

NOT IN CONTRACT

Date
Revision /

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
3603 W. LAKE HOUSTON PKWY, KINGWOOD, TEXAS 77339

REGISTERED ARCHITECT RAMI RIMAWI 16711 STATE OF TEXAS
10/29/2025

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GENERAL INFORMATION

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. R1.00
Drawn By: RM	
Date: 10/29/2025	

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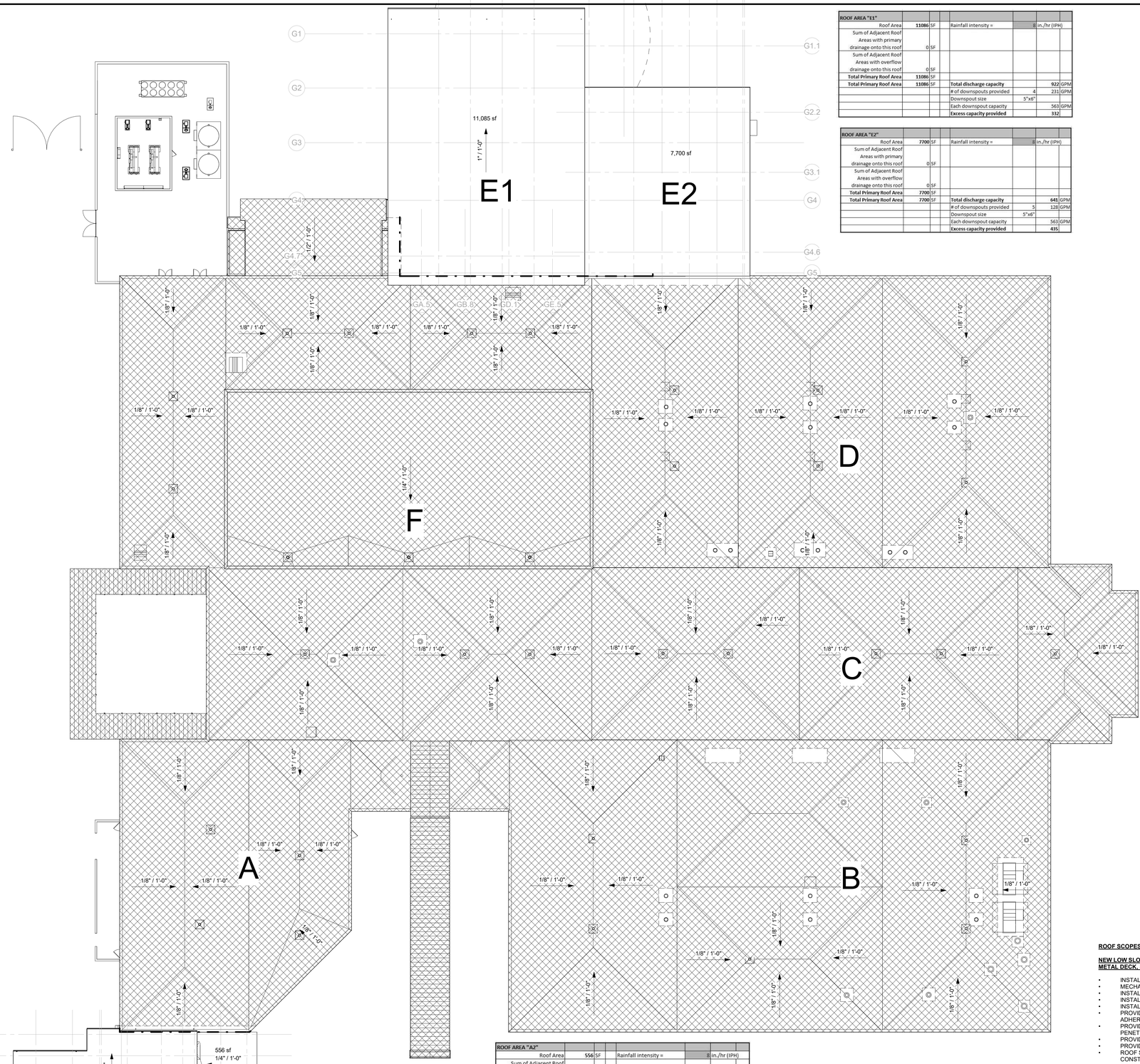

ROOF AREA "E1"						
Roof Area	11086	SF	Rainfall intensity =	8	in./hr (IPH)	
Sum of Adjacent Roof Areas with primary drainage onto this roof	0	SF				
Sum of Adjacent Roof Areas with overflow drainage onto this roof	0	SF				
Total Primary Roof Area	11086	SF				
Total Primary Roof Area	11086	SF	**Total discharge capacity**		922	GPM
			# of downspouts provided	4	231	GPM
			Downspout size	5"x6"		
			Each downspout capacity		563	GPM
			Excess capacity provided		332	

ROOF AREA "E2"						
Roof Area	7700	SF	Rainfall intensity =	8	in./hr (IPH)	
Sum of Adjacent Roof Areas with primary drainage onto this roof	0	SF				
Sum of Adjacent Roof Areas with overflow drainage onto this roof	0	SF				
Total Primary Roof Area	7700	SF				
Total Primary Roof Area	7700	SF	**Total discharge capacity**		641	GPM
			# of downspouts provided	5	128	GPM
			Downspout size	5"x6"		
			Each downspout capacity		563	GPM
			Excess capacity provided		435	

ROOF AREA "A1"						
Roof Area	6893	SF	Rainfall intensity =	8	in./hr (IPH)	
Sum of Adjacent Roof Areas with primary drainage onto this roof	0	SF				
Sum of Adjacent Roof Areas with overflow drainage onto this roof	0	SF				
Total Primary Roof Area	6893	SF				
Total Primary Roof Area	6893	SF	**Total discharge capacity**		573	GPM
			# of downspouts provided	4	143	GPM
			Downspout size	5"x6"		
			Each downspout capacity		563	GPM
			Excess capacity provided		420	

ROOF AREA "A2"						
Roof Area	556	SF	Rainfall intensity =	8	in./hr (IPH)	
Sum of Adjacent Roof Areas with primary drainage onto this roof	0	SF				
Sum of Adjacent Roof Areas with overflow drainage onto this roof	0	SF				
Total Primary Roof Area	556	SF				
Total Primary Roof Area	556	SF	**Total discharge capacity**		46	GPM
			# of drains provided	1	46	GPM
			Drain size	4"		
			Each drain capacity		192	GPM
			Excess capacity provided		146	

1 OVERALL ROOF PLAN
1" = 20'-0"

ROOF SCOPES OF WORK:

NEW LOW SLOPE ROOF ASSEMBLY SCOPE OF WORK AT ADDITIONS
METAL DECK, SLOPE IN STRUCTURE

- INSTALL POLYISOCYANURATE INSULATION, EQUAL TO R25.
- MECHANICALLY FASTEN FIRST LAYER OF POLYISOCYANURATE TO DECK
- INSTALL SECOND LAYER OF POLYISOCYANURATE IN HOT ASPHALT
- INSTALL ½" GYPSUM COVERBOARD SET IN HOT ASPHALT
- INSTALL 1 PLY 80 MIL BASE PLY MEMBRANE ADHERED IN HOT ASPHALT
- PROVIDE 1-PLY 80 MIL PVC THERMOPLASTIC FLEECEBACK CAP SHEET ADHERED IN HOT ASPHALT
- PROVIDE TREATED WOOD NAILERS AROUND THE PERIMETER AND ALL PENETRATIONS TO MATCH ROOF THICKNESS.
- PROVIDE ALL ASSOCIATED METAL TRIM, AND COPING
- PROVIDE 20 YEAR NDL WARRANTY
- ROOF SYSTEM TO MEET A MINIMUM OF CLASS C AS REQUIRED FOR TYPE II-B CONSTRUCTION PER TABLE 1505.1 OF THE IBC.

EXISTING LOW SLOPE ROOF ASSEMBLY SCOPE OF WORK AT NEW SKYLIGHTS AND MECHANICAL EQUIPMENT - MATCH EXISTING ROOF SYSTEM
METAL DECK, SLOPE IN STRUCTURE

- SPUD BACK EXISTING ROOF A MINIMUM OF 36" AWAY FROM NEW ROOF CURB.
- TEAR OFF EXISTING ROOF COVERBOARD AND INSULATION TO DECK.
- SET NEW SKYLIGHT CURBS AND/OR MECHANICAL CURBS ON DECK AND REFER TO STRUTURAL DRAWINGS FOR SUPPORTS AND ATTACHMENT.
- INSTALL NEW RIGID INSULATION, COVERBOARD AND ROOF MEMBRANES AND TIE INTO EXISTING ROOF SYSTEM AS DETAILED.
- PROVIDE NEW 1/2" TAPERED CRICKETS ON HIGH SIDE OF NEW CURBS AS REQUIRED TO PROVIDE POSITIVE DRAINAGE TO EXISTING ROOF DRAINS.
- ROOF SYSTEM TO MEET A MINIMUM OF CLASS C AS REQUIRED FOR TYPE II-B CONSTRUCTION PER TABLE 1505.1 OF THE IBC.

Revision / Date

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RYAN S. MARTIN 16711 REGISTERED ARCHITECT STATE OF TEXAS
10/29/2025

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OVERALL ROOF PLAN

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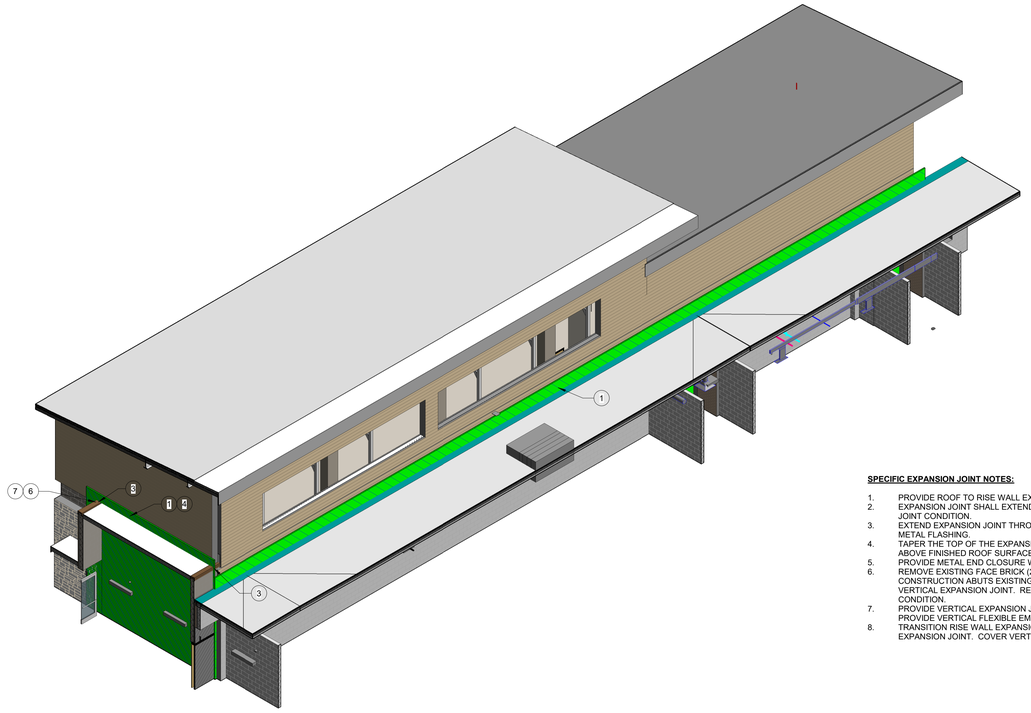
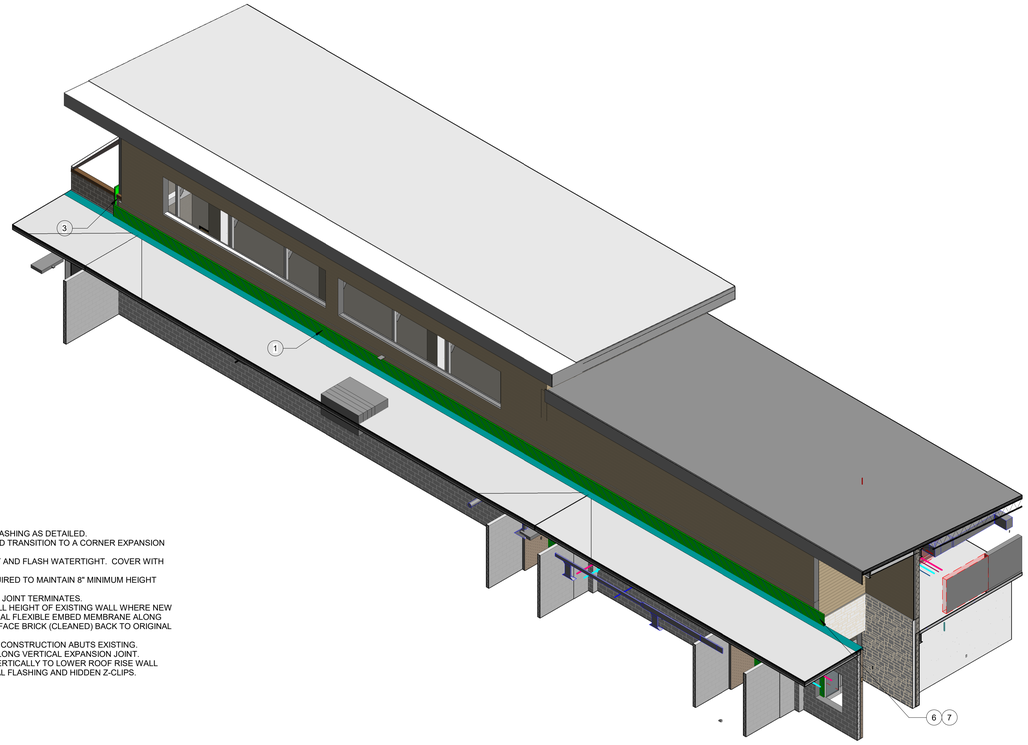


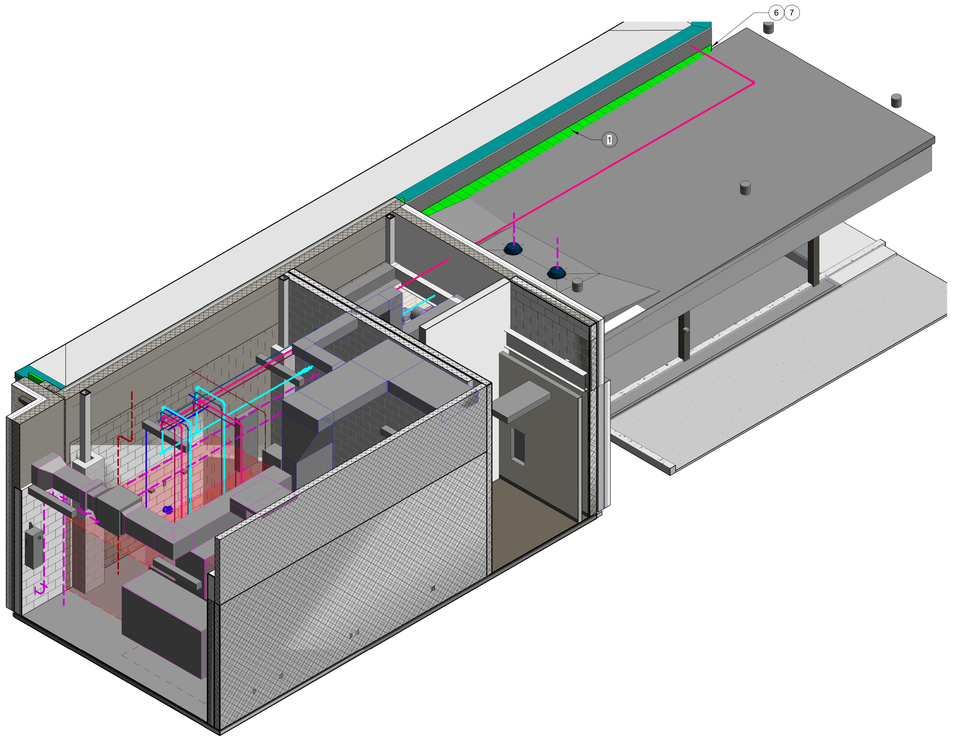
4 ENLARGED EXPANSION JOINT - AREA E - W

SPECIFIC EXPANSION JOINT NOTES:

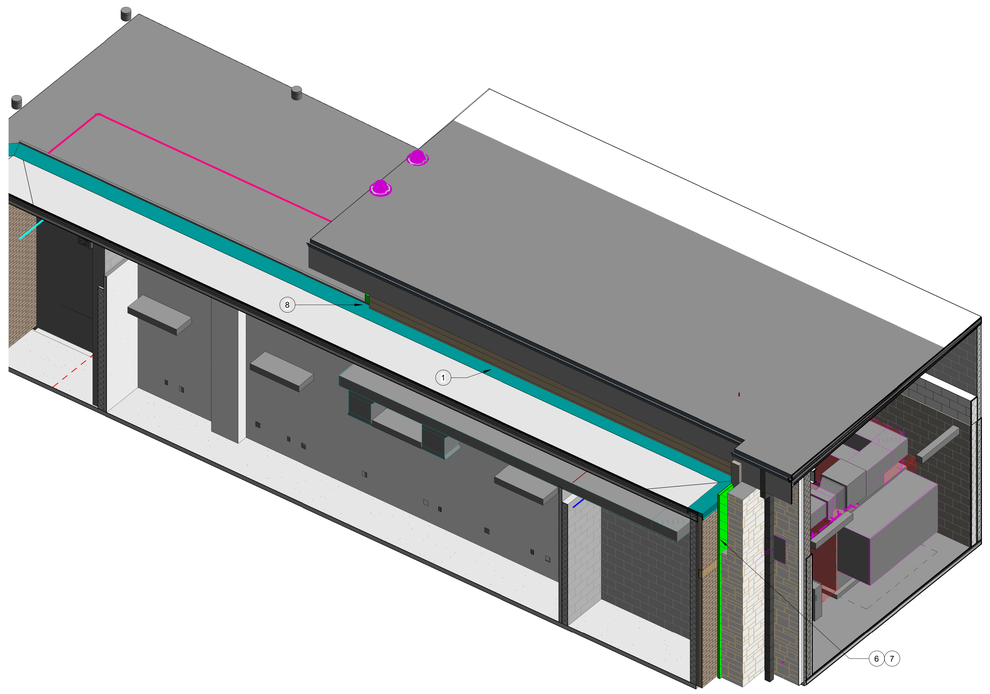
1. PROVIDE ROOF TO RISE WALL EXPANSION JOINT FLASHING AS DETAILED.
2. EXPANSION JOINT SHALL EXTEND TO RISE WALL AND TRANSITION TO A CORNER EXPANSION JOINT CONDITION.
3. EXTEND EXPANSION JOINT THROUGH THE PARAPET AND FLASH WATERTIGHT. COVER WITH METAL FLASHING.
4. TAPER THE TOP OF THE EXPANSION JOINT AS REQUIRED TO MAINTAIN 8" MINIMUM HEIGHT ABOVE FINISHED ROOF SURFACE.
5. PROVIDE METAL END CLOSURE WHERE EXPANSION JOINT TERMINATES.
6. REMOVE EXISTING FACE BRICK (2 BRICKS WIDE) FULL HEIGHT OF EXISTING WALL WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT. REINSTALL EXISTING FACE BRICK (CLEANED) BACK TO ORIGINAL CONDITION.
7. PROVIDE VERTICAL EXPANSION JOINT WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT.
8. TRANSITION RISE WALL EXPANSION JOINT DOWN VERTICALLY TO LOWER ROOF RISE WALL EXPANSION JOINT. COVER VERTICAL EJ WITH METAL FLASHING AND HIDDEN Z-CLIPS.



3 ENLARGED EXPANSION JOINT - AREA E - S



2 ENLARGED EXPANSION JOINT - AREA A - W



1 ENLARGED EXPANSION JOINT - AREA A - S

Revision / Date

Project:

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ENLARGED EXPANSION JOINTS

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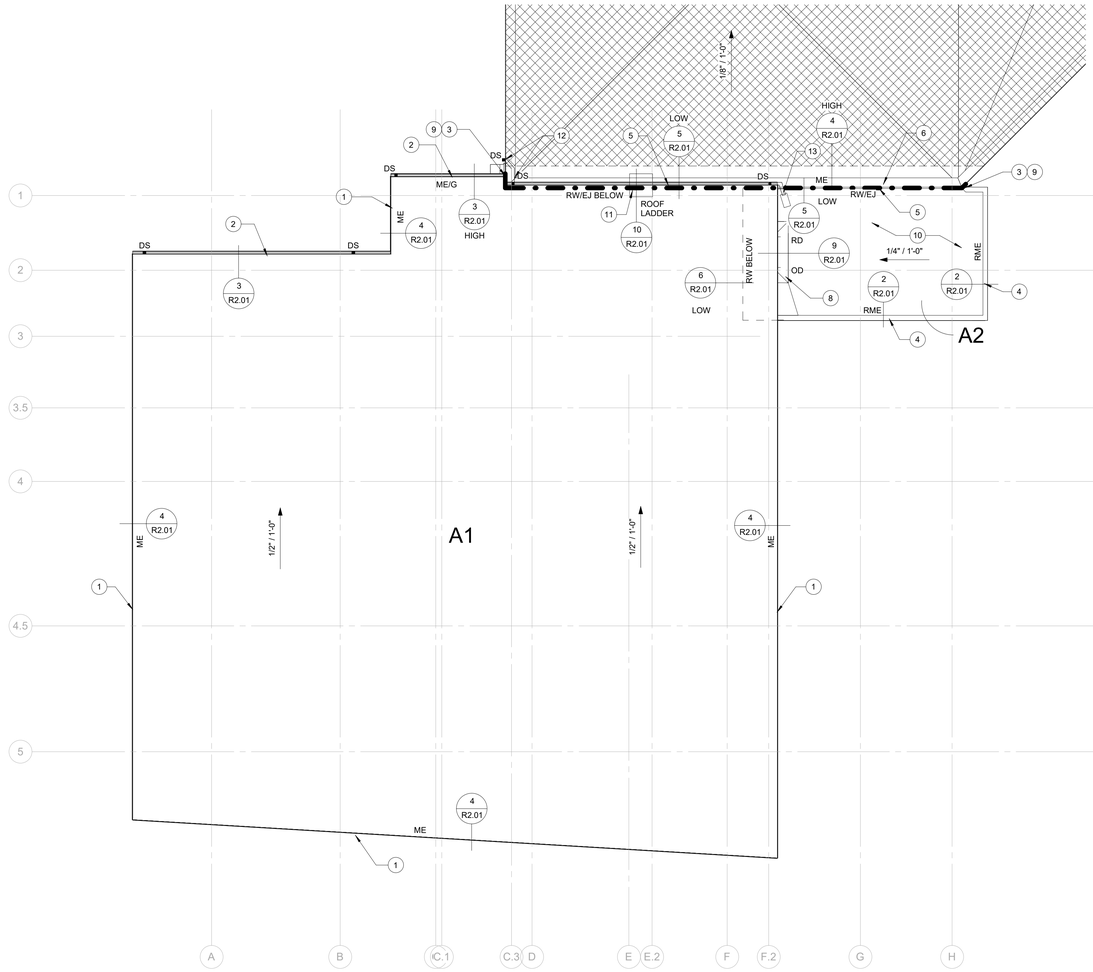
SPECIFIC ROOF NOTES:

1. PREFINISHED METAL EDGE FLASHING.
2. PREFINISHED METAL EDGE GUTTER WITH DOWNSPOUTS.
3. PROVIDE NEW THERMOPLASTIC BOOT AT METAL EDGE TO RISE WALL TRANSITION.
4. RAISED METAL EDGE FLASHING.
5. PROVIDE ROOF TO RISE WALL EXPANSION JOINT WHERE NEW CONSTRUCTION ABUTS EXISTING.
6. REMOVE EXISTING METAL EDGE FLASHING AND SPUD BACK EXISTING ROOFING 36" FROM EDGE. INSTALL NEW VENEER METAL PANELS OVER EXISTING AND FLASH IN NEW METAL EDGE FLASHING TO EXISTING ROOF SYSTEM.
7. PROVIDE CONCRETE SPLASH BLOCK ON ROOF AT EACH DOWNSPOUT.
8. ROOF DRAIN AND OVERFLOW DRAIN (RD/OD TYP.) REFER TO PLUMBING DRAWINGS FOR SIZE AND LEADER INFORMATION. REFER TO DETAIL FOR INSTALLATION.
9. REMOVE EXISTING FACE BRICK (2 BRICKS WIDE) FULL HEIGHT OF EXISTING WALL WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT. REINSTALL EXISTING FACE BRICK (CLEANED) BACK TO ORIGINAL CONDITION.
10. PROVIDE 1/4" TAPERED INSULATION ON FLAT DECK AT ROOF AREA A2.
11. PROVIDE ROOF TO ROOF LADDER WITH WALK PADS AT HIGH AND LOW ROOF SURFACE.
12. ROUTE NEW DOWNSPOUT TO EXISTING LOWER ROOF AND TO DOWN FACE OF BUILDING. TIE INTO STORM.
13. ROUTE NEW DOWNSPOUT TO NEW LOWER ROOF. DISCHARGE TO NEW CONCRETE SPLASHBLOCK.



1 PARTIAL ROOF PLAN - AREA A
1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION & RENOVATION
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ENLARGED ROOF PLAN - AREA A

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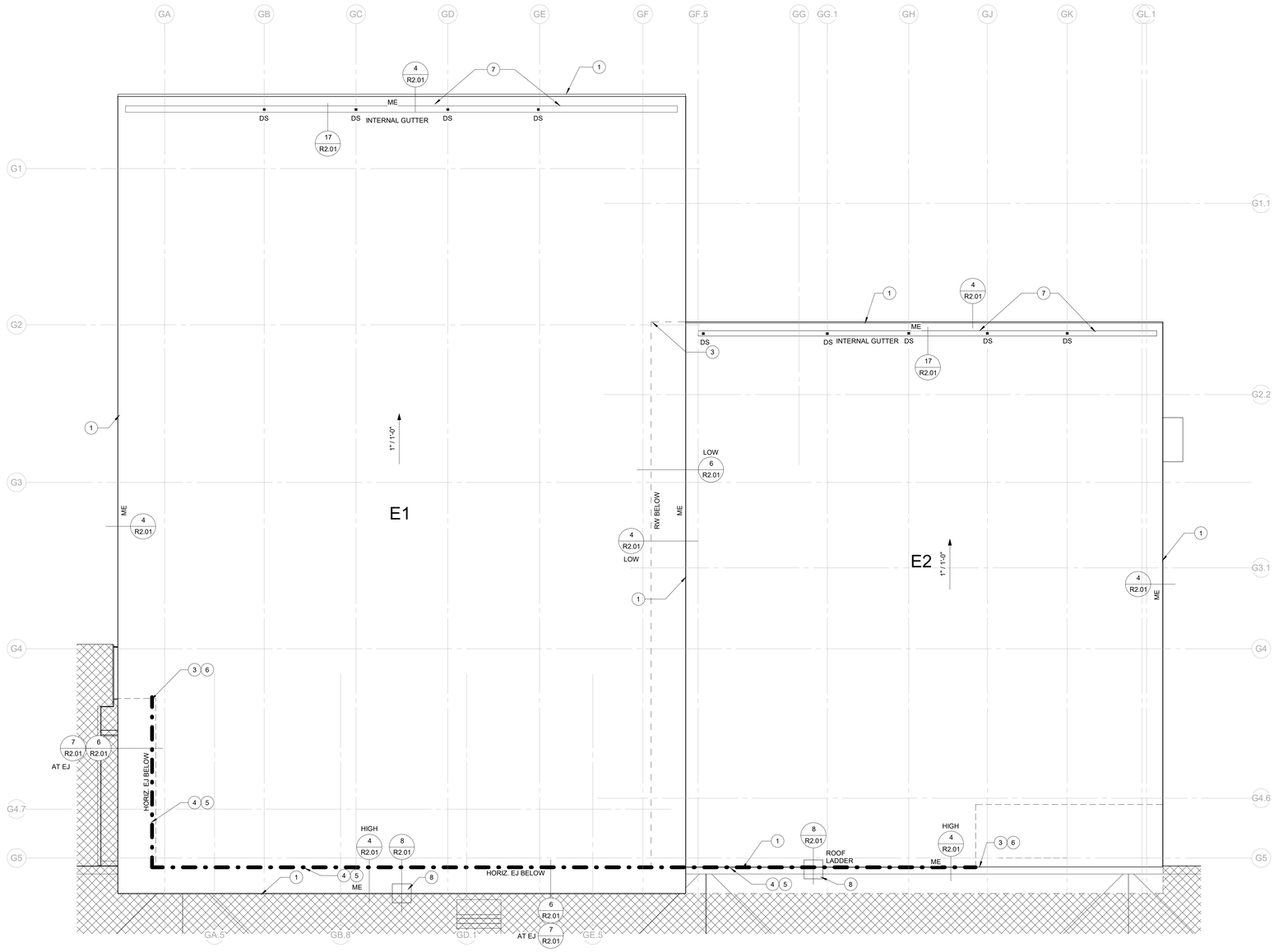
ROOF SPECIFIC NOTES:

1. PREFINISHED METAL EDGE FLASHING.
2. PREFINISHED METAL EDGE GUTTER WITH DOWNSPOUTS.
3. PROVIDE THERMOPLASTIC BOOT AT METAL EDGE TO RISE WALL TRANSITION.
4. PROVIDE HORIZONTAL EXPANSION JOINT WHERE NEW CONSTRUCTION ABUTS EXISTING.
5. REMOVE EXISTING METAL EDGE FLASHING AND SPUD BACK EXISTING ROOFING 36" FROM EDGE AND PROVIDE FLASHING TO RISE WALL CONDITION.
6. REMOVE EXISTING FACE BRICK (2 BRICKS WIDE) FULL HEIGHT OF EXISTING WALL WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT. REINSTALL EXISTING FACE BRICK (CLEANED) BACK TO ORIGINAL CONDITION.
7. INTERNAL GUTTER WITH DOWNSPOUTS. ROUTE SHEET METAL DOWNSPOUT DOWN INTO STEEL TUBE BELOW AND STUB INTO INTERNAL PVC PIPING.
8. PROVIDE ROOF TO ROOF LADDER WITH WALK PADS AT HIGH AND LOW ROOF SURFACE.



1 PARTIAL ROOF PLAN - AREA E
1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION & RENOVATION
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ENLARGED ROOF PLAN - AREA E

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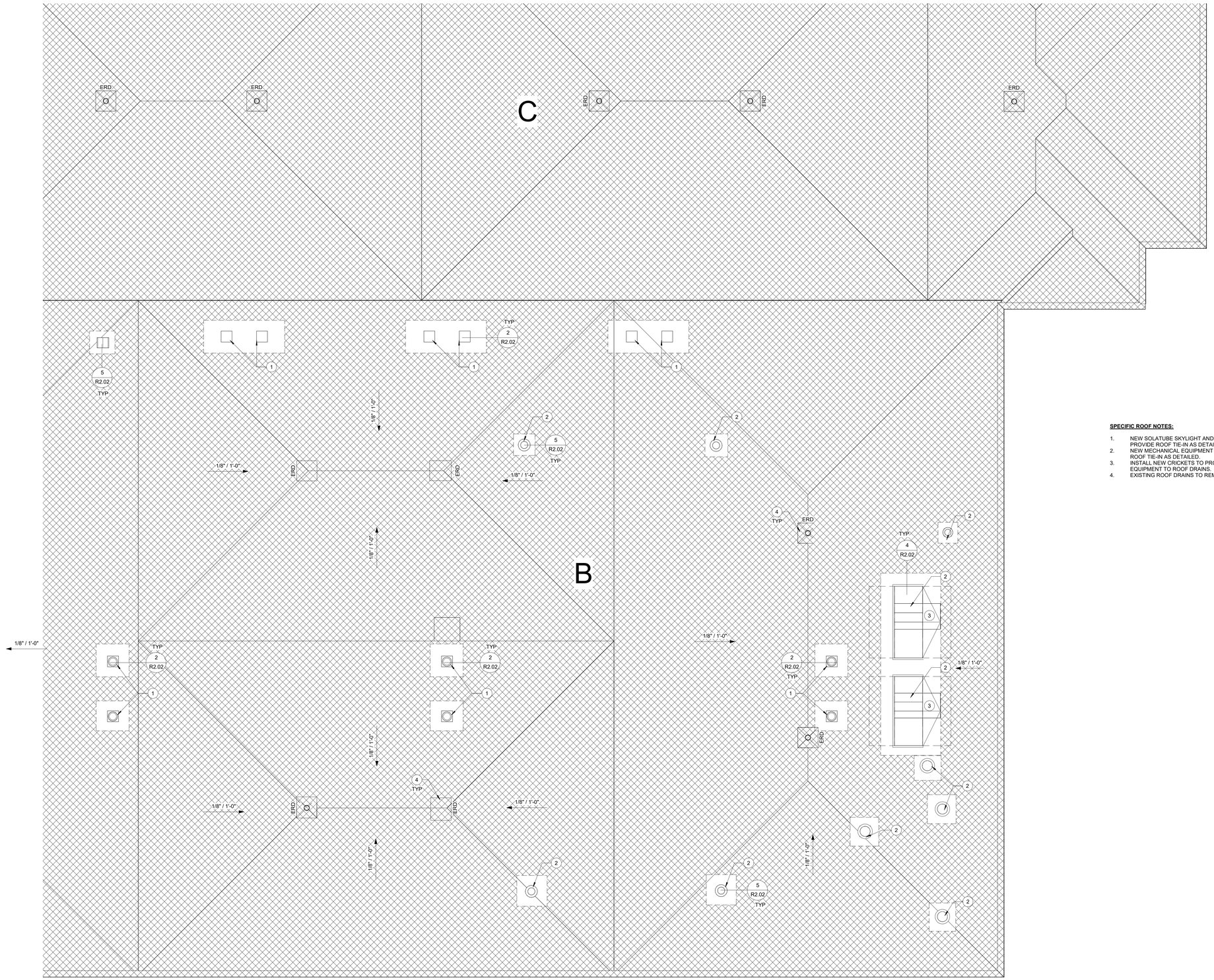

1 PARTIAL ROOF PLAN - AREA B
1/8" = 1'-0"

SPECIFIC ROOF NOTES:

1. NEW SOLATUBE SKYLIGHT AND MANUFACTURED CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.
2. NEW MECHANICAL EQUIPMENT AND CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.
3. INSTALL NEW CRICKETS TO PROVIDE POSITIVE DRAINAGE AROUND SKYLIGHTS AND/OR EQUIPMENT TO ROOF DRAINS.
4. EXISTING ROOF DRAINS TO REMAIN.

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ENLARGED ROOF PLAN - AREA B

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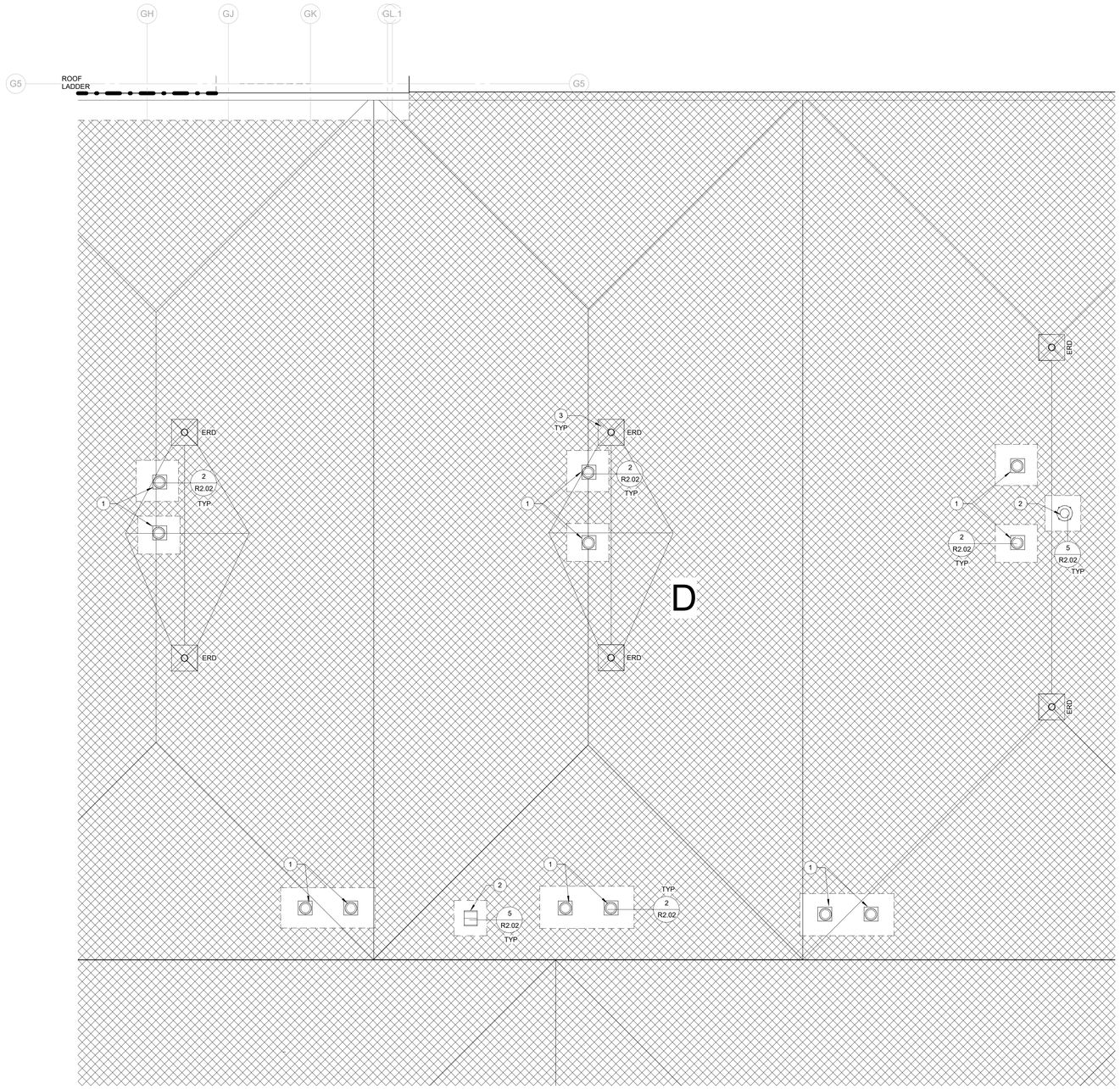

1 PARTIAL ROOF PLAN - AREA D
1/8" = 1'-0"

SPECIFIC ROOF NOTES:

1. NEW SOLATUBE SKYLIGHT WITH MANUFACTURED CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.
2. NEW MECHANICAL EQUIPMENT AND CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.
3. EXISTING ROOF DRAINS TO REMAIN.

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ENLARGED ROOF PLAN - AREA D

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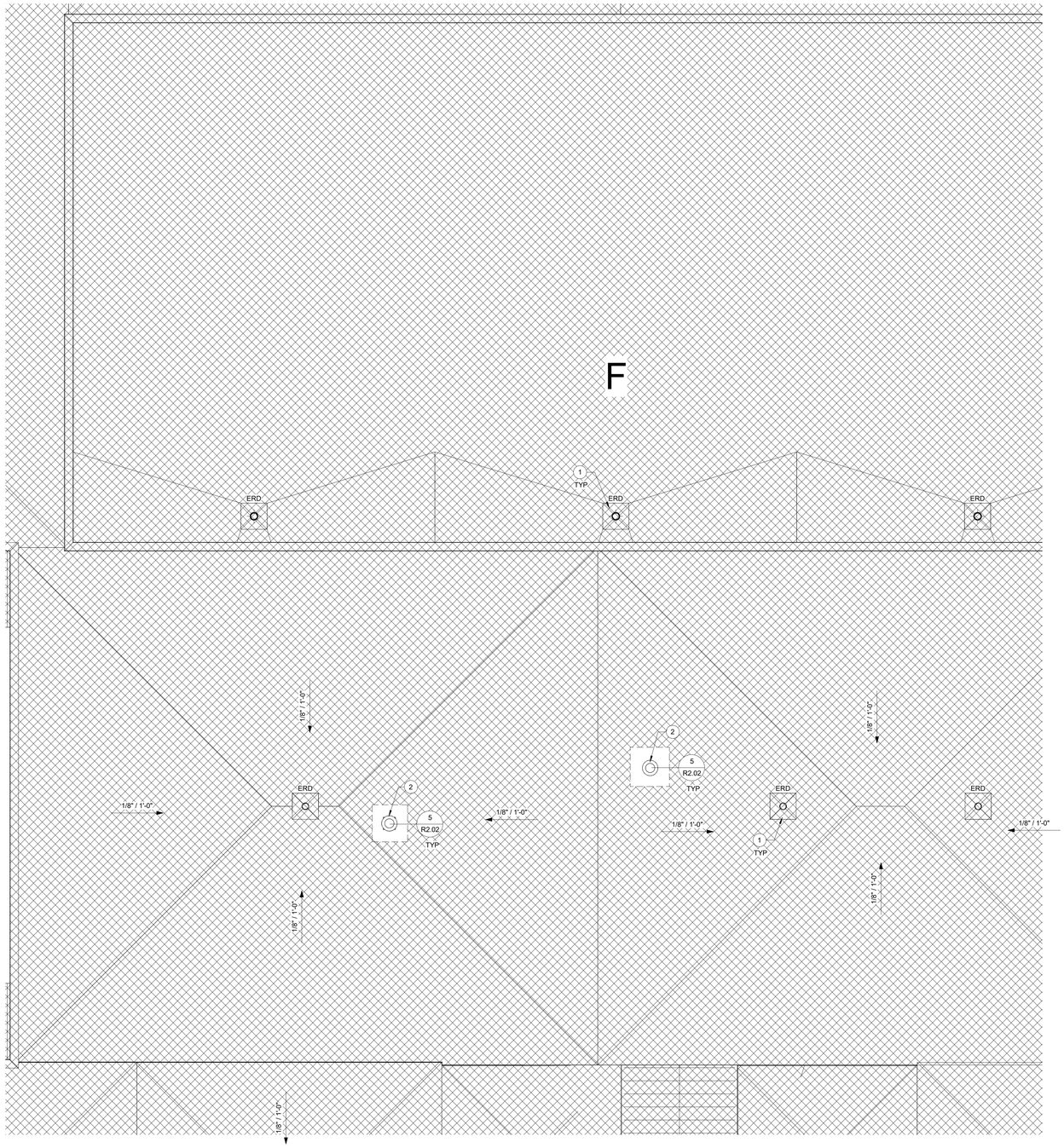
SPECIFIC ROOF NOTES:

1. EXISTING ROOF DRAIN TO REMAIN.
2. NEW MECHANICAL EQUIPMENT AND CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.



1 PARTIAL ROOF PLAN - AREA F
1/8" = 1'-0"

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ENLARGED ROOF PLAN - AREA F

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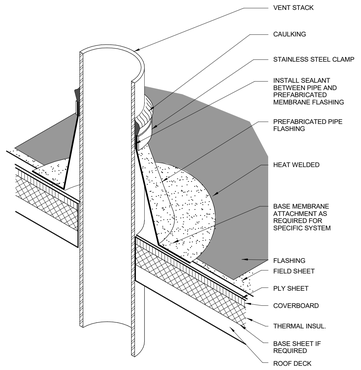
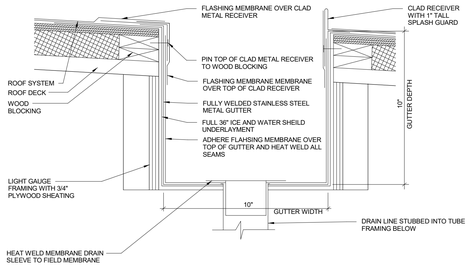
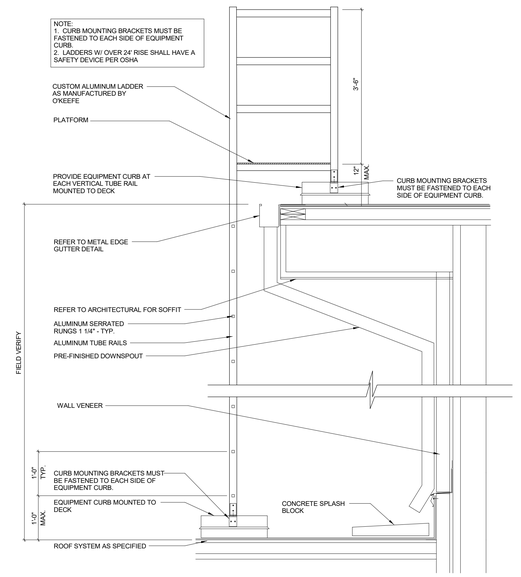


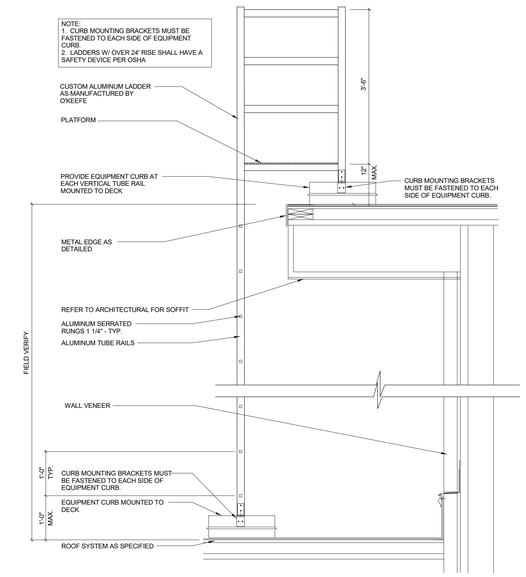
18 PIPE PENETRATION
NOT TO SCALE



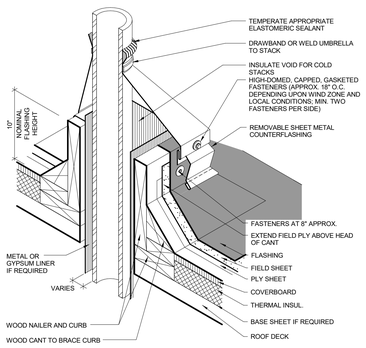
17 INTERNAL GUTTER
NOT TO SCALE



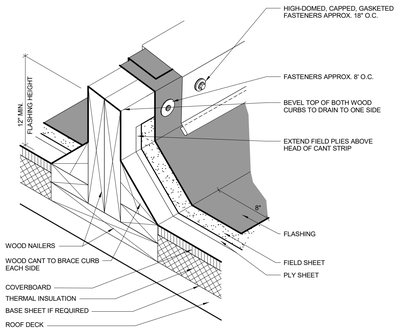
10 ROOF MOUNTED LADDER OVER METAL EDGE GUTTER
NOT TO SCALE



8 ROOF MOUNTED LADDER OVER METAL EDGE
NOT TO SCALE



14 HOT STACK
NOT TO SCALE



13 EQUIPMENT CURB
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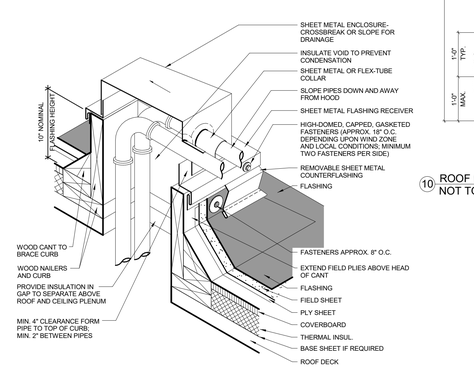

12 PIPE BOX
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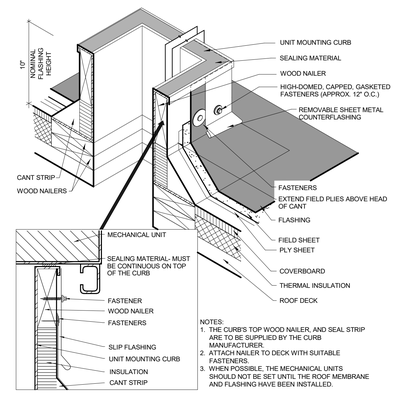
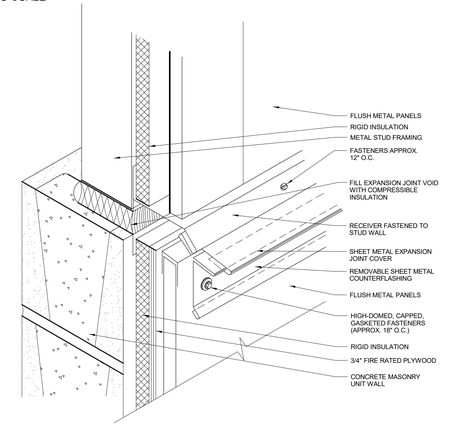


11 MECHANICAL CURB
NOT TO SCALE



7 HORIZONTAL EXPANSION JOINT AT METAL PANELS
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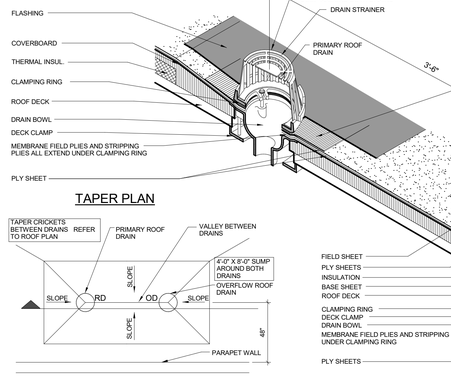
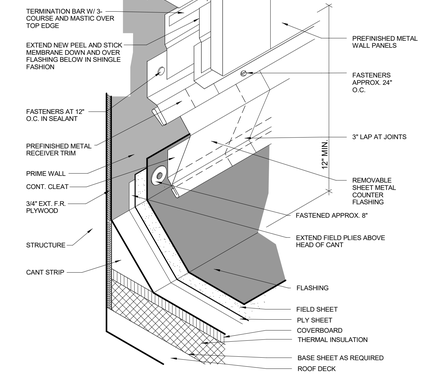


9 PRIMARY AND SECONDARY DRAINS
NOT TO SCALE



6 ROOF TO RISE WALL METAL PANEL
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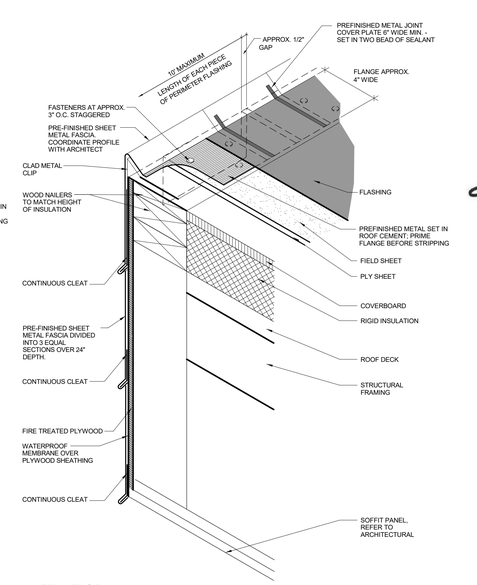
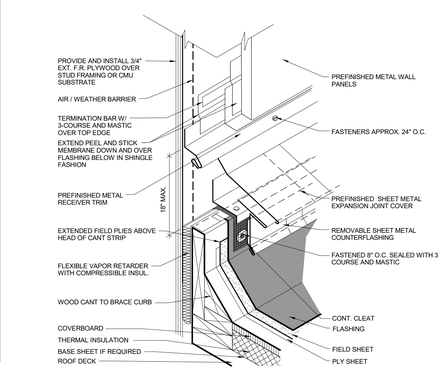


2 WIDE RAISED METAL EDGE
NOT TO SCALE

1 METAL EDGE
NOT TO SCALE



5 RISE WALL EXPANSION JOINT WITH METAL PANELS
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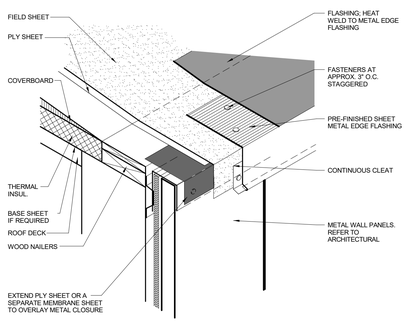
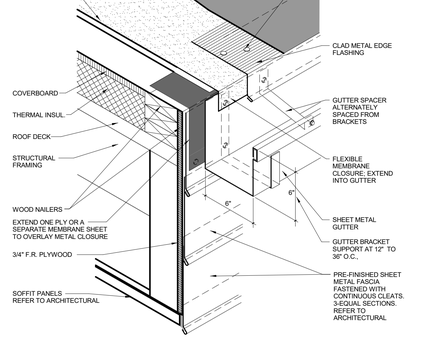


4 METAL EDGE
NOT TO SCALE



3 METAL EDGE GUTTER
NOT TO SCALE

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NEW ADDITION ROOF DETAILS - PVC

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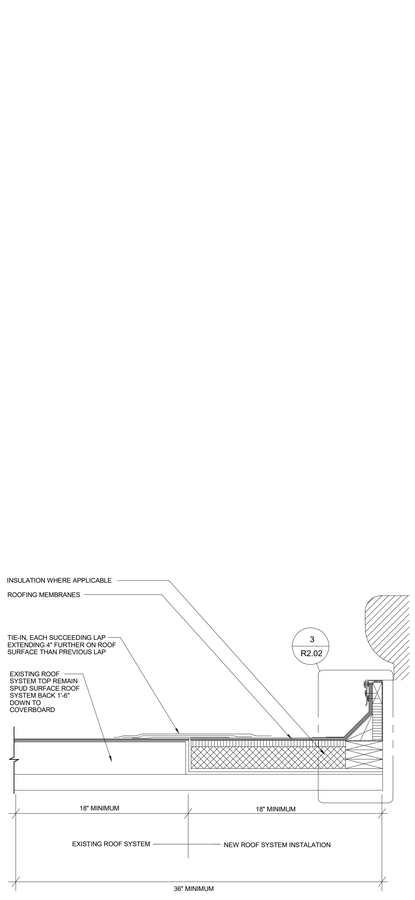


5 PROCESS VENT CURB TIE-IN
NOT TO SCALE



4 MECHANICAL CURB TIE-IN
NOT TO SCALE

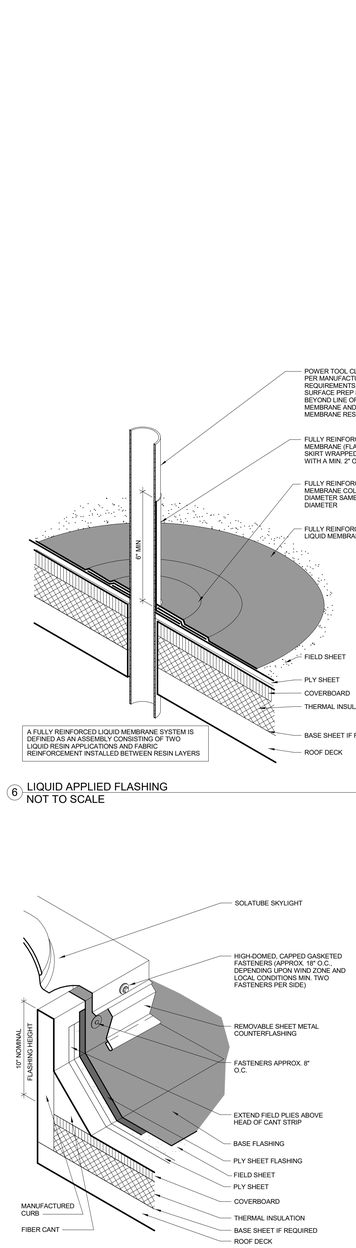


NOTES:
1. THE CURB'S TOP WOOD NAILER, AND SEAL STRIP ARE TO BE SUPPLIED BY THE CURB MANUFACTURER.
2. ATTACH NAILER TO DECK WITH SUITABLE FASTENERS.
3. WHEN POSSIBLE, THE MECHANICAL UNITS SHOULD NOT BE SET UNTIL THE ROOF MEMBRANE AND FLASHING HAVE BEEN INSTALLED.

3 MECHANICAL CURB
NOT TO SCALE



2 SKYLIGHT CURB TIE-IN
NOT TO SCALE



1 SOLATUBE SKYLIGHT
NOT TO SCALE

6 LIQUID APPLIED FLASHING
NOT TO SCALE

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Project:
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EXISTING ROOF DETAILS - MOD BIT

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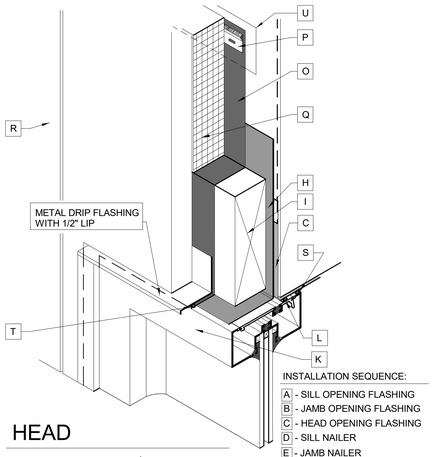
GENERAL NOTES - ENVELOPE FLASHING

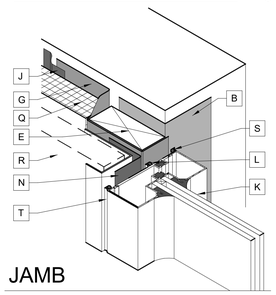
1. FLASHING CONTOURATION IS SHOWN GENERICALLY TO DEPICT FLASHING APPLICATION AND LOCATION AROUND OPENINGS.
2. ALL ROOF DRAIN OUTLETS TO GRADE SHALL BE SEALED WITH SEALANT & FLEXIBLE BACKER ROD AND FLEXIBLE MEMBRANE.
3. COORDINATE FLASHING APPLICATION & LOCATIONS WITH ARCHITECTURAL ELEMENTS LOCATED AND IDENTIFIED IN ARCHITECTURAL DETAILS. REFER TO ARCHITECTURAL SHEETS FOR FURTHER INFORMATION.
4. THE BASIS OF DESIGN IS FOR THE WINDOWS, DOORS AND OTHER WALL PENETRATIONS TO BE INSTALLED.FLASHED AND WATER TESTED PRIOR TO VENEER INSTALATION.
5. FLEXIBLE MEMBRANE FLASHING COLOR TO MATCH MORTAR COLOR.
6. ALL ALUMINIUM FRAMES SHALL CONTAIN THERMALLY BROKEN BACKER PLATE IN OPEN THROAT OF FRAME.
7. PROVIDE ALUMINIUM CAP FILLER AT TOP/BOTTOM OPENINGS OR ALL ALUMINUM FRAME MULLIONS.
8. PROVIDE WOOD NAILERS AS REQUIRED AND DETAILED AROUND PERIMETER OF OPENING FOR FRAME ASTENING AS REQUIRED BY MANUFACTURER.
9. CONTRACTOR SHALL COORDINATE LOCATION OF WINDOW/DOOR IN OPENING AS REQUIRED TO PROVIDE AND MAINTAIN PROPER FLASHING COVERAGE TO ACHIEVE AND MAINTAIN THE SPECIFIED WARRANTY.
10. CONTRACTOR SHALL COORDINATE AND CONFIRM COMPATIBILITY OF ALL ENVELOPE PRODUCTS THAT WILL COME INTO CONTACT WITH ADJACENT MATIERIALS. PROVIDE A COMPATIBLITY MATRIX FOR REVIEW FORALL PARTIES PRIOR TO INSTALLATION OF WATERPROOFING MATERIAL.
11. PROVIDE CONTINUOUS VERTICAL FLEXIBLE FLASHING AT ALL INSIDE/OUTSIDE BUILDING SUBSTRATE CORNERS, CHANGES IN VENEER MATERIALS AND ALL WALL EXPANSION JOINTS AS SHOWN ON DRAWINGS.
12. ISOMETRIC FLASHING ASSEMBLIES ARE FOR FLASHING INFORMATION ONLY. PLEASE REFER TO ARCHITECTRUAL/STRUCTRUAL DRAWINGS FOR ADDITIONAL WALL, WINDOW, DOOR AND LINTEL CONSTRUCTION INFORMATION.



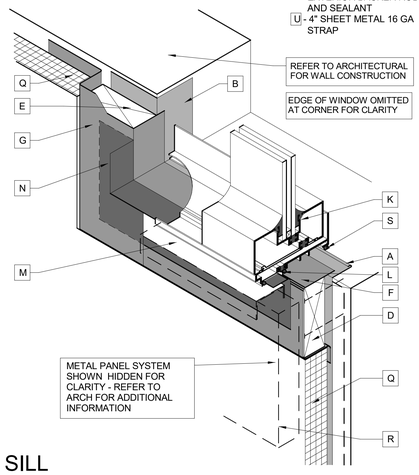
HEAD

INSTALLATION SEQUENCE:

- A - SILL OPENING FLASHING
- B - JAMB OPENING FLASHING
- C - HEAD OPENING FLASHING
- D - SILL NAILER
- E - JAMB NAILER
- F - SILL FLASHING
- G - JAMB FLASHING
- H - HEAD FLASHING
- I - HEAD NAILER
- J - JAMB FLASHING EDGE SEAL
- K - WINDOW UNIT FRAME
- L - HEAD, JAMB, SILL MID SEALANT AND BACKER ROD
- M - SILL PERIMETER FLASHING
- N - JAMB PERIMETER FLASHING
- O - HEAD LINTEL FLASHING
- P - HEAD TERM BAR, 3 COURSE AND MASTIC
- Q - HEAD JAMB AND SILL RIGID INSULATION
- R - HEAD JAMB AND SILL EXTERIOR VENEER
- S - HEAD JAMB AND SILL INTERIOR BACKER ROD AND SEALANT
- T - HEAD JAMB AND SILL EXTERIOR BACKER ROD AND SEALANT
- U - 4" SHEET METAL 16 GA STRAP

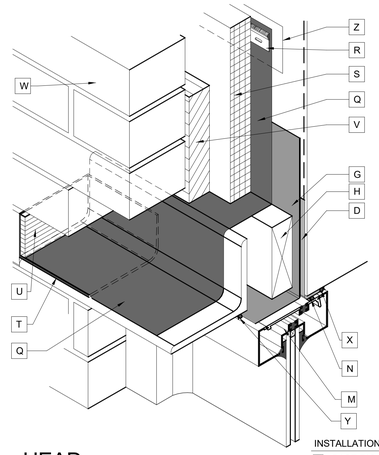


JAMB

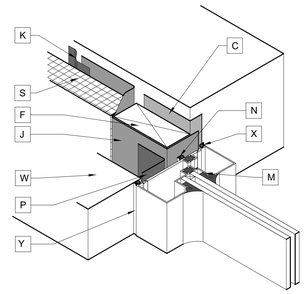


SILL

2 WINDOW ASSEMBLY - METAL PANEL OVER CFMF
NOT TO SCALE



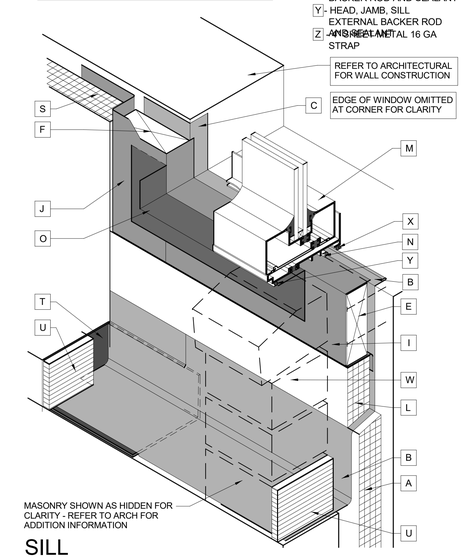
HEAD



JAMB

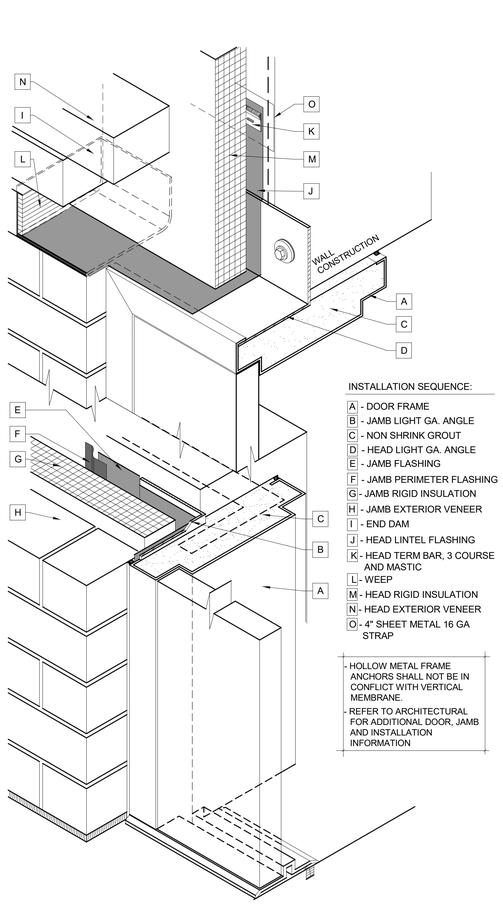
INSTALLATION SEQUENCE:

- A - BASE RIGID INSULATION
- B - SILL OPENING FLASHING
- C - JAMB OPENING FLASHING
- D - HEAD OPENING FLASHING
- E - SILL NAILER
- F - JAMB NAILER
- G - HEAD FLASHING
- H - HEAD NAILER
- I - SILL FLASHING
- J - JAMB FLASHING
- K - JAMB FLASHING EDGE SEAL
- L - SILL INSULATION
- M - WINDOW UNIT FRAME
- N - HEAD, JAMB, SILL MID SEALANT AND BACKER ROD
- O - SILL PERIMETER FLASHING
- P - JAMB PERIMETER FLASHING
- Q - HEAD LINTEL FLASHING
- R - HEAD TERM BAR, 3 COURSE AND MASTIC
- S - HEAD, JAMB RIGID INSULATION
- T - HEAD AND SILL END DAMS
- U - HEAD AND SILL WEEPS
- V - HEAD MORTAR NET
- W - EXTERIOR VENEER
- X - HEAD, JAMB, SILL INTERNAL BACKER ROD AND SEALANT
- Y - HEAD, JAMB, SILL EXTERNAL BACKER ROD AND SEALANT
- Z - 4" SHEET METAL 16 GA STRAP



SILL

1 WINDOW ASSEMBLY - BRICK OVER CFMF
NOT TO SCALE



INSTALLATION SEQUENCE:

- A - DOOR FRAME
- B - JAMB LIGHT GA. ANGLE
- C - NON SHRINK GROUT
- D - HEAD LIGHT GA. ANGLE
- E - JAMB FLASHING
- F - JAMB PERIMETER FLASHING
- G - JAMB RIGID INSULATION
- H - JAMB EXTERIOR VENEER
- I - END DAM
- J - HEAD LINTEL FLASHING
- K - HEAD TERM BAR, 3 COURSE AND MASTIC
- L - WEEP
- M - HEAD RIGID INSULATION
- N - HEAD EXTERIOR VENEER
- O - 4" SHEET METAL 16 GA STRAP

- HOLLOW METAL FRAME ANCHORS SHALL NOT BE IN CONFLICT WITH VERTICAL MEMBRANE.
- REFER TO ARCHITECTURAL FOR ADDITIONAL DOOR, JAMB AND INSTALLATION INFORMATION

3 ENVELOPE FLASHING - HOLLOW METAL ASSEMBLY AT CMU1
NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
3603 W. LAKE HOUSTON PKWY, KINGWOOD, TEXAS 77339

REGISTERED ARCHITECT
RANDY MARK MUNSINGER
16711
STATE OF TEXAS
04/01/2025

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ENVELOPE FLASHING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. R3.01
Drawn By: RM	
Date: 10/29/2025	

10/29/2025 10:28:32 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD REROOF - CREEKWOOD MS ADDITION & RENOVATIONS v22.rvt

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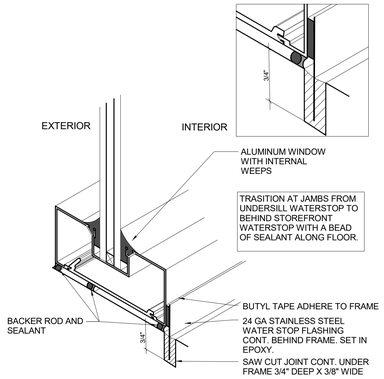
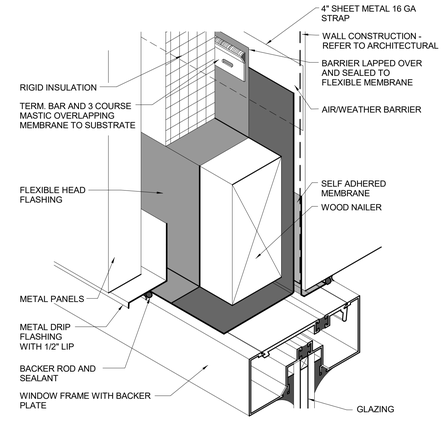
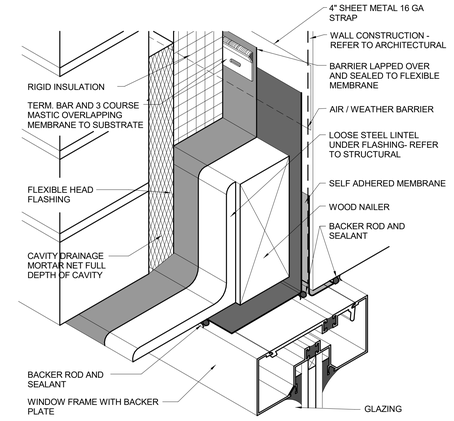


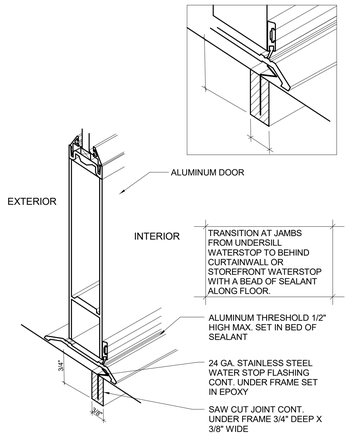
9 WINDOW SILL SAWCUT WATER STOP AT FLOOR
NOT TO SCALE



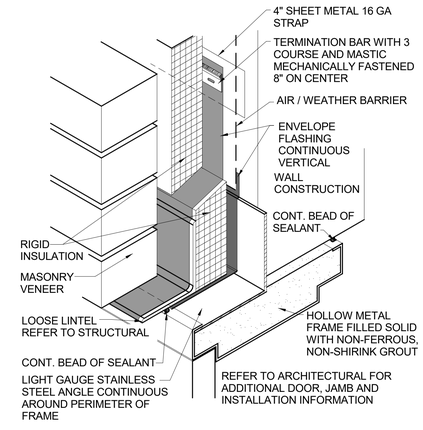
6 ENVELOPE FLASHING - WINDOW HEAD AT METAL PANEL
NOT TO SCALE



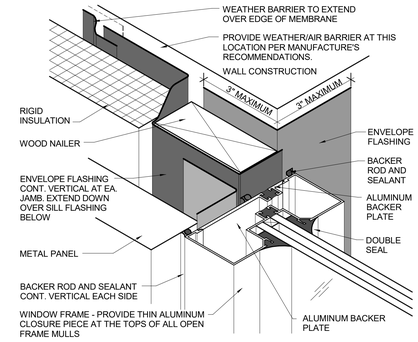
3 ENVELOPE FLASHING - WINDOW HEAD AT BRICK
NOT TO SCALE



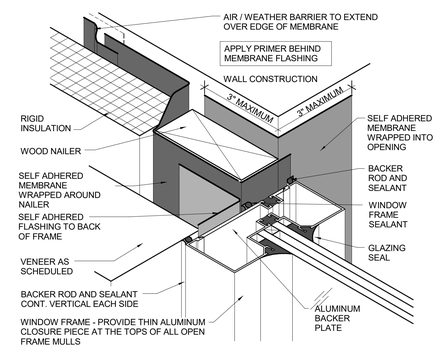
11 DOOR THRESHOLD WATER STOP AT FLOOR
NOT TO SCALE



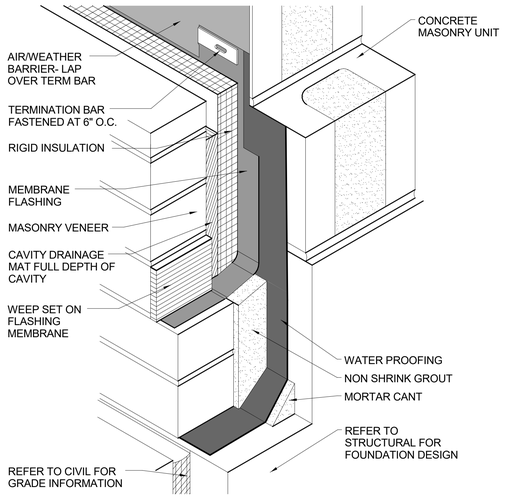
8 ENVELOPE FLASHING - DOOR HEAD AT BRICK
NOT TO SCALE



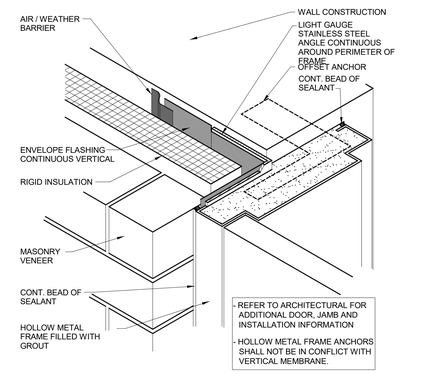
5 ENVELOPE FLASHING - WINDOW JAMB AT METAL PANEL
NOT TO SCALE



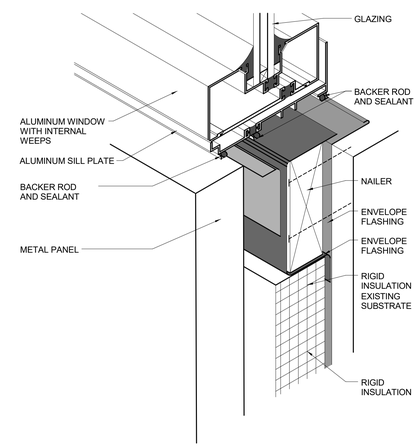
2 ENVELOPE FLASHING - WINDOW JAMB AT BRICK
NOT TO SCALE



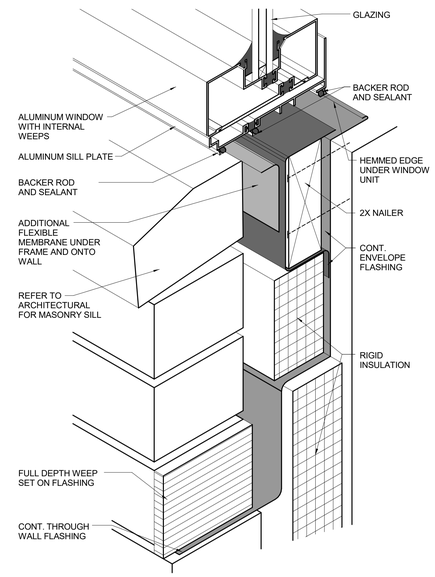
10 ENVELOPE FLASHING - BASE FLASHING - CMU1
NOT TO SCALE



7 ENVELOPE FLASHING - DOOR JAMB AT BRICK
NOT TO SCALE



4 ENVELOPE FLASHING - WINDOW SILL AT METAL PANEL
NOT TO SCALE



1 ENVELOPE FLASHING - WINDOW SILL AT BRICK
NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
3603 W. LAKE HOUSTON PKWY, KINGWOOD, TEXAS 77339

REGISTERED ARCHITECT
PAUL A. RINNER
16711
STATE OF TEXAS
04/01/2025

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ENVELOPE FLASHING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. R3.02
Drawn By: Author	
Date: 10/29/2025	

10/29/2025 10:28:33 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOROOF_CREEKWOOD MS ADDITION & RENOVATIONS_v23.rvt

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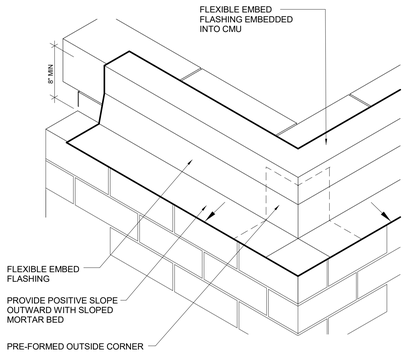
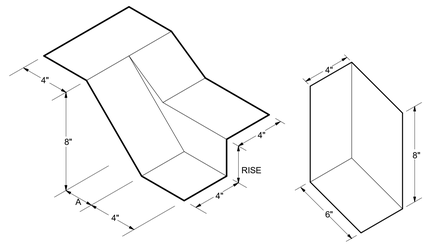


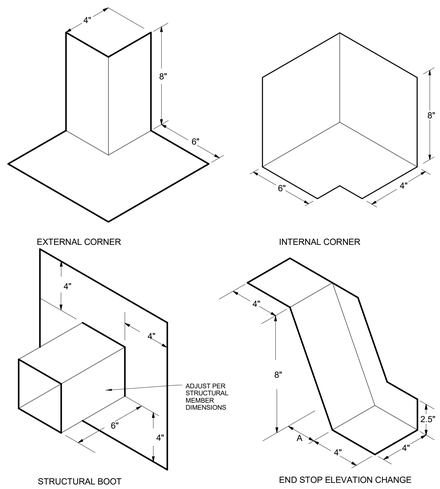
OPTION C. FULL EMBED WITHOUT TERMINATION BAR

OPTION B. TERMINATION BAR ON MASONRY

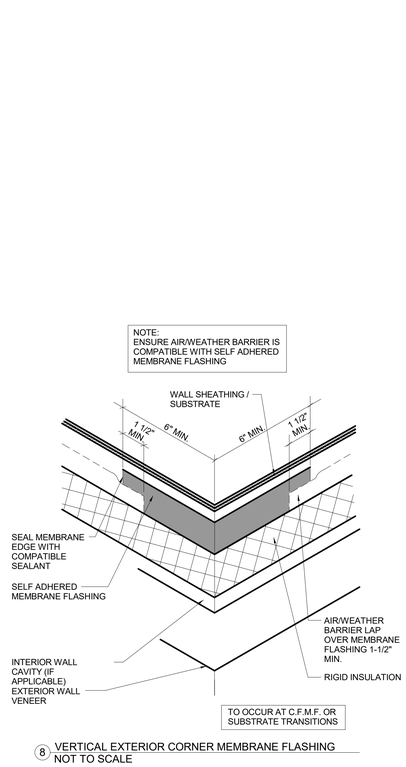
OPTION A. FULL EMBED WITH TERMINATION BAR

10 TERMINATION OF FLASHING AT MASONRY
NOT TO SCALE

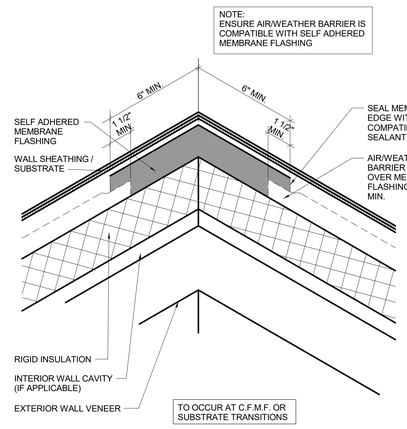




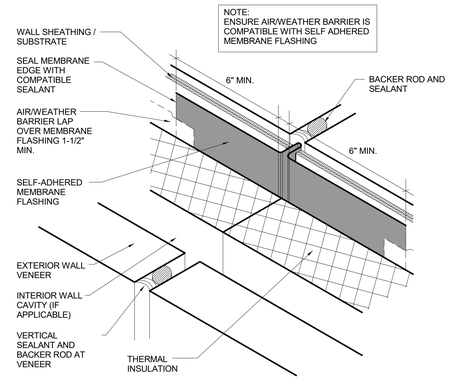
9 FLASHING BOOTS
NOT TO SCALE



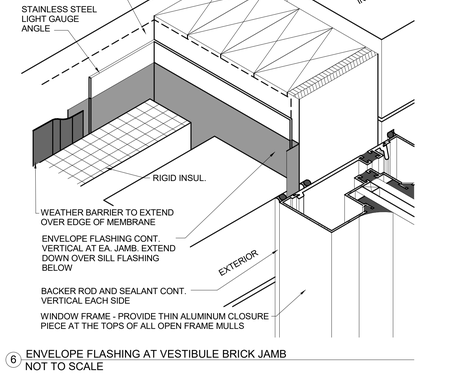
8 VERTICAL EXTERIOR CORNER MEMBRANE FLASHING
NOT TO SCALE



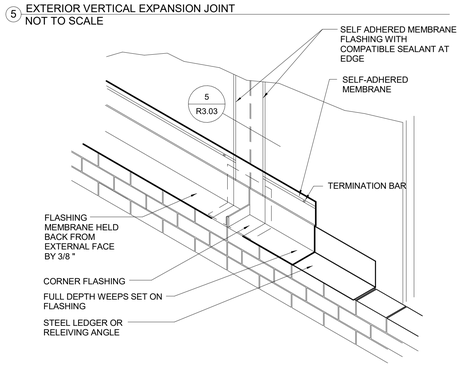
7 VERTICAL INTERIOR CORNER MEMBRANE FLAHSING
NOT TO SCALE



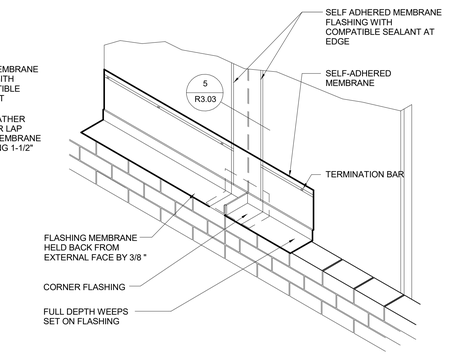
6 ENVELOPE FLASHING AT VESTIBULE BRICK JAMB
NOT TO SCALE



5 EXTERIOR VERTICAL EXPANSION JOINT
NOT TO SCALE

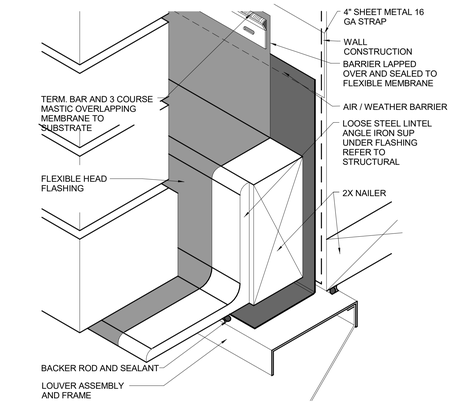


OPTION B. FLASHING AT RELEIVING ANGLE

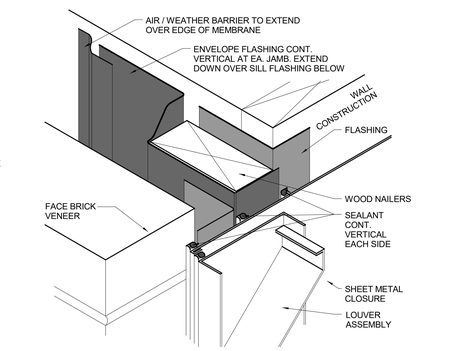


OPTION A. FLASHING AT BASE OF WALL

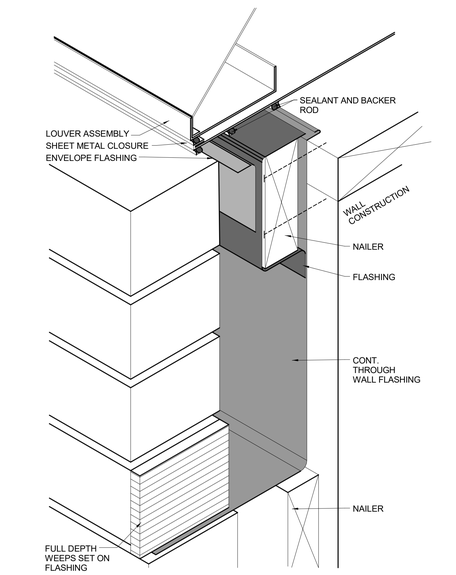
4 FLASHING AT CONTROL JOINT AND EXPANSION JOINT
NOT TO SCALE



3 ENVELOPE FLASHING - LOUVER HEAD AT ICF & BRICK
NOT TO SCALE



2 ENVELOPE FLASHING - LOUVER JAMB AT ICF & BRICK
NOT TO SCALE



1 ENVELOPE FLASHING - LOUVER SILL AT ICF & BRICK
NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
3603 W. LAKE HOUSTON PKWY, KINGWOOD, TEXAS 77339

RICHARD D. HUCKABEE
REGISTERED ARCHITECT
16711
STATE OF TEXAS
04/01/2025

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ENVELOPE FLASHING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. R3.03
Drawn By: Author	
Date: 10/29/2025	

10/29/2025 10:28:33 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOROOF, CREEKWOOD MS ADDITION & RENOVATIONS_v23.rvt

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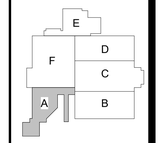
N 1 **PLUMBING DEMOLITION FLOOR PLAN - SECTION A**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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PLUMBING DEMOLITION
FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P0.11
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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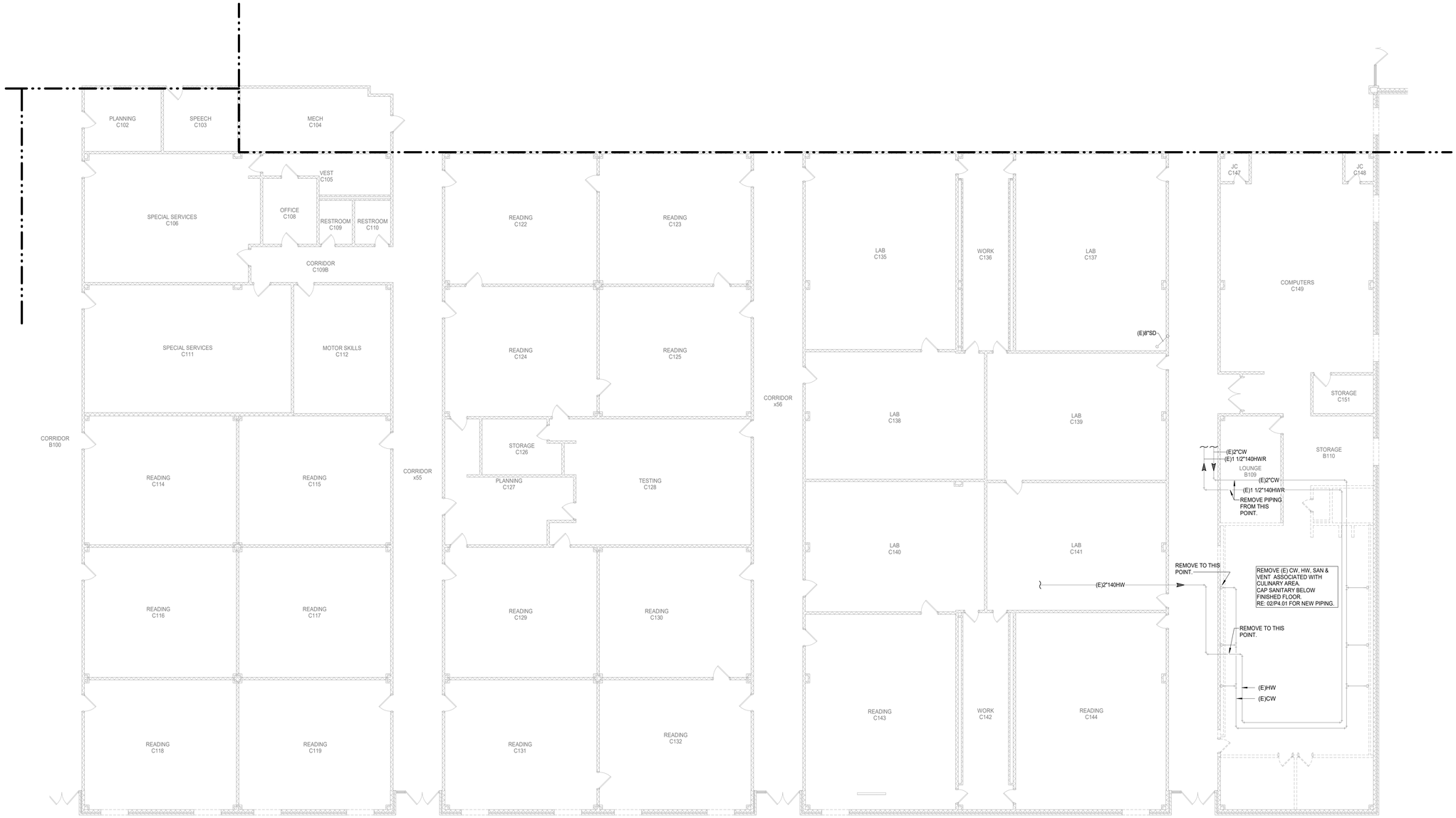


N

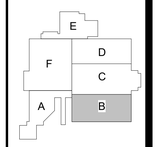
1 PLUMBING DEMOLITION FLOOR PLAN - SECTION B

Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING DEMOLITION FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P0.12
Drawn By: PG	
Date: 10.29.2025	

10/28/2025 1:58:39 PM
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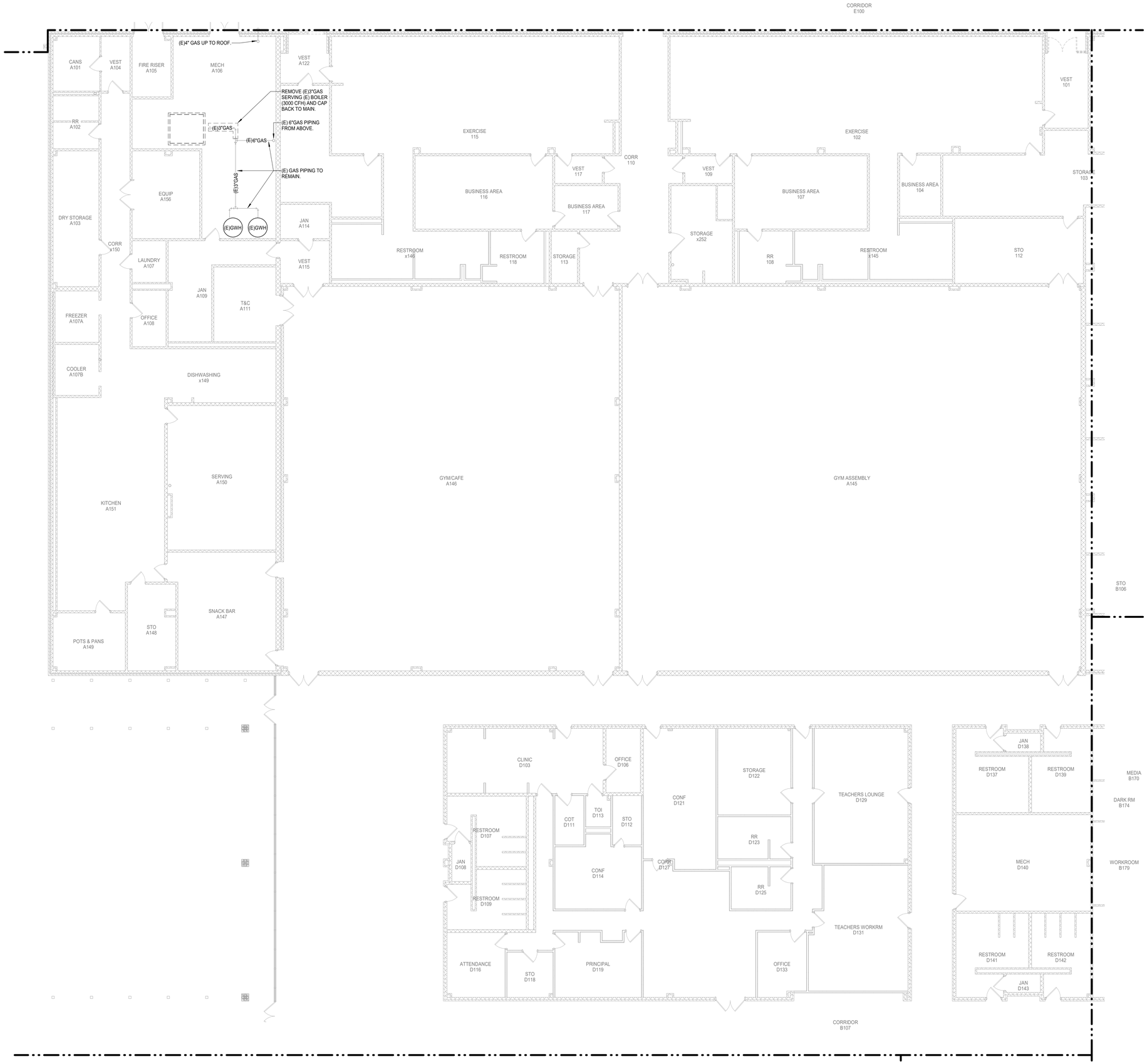
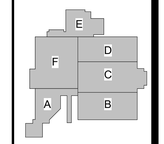


1 **PLUMBING DEMOLITION FLOOR PLAN - SECTION F**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING DEMOLITION FLOOR PLAN - SECTION F

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No.	Sheet No.
1821-13-01	P0.16
Drawn By: PG	
Date: 10.29.2025	

10/28/2025 1:59:02 PM
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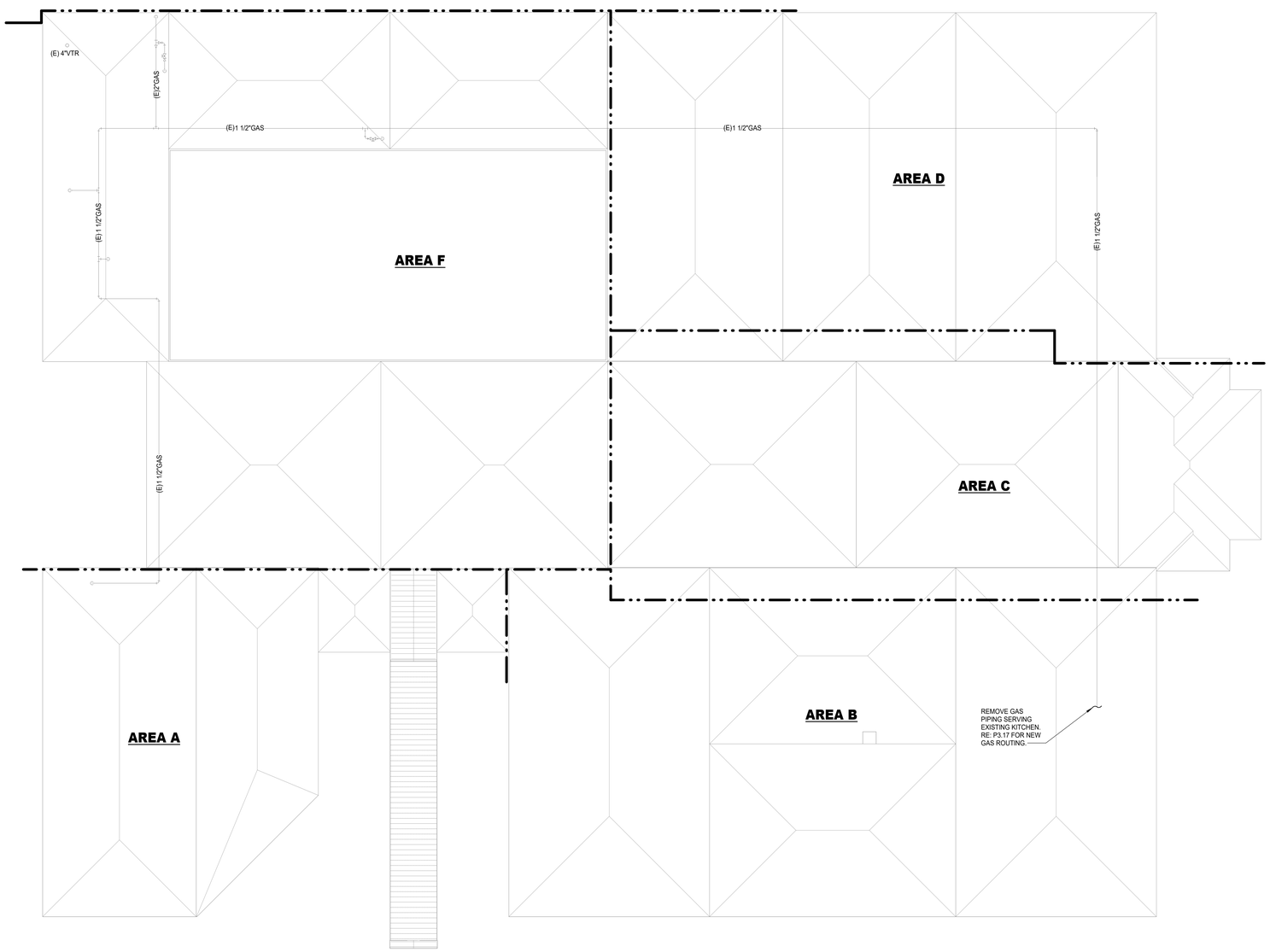
AREAS WITH ROOF DRAINS SHOWN TO BE REMOVED.
NEW ROOF DRAINS WILL BE PLACED IN THE SAME AREA.

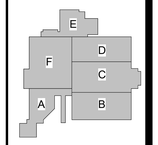


1 **PLUMBING DEMOLITION ROOF PLAN**
Scale: 1" = 20'-0"

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING DEMOLITION ROOF PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P0.18
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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GENERAL NOTE:

ALL PIPE IN OPEN TRENCHES SHALL BE OBSERVED BY THE ENGINEER AND TESTED BY THE CONTRACTOR WITH THE ENGINEER PRESENT PRIOR TO BACKFILL.



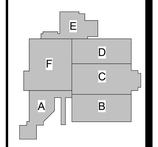
N

1 **PLUMBING SITE PLAN**
Scale: 1" = 20'-0"

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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PLUMBING COMPOSITE PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P1.00
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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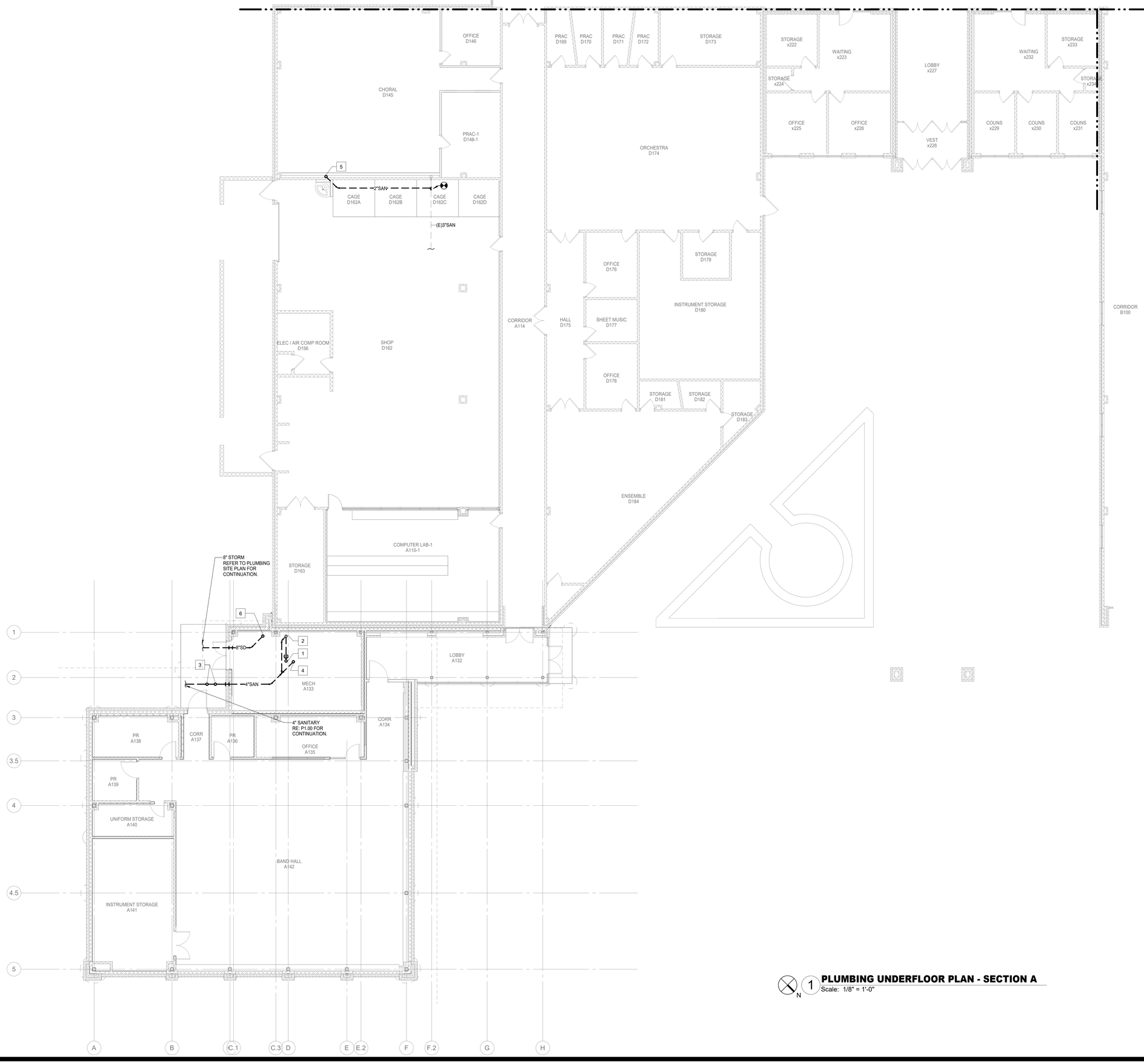

PLUMBING KEYED NOTES

1 4" SANITARY FROM FLOOR SINK ABOVE.
2 2" VENT UP.
3 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.
4 4" SANITARY FROM CLEANOUT ABOVE.
5 2" SANITARY FROM SINK ABOVE.
6 8" STORM FROM ABOVE.

PLUMBING GENERAL NOTES:

1. IN RESTROOMS: ALL FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A MECHANICAL TRAP PRIMER VALVE AT THE NEAREST WATER CLOSET OR URINAL.

2. IN MECHANICAL ROOMS, CENTRAL PLANT AND MECHANICAL MEZZANINES: ALL FLOOR SINKS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER DEVICE ON WALL.

3. IN LAUNDRY ROOMS AND CUSTODIAL ROOMS: ALL FLOOR SINKS AND FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER DEVICE ON WALL.

4. IN KITCHEN AND CULINARY LABS: ALL FLOOR SINKS AND FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER DEVICE ON WALL OF ADJACENT MECHANICAL ROOM.

PLUMBING UNDERFLOOR PLAN - SECTION A
N 1 Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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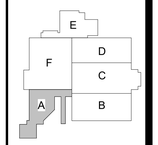
10-29-2025



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PLUMBING UNDERFLOOR PLAN - SECTION A

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111

Job No. 1821-13-01	Sheet No. P2.11
Drawn By: PG	
Date: 10.29.2025	
Salas O'Brien Project Number: 2022-05088-00	

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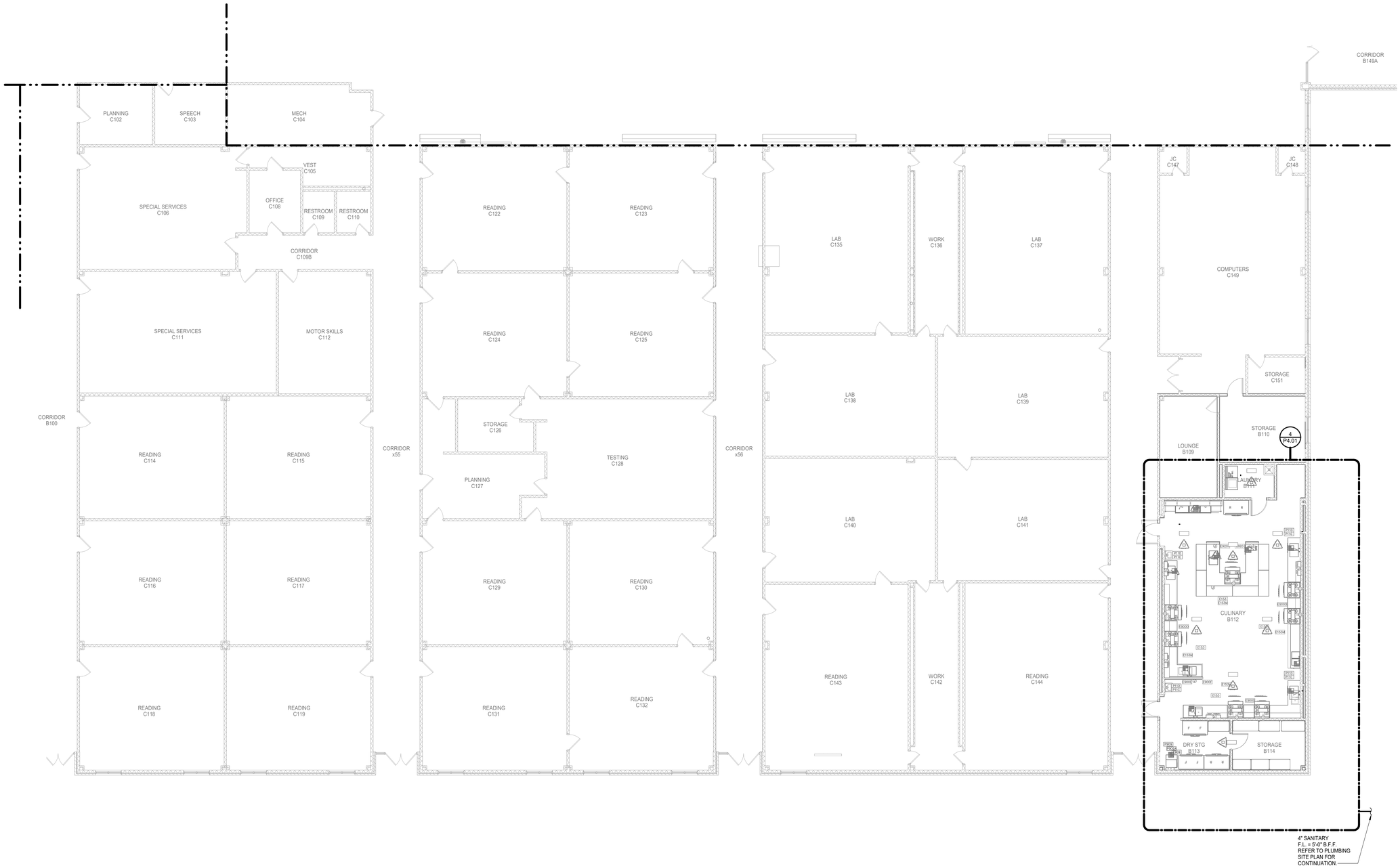


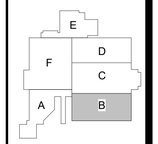
1 PLUMBING UNDERFLOOR PLAN - SECTION B

Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PLUMBER
STATE OF TEXAS
10-29-2025



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PLUMBING UNDERFLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P2.12
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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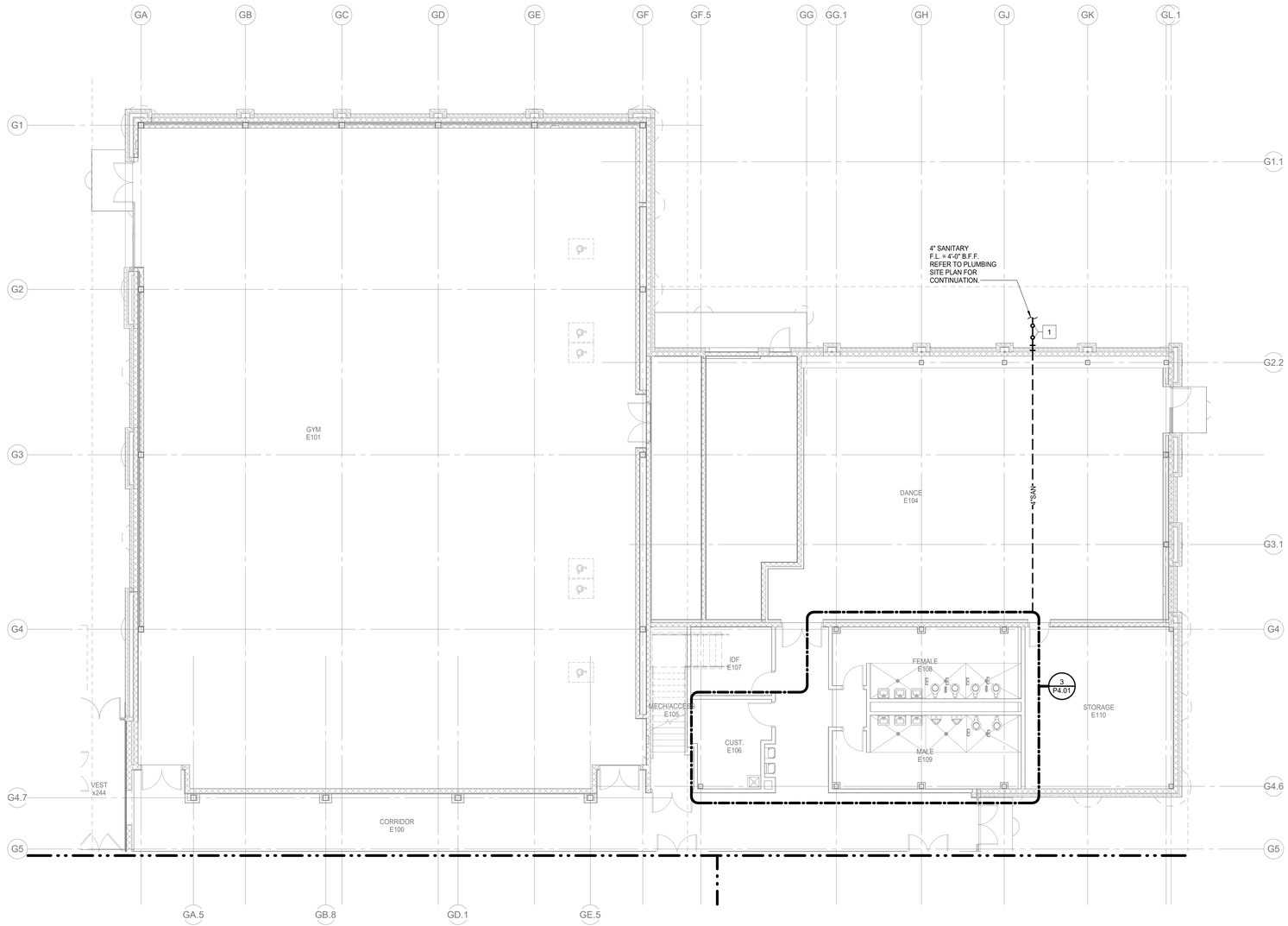
PLUMBING KEYED NOTES

1 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.



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1 **PLUMBING UNDERFLOOR PLAN - SECTION E**

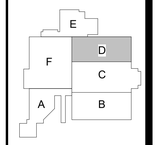
Scale: 1/8" = 1'-0"

Revision /	Date

Project:

CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL
ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR

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PLUMBING UNDERFLOOR PLAN - SECTION E

PACKAGE	VOLUME

Salas O'Brien

Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No.	Sheet No.
1821-13-01	P2.15
Drawn By: PG	
Date: 10.29.2025	

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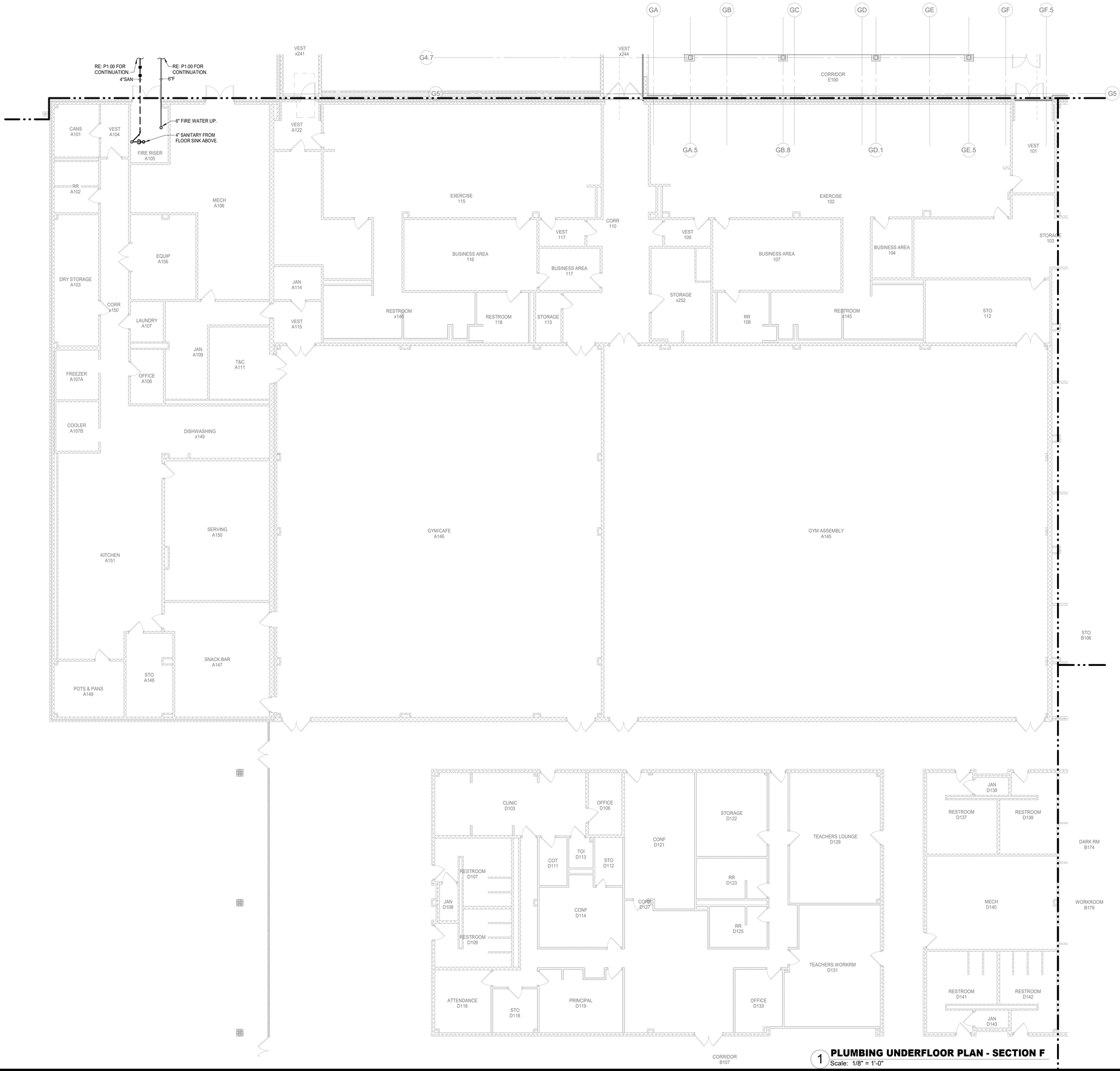
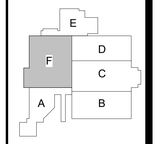


1 **PLUMBING UNDERFLOOR PLAN - SECTION F**
Scale: 1/8" = 1'-0"

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING UNDERFLOOR PLAN - SECTION F

PACKAGE | VOLUME

Job No. 1821-13-01
Drawn By: PG
Date: 10.29.2025
Sheet No. P2.16

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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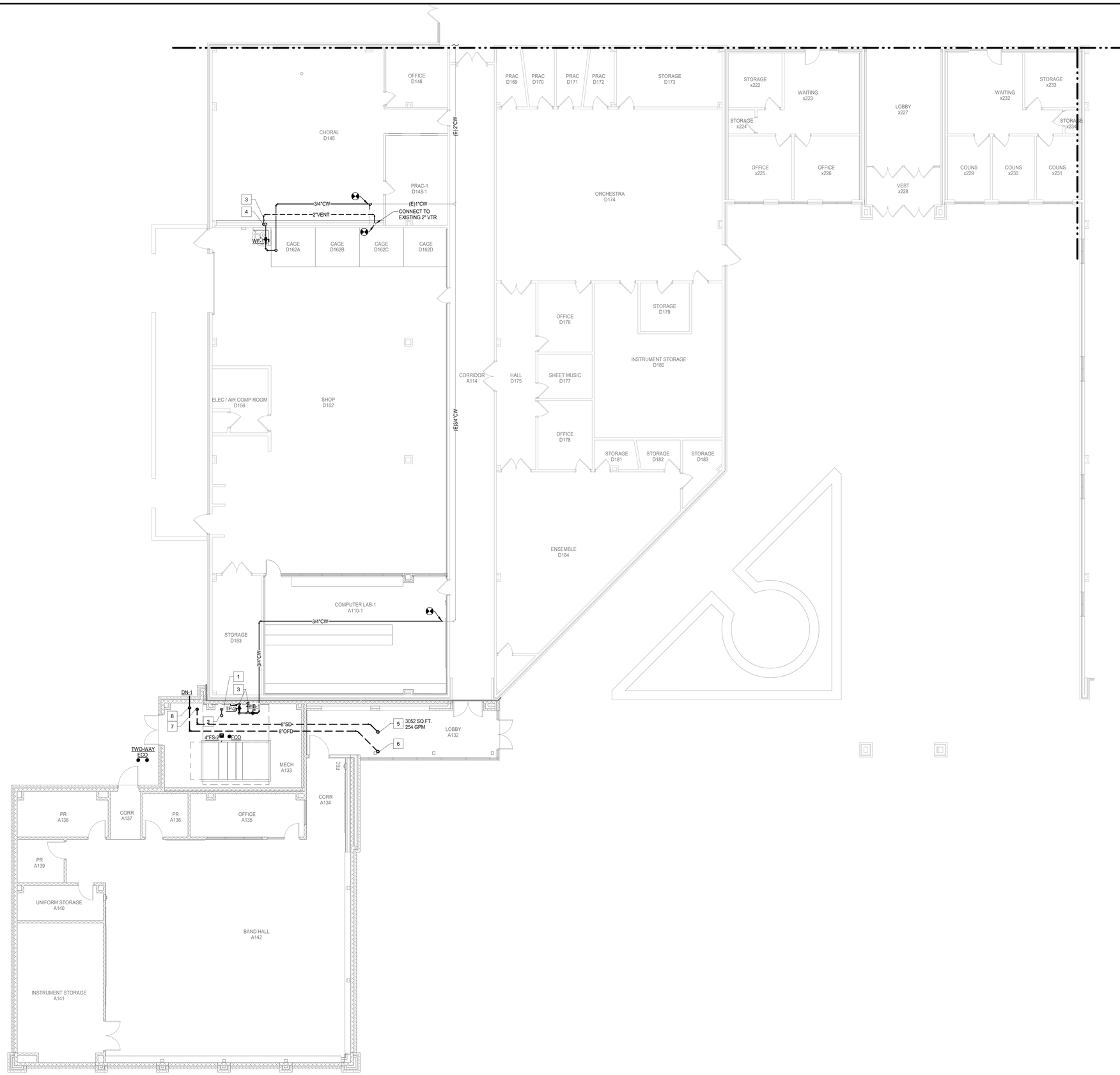
PLUMBING KEYED NOTES

1 2" VENT FROM BELOW.
2 2" VENT UP TO 2" VTR.
3 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
4 2" SANITARY DOWN, 2" VENT UP.
5 8" STORM FROM ROOF DRAIN ABOVE.
6 8" STORM OVERFLOW FROM OVERFLOW DRAIN ABOVE.
7 8" STORM DOWN.
8 8" STORM OVERFLOW DOWN TO DOWNSPOUT NOZZLE. REFER TO ARCHITECTURAL DRAWING FOR EXACT ELEVATION.

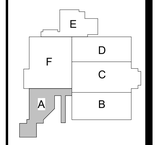


N 1 **PLUMBING FLOOR PLAN - SECTION A**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
2	03-26-24	City Comments 2
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING FLOOR PLAN - SECTION A

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No.	Sheet No.
1821-13-01	P3.11
Drawn By: PG	
Date: 10.29.2025	

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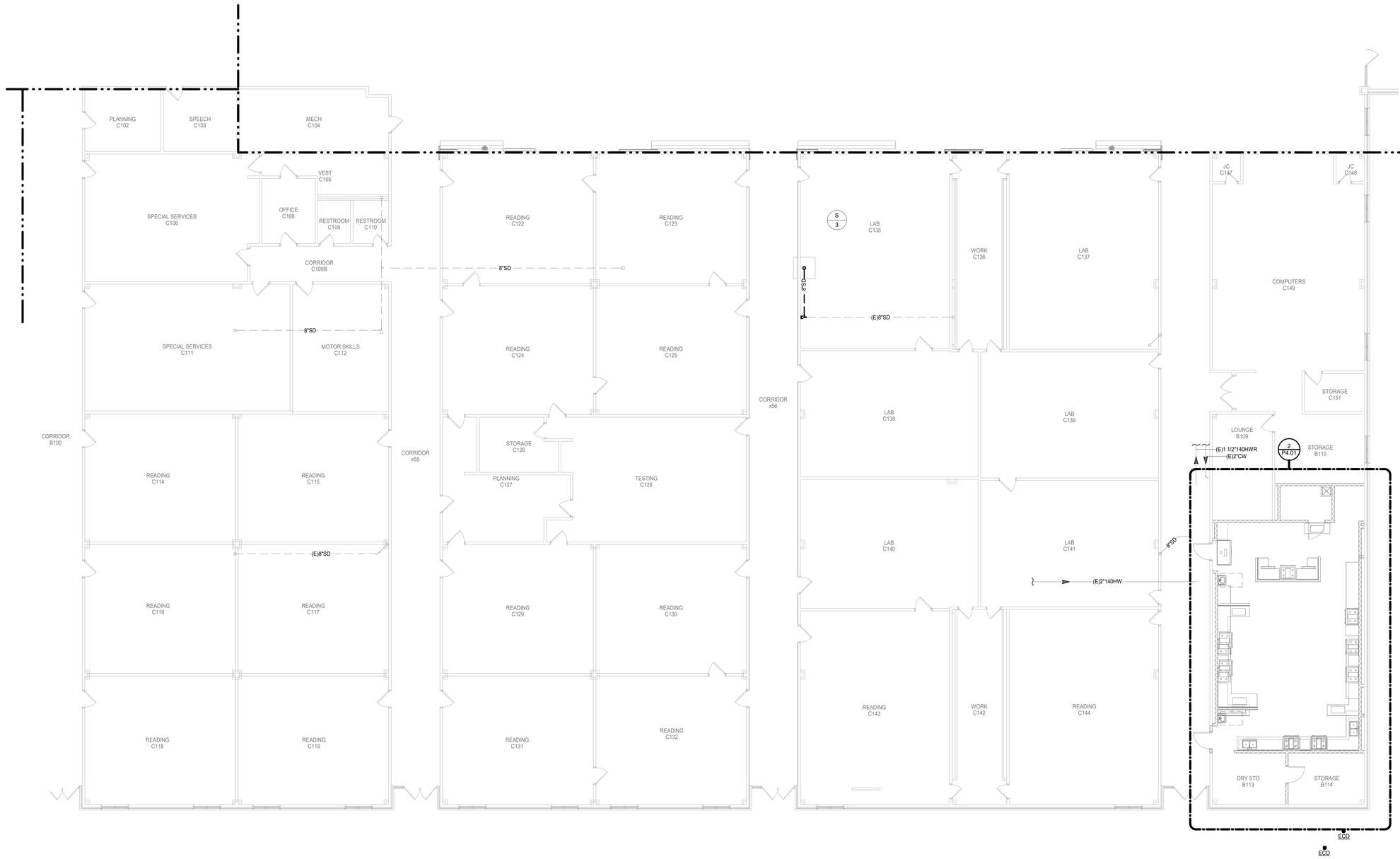
NOTE REGARDING SECONDARY ROOF DRAINAGE:
THE EXISTING SECONDARY STORM SYSTEM SERVING THE EXISTING ROOF IS VIA THE EDGE OF THE ROOF. THAT SYSTEM IS NOT BEING REWORKED AND WILL REMAIN AS EXISTING.

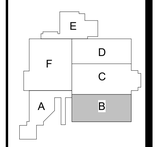


1 PLUMBING FLOOR PLAN - SECTION B
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
3	06-06-24	City Comments 3
4	07-25-24	City Comments 4

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL
ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P3.12
Drawn By: PG	
Date: 10.29.2025	

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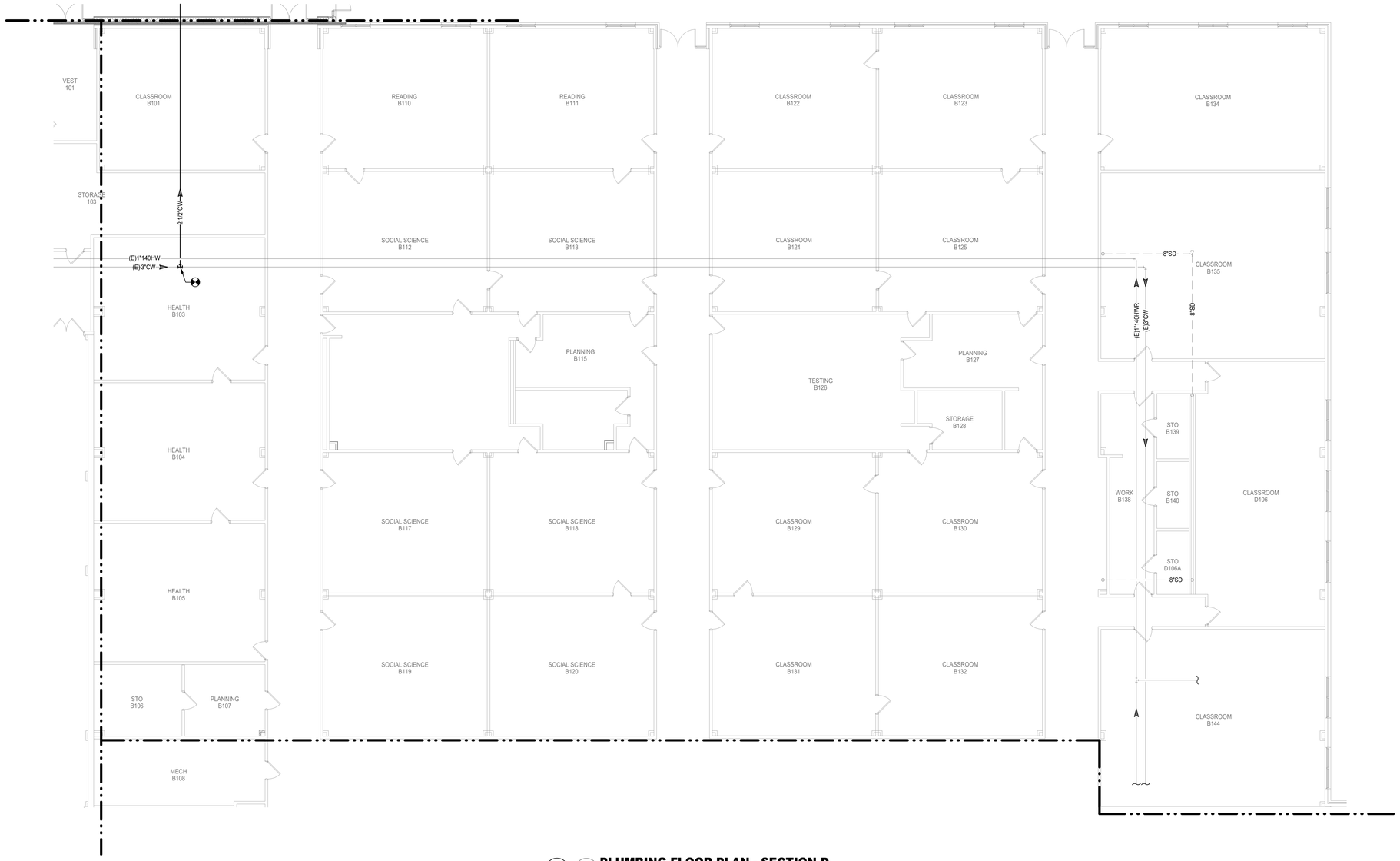
PLUMBING KEYED NOTES



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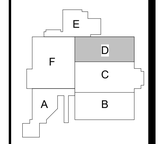
1 **PLUMBING FLOOR PLAN - SECTION D**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
2	03-26-24	City Comments 2
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL
ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING FLOOR PLAN - SECTION D

PACKAGE | VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: PG
Date: 10.29.2025
Sheet No. P3.14

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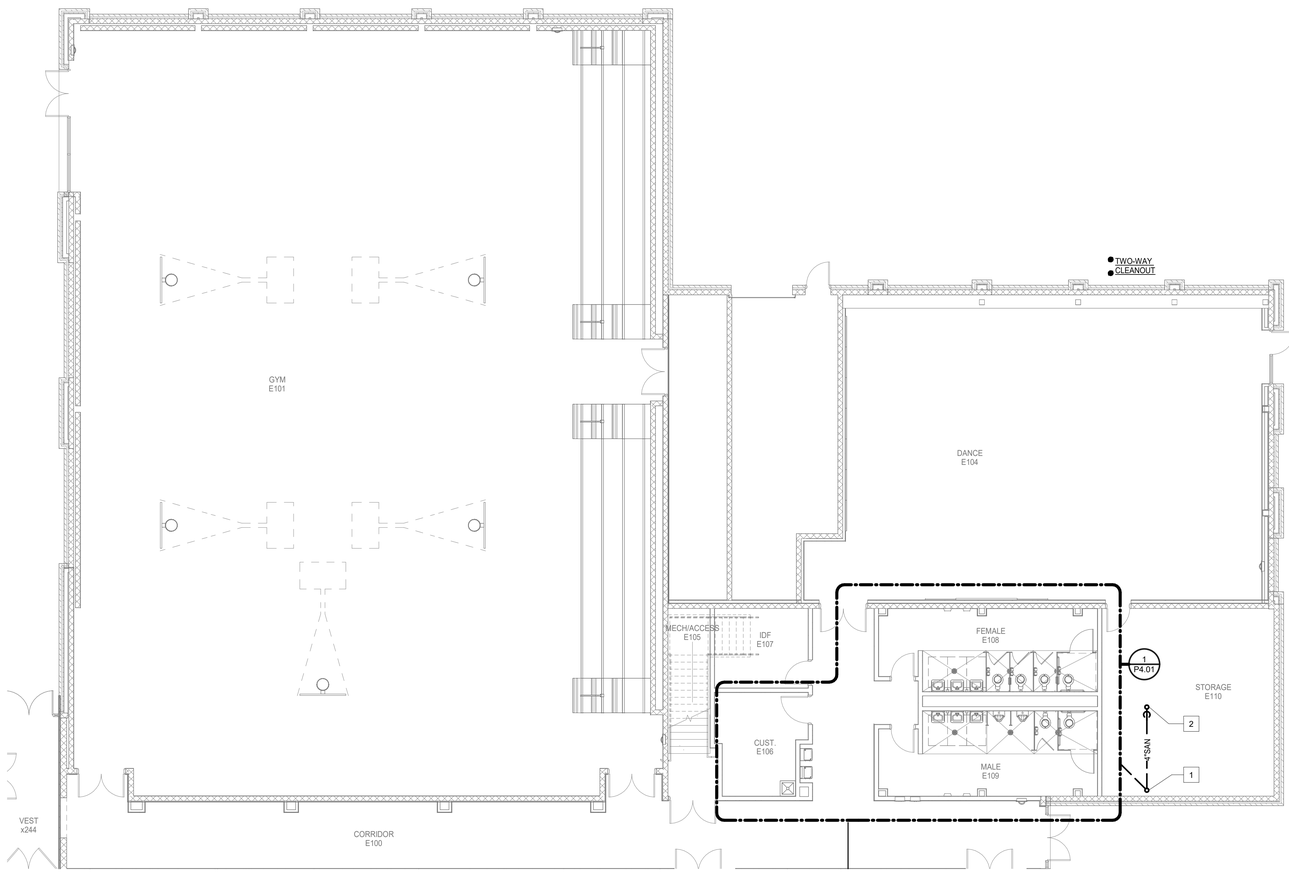
PLUMBING KEYED NOTES

1 2" VENT UP.
2 4" SANITARY FROM FLOOR SINK ABOVE.

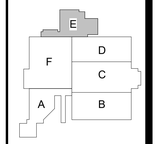


N 1 **PLUMBING FLOOR PLAN - SECTION E**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING FLOOR PLAN - SECTION E

PACKAGE | VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: PG
Date: 10.29.2025
Sheet No. P3.15

10/29/2025 1:59:28 PM
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PLUMBING KEYED NOTES

1 2" GAS DOWN
2 PRESSURE REGULATOR FROM 5 PSI TO 8 OZ. 2.000 CFH.
3 CONNECT 1-1/2" GAS TO MECHANICAL BOILER.
4 6" FIRE ENTRY INTO BUILDING. FIRE SPRINKLER CONTRACTOR TO PROVIDE AND INSTALL A COMPLETE AUTOMATIC FIRE SPRINKLER SYSTEM WITH THE BUILDING. REFER TO FIRE SPRINKLER ENTRY DETAIL RE:04/P7.12.
5 2" VENT FROM BELOW.

N

1 **PLUMBING FLOOR PLAN - SECTION F**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
10-29-2025

KEY PLAN - 1ST FLOOR
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PLUMBING FLOOR PLAN - SECTION F

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111

Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01	Sheet No. P3.16
Drawn By: PG	
Date: 10.29.2025	

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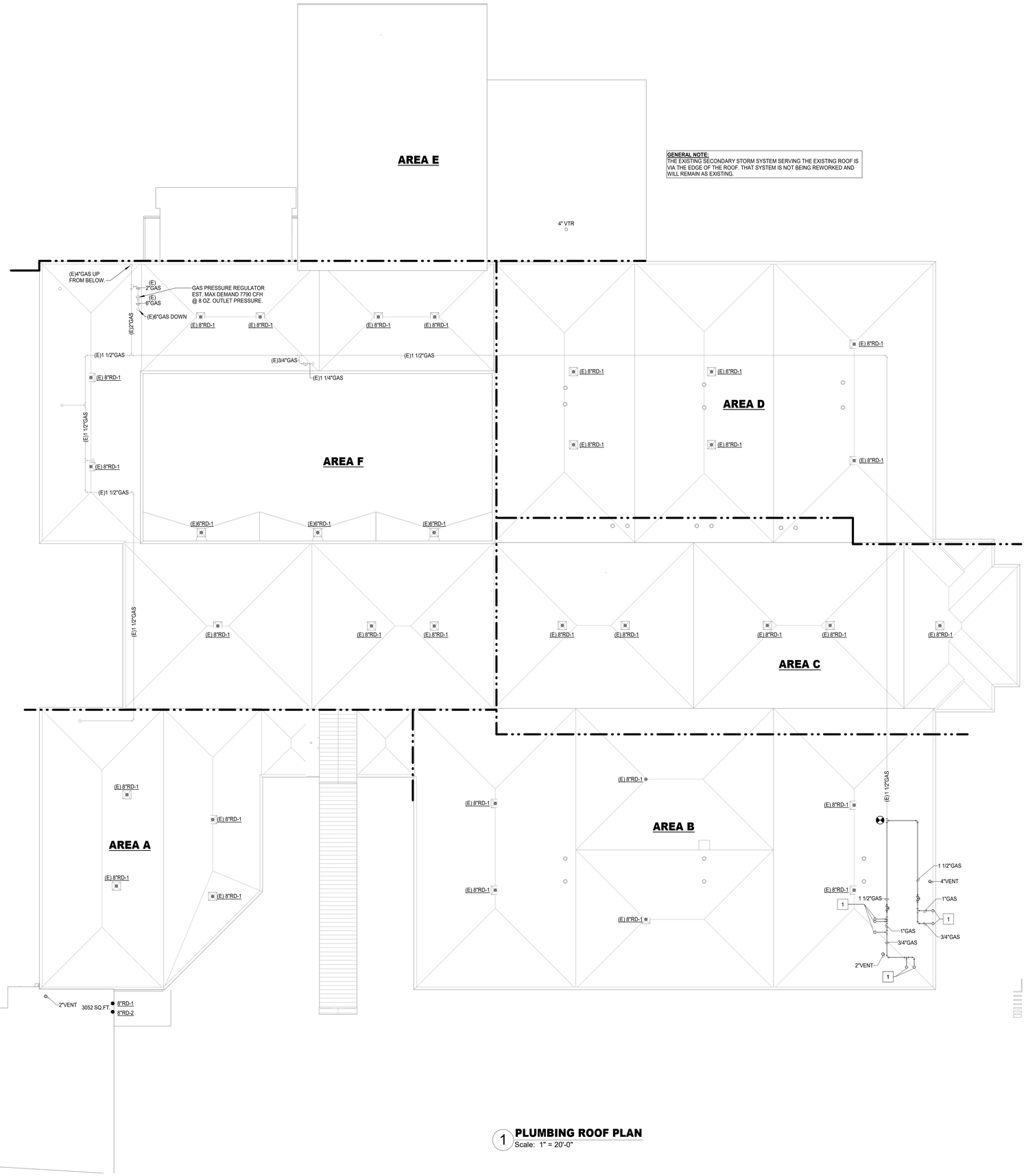
PLUMBING KEYED NOTES

1 3/4" GAS DOWN



1 **PLUMBING ROOF PLAN**
Scale: 1" = 20'-0"

Revision /	Date	
1	02-16-24	City Comments 1
3	05-06-24	City Comments 3
4	07-25-24	City Comments 4

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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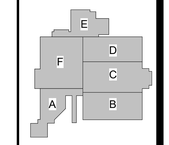

KEY PLAN - 1ST FLOOR
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PLUMBING ROOF PLAN

PACKAGE	VOLUME

Job No. 1821-13-01	Sheet No. P3.17
Drawn By: PG	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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PLUMBING KEYED NOTES

1 2" CW DOWN TO SERVE PLUMBING FIXTURE/S.
2 1" HW DOWN TO SERVE PLUMBING FIXTURE/S.
3 2" VENT UP.
4 2" VENT FROM BELOW.
5 3" SANITARY FROM FLOOR DRAIN ABOVE.
6 3/4" CW AND HW DOWN, 2" GREASE WASTE DOWN, 2" VENT UP.
7 3/4" HW DOWN TO SERVE PLUMBING FIXTURE/S.
8 3/4" CW DOWN.
9 3/4" CW AND HW DOWN.
10 3/4" GAS FROM BELOW
11 3/4" CW AND HW FROM BELOW.
12 2" GREASE WASTE FROM ABOVE.
13 4" GREASE WASTE FROM FLOOR CLEANOUT ABOVE.
14 3" GREASE WASTE FROM FLOOR DRAIN ABOVE.
15 4" GREASE WASTE FROM FLOOR SINK ABOVE.
16 3/4" CW AND HW FROM ABOVE.
17 3/4" GAS FROM ABOVE
18 2" GREASE WASTE FROM HAND SINK ABOVE.
19 3/4" GAS FROM ABOVE. DOWN TO UNDERFLOOR.
20 3/4" GAS DOWN FROM ROOF IN SLEEVE EXTEND TO RANGE & PROVIDE 3/4" STOP COCK, UNION & CONNECT TO EACH RANGE.
21 4" VENT UP TO 4" VTR.
22 2" SANITARY FROM ABOVE.
23 2" SANITARY DOWN, 2" VENT UP.
24 4" SANITARY FROM ABOVE.
25 3" SANITARY FROM CLEANOUT ABOVE.
26 4" SANITARY FROM FLOOR SINK ABOVE.
27 3" VENT UP.
28 1" HWR DOWN.
29 2" SANITARY FROM URINAL ABOVE.
30 4" SANITARY FROM CLEANOUT ABOVE.
31 3" SANITARY FROM FLOOR SINK ABOVE.
32 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.
33 4" SANITARY DOWN THROUGH SLAB.
34 2" SANITARY DOWN THROUGH SLAB.
35 1" HWR UP.
36 1" CW DOWN.
37 1" HW UP.
38 3" VENT UP TO 3" VTR.
39 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.
40 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
41 3/4" CW UP.
42 TRAP PRIMER LINE FROM WATER CLOSET.
43 3/4" GAS UP

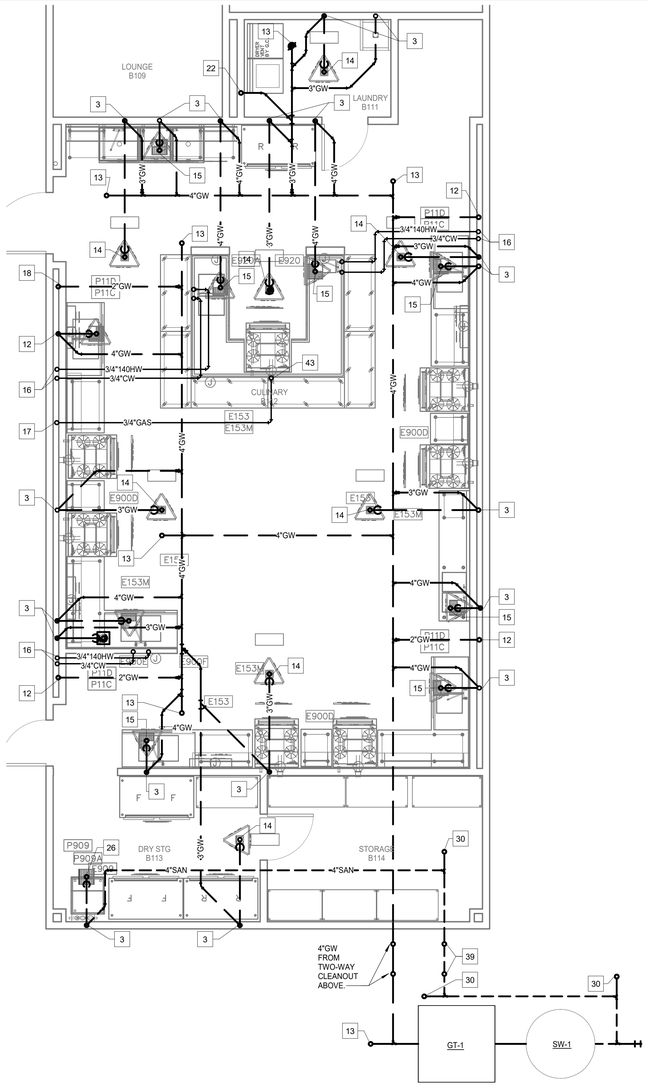
PLUMBING GENERAL NOTES:

1. IN RESTROOMS: ALL FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A MECHANICAL TRAP PRIMER VALVE AT THE NEAREST WATER CLOSET.

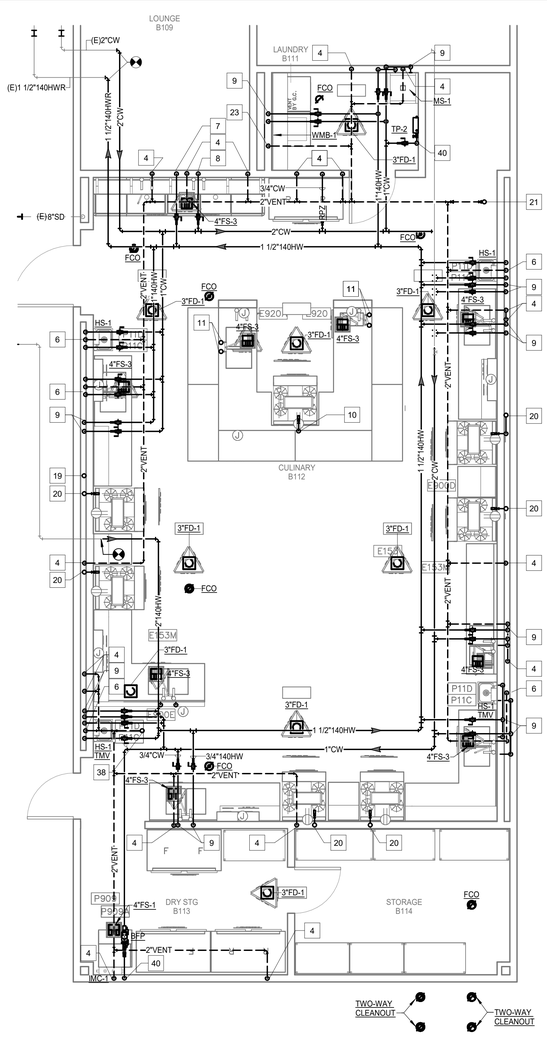
2. IN MECHANICAL ROOMS, CENTRAL PLANT AND MECHANICAL MEZZANINES: ALL FLOOR SINKS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER DEVICE ON WALL.

3. IN LAUNDRY ROOMS AND CUSTODIAL ROOMS: ALL FLOOR SINKS AND FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER DEVICE ON WALL.

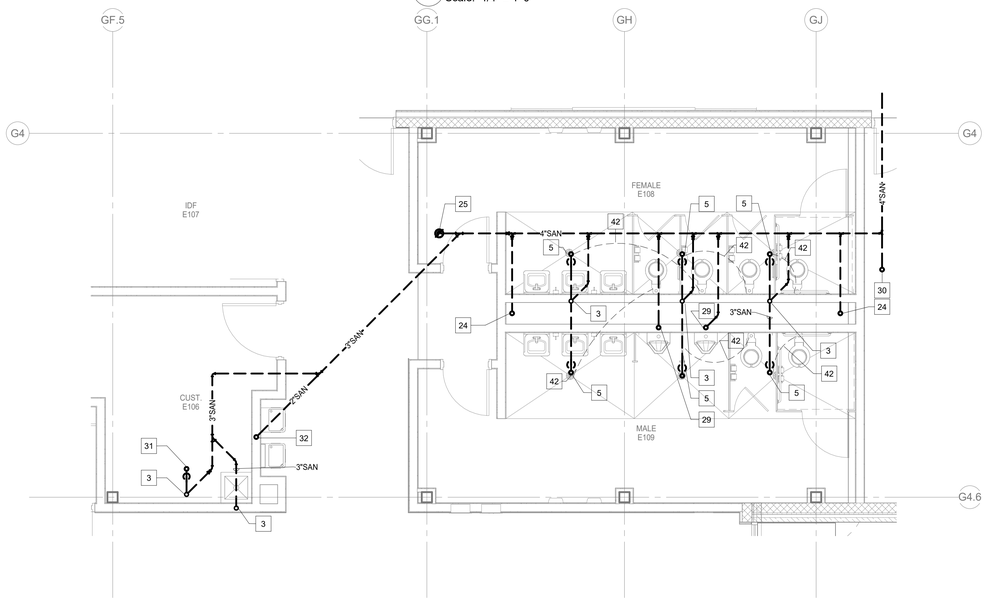
4. IN KITCHEN AND CULINARY LABS: ALL FLOOR SINKS AND FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER DEVICE ON WALL OF ADJACENT ROOM.



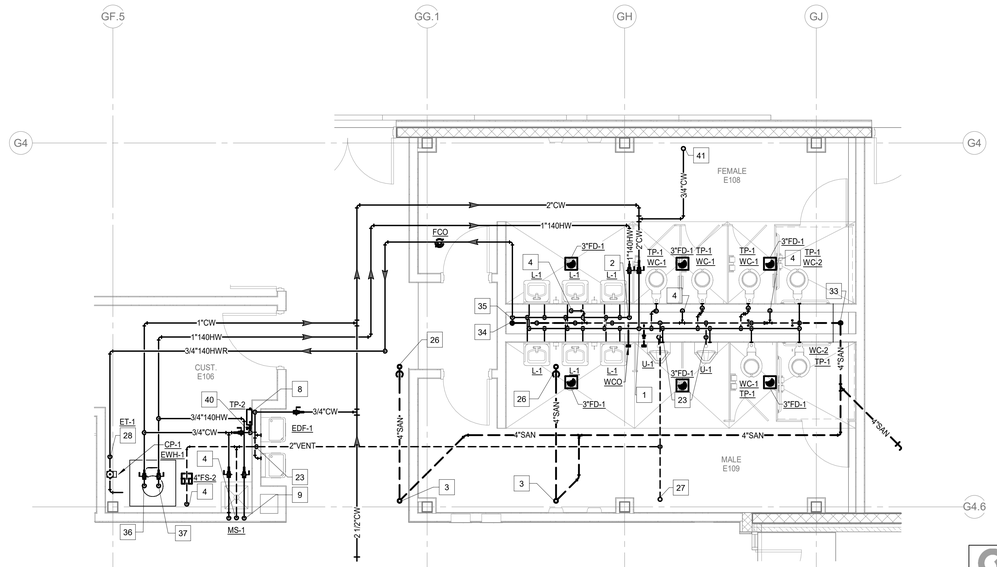
4 PLUMBING ENLARGED UNDERFLOOR FOOD SERVICE PLAN
Scale: 1/4" = 1'-0"



2 PLUMBING ENLARGED FOOD SERVICE PLAN
Scale: 1/4" = 1'-0"



3 PLUMBING UNDERFLOOR PLAN - NORTH RESTROOM
Scale: 1/4" = 1'-0"



1 PLUMBING FLOOR PLAN - NORTH RESTROOM
Scale: 1/4" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
3	06-06-24	City Comments 3
4	07-25-24	City Comments 4

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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HUMBLE ISD
KINGWOOD, TX

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PLUMBING ENLARGED PLANS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P4.01
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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PLUMBING KEYED NOTES

1 3" VENT UP TO 4" VTR.
2 3" VENT FROM BELOW.
3 2" VENT UP.
4 3/4" CW FROM BELOW.
5 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.

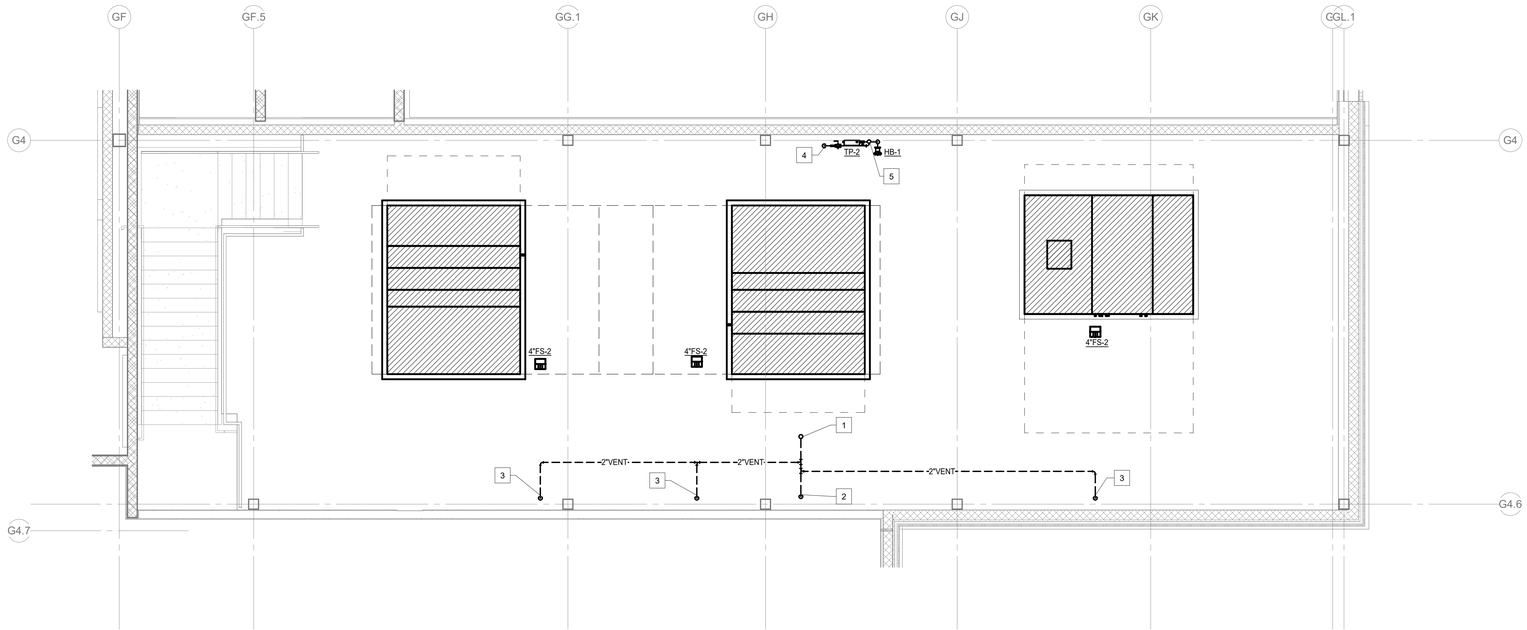
PLUMBING GENERAL NOTES:

1. IN RESTROOMS: ALL FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A MECHANICAL TRAP PRIMER VALVE AT THE NEAREST WATER CLOSET OR URINAL.

2. IN MECHANICAL ROOMS, CENTRAL PLANT AND MECHANICAL MEZZANINES: ALL FLOOR SINKS ARE TO HAVE A TRAP GUARDS PROVIDED.

3. IN LAUNDRY ROOMS AND CUSTODIAL ROOMS: ALL FLOOR SINKS AND FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER VALVE ON WALL.

4. IN KITCHEN AND CULINARY LABS: ALL FLOOR SINKS AND FLOOR DRAINS ARE TO HAVE A 1/2" TRAP PRIMER CONNECTION AND BE CONNECTED TO A SURFACE MOUNT ELECTRONIC TRAP PRIMER VALVE ON WALL OF ADJACENT MECHANICAL ROOM.



1 **PLUMBING MEZZANINE PLAN - CMS**
Scale: 1/4" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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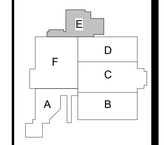

KEY PLAN - 1ST FLOOR
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PLUMBING ENLARGED PLANS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P4.02
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Project Number: 2022-05088-00

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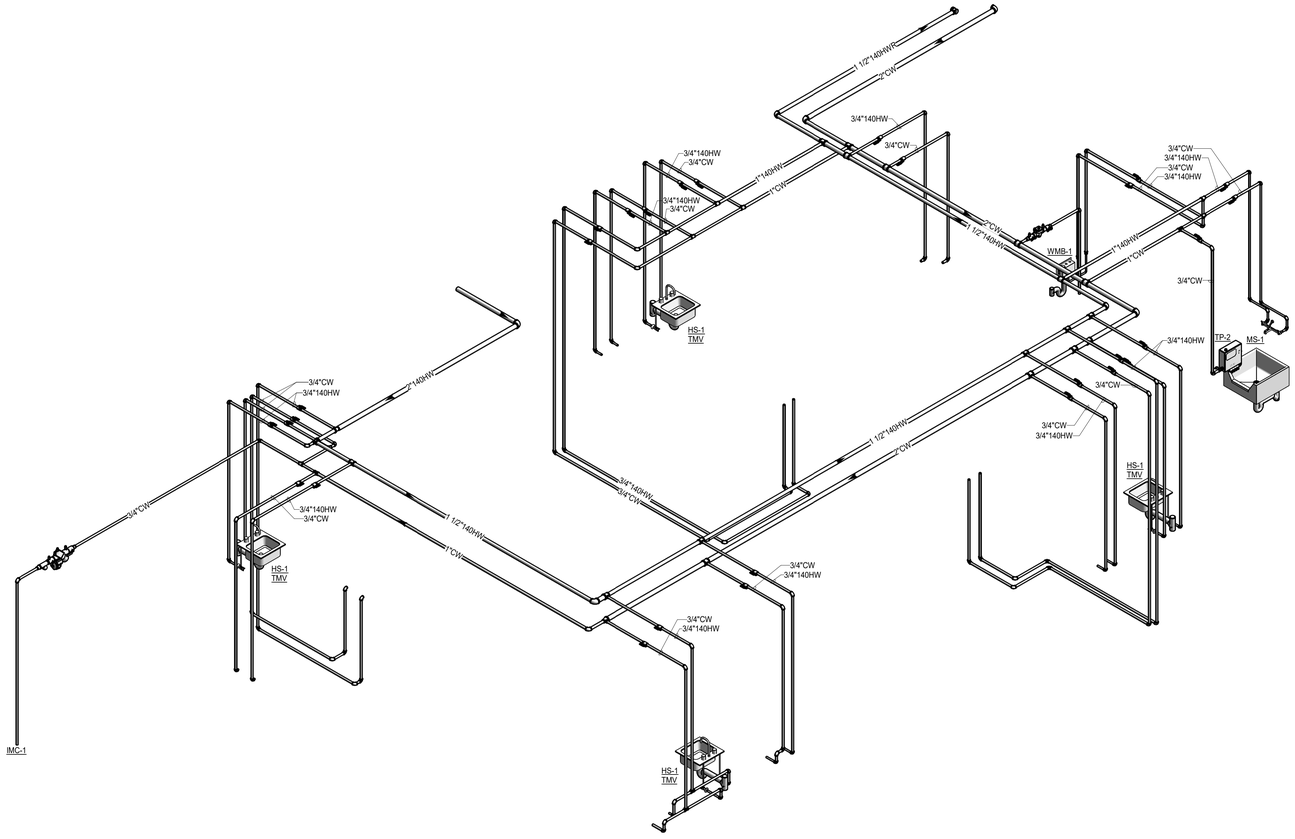
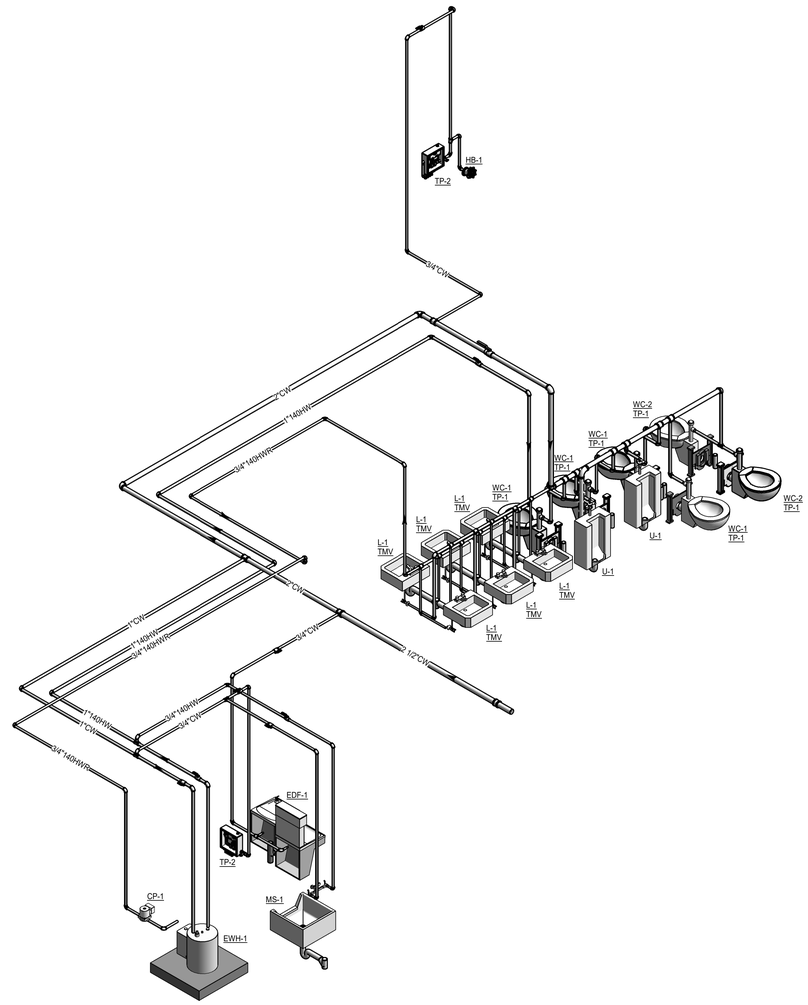


2 PLUMBING CULINARY RISER DIAGRAM - DOMESTIC WATER
Scale:



3 PLUMBING RESTROOM RISER DIAGRAM - DOMESTIC WATER
Scale:

Revision /	Date	
1	02-16-24	City Comments 1
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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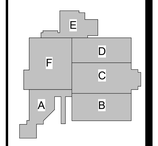

KEY PLAN - 1ST FLOOR
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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING DOMESTIC WATER RISER DIAGRAMS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P5.00
Drawn By: PG	
Date: 10.29.2025	

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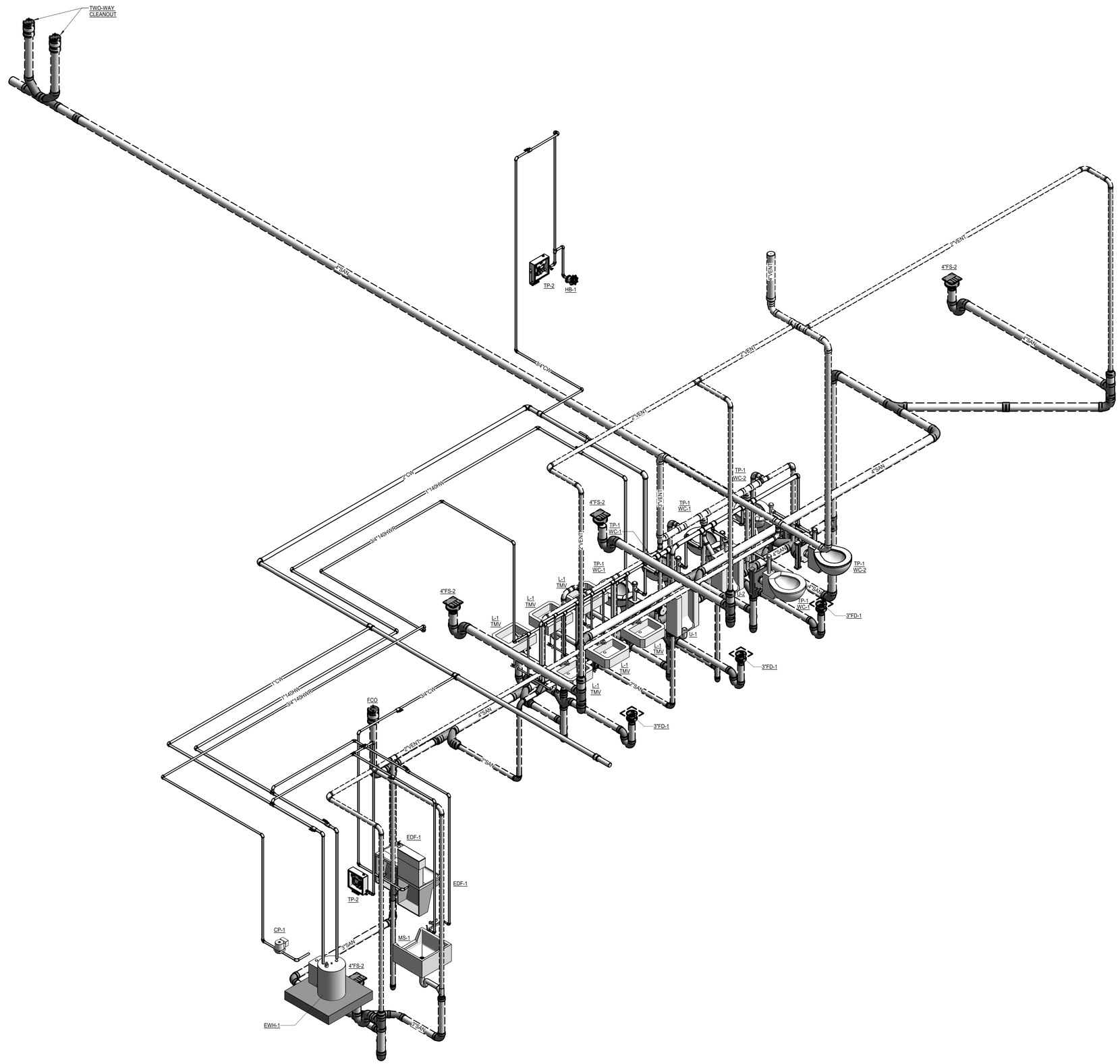

1 **PLUMBING RESTROOM RISER DIAGRAM**
Scale:

Revision /	Date	
1	02-16-24	City Comments 1
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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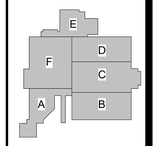

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PLUMBING RESTROOM RISER DIAGRAM

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P5.01
Drawn By: PG	
Date: 10.29.2025	

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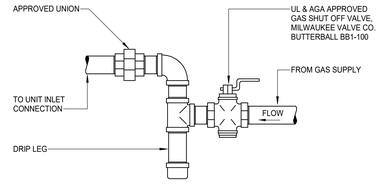
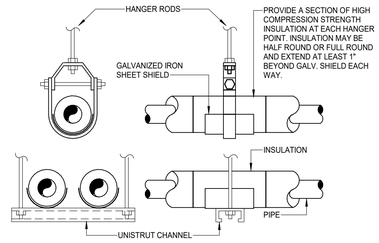
PNG03 - XX/XX/XX



12 GAS CONNECTION
SCALE: NONE

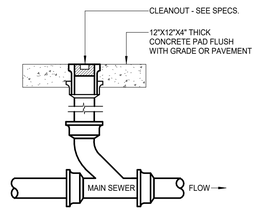
PP01 - XX/XX/XX

MINIMUM DIMENSIONS OF GALVANIZED SHEETMETAL PROTECTION SHIELDS AT PIPE HANGERS		
NOMINAL SIZE PIPE	SHIELD LENGTH (IN.)	GAUGE THICKNESS
1/2" & 3/4"	12	18
1" - 2-1/2"	12	18
3" - 4"	16	18
6"	18	16

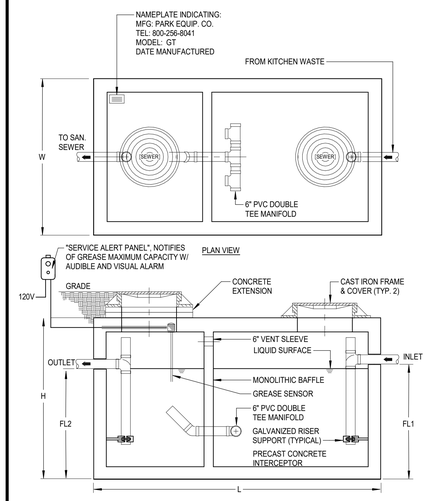


8 PIPE SHIELDS FOR INSULATED PIPING
SCALE: NONE

PSAN04- XX/XX/XX



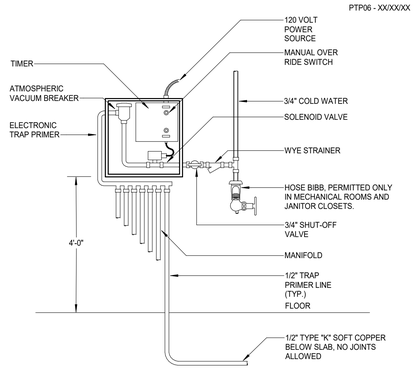
4 EXTERIOR CLEANOUT
SCALE: NONE



GREASE INTERCEPTOR SCHEDULE								
MODEL NO.	CAPACITY US/gal	GREASE CAP. (LBS)	EMPTY WT (LBS)	LENGTH L	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2
GT-2000	2,000	4,600	21,250	9'-0"	6'-0"	8'-0"	6-9"	6'-6"

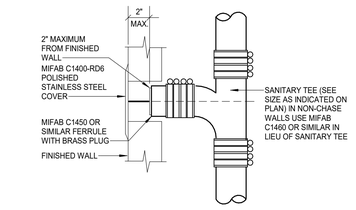
16 GREASE INTERCEPTOR
SCALE: NONE

PTP06 - XX/XX/XX



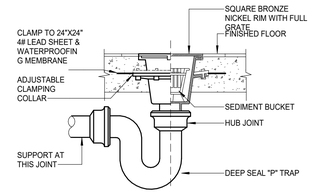
11 ELECTRONIC TRAP PRIMER
SCALE: NONE

PSAN03- XX/XX/XX



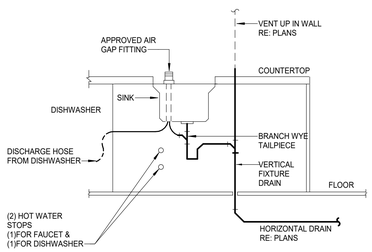
7 WALL CLEANOUT
SCALE: NONE

PSAN08- XX/XX/XX



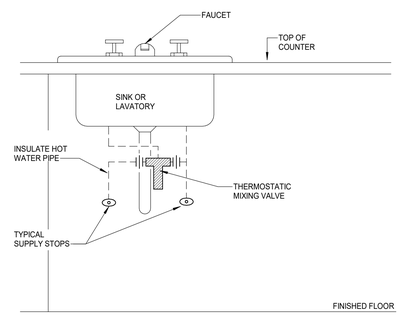
3 FLOOR SINK
SCALE: NONE

PSAN14- XX/XX/XX



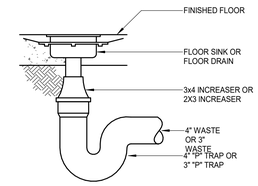
14 DISHWASHER CONNECTION
SCALE: NONE

PHW04 - 08/10/20



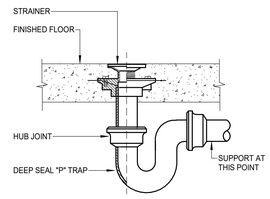
THERMOSTATIC MIXING VALVE AT SINK/LAVATORY DUAL TEMPERATURE
10
SCALE: NONE

PSAN09- XX/XX/XX



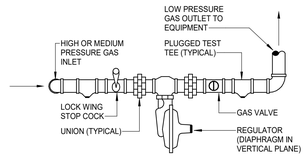
COMBINATION WASTE AND VENT DRAIN CONNECTION
6
SCALE: NONE

PSAN07- XX/XX/XX



2 FLOOR DRAIN
SCALE: NONE

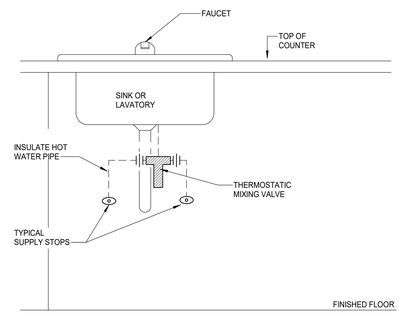
PNG02 - XX/XX/XX



NOTE: REFERENCE DRAWINGS FOR PIPE SIZES.

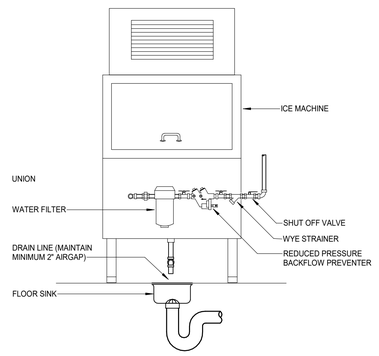
13 GAS PRESSURE REGULATOR PIPING
SCALE: NONE

PHW04 - 08/10/20



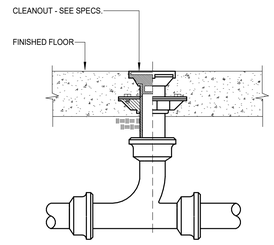
THERMOSTATIC MIXING VALVE AT SINK/LAVATORY SINGLE TEMPERATURE
9
SCALE: NONE

PSAN25- XX/XX/XX



5 ICE MACHINE CONNECTION
SCALE: NONE

PSAN01- XX/XX/XX

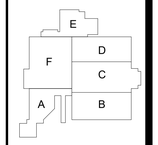


1 FLOOR CLEANOUT
SCALE: NONE

Revision / Date
2 03-26-24 City Comments 2

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL
ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. P7.11
Drawn By: PG	
Date: 10.29.2025	

10/29/2025 1:59:36 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_02 CREEKWOOD & RIVERWOOD MS ADD & RENO_MEPT.rvt

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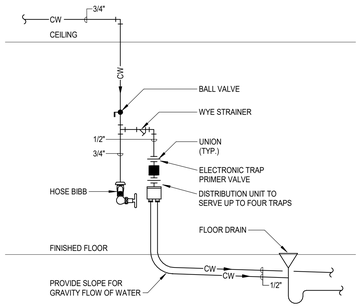
PSAN21- XX/XX/XX

GREASE INTERCEPTOR SIZING (IPC)				
FIXTURE TYPE:	TRAP ARM SIZE	FIXTURE UNITS	QUANITY	SUM
FLOOR DRAINS, ETC.	3"	5	8	40
FLOOR SINKS, ETC.	4"	6	10	60
LAVATORIES	2"	1	4	4
CLOTHES WASHER (RESIDENTIAL)	2"	2	1	2
MOP SINK	3"	2	1	2
TOTAL FIXTURE UNITS (DFU)				108
MULTIPLY 125 GPM BY TOTAL DFU'S: 4" PIPE @ 1/4" SLOPE FULL = 125 GPM CALCULATION: 125 x 108 =				13,500
DIVIDE 13,500 BY 216 DFU MAX DFU CAPACITY OF 4" PIPE @ 1/4" SLOPE = 216 CALCULATION: 15,000 / 216 =				62.5
MULTIPLY BY 30 MIN. RETENTION TIME CAPACITY (GALLONS)				1875

GREASE INTERCEPTOR SCHEDULE								
MODEL NO.	CAPACITY USGal	GREASE CAP. (LBS)	EMPTY WT (LBS)	LENGTH L	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2
GT-2000	2,000	4,600	21,250	9'-0"	6'-0"	8'-0"	6'-9"	6'-6"

10 GREASE TRAP SIZING CALCULATION (GT-1)
SCALE: NONE

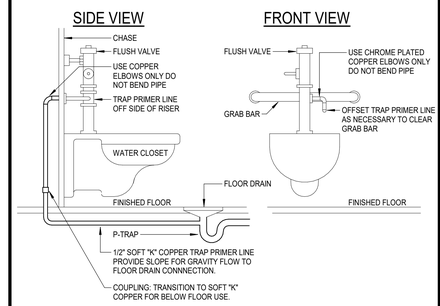
PTP05 - XX/XX/XX



NOTE: OMIT HOSE BIBB WHEN IN JANITOR'S CLOSET

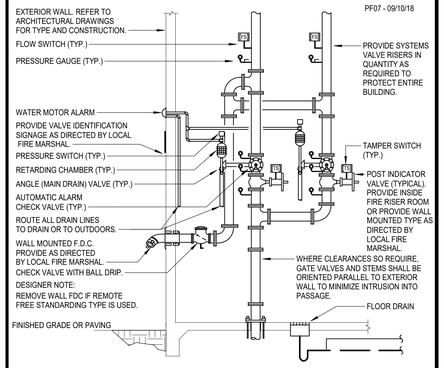
5 ELECTRONIC TRAP PRIMER IN MECHANICAL ROOM/JANITOR CLOSET
SCALE: NONE

PTP03 - XX/XX/XX



2 FLUSH VALVE TRAP PRIMER
SCALE: NONE

PF07 - 09/10/18



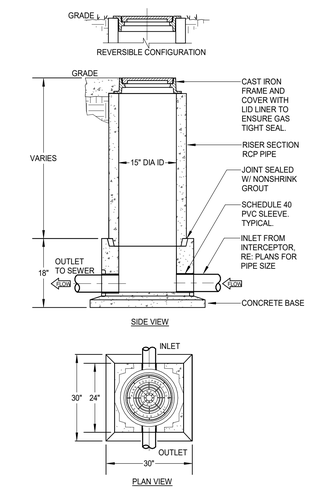
4 FIRE ENTRY PIPING
SCALE: NONE

PSAN30 - XX/XX/XX

NOTES AND SPECIFICATIONS:

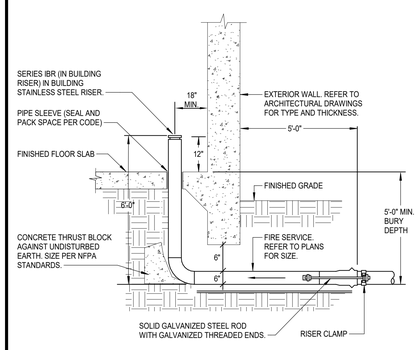
1. USE 15" T&G R.C.P. FOR INSTALLATION FOR INSTALLATION 6'-0" DEEP AND LESS.
2. USE 24" T&G R.C.P. FOR INSTALLATION GREATER THAN 6'-0" DEEP. (STANDARD RING AND M.H. COVER REQUIRED)
3. SAMPLING WELL MUST BE SET IN A CIRCULAR OR SQUARE CONCRETE PAD (1'-0" GREATER THAN OUTSIDE DIAMETER OF PIPE.)
4. LAWN INSTALLATION MUST BE 4" ABOVE FINISHED GRADE.
5. DRIVE & SIDEWALK INSTALLATION MUST BE BROUGHT TO FINISHED GRADE
6. CONCRETE SHALL BE CLASS 1 WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT SHALL BE OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.
7. CAST IRON FRAMES AND GRATES SHALL BE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30, HEAVY DUTY AASHTO H-20.

MANUFACTURER/ MODEL
PARK EQUIPMENT SWB-15



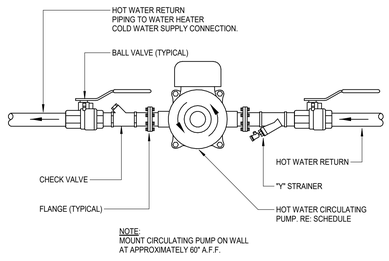
1 SAMPLE WELL
SCALE: NONE

PF02 - 09/10/18



9 FIRE SPRINKLER ENTRY
SCALE: NONE

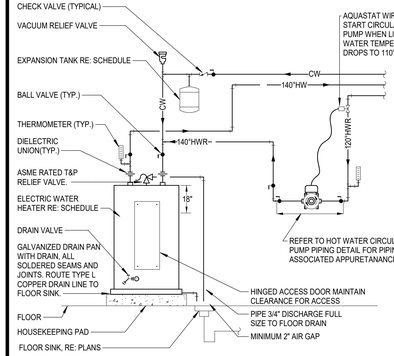
PHW07 - 09/10/18



NOTE:
MOUNT CIRCULATING PUMP ON WALL AT APPROXIMATELY 60" A.F.F.

6 HOT WATER CIRCULATING PUMP PIPING
SCALE: NONE

PWH11 - 04/12/18



3 ELECTRIC WATER HEATER PIPING
SCALE: NONE

Revision /	Date	
1	02-16-24	City Comments 1
2	03-26-24	City Comments 2

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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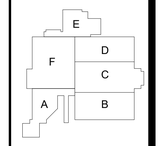

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PLUMBING DETAILS

PACKAGE VOLUME

Job No. 1821-13-01
Sheet No. P7.12
Drawn By: PC
Date: 10.29.2025

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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PLUMBING PIPING LEGEND

SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSTATE DRAIN PIPING (CD)
D	CONDENSTATE - INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
1	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P 1	4" VTR RISER FLAG

PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
8. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
9. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
10. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
11. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
12. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
13. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
14. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
15. ALL BALL VALVES AND SHUT OFF VALVES SHALL BE FULL PORT VALVES.

PLUMBING MATERIAL LIST

ABOVE GRADE, INSIDE BUILDING

SANITARY WASTE AND VENT PIPING SHALL BE

NO-HUB CAST IRON SYSTEM CONFORMING TO CISPI. STANDARD NO. 301-75. NEOPRENE GASKETS SHALL CONFORM TO ASTM STANDARD C564-75, OR,

STORM PIPING SHALL BE

SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPE AND FITTINGS WITH ELASTOMERIC GASKETS JOINTS.

DOMESTIC WATER PIPING SHALL BE

DRAWN (HARD) COPPER WATER TUBE, TYPE "L", ASTM B88, WITH WROUGHT COPPER FITTINGS, ANSI B16.22 AND 95-5 SOLDER JOINTS.

BELOW GRADE, INSIDE BUILDING

SANITARY WASTE AND VENT PIPING SHALL BE

SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS. DO NOT USE IN AIR SUPPLY OR RETURN PLENUMS, AND OR WHERE FIRE RATED WALLS, PARTITIONS, OR FLOORS ARE PENETRATED.

STORM PIPING SHALL BE

SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS.

DOMESTIC WATER PIPING SHALL BE

ANNEALED (SOFT) COPPER WATER TUBE, TYPE "K", ASTM B88, WITH NO JOINTS OR FITTINGS BELOW SLAB.

GAS PIPING SHALL BE

PIPE 2" AND SMALLER. PROVIDE SCHEDULE 40 ASTM A 53 BLACK STEEL WITH FACTORY FABRICATED SOCKET WELD FITTINGS.

PIPE LARGER THAN 2", USE SCHEDULE 40 ASTM A 53 BLACK STEEL PIPE WITH LONG RADIUS WELD FITTINGS.

NOTE: ALL PIPE MATERIAL ABOVE SHALL COMPLY WITH UPC 301.1 & NSF 14.

SHOCK ARRESTOR SCHEDULE

P.D.I. SYMBOLS:	FIXTURE UNITS:	THREADED CONNECTION	CERTIFICATION
A	1 - 11	1/2"	ASSE 1010
B	12 - 32	3/4"	ASSE 1010
C	33 - 60	1"	ASSE 1010
D	61 - 113	1"	ASSE 1010
E	114 - 154	1"	ASSE 1010
F	155 - 330	1"	ASSE 1010

ELECTRIC WATER HEATER SCHEDULE

ITEM NO.	KW INPUT	GALS. PER HR. RECOVERY RATE 100°F RISE	STORAGE CAPACITY	ELECTRICAL REQUIRED	STORED WATER TEMP.	MANUFACTURER / COMMENTS
EWH-1	6	25	40	208V/1PH.	140 F	A.O. SMITH DSE-40A

NOTES:
1. ALL ELECTRIC WATER HEATERS SHALL BE ASME.

DOMESTIC HW EXPANSION TANK SCHED.

ITEM NO.	DESCRIPTION	MAX. WORK PRESSURE	TANK VOL. GALLONS	MAX. ACCEPT. GALLONS	DIAMETER INCHES	MANUFACTURER AND MODEL
ET-1	HOT WATER EXPANSION TANK	150 PSI	6.4	3.2	12"	AMTROL THERM-X-TROL #ST-12C-DD

NOTES:
1. ALL EXPANSION TANKS SHALL BE ASME RATED.
2. ET-1 SHALL BE PIPE IN CONJUNCTION WITH EWH-1.

CIRCULATING PUMP SCHEDULE

ITEM NO.	DESCRIPTION	TYPE	GPM	HEAD FEET	H.P. MIN.	VOLT/ PHASE	MAX RPM	MANUFACTURER AND MODEL
CP-1	CIRCULATION PUMP 110 F HOT WATER	IN-LINE STAINLESS STEEL	5	3.35	1/12	120/1	2400	GRUNDFOS #ALPHA HWR 15-29

PLUMBING FIXTURE SCHEDULE

TYPE: WC-1 (STANDARD HEIGHT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH ANTIMICROBIAL SURFACE, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1- 1/2" TOP SPUD AND BOLT COVERS.
AMERICAN STANDARD AFWALL #2634101.020
SEAT: ELONGATED OPEN FRONT SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES.
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD.
SLOAN ROYAL II #111-1.28.
CARRIER: WADE 310, 330, 340 SERIES.
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT REQUIREMENTS.

TYPE: WC-2 (T.A.S. / ADA COMPLIANT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH ANTIMICROBIAL SURFACE, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1- 1/2" TOP SPUD AND BOLT COVERS.
AMERICAN STANDARD AFWALL #2634101.020
SEAT: ELONGATED OPEN FRONT SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. REFER TO ARCHITECTURAL DRAWINGS FOR SEAT COLOR. BEMIS #1955SSCT.
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. PROVIDE WITH TRAP PRIMER ON FLUSH TUBE AT LOCATION ON DRAWING.
SLOAN ROYAL II #111-1.28.
CARRIER: WADE 311, 330, 340 SERIES.
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT REQUIREMENTS.

TYPE: U-1 (T.A.S. COMPLIANT)
DESCRIPTION: URINAL, WALL HUNG, WHITE VITREOUS CHINA, 0.5 GALLON PER FLUSH, WASHOUT FLUSH ACTION, INTEGRAL TRAP, REMOVABLE DOMED STRAINER. AMERICAN STANDARD "WASHBROOK" 6590.001
FLUSH VALVE: 0.5 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED URINAL FLUSHOMETER, VACUUM BREAKER, SPUD COUPLING FOR 3/4" TOP SPUD.
SLOAN ROYAL II #186-0.5.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, UPPER AND LOWER BEARING PLATES WITH THREADED STUDS. WADE 401-AM1-M38.
ROUGH-IN: 2" WASTE, 2" VENT, 3/4" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: L-1 (T.A.S. COMPLIANT) - METERED - TEMPERED WATER FOR STUDENTS
DESCRIPTION: LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, 4" CENTERSET FAUCET HOLES. AMERICAN STANDARD LUCERNE #0355.012.
FAUCET: CHROME PLATED BRASS DECK MOUNTED LAVATORY FAUCET WITH COVER PLATE, 4-1/8" SPOUT, AND PUSH BUTTON HANDLE INDEXED "PUSH". SELF CLOSING, METERING CARTRIDGE, VANDAL RESISTANT 0.5 GPM NON-AERATING LAMINAR FLOW OUTLET. CHICAGO MODEL #857-E66VP-665PSHABCP.
MIXING VALVE: ASSE 1070 POINT OF USE THERMOSTATIC MIXING VALVE WITH WAX FILLED THERMOSTAT, CHECK VALVES ON INLETS AND MOUNTING BRACKET. BRADLEY #S59-4007 AND #S45-2976
STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #155A.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE #8872C
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #LFH2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE 520-08.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: IMC-1
DESCRIPTION: ICE MACHINE CONNECTION. WATER SUPPLY VALVED AT WALL. PROVIDE DOUBLE CHECK VALVE TYPE BACKFLOW PREVENTER AND WATER FILTER. WATTS 1/2" 007-S BACKFLOW PREVENTER AND AQUA-PURE #ICE 140-S FILTER. ROUTE BACKFLOW PREVENTER DISCHARGE TO FLOOR SINK SERVING ICE MACHINE.
ROUGH-IN: 3/4" COLD WATER. COORDINATE ROUGH-IN LOCATION/HEIGHT, FINAL CONNECTION WITH EQUIPMENT BEING INSTALLED AND WITH ARCHITECTURAL/CASEWORK DRAWINGS.

TYPE: MS-1
DESCRIPTION: MOP SINK BASIN, 36" X 36" X 12" HIGH CORNER TYPE. PRECAST TERRAZZO WITH 6" DROPPED FRONT. STAINLESS STEEL THRESHOLD CAP. AND DOUBLE STAINLESS STEEL WALL GUARDS.STERN-WILLIAMS "CORLOW" SBC-1750.
FAUCET: CHROME PLATED BRASS WALL MOUNTED FITTING WITH CHECK IN STOPS, ADJUSTABLE SUPPLY ARMS, VACUUM BREAKER SPOUT WITH PAIL HOOK AND WALL BRACE, 2-1/2" INDEXED LEVER HANDLES ON 8" CENTERS. QUARTER TURN CARTRIDGES, 3/4" MALE HOSE THREAD OUTLET. CHICAGO 445-897-CP.
ROUGH-IN: 3" WASTE, 2" VENT, 1/2" HOT AND COLD WATER.

TYPE: EDF-1 (T.A.S. COMPLIANT) WITH BOTTLE FILLER, FILTERED.
DESCRIPTION: WALL HUNG, BARRIER FREE, ELECTRIC DRINK FOUNTAIN, ALL STAINLESS STEEL, CHROME-PLATED TWO-STREAM MOUND BUILDING TYPE BUBBLER. 8 GPH OF 50 DEGREE WATER AT 90 DEGREE AMBIENT AND 80 DEGREE INLET WATER. PROVIDE CANE TOUCH APRON IN ALL STAINLESS STEEL ON ALL UNITS MOUNTED WITH A CLEAR KNEE SPACE GREATER THAN 27" HIGH.
HALSEY TAYLOR #HTHB-HACBLSS-WF WITH APRON 42522.
P-TRAP: 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. MCGUIRE 8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE SLAB WITH (4) 1/2" BOLTS. ADJUSTABLE SLEEVE FOR CONNECTION TO HANGER PLATE PROVIDED BY FIXTURE MANUFACTURER. WADE 400.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: HB-1 - COLD WATER
DESCRIPTION: HOSE BIBB. EXPOSED TYPE, MILD CLIMATE, WALL-MOUNTED FAUCET WITH 3/4" F.P.T. INLET, 3/4" MALE HOSE THREAD OUTLET AND SELF-DRAINING ANTI-SIPHON VACUUM BREAKER. CERAMIC 1/4"TURN OPERATING CARTRIDGE. CHROME PLATED BRASS FINISH WITH REMOVABLE TEE HANDLE.
CHICAGO 952-XKCP.
ROUGH-IN: 3/4" COLD WATER. INSTALL WITH OUTLET AT 18" A.F.F. OR AS DIRECTED BY ARCHITECT/OWNER.

TYPE: RVB-1
DESCRIPTION: RECESSED VALVE BOX, 7" X 7", 18 GAUGE STEEL WITH WHITE POWDER COAT FINISH, 1/2" THREADED CONNECTION DOMESTIC VALVE. PROVIDE FILTER WHEN MAKING FINAL CONNECTION. GUY GRAY BIM-875 WITH AQUA-PURE AP717 FILTER.
ROUGH-IN: 1/2" COLD WATER

TYPE: WMB-1
DESCRIPTION: WASHING MACHINE DRAIN BOX. 20 GAUGE STEEL BOX WITH WHITE POWDER COAT FINISH, MALE IRON PIPE WATER SUPPLY CONNECTIONS AND DRAIN FITTING. PROVIDE HAMMER ARRESTOR AT BOTH HOT AND COLD WATER HOSE THREADS.
GUY GRAY T-200 (36" - 42" AFF).
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER

TYPE: WH-1
DESCRIPTION: WALL HYDRANT IN S.S. BOX, 3/4" NON FREEZE, HALF TURN CERAMIC DISC CARTRIDGE. STAINLESS STEEL FINISH WITH ANTI SIPHON VACUUM BREAKER AND LOOSE TEE KEY. INSTALL WITH BOTTOM OF HYDRANT 18" A.F.F. WADE 8801-MT-175.
ROUGH-IN: 3/4" COLD WATER

TYPE: TP-1
SERVICE: ONE FLOOR DRAIN TRAP
DESCRIPTION: FLUSH VALVE TRAP PRIMER. 1-1/2" O.D. X 12" 17 GAUGE PRIMING TUBE WITH VACUUM BREAKER. PRECISION PLUMBING PRODUCTS #FVP-1VB. REFERENCE 'WC-1' & 'WC-2'.

TYPE: TP-2
SERVICE: SERVES 1 TO 30 FOR FLOOR DRAINS/SINKS TRAPS, REFER TO PLANS.
DESCRIPTION: ELECTRONIC TRAP PRIMER WITH DISTRIBUTION MANIFOLD AND CABINET. SURFACE MOUNT WHERE SHOWN. PROVIDE SOLID COVER OVER CABINET. PRECISION PLUMBING PRODUCTS PRIME TIME PT SERIES.

TYPE: DN-1
DESCRIPTION: OVERFLOW DOWNSPOUT NOZZLE. CAST BRONZE WITH THREADED OR NO HUB OUTLET AND FLANGE TO SECURE NOZZLE TO WALL. INSTALL AT 12" ABOVE FINISHED SLAB OR AS DIRECTED BY ARCHITECT. WADE #3941-85.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: FD-1
SERVICE: TOILET ROOMS AND GENERAL USE
DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 6" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET. WADE 1100-MR6.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.

TYPE: FS-1
SERVICE: ICE MACHINE DRAIN / BACKFLOW PREVENTER DISCHARGE
DESCRIPTION: CAST IRON 8" SQUARE FLOOR SINK WITH 6" DEEP SUMP, A.R.E. INTERIOR, ALUMINUM DOME BOTTOM STRAINER, 1/2 STAINLESS STEEL TOP, CLAMPING DEVICE. WADE 9110-15026-27-SS.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS / EQUIPMENT PLACEMENT.

TYPE: FS-2
SERVICE: MECHANICAL ROOM
DESCRIPTION: A.R.E. COATED CAST IRON BODY 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, BOTTOM OUTLET, LOOSE SET CAST IRON SECONDARY STRAINER, CLAMPING DEVICE, AND HALF TOP GRATE. WADE 9145-A-15-26-64.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.

TYPE: FS-3
SERVICE: KITCHEN INDIRECT WASTE
DESCRIPTION: CAST IRON 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, A.R.E. INTERIOR, ALUMINUM DOME BOTTOM STRAINER, STAINLESS STEEL TOP, AND CLAMPING DEVICE. WADE 9140-15-27-26-SS.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL / KITCHEN CONSULTANT DRAWINGS.

TYPE: RD-1
DESCRIPTION: ROOF DRAIN. CAST IRON BODY WITH FLANGE, FLASHING RING WITH GRAVEL STOP, ALUMINUM DOME, UNDERDECK CLAMP AND ADJUSTABLE EXTENSION AS REQUIRED FOR ROOF CONSTRUCTION. WADE 3000-46-52-53 FOR 6" AND SMALLER, WADE 3001-46-52-53 FOR 8" AND LARGER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: RD-2
DESCRIPTION: OVERFLOW ROOF DRAIN. CAST IRON BODY WITH FLANGE, FLASHING RING WITH GRAVEL STOP, ALUMINUM DOME, 2" HIGH WATER DAM, BEARING PAN, UNDERDECK CLAMP AND ADJUSTABLE EXTENSION AS REQUIRED FOR ROOF CONSTRUCTION. WADE 3000-D-46-52-53 FOR 6" AND SMALLER, WADE 3001-D-46-52-53 FOR 8" AND LARGER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: ECO
DESCRIPTION: EXTERIOR CLEANOUT TO GRADE, CAST IRON BODY WITH ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED VANDAL RESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18"X18"X12" CONCRETE PAD. WADE 6000-Z.

TYPE: FCO
DESCRIPTION: FLOOR CLEANOUT, CAST IRON BODY AND ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED STAINLESS STEEL COVER. WADE 6000-153. FOR CARPETED FLOORS PROVIDE WADE 6000-CM.

TYPE: WCO
DESCRIPTION: WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH DUCTILE IRON COMBINED COVER/PLUG AND ROUND STAINLESS COVER PLATE WITH CENTER SECURING SCREW. WADE 8550 WITH 8480-RS. PROVIDE WADE 8560 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRUCTION.

TYPE: GT-1
DESCRIPTION: GREASE TRAP, PRECAST CONCRETE WITH STEEL REINFORCEMENT AND MANHOLE ACCESS (UNLESS NOTED OTHERWISE) COMPLETE WITH COVERS AND FRAMES. DETAILED ON DRAWINGS. PROVIDE APPROVED SAMPLE WELL ON DISCHARGE SIDE OF GREASE INTERCEPTOR.

TYPE: SW-1
DESCRIPTION: SAMPLING WELL. DETAILED ON DRAWINGS.

TYPE: TMV
DESCRIPTION: THERMOSTATIC MIXING VALVE. SCHEDULED ON DRAWINGS.

TYPE: G
DESCRIPTION: NATURAL GAS COCK, SINGLE OR DOUBLE, COUNTERTOP OR WALL MOUNTED. FURNISHED BY DIVISION 12 AND INSTALLED BY DIVISION 22.
ROUGH-IN: 1/2" NATURAL GAS. COODINATE FINAL QUANTITY, LOCATIONS AND INSTALLATION WITH ARCHITECTURAL / CASEWORK DRAWINGS.

TYPE: WF-1
DESCRIPTION: BRADLEY SENTRY CORNER SHALLOW BOWL WASHFOUNTAIN. MODEL #SN2013 WITH AIR VALVE FOOT CONTROL, FLOOR MOUNTED. 3 STATIONS. STANDARD PEDESTAL HEIGHT. WITH STAINLESS STEEL SHROUD.

TYPE: HS-1 (T.A.S. COMPLIANT) - KITCHEN HAND WASH
DESCRIPTION: LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, SINGLE CENTERED FAUCET HOLE. AMERICAN STANDARD "LUCERNE" 0355.421.
FAUCET: CHROME PLATED BRASS DECK MOUNTED FITTING WITH 5-1/4" RIGID/SWING SPOUT WITH 1.5 GPM FLOW CONTROL DEVICE IN BASE OF SPOUT AND 4" WRIST BLADE HANDLES ON 4" CENTERS. QUARTER TURN CERAMIC DISC OPERATING CARTRIDGES. CHICAGO #895-317GNDFCXKABCP.
MIXING VAVLE: ASSE 1070 POINT OF USE THERMOSTATIC MIXING VALVE WITH WAX FILLED THERMOSTAT. BYPASS, CHECK VALVES ON INLETS AND MOUNTING BRACKET.
STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #155A.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE 8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE 520-08.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

GENERAL NOTES
ALL LAVATORIES AND SINKS SHALL BE SUPPLIED WITH HOT AND COLD WATER (UNLESS NOTED TO BE COLD WATER ONLY) TO FAUCETS AS INDICATED ON PLANS AND FIXTURE SCHEDULE. PROVIDE CHROME PLATED BRASS SUPPLY STOPS WITH LOOSE KEYS AND WALL ESCUTCHEONS. PROVIDE CHROME PLATED FLEXIBLE RISERS OF SIZE REQUIRED TO PROPERLY CONNECT FIXTURES. PROVIDE 17 GAUGE CHROME PLATED CAST BRASS P-TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON (UNLESS NOTED TO BE AN ACID WASTE FIXTURE). REFER TO FIXTURE SCHEDULE FOR MINIMUM SIZES OF PLUMBING FIXTURE ROUGH-INS.

INSULATION KITS AT ALL LAVATORIES AND SINKS REQUIRED TO BE T.A.S. ACCESSIBLE (MCGUIRE OR TRUEBRO). ALL SUCH FIXTURES AND FINAL INSTALLATIONS SHALL COMPLY WITH THE STATE ACCESSIBILITY STANDARDS REQUIREMENTS.

INSERT TRAP GUARDS AFTER FINAL RODDING OF DRAINS. INSTALL TRAP GUARD WITH CLEAR SILICONE CAULK FOR GAS-TIGHT SEAL. FOR DRAIN RODDING AFTER INSTALLATION. INSERT SEWER TAPE THROUGH LIGHTLY GREASED 1-1/2" PVC PIPE TO PROTECT TRAP GUARD.

DISREGARD FIXTURES LISTED THAT ARE NOT ON THIS JOB.

Revision /	Date	
1	02-16-24	City Comments 1
2	03-26-24	City Comments 2
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025

KEY PLAN - 1ST FLOOR
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PLUMBING SCHEDULES

PACKAGE VOLUME

Job No. 1821-13-01
Sheet No. P8.11
Drawn By: PG
Date: 10.29.2025

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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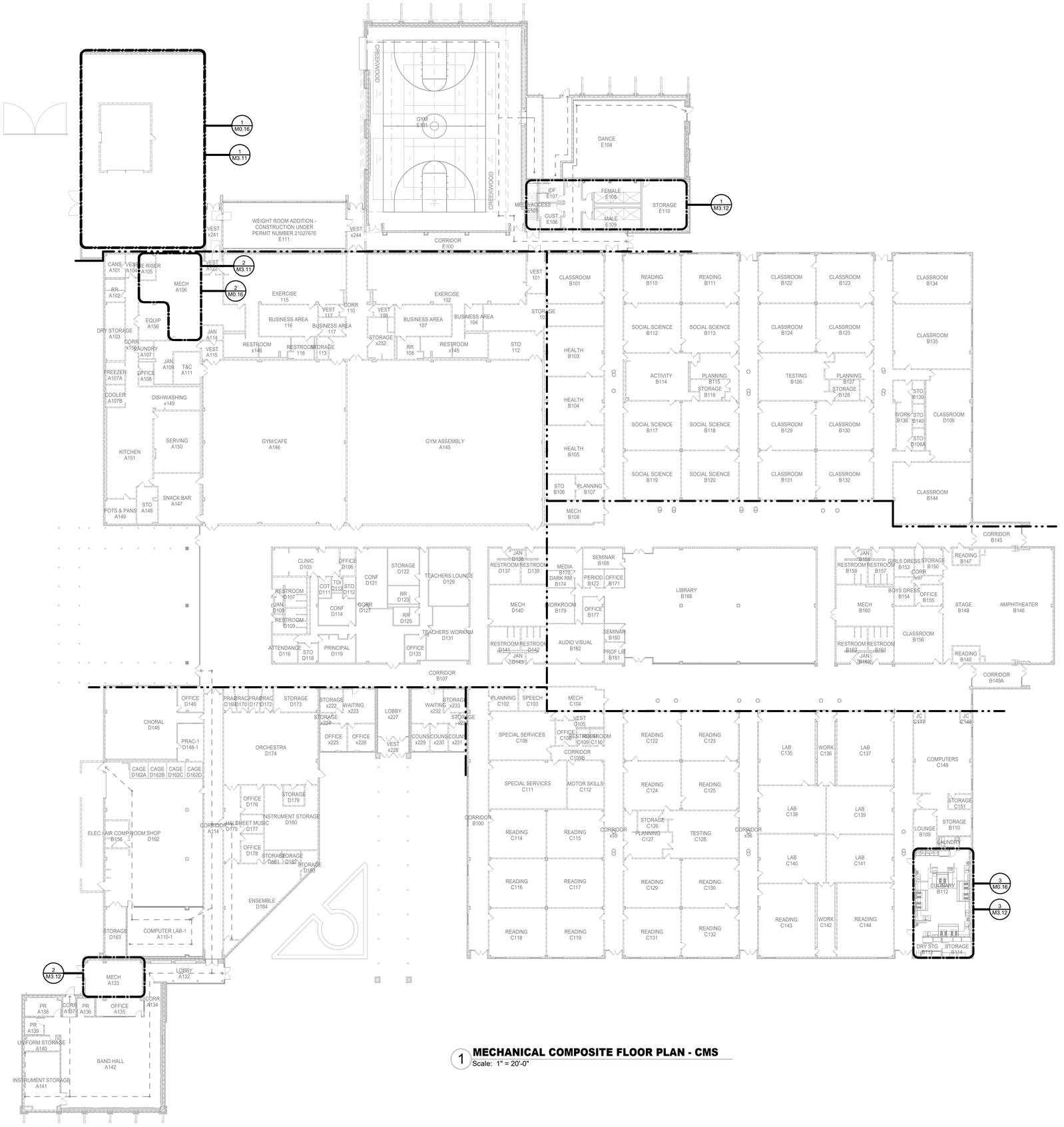


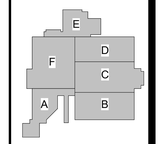
1 MECHANICAL COMPOSITE FLOOR PLAN - CMS

Scale: 1" = 20'-0"

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

Revision /	Date

Bradley Kalmans
REGISTERED
BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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MECHANICAL COMPOSITE PLAN - CREEKWOOD

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M0.01
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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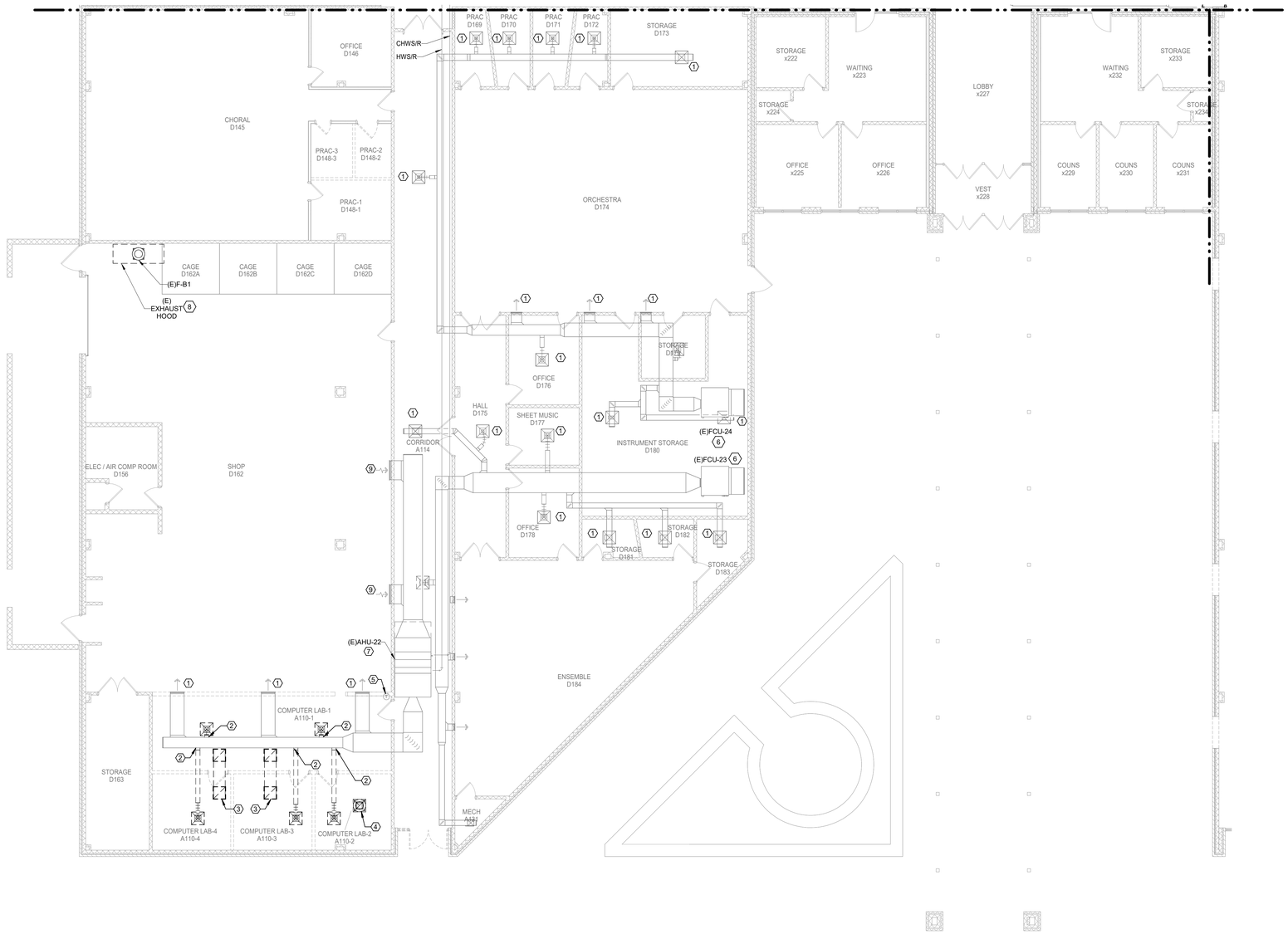
MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, AIR HANDLERS AND CONTROLS.
5. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

1. EXISTING SUPPLY GRILLE TO REMAIN.
2. REMOVE EXISTING DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
3. REMOVE EXISTING RETURN AIR GRILLES AND ASSOCIATED DUCTWORK.
4. EXISTING EXHAUST FAN, ASSOCIATED DUCTWORK, CONTROLS AND GRILLE TO BE REMOVED. PATCH HOLE IN ROOF ACCORDING TO SPECIFICATIONS.
5. EXISTING TEMPERATURE SENSOR TO BE REMOVED, SET ASIDE AND PROTECTED TO BE RELOCATED DURING NEW CONSTRUCTION. EXISTING CONTROL WIRING TO BE REUSED. RE 1/M2.11 FOR NEW LOCATION.
6. EXISTING FAN COIL UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
7. EXISTING AIR HANDLER UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
8. EXISTING EXHAUST HOOD, EXHAUST FAN, ASSOCIATED DUCTWORK, AND CONTROLS FOR FORGE SHALL BE REMOVED.
9. EXISTING RETURN DIFFUSER TO REMAIN.



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1 MECHANICAL DEMOLITION FLOOR PLAN - CMS - SECTION A

Scale: 1/8" = 1'-0"

SYMBOL LEGEND	
	POINT OF CONNECTION TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
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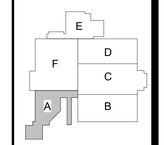

KEY PLAN - 1ST FLOOR
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MECHANICAL DEMOLITION FLOOR PLAN - SECTION A

PACKAGE | VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: AA
Date: 10.29.2025
Sheet No. M0.11

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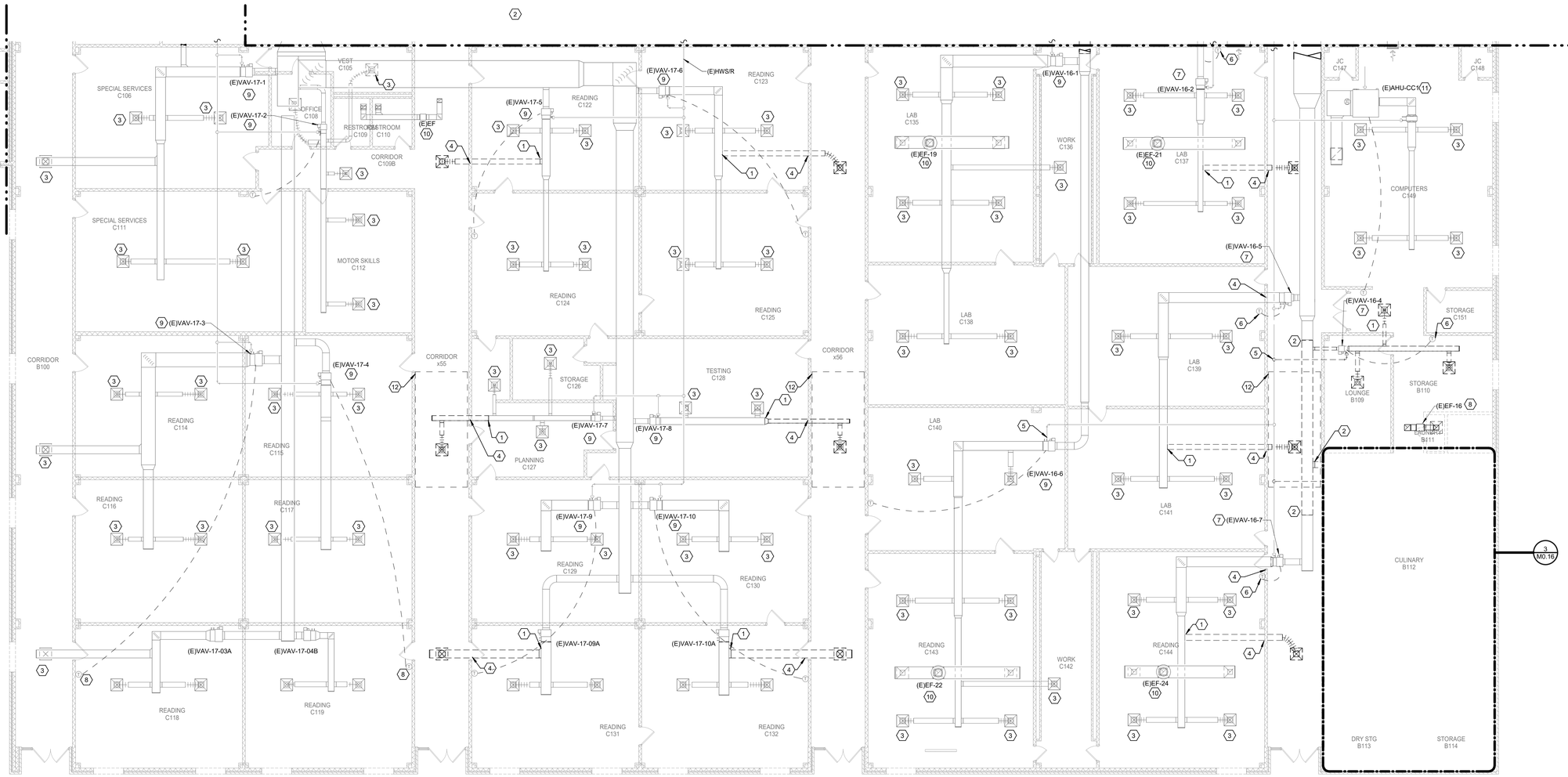
MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, AIR HANDLERS AND CONTROLS.
5. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY GRILLE AND ASSOCIATED DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
2. REMOVE EXISTING DUCTWORK TO POINT INDICATED.
3. EXISITNG SUPPLY GRILLE TO REMAIN.
4. REMOVE EXISTING FIRE DAMPER.
5. REMOVE EXISTING HOT WATER RETURN AND SUPPLY PIPING TO POINT INDICATED.
6. EXISTING TEMPERATURE SENSOR TO REMAIN. EXISTING CONTROL WIRING TO BE REUSED.
7. REMOVE EXISTING VAV UNIT. SET ASIDE AND PROTECT VAV UNIT SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. RE 1/M2.12 FOR NEW LOCATION.
8. EXISTING EXHAUST FAN, CONTROLS AND ASSOCIATED DUCTWORK SHALL BE REMOVED. PATCH ROOF ACCORDING TO SPECIFICATIONS.
9. EXISTING VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
10. EXISTING EXHAUST FAN, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
11. EXISTING AIR HANDLER, ASSOCIATED DUCTWORK, HOT WATER COIL, AND CONTROLS TO REMAIN.
12. ALL MECHANICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO TERMINAL UNITS, DUCTWORK, PIPING, CONTROL DEVICES AND ASSOCIATED WIRING INSIDE THIS AREA SHALL BE REMOVED AND/OR REROUTED TO NOT OBSTRUCT NEW ARCHITECTURAL SOLAR TUBE. REFER TO NEW FLOOR PLANS FOR MORE ADDITIONAL INFORMATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SOLAR TUBE LOCATIONS AND DIMENSION.

SYMBOL LEGEND	
⌖	POINT OF CONNECTION TO EXISTING
▭	ITEM TO REMAIN
[ ]	ITEM TO BE REMOVED



N 1 **MECHANICAL DEMOLITION FLOOR PLAN - CMS - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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MECHANICAL DEMOLITION FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M0.12
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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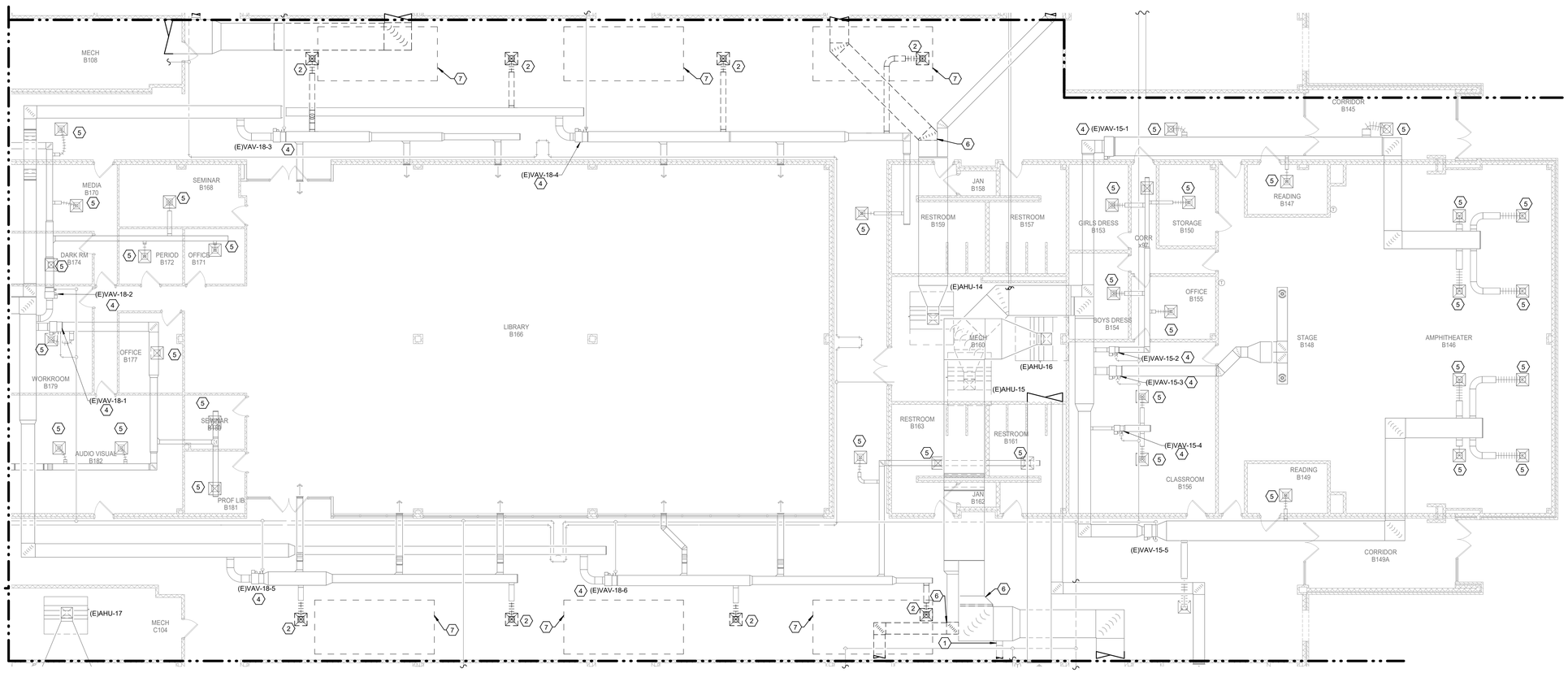
SYMBOL LEGEND	
	POINT OF CONNECTION TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, AIR HANDLERS AND CONTROLS.
5. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY DIFFUSER AND ASSOCIATED DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
2. REMOVE EXISITNG SUPPLY DIFFUSER.
3. REMOVE EXISTING HOT WATER RETURN AND SUPPLY PIPING TO POINT INDICATED.
4. EXISTING VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
5. EXISTING SUPPLY GRILLE TO REMAIN.
6. REMOVE EXISTING DUCTWORK TO POINT INDICATED.
7. ALL MECHANICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO TERMINAL UNITS, DUCTWORK, PIPING, CONTROL DEVICES AND ASSOCIATED WIRING INSIDE THIS AREA SHALL BE REMOVED AND/OR REROUTED TO NOT OBSTRUCT NEW ARCHITECTURAL SOLAR TUBE. REFER TO NEW FLOOR PLANS FOR MORE ADDITIONAL INFORMATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SOLAR TUBE LOCATIONS AND DIMENSION.



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1 **MECHANICAL DEMOLITION FLOOR PLAN - CMS - SECTION C**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
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KINGWOOD, TX

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MECHANICAL DEMOLITION FLOOR PLAN - SECTION C

PACKAGE | VOLUME

Job No. 1821-13-01
Drawn By: AA
Date: 10.29.2025
Sheet No. M0.13

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT, THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, AIR HANDLERS AND CONTROLS.
5. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY GRILLE AND ASSOCIATED DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
2. REMOVE EXISTING DUCTWORK TO POINT INDICATED.
3. REMOVE EXISTING VAV UNIT. SET ASIDE AND PROTECT VAV UNIT SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.14 FOR NEW LOCATION.
4. REMOVE EXISTING FIRE DAMPER.
5. REMOVE EXISTING FAN COIL UNIT. SET ASIDE AND PROTECT FAN COIL UNIT SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.14 FOR NEW LOCATION.
6. EXISTING SUPPLY GRILLE TO REMAIN.
7. REMOVE EXISTING HOT WATER COIL. SET ASIDE AND PROTECT HOT WATER COIL SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.14 FOR NEW LOCATION.
8. REMOVE EXISTING HOT WATER RETURN AND SUPPLY PIPING TO POINT INDICATED, CAP AND REINSULATE TO MATCH EXISTING.
9. REMOVE EXISTING HOT WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
10. EXISTING TEMPERATURE SENSOR TO REMAIN. EXISTING CONTROL WIRING TO BE REUSED.
11. REMOVE EXISTING CHILLED WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
12. REMOVE EXISTING RETURN PLENUMN AND SMOKE DETECTOR.
13. EXISTING EXHAUST FAN, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
14. EXISTING VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
15. ALL MECHANICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO TERMINAL UNITS, DUCTWORK, PIPING, CONTROL DEVICES AND ASSOCIATED WIRING INSIDE THIS AREA SHALL BE REMOVED AND/OR REROUTED TO NOT OBSTRUCT NEW ARCHITECTURAL SOLAR TUBE. REFER TO NEW FLOOR PLANS FOR MORE ADDITIONAL INFORMATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SOLAR TUBE LOCATIONS AND DIMENSION.

SYMBOL LEGEND	
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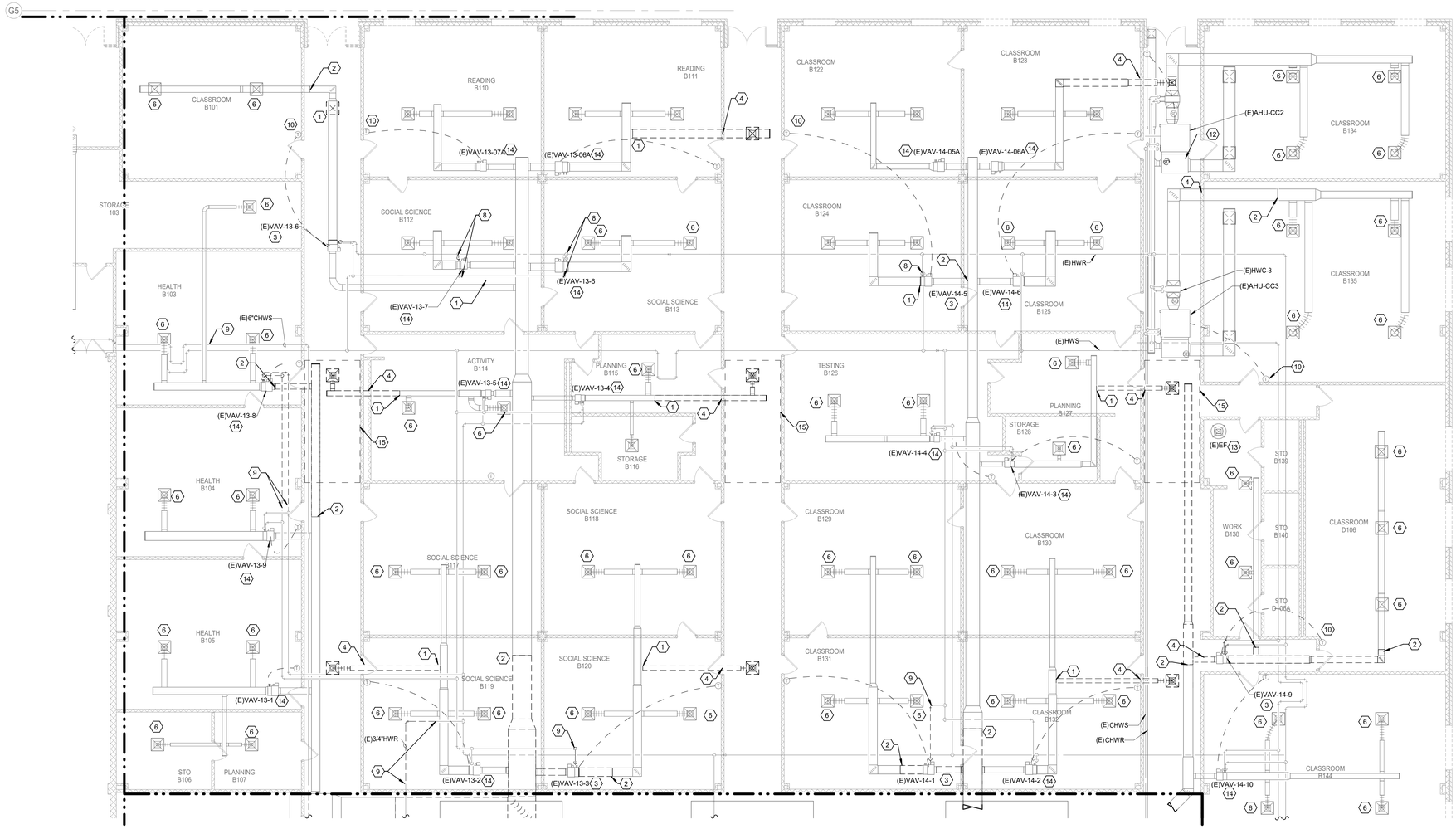
	ITEM TO REMAIN
[ ]	ITEM TO BE REMOVED



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1 MECHANICAL DEMOLITION FLOOR PLAN - CMS - SECTION D

Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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HUMBLE ISD
KINGWOOD, TX

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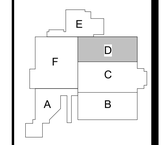

KEY PLAN - 1ST FLOOR
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MECHANICAL DEMOLITION FLOOR PLAN - SECTION D

PACKAGE VOLUME

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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: AA
Date: 10.29.2025
Sheet No. M0.14

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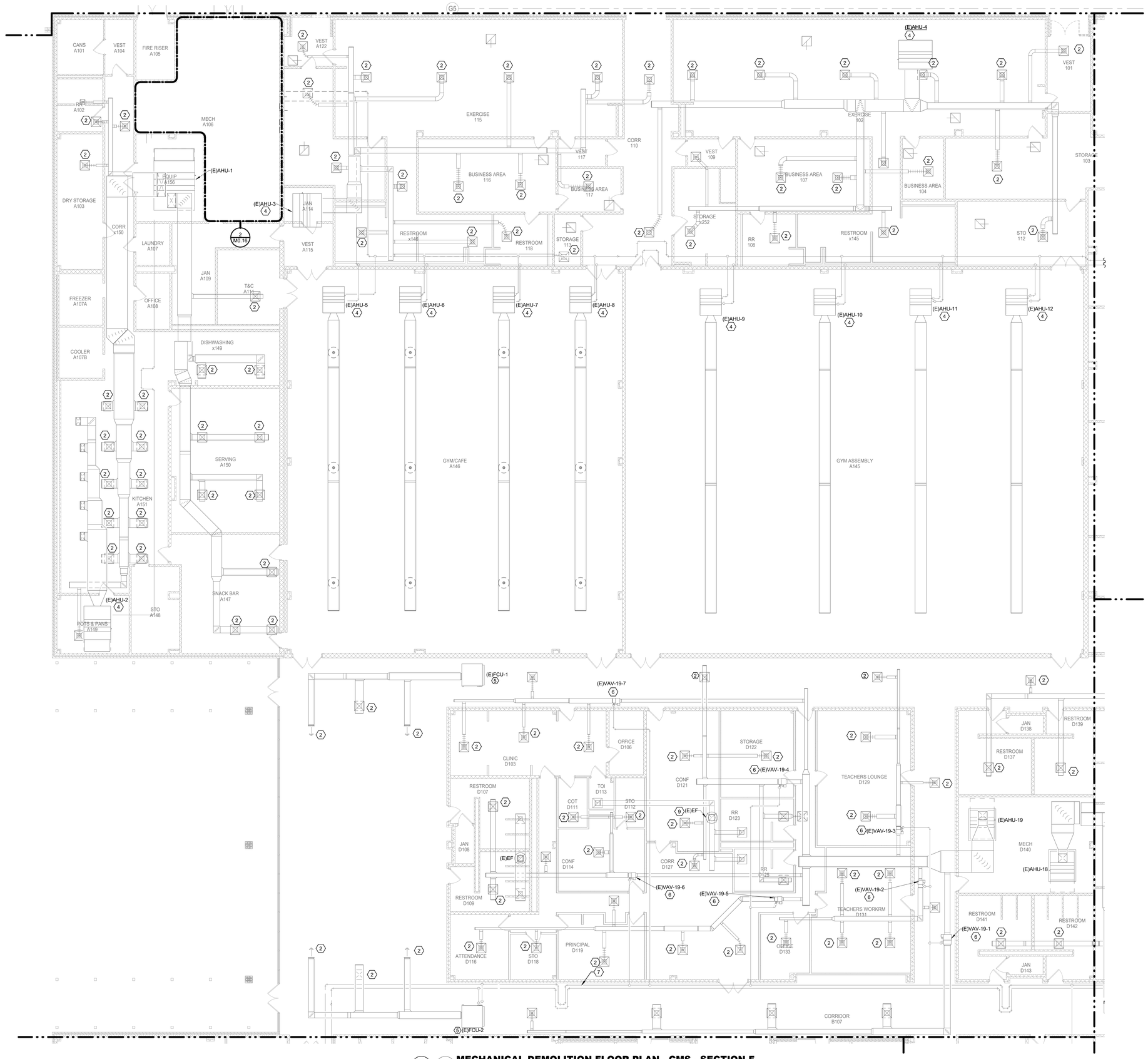

MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, AIR HANDLERS AND CONTROLS.
5. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

1. EXISITNG SUPPLY GRILLE TO BE RELOCATED. REMOVE EXISTING SUPPLY GRILLE, SET ASIDE AND PROTECT SUPPLY GRILLE SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.16 FOR NEW LOCATION.
2. EXISITNG SUPPLY GRILLE TO REMAIN.
3. REMOVE EXISTING SUPPLY GRILLE AND ASSOCIATED DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
4. EXISITNG AIR HANDLER, ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.
5. EXISITNG FAN COIL UNIT ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.
6. EXISITNG VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.
7. REMOVE EXISTING HOT WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
8. REMOVE EXISTING CHILLED WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
9. EXISITNG EXHAUST FAN, ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.

SYMBOL LEGEND	
	POINT OF CONNECTION TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

1 MECHANICAL DEMOLITION FLOOR PLAN - CMS - SECTION F

Scale: 1/8" = 1'-0"

N

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
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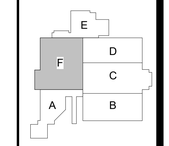

KEY PLAN - 1ST FLOOR
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

MECHANICAL DEMOLITION FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M0.15
Drawn By: AA	
Date: 10.29.2025	

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MECHANICAL DEMOLITION GENERAL NOTES:

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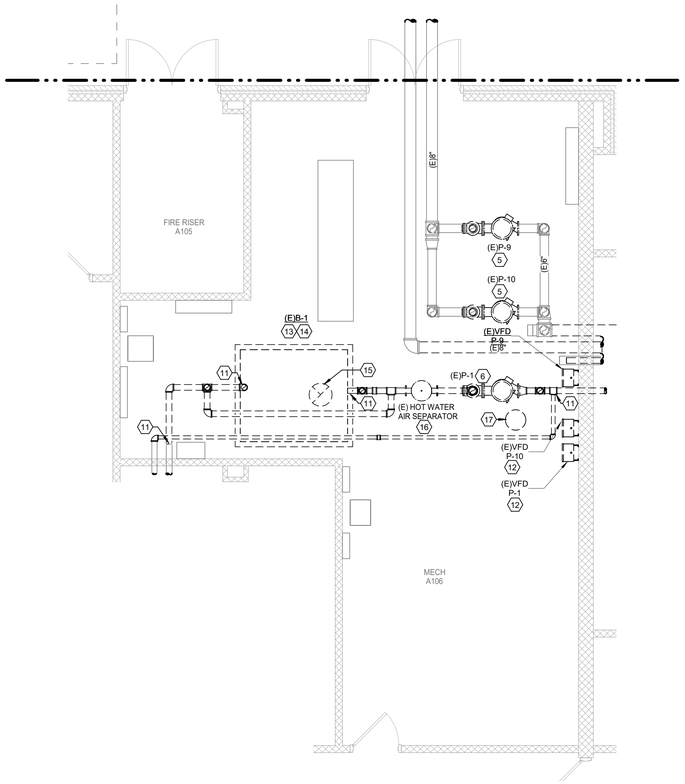
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

MECHANICAL DEMOLITION KEYED NOTES:

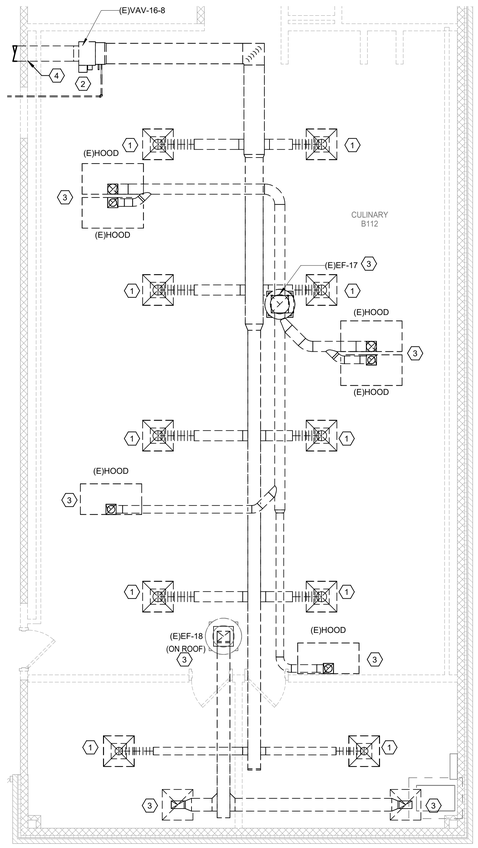
1. REMOVE EXISTING SUPPLY GRILLE.
2. REMOVE EXISTING VAV UNIT, ASSOCIATED HOT WATER SUPPLY AND RETURN PIPING, AND ASSOCIATED DUCTWORK.
3. REMOVE EXISTING EXHAUST FAN, ASSOCIATED DUCT AND EXHAUST GRILLE, AND KITCHEN HOODS.
4. REMOVE EXISTING FIRE DAMPER.
5. EXISTING CHILLED WATER SECONDARY PUMP AND ASSOCIATED APPURTENANCES SHALL BE REMOVED.
6. EXISTING HOT WATER PUMP AND ASSOCIATED APPURTENANCES SHALL BE REMOVED.
7. EXISTING PRIMARY CHILLED WATER PUMP SHALL REMAIN.
8. EXISTING WATER COOLED CHILLER SHALL REMAIN.
9. EXISTING CONDENSER WATER PUMP SHALL REMAIN.
10. EXISTING COOLING TOWER SHALL REMAIN.
11. REMOVE EXISTING PIPE UP TO THIS POINT.
12. EXISTING VARIABLE FREQUENCY DRIVE SHALL BE REMOVED FOR REPLACEMENT.
13. EXISTING BOILER, CONTROLS, AND ASSOCIATED APPURTENANCES SHALL BE REMOVED.
14. EXISTING CONCRETE PAD SHALL BE REMOVED.
15. EXISTING BOILER FLUE VENT SHALL BE REMOVED. ROOF OPENING SHALL BE PATCHED AND SEALED.
16. EXISTING HOT WATER AIR SEPARATOR SHALL BE REMOVED.
17. EXISTING HOT WATER CHEMICAL FEEDER SHALL BE REMOVED.

SYMBOL LEGEND	
⌖	POINT OF CONNECTION TO EXISTING
▭	ITEM TO REMAIN
[ ]	ITEM TO BE REMOVED



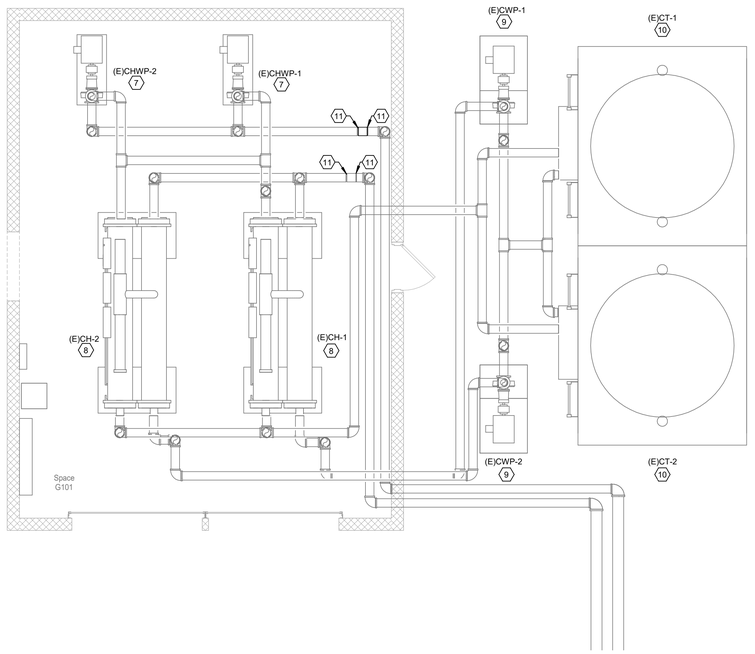
2 MECHANICAL ENLARGED DEMOLITION FLOOR PLAN - CENTRAL PLANT

Scale: 1/4" = 1'-0"



3 MECHANICAL ENLARGED DEMOLITION FLOOR PLAN - CULLINARY LAB

Scale: 1/4" = 1'-0"



1 MECHANICAL ENLARGED DEMOLITION FLOOR PLAN - SERVICE YARD

Scale: 1/4" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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KINGWOOD, TX

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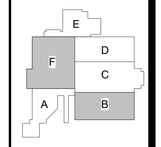

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MECHANICAL ENLARGED DEMOLITION FLOOR PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M0.16
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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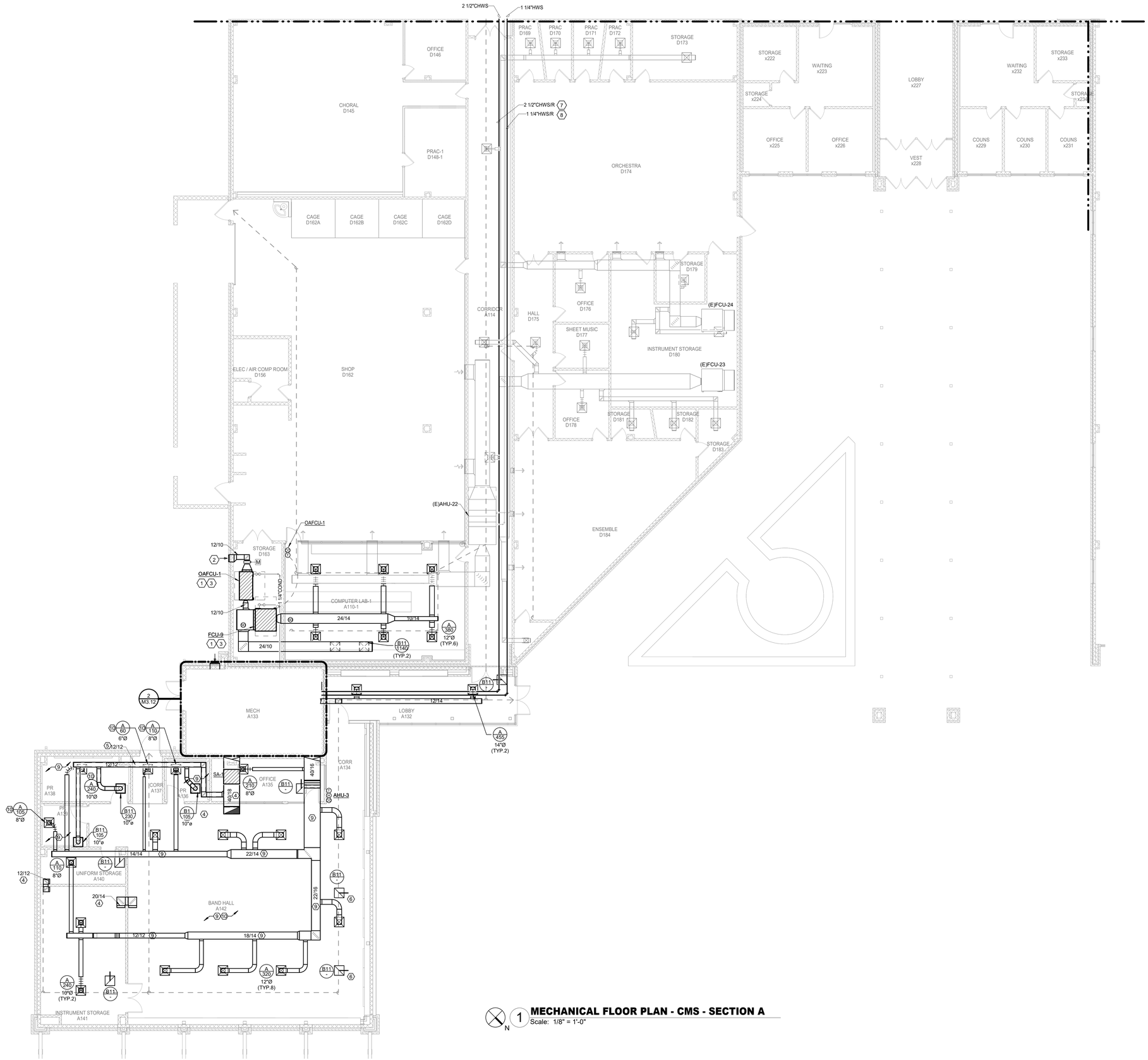

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1 MECHANICAL FLOOR PLAN - CMS - SECTION A

Scale: 1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

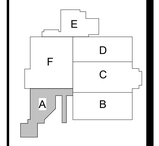
MECHANICAL KEYED NOTES:

1. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. PROVIDE 24"/24" RUSKIN MODEL EME520 MD WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 1.52 SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT.
3. ROUTE FULL SIZE CONDENSATE PIPE TO TO FLOOR SINK IN MECHANICAL ROOM. REFER TO PLUMBING DRAWING FOR EXACT LOCATION.
4. PROVIDE INTERNALLY LINED RETURN AIR BOOT.
5. DUCTWORK SHALL BE INTERNALLY LINED.
6. RETURN AIR BOOT SHALL PENETRATE INTO PLENUM ABOVE THE DOUBLE ACOUSTICAL CEILING.
7. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
8. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
9. PROVIDE 1" INTERNALLY LINED DUCTWORK IN THIS SPACE AS SPECIFIED.
10. FLEX DUCT CAN NOT BE ROUTED ABOVE SOUND ISOLATION CEILING. (TYP.).

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80218
LICENSED
PROFESSIONAL
ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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MECHANICAL FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M2.11
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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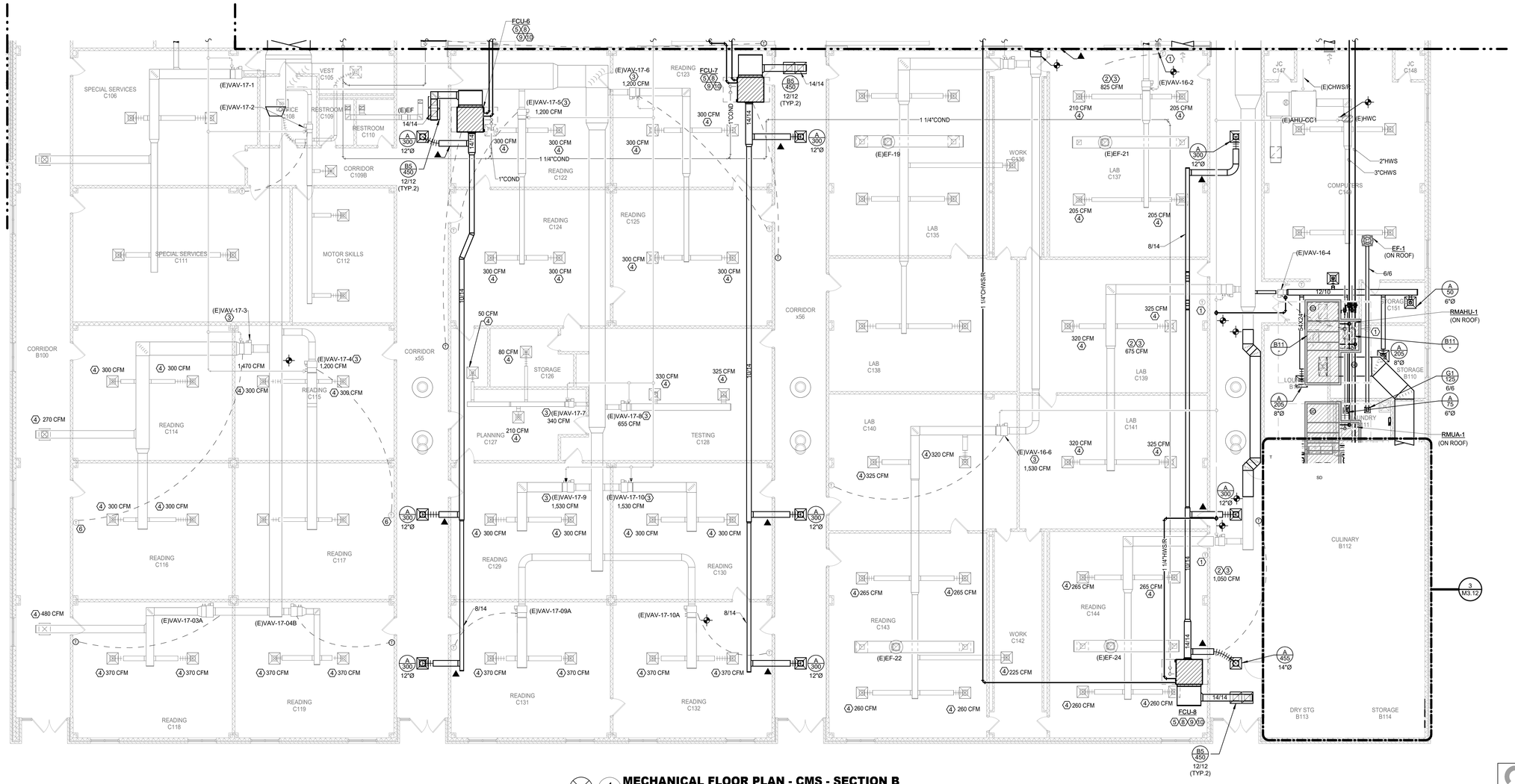
MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. EXTEND EXISTING CONTROL WIRES FROM TEMPERATURE SENSOR TO MAKE FINAL CONNECTION.
2. RELOCATE EXISTING VAV UNIT TO NEW LOCATION. INSULATE AND MATCH SIZE OF EXISTING SUPPLY AND RETURN PIPING AND CONNECT TO POINT INDICATED.
3. REBALANCE EXISTING VAV BOX TO CFM INDICATED.
4. REBALANCE EXISTING SUPPLY DIFFUSER TO CFM INDICATED.
5. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
6. NEW LOCATION OF EXISTING THERMOSTAT. EXTEND CONTROL WIRE TO MAKE FROM TERMINAL UNIT CONTROLLER TO SENSOR NEW LOCATION.
7. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO FLOOR SINK.
8. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
9. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
10. ROUTE FULL SIZE CONDENSATE PIPE TO EXISTING MAIN CONDENSATE PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.



1 MECHANICAL FLOOR PLAN - CMS - SECTION B
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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MECHANICAL FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M2.12
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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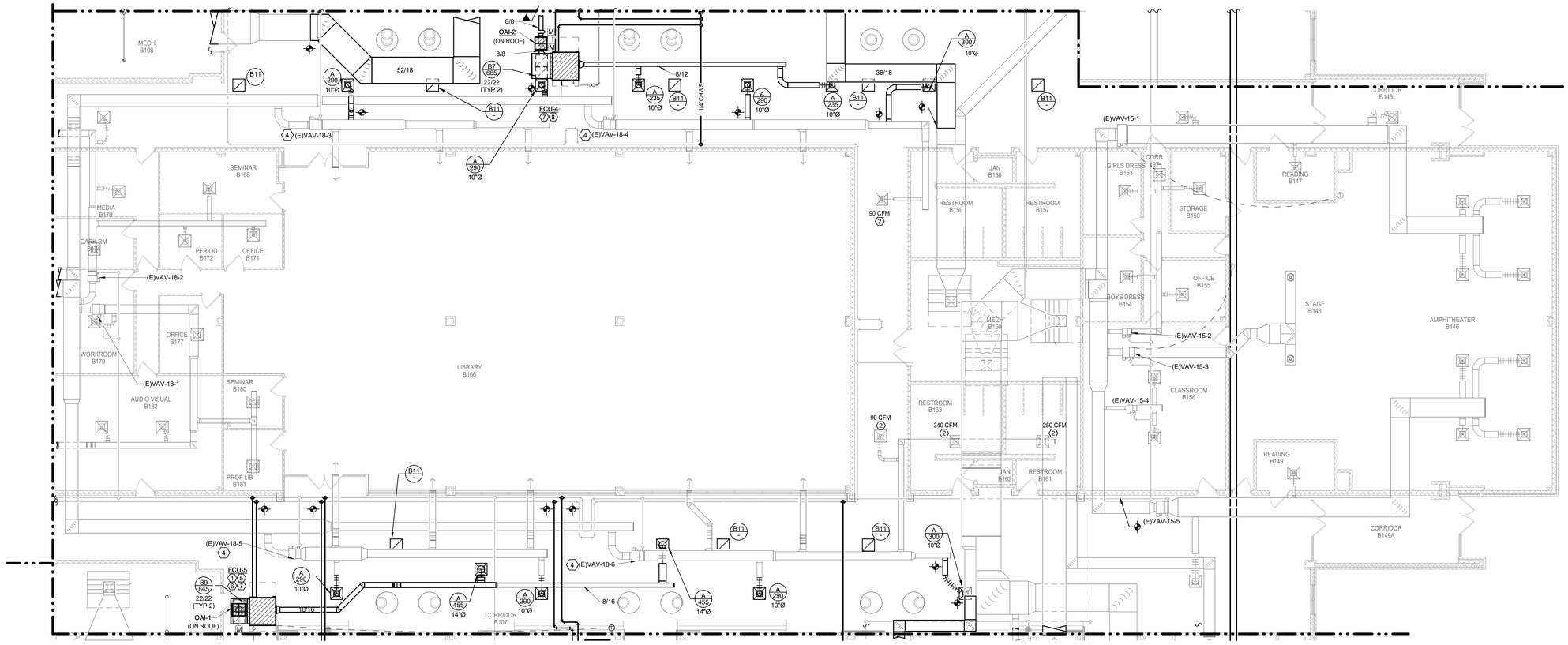
MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.
5. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM OLD DRAWINGS AND PRIMA FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
6. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ACCEPTABLE TEMPERATURE AND HUMIDITY CONTROL WITH EXISTING BUILDING DURING RENOVATION ACTIVITIES.

MECHANICAL KEYED NOTES:

1. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. REBALANCE EXISTING SUPPLY DIFFUSER TO CFM INDICATED.
3. EXISTING VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
4. REBALANCE EXISTING VAV BOX TO CFM INDICATED.
5. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
6. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
7. ROUTE FULL SIZE CONDENSATE PIPE TO EXISTING MAIN CONDENSATE PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.



N 1 **MECHANICAL FLOOR PLAN - CMS - SECTION C**
Scale: 1/8" = 1'-0"

Date
Revision /

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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KINGWOOD, TX

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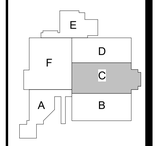

KEY PLAN - 1ST FLOOR
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MECHANICAL FLOOR PLAN - SECTION C

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M2.13
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
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Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
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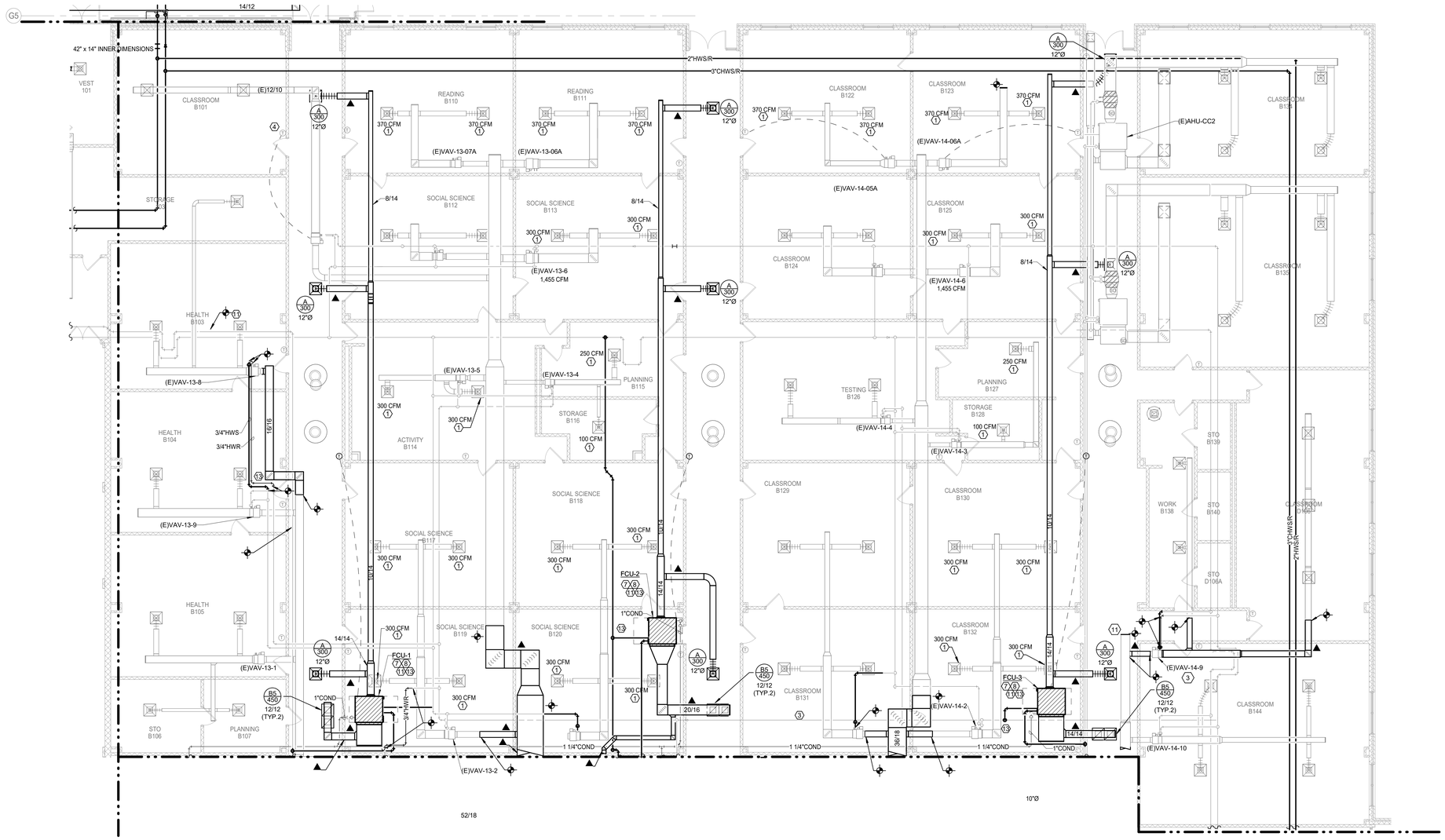
MECHANICAL KEYED NOTES:

1. REBALANCE EXISTING SUPPLY DIFFUSER TO CFM INDICATED.
2. RELOCATE EXISTING FAN COIL UNIT TO NEW LOCATION. INSULATE AND MATCH SIZE OF EXISTING SUPPLY AND RETURN PIPING AND CONNECT TO POINT INDICATED.
3. RELOCATE EXISTING VAV UNIT TO NEW LOCATION. INSULATE AND MATCH SIZE OF EXISTING SUPPLY AND RETURN PIPING AND CONNECT TO POINT INDICATED.
4. EXTEND EXISTING CONTROL WIRES FROM TEMPERATURE SENSOR TO MAKE FINAL CONNECTION.
5. RELOCATE EXISTING HOT WATER COIL TO NEW LOCATION.
6. CONNECT TO EXISITING HOT WATER SUPPLY AND RETURN PIPING. MATCH INSULATION AND SIZE INDICATED.
7. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
8. ROUTE CONDENSATE PIPE AT SIZE INDICATED TO FLOOR SINK.
9. PROVIDE FULL SIZE RETURN PLENUMN.
10. PROVIDE WITH MANUAL BALANCING DAMPER.
11. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
12. ROUTE FULL SIZE CONDENSATE PIPE TO EXISTING MAIN CONDENSATE PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
13. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.



MECHANICAL FLOOR PLAN - CMS - SECTION D

Scale: 1/8" = 1'-0"

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Project: CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

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MECHANICAL FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1521-13-01	Sheet No. M2.14
Drawn By: AA	
Date: 10.29.2025	

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MECHANICAL GENERAL NOTES:

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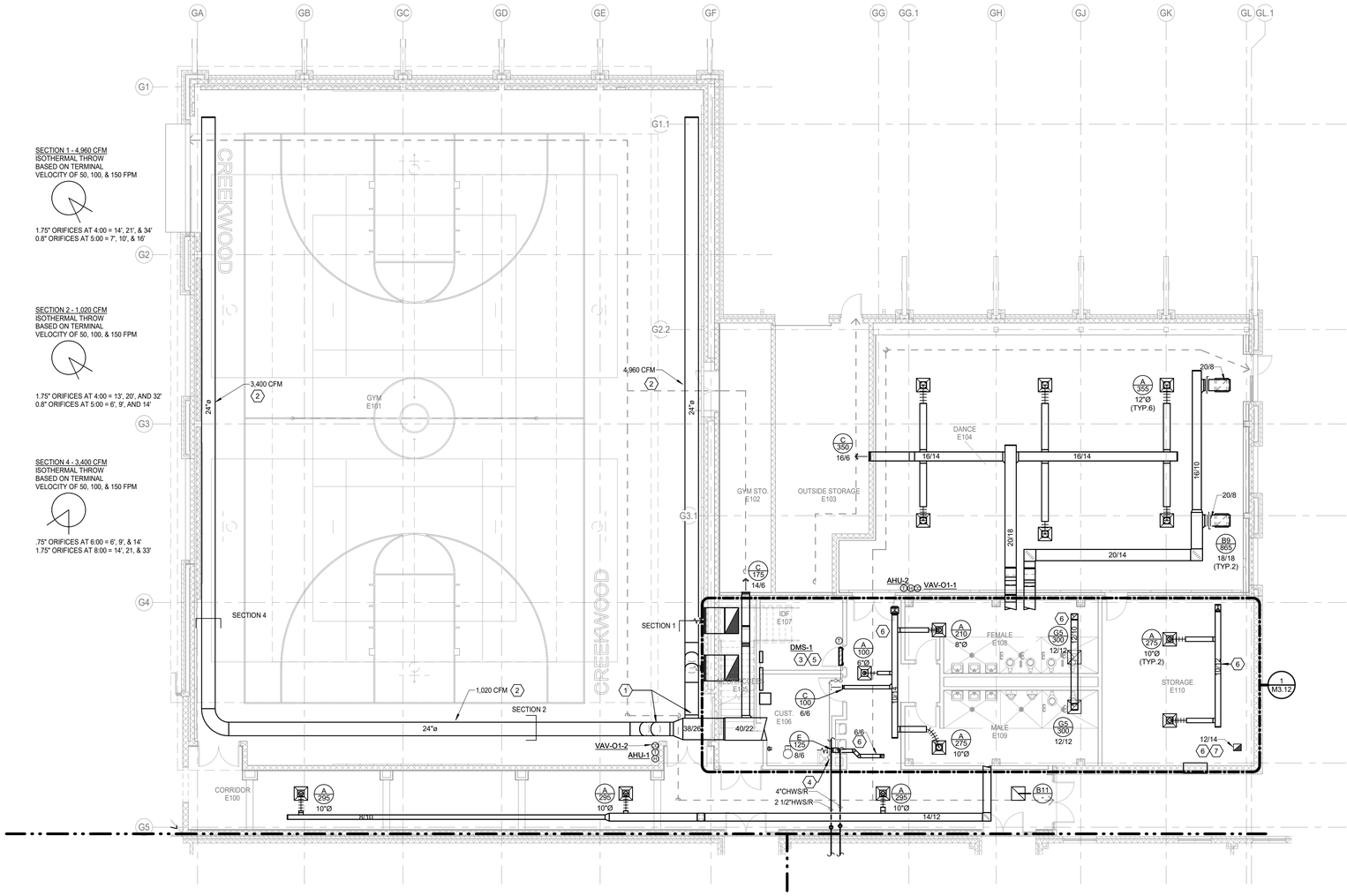
MECHANICAL KEYED NOTES:

1. TRANSITION TO FABRIC DUCT.
2. PROVIDE AN ENGINEERED FABRIC AIR DISTRIBUTION SYSTEM PER SPECIFICATIONS TO INCLUDE DISCHARGE ORIFICES AS REQUIRED. COORDINATE COLOR WITH ARCHITECT.
3. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
4. ROUTE FULL SIZE CONDENSATE PIPE TO PLUMBING DRAIN. REFER TO PLUMBING DRAWING FOR EXACT LOCATION.
5. ROUTE REFRIGERANT LINES TO ASSOCIATED CONDENSING UNIT. SIZE LINES PER MANUFACTURER'S RECOMENDATION.
6. ROUTE DUCTWORK BETWEEN STRUCTURE.
7. ROUTE DUCT UP THROUGH MEZZANINE FLOOR AT SIZE INDICATED AND PROVIDE FIRE DAMPER. RE:1/M3.12



1 MECHANICAL FLOOR PLAN - CMS - SECTION E
Scale: 1/8" = 1'-0"

Revision /	Date	
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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KINGWOOD, TX

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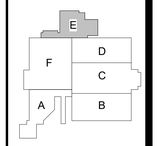

KEY PLAN - 1ST FLOOR
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MECHANICAL FLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M2.15
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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MECHANICAL GENERAL NOTES:

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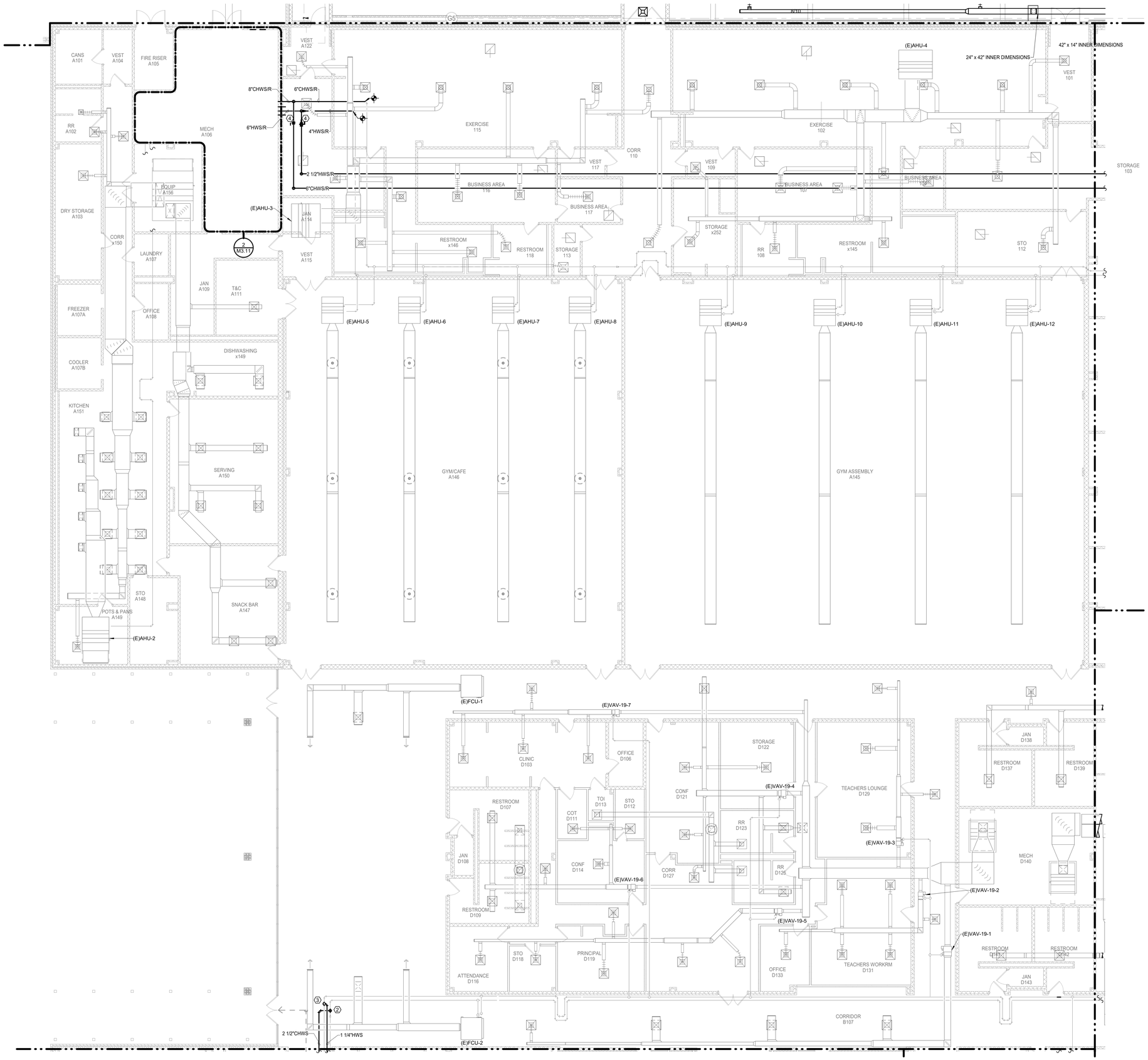
MECHANICAL KEYED NOTES:

1. RELOCATE EXISTING SUPPLY GRILLE.
2. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
3. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
4. PROVIDE ISOLATION VALVE.



1 **MECHANICAL FLOOR PLAN - CMS - SECTION F**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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KINGWOOD, TX

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MECHANICAL FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M2.16
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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MECHANICAL GENERAL NOTES:

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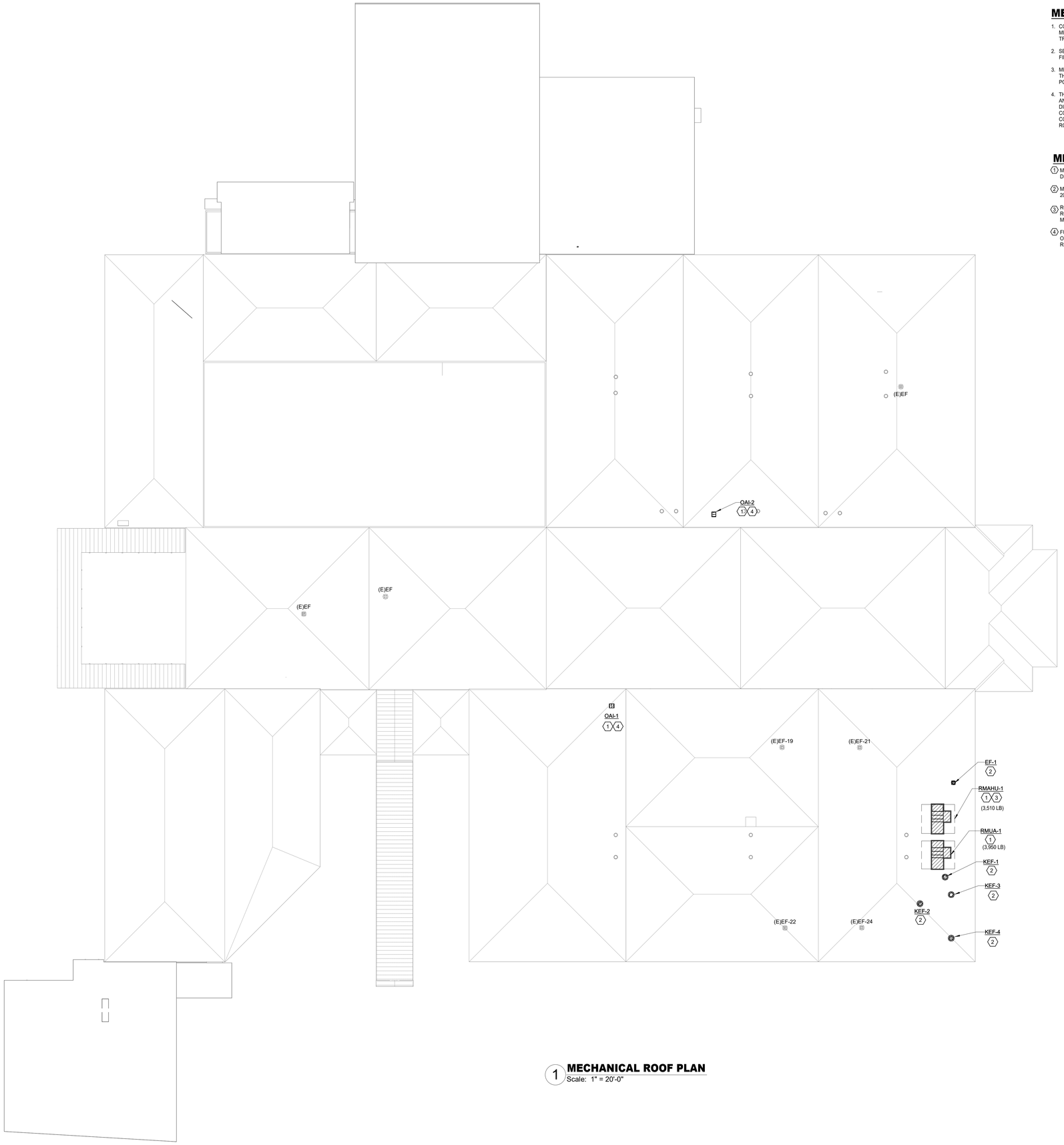
MECHANICAL KEYED NOTES:

1. MOUNT ON WIND RESISTANT ROOF CURB. RE 1/M5.12 FOR DETAIL.
2. MOUNT ON WIND RESISTANT EQUIPMENT SUPPORT. RE 2/M5.11 FOR DETAIL.
3. ROUTE FULL SIZE CONDENSATE TO NEAREST EXISTING ROOF DRAIN. INSTALL TRAP AS RECOMENDED BY MANUFACTURER.
4. FULL SIZE DUCTWORK DOWN THROUGH ROOF FROM OUTSIDE AIR INTAKE ON ROOF. PROVIDE TRANSITION AS REQUIRED.



1 **MECHANICAL ROOF PLAN**
Scale: 1" = 20'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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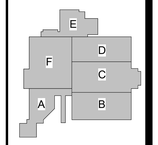

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MECHANICAL ROOF PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M2.17
Drawn By: AA	
Date: 10.29.2025	

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Houston
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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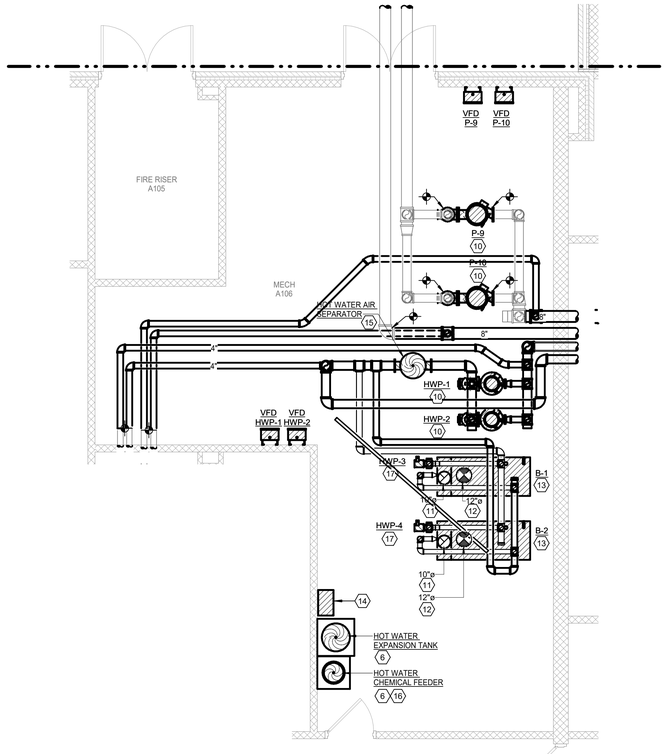
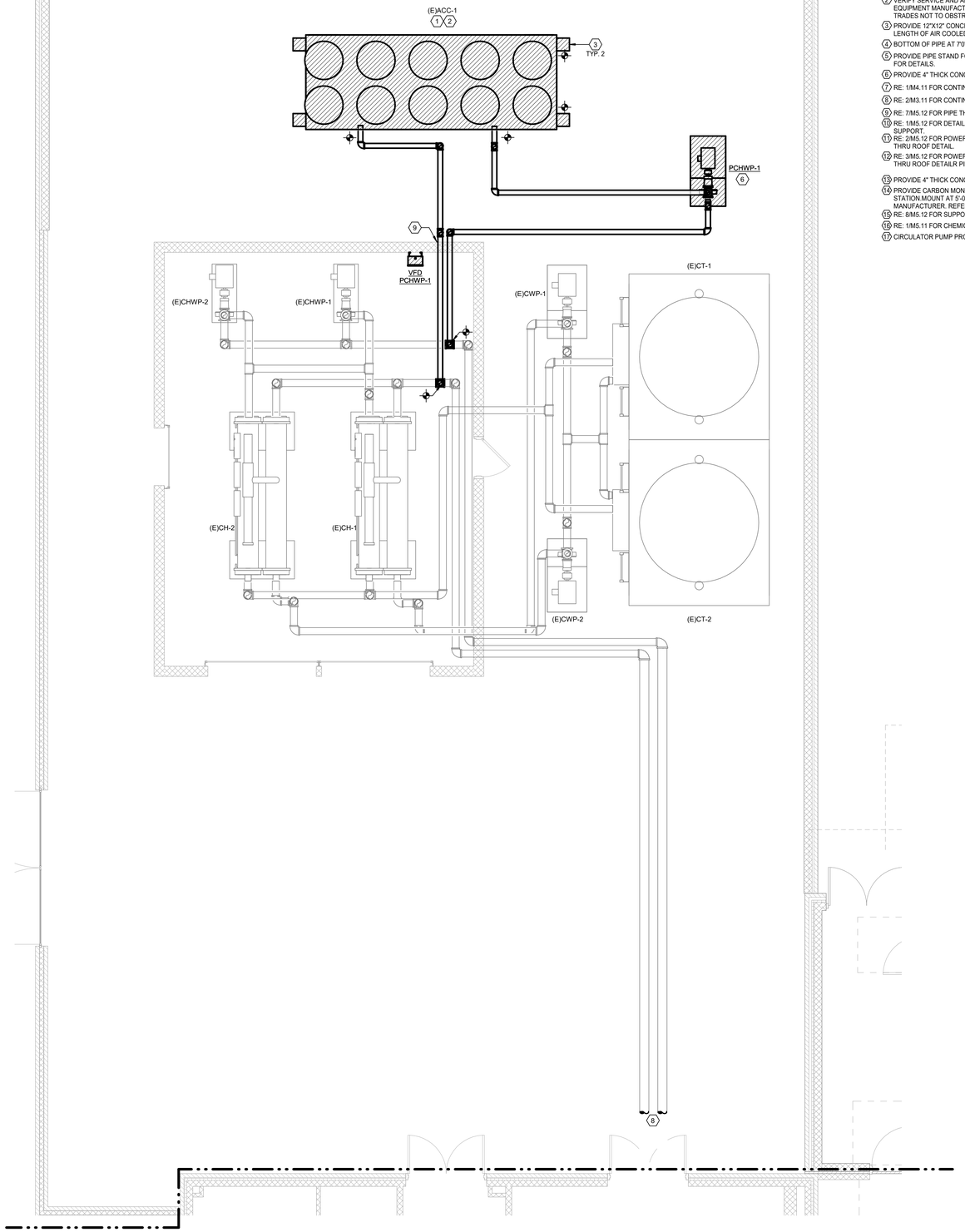
MECHANICAL KEYED NOTES:

1. EXISTING AIR COOLED CHILLER RELLOCATED FROM RIVERWOOD MIDDLE SCHOOL.
2. VERIFY SERVICE AND AIRFLOW CLEARANCE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
3. PROVIDE 12"X12" CONCRETE RUNNERS TO SPAN LENGTH OF AIR COOLED CHILLER.
4. BOTTOM OF PIPE AT 7'0" A.F.F.
5. PROVIDE PIPE STAND FOR SUPPORT OF PIPE RE: 4/M5.12 FOR DETAILS.
6. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
7. RE: 1/M4.11 FOR CONTINUATION.
8. RE: 2/M3.11 FOR CONTINUATION.
9. RE: 7/M5.12 FOR PIPE THRU EXTERIOR WALL DETAIL.
10. RE: 1/M5.12 FOR DETAIL IN VERTICAL INLINE PUMP SUPPORT.
11. RE: 2/M5.12 FOR POWER EXHAUSTED BOILER FLUE THRU ROOF DETAIL.
12. RE: 3/M5.12 FOR POWER EXHAUSTED BOILER INTAKE THRU ROOF DETAILR PIPE THRU EXTERIOR WALL DETAIL.
13. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
14. PROVIDE CARBON MONOXIDE MONITORING STATION MOUNT AT 5'-0" AFF. AS RECOMMENDED BY MANUFACTURER. REFER TO SPECIFICATION
15. RE: 8/M5.12 FOR SUPPORT AT AIR SEPARATOR.
16. RE: 1/M5.11 FOR CHEMICAL FEEDER TANK SUPPORT.
17. CIRCULATOR PUMP PROVIDED BY PUMP MANUFACTURER.



2 MECHANICAL ENLARGED FLOOR PLAN - CENTRAL PLANT
Scale: 1/4" = 1'-0"



1 MECHANICAL ENLARGED FLOOR PLAN - SERVICE YARD
Scale: 1/4" = 1'-0"

Project: CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

BRADLEY KALMANS
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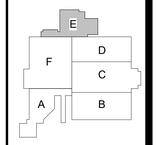
10-29-2025



KEY PLAN - 1ST FLOOR
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MECHANICAL ENLARGED FLOOR PLANS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M3.11
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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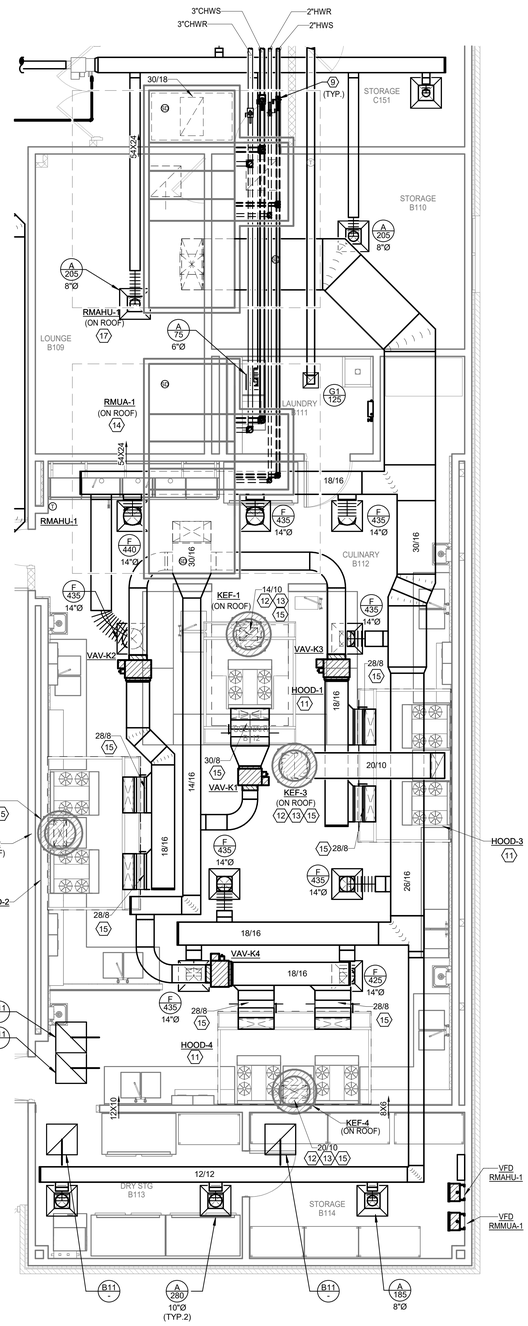
MECHANICAL GENERAL NOTES:

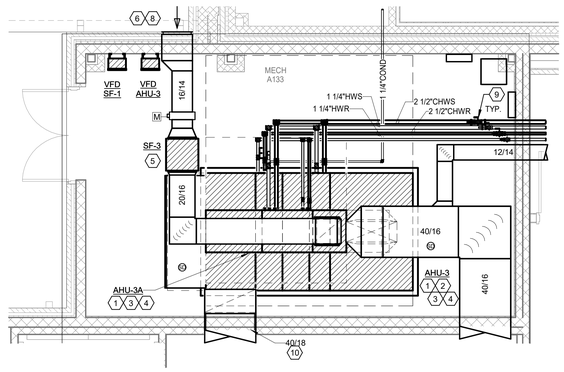
1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

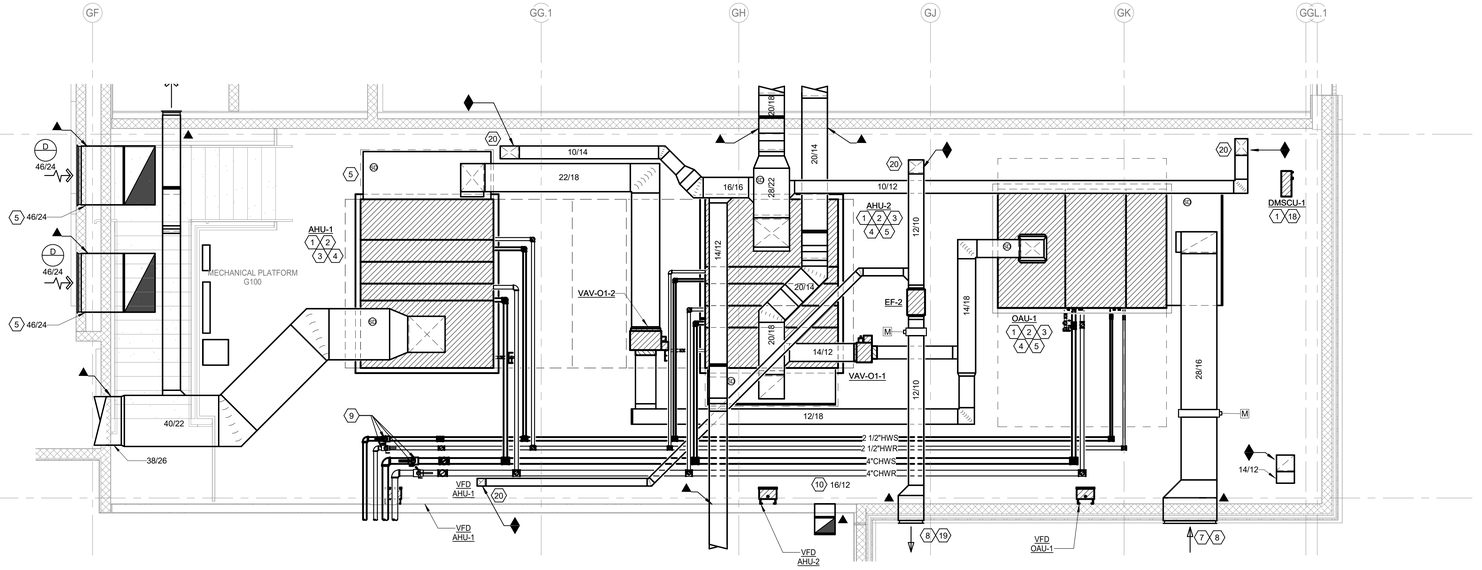
1. VERIFY SERVICE CLEARANCES FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
3. ROUTE FULL SIZE CONDENSATE DRAIN PIPING TO FLOOR SINK (SEE PLUMBING DRAWING FOR EXACT LOCATION). INSTALL CONDENSATE TRAP AS RECOMMENDED PER MANUFACTURER.
4. REFER TO DETAILS FOR AHU COIL PIPING.
5. PROVIDE FULL SIZE PLENUM AT RETURN AIR INLET FOR AHU AS SHOWN AND INSTALL TEMPERATURE SENSOR.
6. PROVIDE 24" WIDE X 24" HIGH RUSKIN MODEL EME520MD WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 1.52 SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT.
7. PROVIDE 42" WIDE X 40" HIGH RUSKIN MODEL EME520MD WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 5.16 SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT.
8. PROVIDE DUCTWORK AT FULL SIZE OF LOUVER.
9. PROVIDE ISOLATION VALVE AT LOCATION SHOWN.
10. PROVIDE INTERNALLY LINED RETURN AIR ELBOW.
11. KITCHEN HOOD PROVIDED BY FOOD SERVICE CONSULTANT. MECHANICAL CONTRACTOR TO INSTALL AND MAKE FINAL DUCT CONNECTIONS.
12. KITCHEN EXHAUST DUCTWORK TO BE WELDED 16 GAUGE BLACK STEEL CONSTRUCTION. WRAP DUCTWORK IN A TOTALLY ENCAPSULATED FOIL FACED FIRE BOARD WITH A MINIMUM OF TWO HOUR FIRE RATING. SLOPE DUCT TOWARDS HOOD AND PROVIDE CLEANOUT AT EACH CHANGE OF DIRECTION. REFER TO SPECIFICATIONS FOR SPECIAL CONSTRUCTION AND INSULATION REQUIREMENTS.
13. FULL SIZE EXHAUST AIR DUCTWORK DOWN FROM EXHAUST FAN ON ROOF. PROVIDE TRANSITION TO SIZE INDICATED.
14. ROUTE FULL SIZE MAKEUP AIR DUCTWORK UP TO ROOF MOUNTED AIR HANDLING UNIT ON ROOF.
15. TRANSITION DUCTWORK TO HOOD COLLAR DIMENSION AS REQUIRED.
16. PROTECT DUCT PENETRATION WITH AN APPROVED THROUGH PENETRATION FIRESTOP SYSTEM IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE.
17. PROVIDE FULL SIZE PLENUM AT RETURN THROUGH ROOF FOR AHU AS SHOWN. PROVIDE SMOKE DETECTOR.
18. ROUTE REFRIGERANT LINES TO ASSOCIATED INDOOR MINI SPLIT UNIT.
19. PROVIDE 20" WIDE X 20" HIGH RUSKIN MODEL EME520MD WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 1.02 SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT.
20. ROUTE EXHAUST AIR DUCTWORK DOWN THROUGH MEZZANINE FLOOR AT SIZE INDICATED . RE:1/M2.15 FOR CONTINUATION.



3 MECHANICAL ENLARGED FLOOR PLAN - CULINARY LAB
Scale: 1/4" = 1'-0"



2 MECHANICAL ENLARGED FLOOR PLAN -MECH A133
Scale: 1/4" = 1'-0"



1 MECHANICAL MEZZANINE PLAN - CMS
Scale: 1/4" = 1'-0"

Revision /	Date	
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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MECHANICAL ENLARGED FLOOR PLANS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M3.12
Drawn By: AA	
Date: 10.29.2025	

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Houston
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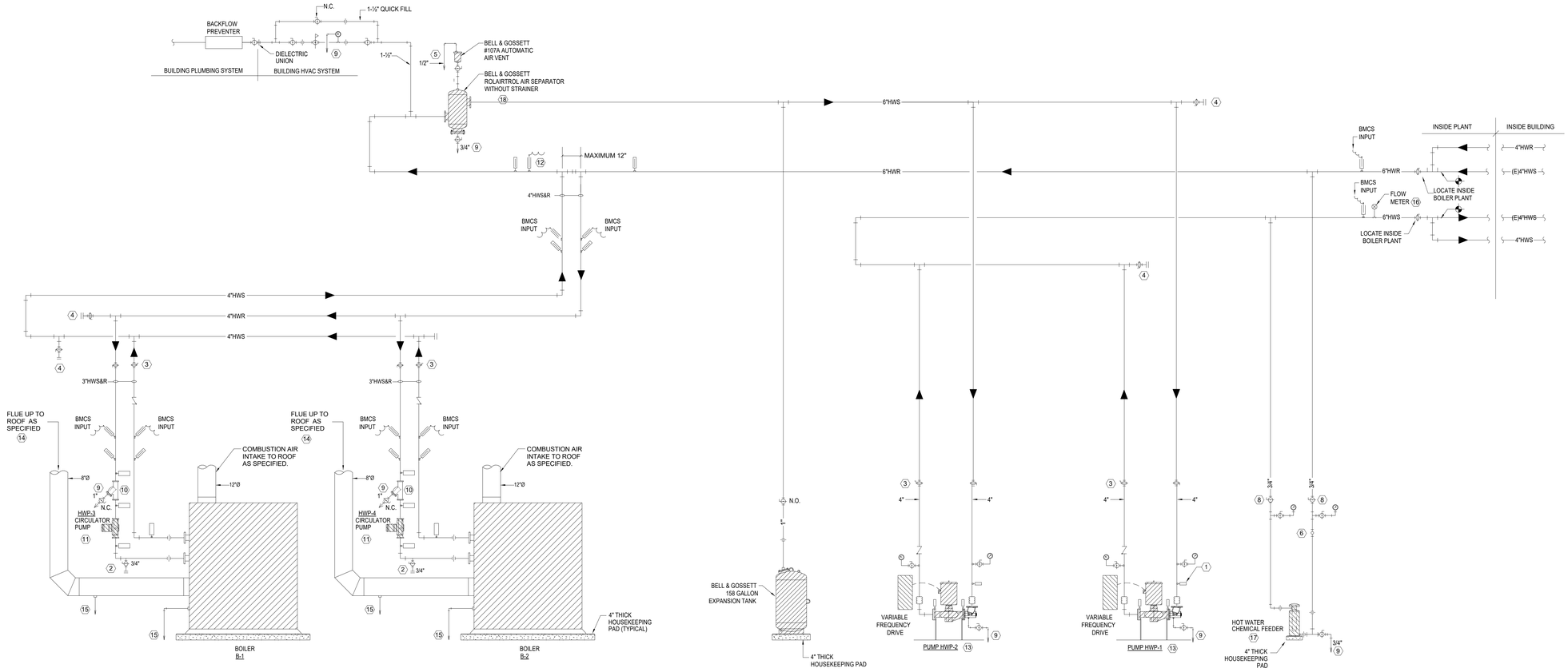
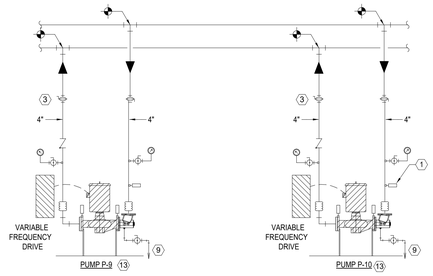
MECHANICAL KEYED NOTES

1. PROVIDE PETE'S PLUG. (TYP.)
2. PROVIDE BALL VALVE WITH HOSE THREAD ADAPTER AT FULL SIZE OR AT SIZE INDICATED.
3. BALANCING VALVE TO BE PROVIDED WITH INFINITE POSITION CRANK OR MEMORY STOP FOR BALANCING SERVICE.
4. PROVIDE ISOLATION VALVE AND BLIND FLANGE.
5. 12" WIDE X 12" TALL X UNIT LENGTH CONCRETE RUNNER REINFORCED WITH 4 CONTINUOUS #4 REBAR WITH #3 STIRRUPS AT 18" O.C. SPACING. PROVIDE 1-1/2" COVER ON TOP AND SIDES AND 3" COVER ON BOTTOM OF BEAM. (TYPICAL OF 2)
6. PROVIDE ERNEST GAUGE #E-57-3 BRONZE BODY SIGHT GLASS WITH S.S. SHAFT, PLASTIC SPINNER AND DOUBLE WINDOW. OPERATING TEMPERATURE AND PRESSURE SHALL BE 125 PSI, 200F. MINIMUM.
7. PROVIDE NEW 4" CONCRETE PAD.
8. PROVIDE ISOLATION VALVE AS CLOSE AS POSSIBLE TO CHEMICAL FEEDER.
9. ROUTE TYPE "L" COPPER DRAIN PIPING AT FULL SIZE OR SIZE INDICATED TO NEAREST FLOOR SINK.
10. PROVIDE STRAINER.
11. CIRCULATOR PUMP PROVIDED BY BOILER MANUFACTURER.
12. HEADER TEMPERATURE SENSOR. PROVIDED BY BOILER MANUFACTURER.
13. REFER TO DETAILS FOR MORE INFORMATION ON VERTICAL INLINE PUMP.
14. REFER TO DETAILS FOR POWER EXHAUSTED BOILER FLUE THRU ROOF DETAIL.
15. ROUTE FULL SIZE CPVC PIPING TO FROM BOILER TO ACID NEUTRALIZATION BASIN AND FROM ACID NEUTRALIZATION BASIN TO FLOOR SINK.
16. PROVIDE FLOW METER AS SPECIFIED. MAINTAIN UNOBSTRUCTED STRAIGHT RUN OF PIPE UPSTREAM AND DOWNSTREAM OF METER AS RECOMMENDED BY MANUFACTURER.
17. REFER TO DETAILS FOR MORE INFORMATION ON CHEMICAL FEEDER SUPPORT.
18. REFER TO DETAILS FOR MORE INFORMATION ON AIR SEPARATOR SUPPORT.



1 HOT WATER PIPING DIAGRAM
SCALE: NO SCALE



2 PARTIAL SECONDARY CHILLED WATER PIPING DIAGRAM
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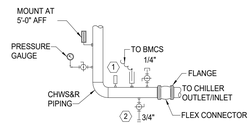

3 TYPICAL PIPING AT INLET AND OUTLET OF CHILLER
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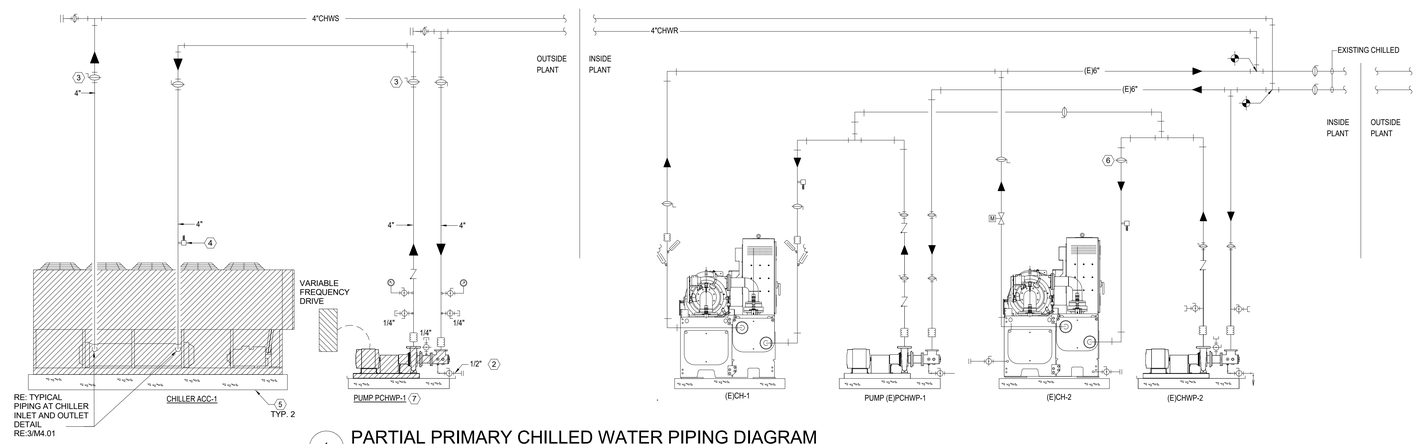

1 PARTIAL PRIMARY CHILLED WATER PIPING DIAGRAM
SCALE: NOT TO SCALE

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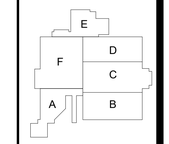

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MECHANICAL PIPING DIAGRAM

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M4.11
Drawn By: Author	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
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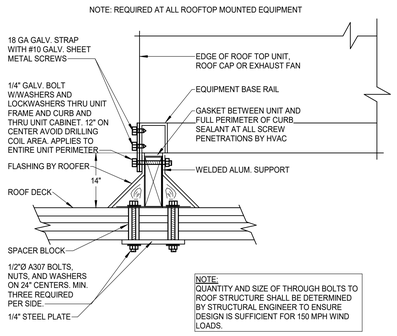

19 **WIND RESISTANT EQUIPMENT SUPPORT**
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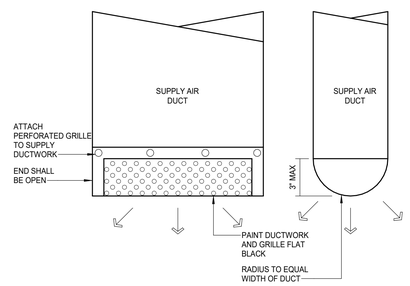
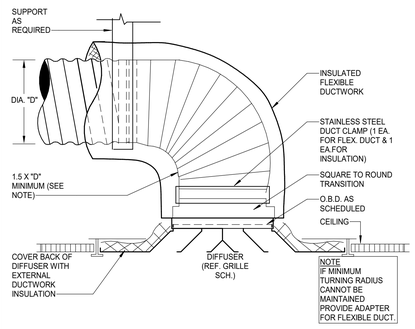
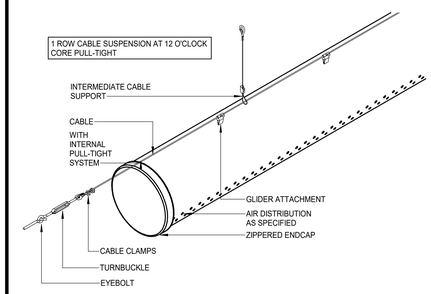


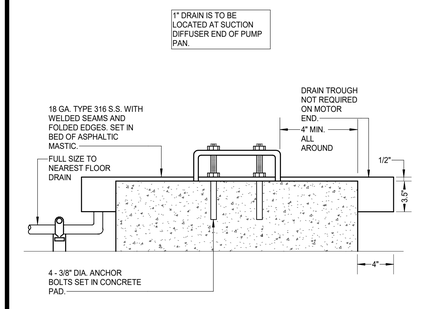
15 **PERFORATED GRILLE (AUDITORIUM)**
SCALE: NONE



FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
SCALE: NONE



7 **FABRIC DUCT SUSPENSION DETAIL**
SCALE: NONE



3 **PUMP PAN**
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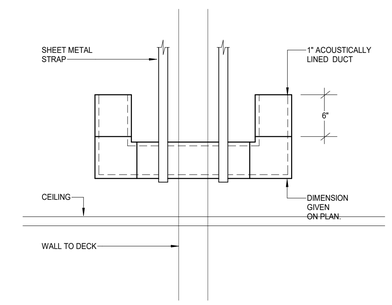

18 **TRANSFER AIR DUCT**
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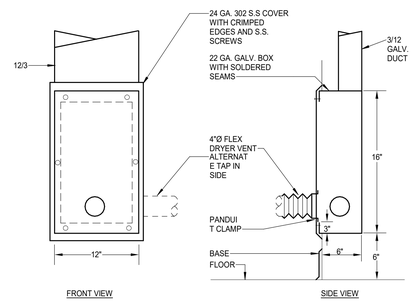

14 **LINT TRAP**
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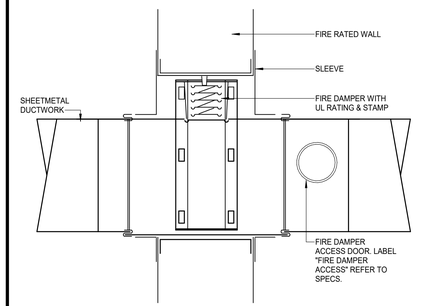
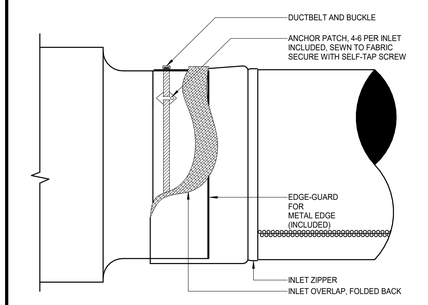


10 **FIRE DAMPER**
SCALE: NONE



6 **FABRIC DUCT INLET DETAIL**
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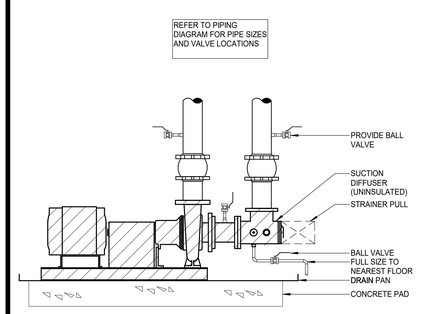

2 **END SUCTION PUMP**
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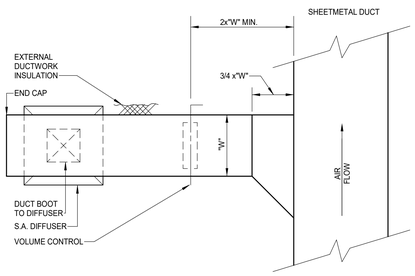

RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER
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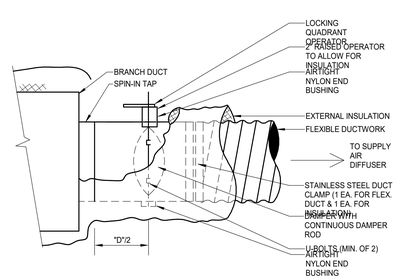

13 **FLEXIBLE DUCT TAP - SPIN-IN**
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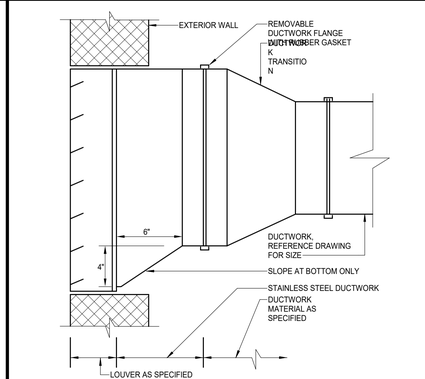

9 **DUCTWORK AT LOUVER**
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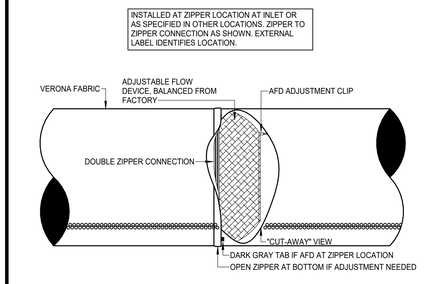

5 **ADJUSTABLE FLOW DEVICE (AFD)**
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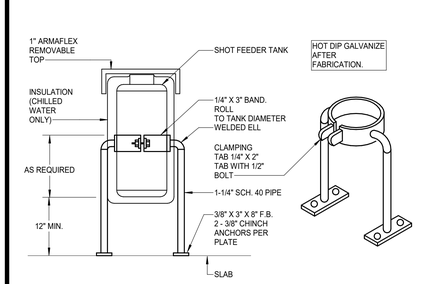

HOT WATER CHEMICAL FEEDER TANK SUPPORT DETAIL
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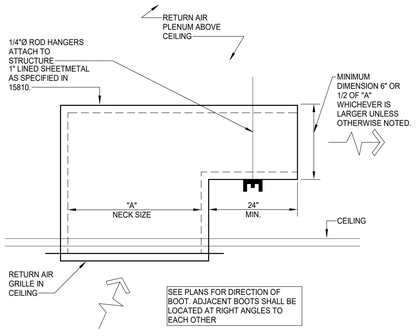

16 **RETURN AIR GRILLE BOOT**
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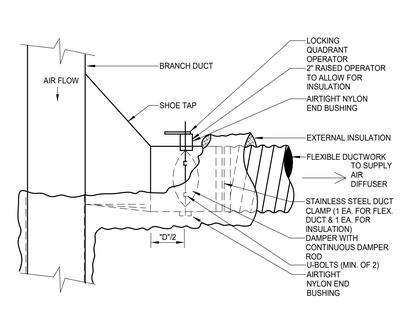

12 **FLEXIBLE DUCT TAP - SHOE**
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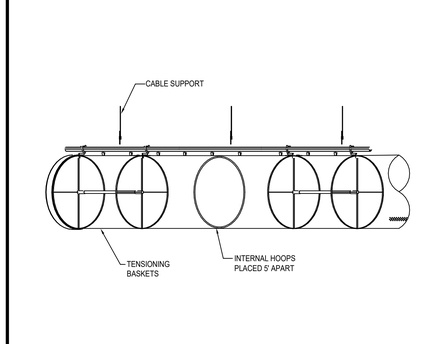

8 **PULL-WITH U-TRACK DETAIL**
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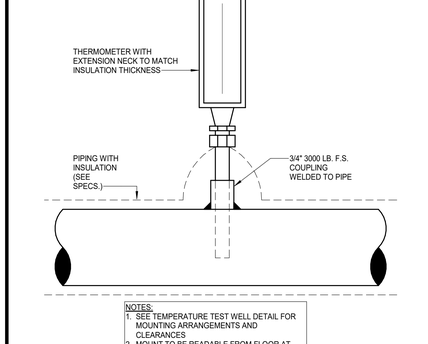

4 **THERMOMETER INSTALLATION**
SCALE: NONE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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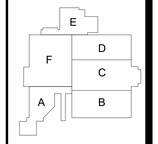

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MECHANICAL DETAILS

PACKAGE	VOLUME
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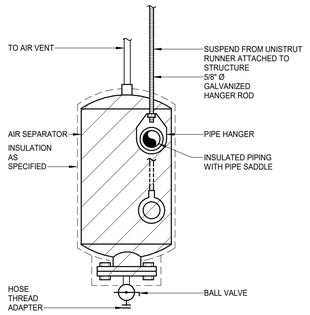
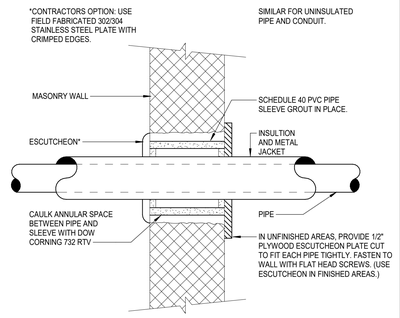
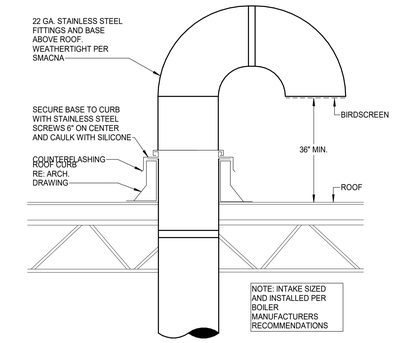


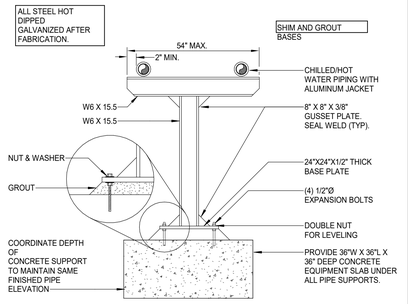
8 SUPPORT AT AIR SEPARATOR
SCALE: NONE



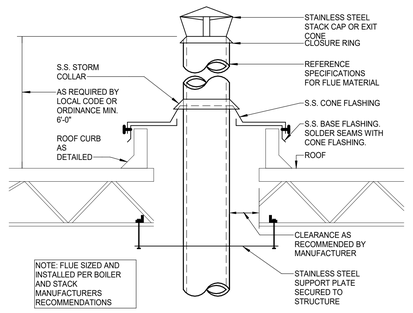
7 PIPE THROUGH EXTERIOR WALL
SCALE: NONE



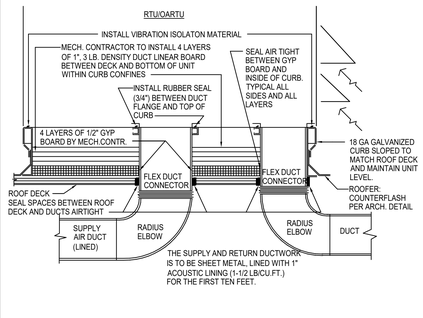
POWER EXHAUSTED BOILER COMBUSTION AIR INTAKE THRU ROOF
3 SCALE: NONE



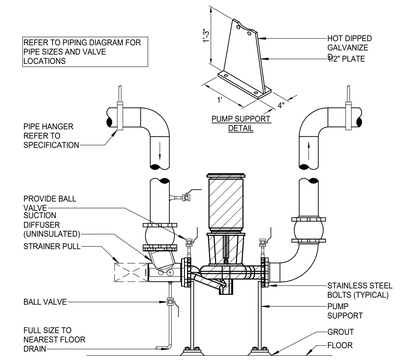
6 PIPE STAND
SCALE: NONE



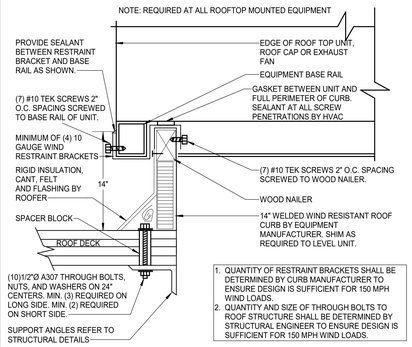
POWER EXHAUSTED BOILER FLUE THRU ROOF
2 SCALE: NONE



MR - ROOF MOUNTED AIR HANDLING UNIT DETAIL
5 SCALE: NONE



1 VERTICAL INLINE PUMP SUPPORT
SCALE: NONE



4 WIND RESISTANT ROOF CURB
SCALE: NONE

Revision / Date

Project:
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KINGWOOD, TX

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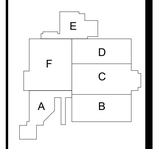
10-29-2025



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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

MECHANICAL DETAILS

PACKAGE | VOLUME

Job No. 1821-13-01
Drawn By: AA
Date: 10.29.2025
Sheet No. M5.12

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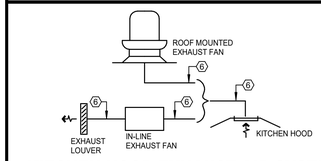
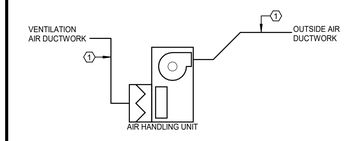
SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
#/#	REVISION TAG
	NEW EQUIPMENT
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
	SMOKE DAMPER (VERTICAL)
	SMOKE DAMPER (HORIZONTAL)
	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
T	THERMOSTAT AND TEMPERATURE SENSOR
H	HUMIDISTAT
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
AIR DEVICES	
	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
	EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
	RETURN AIR SIDEWALL GRILLE
20X12	RETURN AIR OPENING ABOVE CEILING
PIPING	
-CWS&R-	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
-CHWS&R-	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CHWS–	CHILLED WATER SUPPLY
–CHWR–	CHILLED WATER RETURN
-HWS&R-	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–HWS–	HOT WATER FOR HYDRONIC HEATING SUPPLY
–HWR–	HOT WATER FOR HYDRONIC HEATING RETURN
—D—	CONDENSATE DRAIN LINE
—AD—	AUXILLARY CONDENSATE DRAIN LINE
	ELBOW UP
	ELBOW DOWN
	90° ELBOW
	45° ELBOW
	TEE
	TEE DOWN
	TEE UP
	TOP BRANCH CONNECTION
	BOTTOM BRANCH CONNECTION
	FLANGE
	CAP
	CONTINUATION
	FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	UNION
	THERMOMETER WELL
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
FM	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	TURBINE FLOW METER
	ANCHOR
	PIPE GUIDE
SUBSCRIPTS AND ABREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BBS	BELOW BOTTOM OF STRUCTURE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FPM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR
RENOVATIONS	
	POINT OF CONNECTION FROM NEW TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

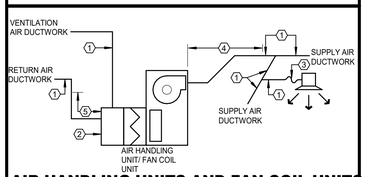
DUCT LINER AND INSULATION



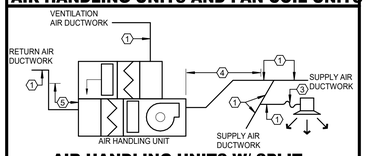
KITCHEN HOOD EXHAUST AIR SYSTEMS



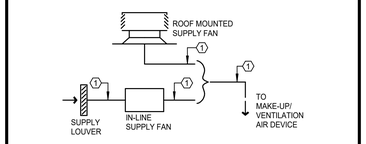
OUTSIDE AIR PRETREATMENT UNIT



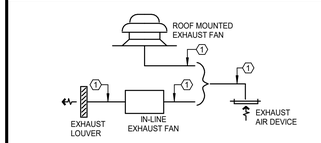
AIR HANDLING UNITS AND FAN COIL UNITS



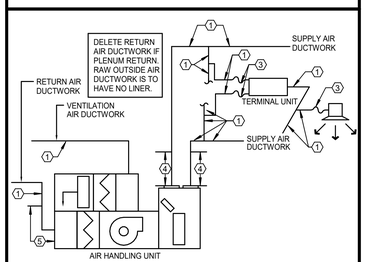
AIR HANDLING UNITS W/ SPLIT DEHUMIDIFICATION UNITS



MAKE-UP/VENTILATION AIR SYSTEMS



EXHAUST AIR SYSTEMS

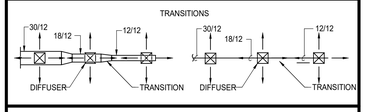


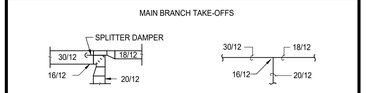
DUAL DUCT VARIABLE AIR VOLUME AIR HANDLING UNITS W/ SPLIT DEHUMIDIFICATION UNITS

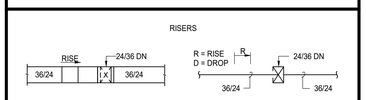
KEYED NOTES:

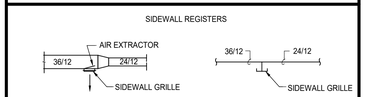
1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.
6. EXHAUST DUCTWORK AS SPECIFIED WITH FIREBOARD INSULATION AS SPECIFIED.
7. SHEETMETAL DUCTWORK ONLY. NO INSULATION REQUIRED.

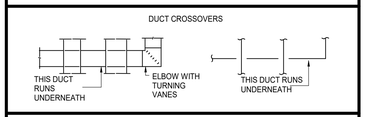
DUCTWORK SYMBOLS LEGEND

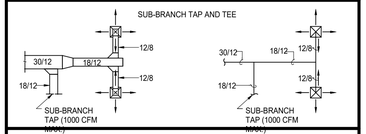


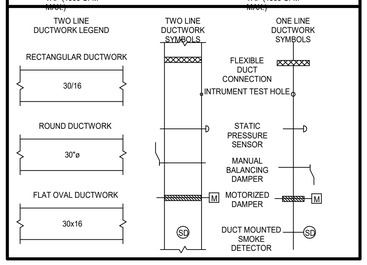




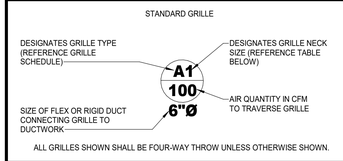




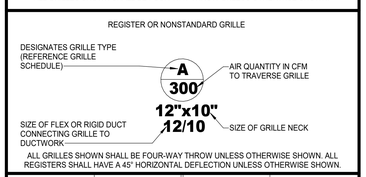




GRILLE SIZING SCHEDULE



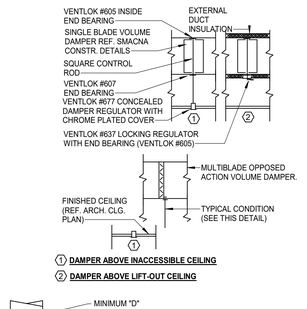
ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN.

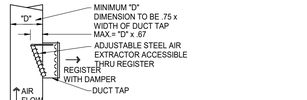


ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN. ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

GRILLE SIZE DESIGNATION	GRILLE NECK SIZE	GRILLE SIZE DESIGNATION	GRILLE NECK SIZE
1	6" x 6"	7	15" x 15"
2	8" x 8"	8	16" x 16"
3	9" x 9"	9	18" x 18"
4	10" x 10"	10	20" x 20"
5	12" x 12"	11	22" x 22"
6	14" x 14"	12	24" x 24"

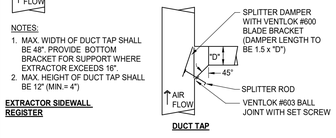
DUCTWORK CONSTRUCTION DETAILS





1 DAMPER ABOVE INACCESSIBLE CEILING

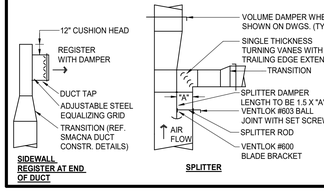
2 DAMPER ABOVE LIFT-OUT CEILING



NOTES:
1. MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16".
2. MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")

EXTRACTOR SIDEWALL REGISTER

DUCT TAP



SIDEWALL REGISTER AT END OF DUCT

SPLITTER

Revision / Date

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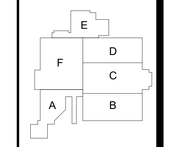

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MECHANICAL DETAILS

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. M5.13
Drawn By: AA	
Date: 10.29.2025	

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CULINARY LAB AIR BALANCE CALCULATION TABLE

MARK	EXHAUST AIR CFM	OUTSIDE AIR CFM	MAKE-UP AIR CFM	
KEF-1	1,500	-	-	
KEF-2	2,100	-	-	
KEF-3	2,100	-	-	
KEF-4	2,100	-	-	
RMAHU-1	-	780	-	
RMAU-1	-	-	7,020	
TOTALS	-7,800	780	7,020	
			NET AIRFLOW	0

FAN

MARK	LOCATION NAME	LOCATION NUMBER	SUPPLY CFM	EXT. STATIC PRESSURE (IN. W.C.)	MAX. RPM	HORSE POWER	CURRENT CHARAC. V	P	F	LOCALLY SWITCHED BY	INTERLOCKED WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
KEF-1	CULINARY	B112	1500	1.00	1,290	0.5	120	1	60	-	HOOD-1	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
KEF-2	CULINARY	B112	2100	1.00	1,369	1	120	1	60	-	HOOD-2	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
KEF-3	CULINARY	B112	2100	1.00	1,369	1	120	1	60	-	HOOD-3	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
KEF-4	CULINARY	B112	2100	1.00	1,369	1	120	1	60	-	HOOD-4	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
EF-1	COMPUTERS	C149	125	0.50	1,550	0.13	120	1	60	-	AHU-16	ROOF MOUNTED	BELT	COOK	ACED	1,2,4
EF-2	MECHANICAL PLATFORM	G100	725	0.75	2,160	0.3	120	1	60	-	AHU-2	INLINE	BELT	COOK	SQN	1,2,4,6
SF-3	MECH	A133	1400	0.50	1,103	0.34	480	3	60	-	AHU-3	INLINE	BELT	COOK	SQND	1,2,4,5,6

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH DISCONNECT SWITCH.
2. PROVIDE WITH ROOF CURB AND BIRD SCREEN.
3. PROVIDE WITH EC CONTROL MOTOR
4. PROVIDE WITH MOTORIZED DAMPER.
5. PROVIDE WITH VARIABLE FREQUENCY DRIVE.
6. SUSPEND FAN FROM STRUCTURE WITH FOUR THREADED RODS AND UNISTRUT.
7. PROVIDE WITH CLEANOUT PORT, VENTED CURB EXTENSION TO MEET NFPA 96, DRAIN CONNECTION, GREASE TRAP AND HINGE KIT.

AIR HANDLING UNIT

MARK	FAN SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C)	HORSE POWER	CURRENT CHARAC. V	PH	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB	LEAVING WET BULB	COOLING WATER ENTERING TEMP (°F)	GPM	PRESSURE DROP (FT.)	HEATING ENTERING AIR TEMPERATURE (°F)	MIN. HEATING CAPACITY	HEATING WATER ENTERING TEMP. (°F)	GPM	PRESSURE DROP (FT.)	PIPE SIZE TO COIL (IN.) CHILLED WATER	HOT WATER	REMARKS
AHU-1	9,555	2,460	1.50	10.0	480	3	60	75.0	62.5	53.8	53.0	45	34.9	15.0	66.1	298,231	180.0	15.1	10.0	2"	1 1/2"	1,3,4,5,7,10,12,13,16,17
AHU-2	4,600	910	1.50	5.0	480	3	60	75.0	62.5	53.8	53.0	45	16.8	15.0	66.0	144,072	180.0	7.3	10.0	1 1/2"	1 1/4"	1,3,4,5,7,10,12,13,16,17
AHU-3	4,785	1,400	1.50	5.0	480	3	60	75.0	62.5	53.8	53.0	45	17.5	15.0	65.6	151,933	180.0	7.7	10.0	1 1/2"	1 1/4"	1,3,4,5,7,10,12,13,16,17
AHU-3A	1,400	1,400						98.0	80.0	53.5	53.0	45	18.0	15.0	27.0	65,016	180.0	3.3	10.0	1 1/2"	3/4"	2,3,4,7,10,11,13,14,15,16,17
OAU-1	3,370	3,370	1.50	5.0	480	3	60	98.0	80.0	53.5	53.0	45	43.4	15.0	27.0	156,503	180.0	7.9	10.0	2 1/2"	1 1/4"	2,3,4,5,7,10,11,13,16,17

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
2. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
3. PROVIDE HORIZONTAL UNIT.
4. PROVIDE CONSTANT VOLUME UNIT.
5. PROVIDE FRONT DISCHARGE.
6. PROVIDE TOP DISCHARGE.
7. PROVIDE TWO-WAY COOLING CONTROL VALVES.
8. PROVIDE THREE-WAY COOLING CONTROL VALVES.
9. PROVIDE TWO-WAY HEATING CONTROL VALVES.
10. PROVIDE THREE-WAY HEATING CONTROL VALVES.
11. PROVIDE HOT WATER COIL IN PRE-HEAT POSITION.
12. PROVIDE HOT WATER COIL IN REHEAT POSITION.
13. PROVIDE UNIT WITH ANGLED FILTER SECTION.
14. UNIT INDICATED SHALL BE STACKED OAU FURNISHED WITH ASSOCIATED AHU (LISTED ABOVE). UNIT INCLUDES ANGLED FILTER MIXING BOX, PREHEAT COIL, ACCESS SPACE, COOLING COIL AND DISCHARGE PLENUM. UNIT DOES NOT HAVE FAN SECTION. SPLIT DEHUMIDIFICATION UNIT SHALL DELIVER OUTSIDE AIR TO MIXING BOX SECTION OF MAIN AIR HANDLER UNIT UPSTREAM OF COIL.
15. SPLIT DEHUMIDIFICATION UNIT TO BE MOUNTED ON TOP OF ASSSOCIATED AHU.
16. PROVIDE UNIT WITH VARIABLE FREQUENCY DRIVE.
17. PROVIDE WITH AIR PURIFICATION SYSTEM. REFER TO SPECIFICATIONS.

CHILLED & HOT WATER FAN/COIL UNIT

MARK	FAN SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C.)	HORSE POWER	CURRENT V	P	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	MIN. TOTAL CAPACITY (BTUH)	MIN. SENSIBLE CAPACITY (BTHU)	WATER ENTERING TEMP(°F)	GPM	PRESSURE DROP (FT.)	HEATING ENTERING AIR TEMPERATURE (°F)	MIN. CAPACITY (BTUH)	WATER ENTERING TEMP.(°F)	GPM	PRESSURE DROP (FT.)	PIPE SIZE TO COIL (IN.) CHILLED WATER	HOT WATER	REMARKS
FCU-1	900	0	0.80	1.0	277	1	60	75.0	62.5	22,297	19,634	45	3	15.0	72.0	22,356	180	1.1	10.0	3/4"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-2	900	120	0.80	1.0	277	1	60	78.0	65.2	30,354	22,521	45	4	15.0	65.5	28,674	180	1.4	10.0	1"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-3	900	0	0.80	1.0	277	1	60	75.0	62.5	22,297	19,634	45	3	15.0	72.0	22,356	180	1.1	10.0	3/4"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-4	470	100	0.80	0.5	277	1	60	76.9	64.3	14,422	11,218	45	2	15.0	67.8	13,802	180	0.7	10.0	3/4"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-5	910	135	0.80	1.0	277	1	60	78.3	65.5	31,627	23,096	45	4	15.0	64.8	29,681	180	1.5	10.0	1"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-6	900	0	0.80	1.0	277	1	60	75.0	62.5	22,297	19,634	45	3	15.0	72.0	22,356	180	1.1	10.0	3/4"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-7	900	0	0.80	1.0	277	1	60	75.0	62.5	22,297	19,634	45	3	15.0	72.0	22,356	180	1.1	10.0	3/4"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-8	1,055	0	0.80	1.0	277	1	60	75.0	62.5	26,136	23,016	45	3	15.0	72.0	26,206	180	1.3	10.0	1"	3/4"	1,2,3,4,5,6,7,8,9,10,11
FCU-9	2,280	550	0.80	2.5	277	1	60	82.6	69.0	113,857	70,917	45	15	15.0	55.9	96,280	180	4.8	10.0	1 1/2"	1"	1,2,3,4,5,6,7,8,9,10,11
OAFCU-1	550	550	0.80	0.8	277	1	60	98.0	80.0	52,970	12,780	45	9	15.0	27.0	25,660	180	2.6	10.0	1 1/4"	3/4"	1,2,3,4,5,6,7,8,9,10,11

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
2. PROVIDE HORIZONTAL UNIT.
3. PROVIDE CONSTANT VOLUME UNIT.
4. PROVIDE HOT WATER COIL IN REHEAT POSITION.
5. PROVIDE WITH LOW VELOCITY ANGLED FILTER SECTION.
6. PROVIDE WITH FLOAT SWITCH AUTOMATIC SHUT OFF.
7. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. PROVIDE SPRING ISOLATION
8. REFER TO MANUFACTURER FOR MORE DETAILS.
9. PROVIDE 2-WAY COOLING CONTROL VALVES.
10. PROVIDE 2-WAY HYDRONIC HOT WATER CONTROL VALVES.
11. PROVIDE WITH AIR PURIFICATION SYSTEM. REFER TO SPECIFICATIONS.

ROOF MOUNTED AIR HANDLING UNIT

MARK	FAN SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT. STATIC PRESSURE (IN. W.C)	HORSE POWER	CURRENT CHARAC. V	PH	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB	LEAVING WET BULB	COOLING WATER ENTERING TEMP (°F)	GPM	PRESSURE DROP (PSI)	HEATING ENTERING AIR TEMPERATURE (°F)	MIN. HEATING CAPACITY	HEATING WATER ENTERING TEMP. (°F)	GPM	PRESSURE DROP (PSI)	PIPE SIZE TO COIL (IN.) CHILLED WATER	HOT WATER	REMARKS
RMAHU-1	4,220	1,060	1.50	5.0	480	3	60	80.6	67.4	54.6	53.8	45	23.7	15.0	67.7	124,422	180.0	6.3	10.0	2"	1"	1,3,4,6,7,8,10,11 ,12,13,14,16
RMUA-1	7,020	7,020	1.50	7.5	480	3	60	98.0	80.0	75.0	62.5	45	64.9	15.0	67.7	206,978	180.0	10.4	10.0	3"	1 1/4"	2,3,5,6,7,8,9,11, ,12,15,13,16

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
2. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
3. PROVIDE HORIZONTAL UNIT.
4. PROVIDE CONSTANT VOLUME UNIT.
5. RMUA-1 SHALL BE INTERLOCKED WITH HOOD FIRE SUPPRESSION SUCH THAT RMAU-1 IS DEACTIVATED UPON DETECTION OF FIRE BELOW HOOD.
6. PROVIDE UNIT WITH AIR PURIFICATION SYSTEM. REFER TO SPECIFICATIONS.
7. PROVIDE TWO-WAY COOLING CONTROL VALVES.
8. PROVIDE THREE-WAY HEATING CONTROL VALVES.
9. PROVIDE HOT WATER COIL IN PRE-HEAT POSITION.
10. PROVIDE HOT WATER COIL IN RE-HEAT POSITION.
11. PROVIDE UNIT WITH BOTTOM DISCHARGE.
12. PROVIDE UNIT WITH PENTHOUSE SECTION TO ENCLOSE PIPING AND CONTROL VALVES.
13. PROVIDE UNIT WITH ANGLED FILTER SECTION.
14. PROVIDE TWO-WAY HEATING CONTROL VALVES.
15. PROVIDE WITH SINGLE ZONE VARIABLE VOLUME UNIT.
16. PROVIDE UNIT WITH VARIABLE FREQUENCY DRIVE.

GRILLE

MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
A	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	OMNI	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE.
B	RETURN AIR	GRILLE	-	STEEL	-	TITUS	PAR	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE. (1,2).
C	SUPPLY AIR	GRILLE	-	STEEL	-	TITUS	300RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED
D	RETURN AIR	GRILLE	-	STEEL	-	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)
E	EXHAUST AIR	GRILLE	-	STEEL	-	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)
F	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	PAS	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" FACE. (1)
G	EXHAUST AIR	GRILLE	-	STEEL	-	TITUS	PAR	EXPOSED T-BAR CEILING FRAME STYLE WITH A 24"X24" OR 12"X12" FACE. PERFORATED FACE.

GENERAL NOTES:
1. DAMPERS NOTED AS U.L. SHALLBE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET.
2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.

REMARKS:
1. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.
2. PROVIDE WITH RETURN AIR BOOT WHEN USED FOR PLENUM RETURN.

VARIABLE VOLUME TERMINAL BOX

MARK	MAXIMUM CFM	MINIMUM CFM	INLET DIAMETER SIZE (IN.)	HOT WATER COIL GPM	HOT WATER COIL CONNECTING PIPE SIZE	REMARKS
VAV-K1	1,350	360	12			-
VAV-K2	1,890	480	14			-
VAV-K3	1,890	480	14			-
VAV-K4	1,890	480	14			-
VAV-O1-1	910	360	10			1
VAV-O1-2	2,460	630	16			1

GENERAL NOTES:
1. MAXIMUM STATIC PRESSURE DROP OF AIR THROUGH THE TERMINAL BOX SHALL BE 0.2" ESP.
2. MAXIMUM VELOCITY THROUGH DUCT INLET SHALL BE 2,000 FPM.
3. MAXIMUM STATIC PRESSURE DROP THROUGH HEATER COIL SHALL BE 0.25" ESP.
4. MAXIMUM STATIC PRESSURE DROP OF WATER THROUGH HEATER COIL SHALL BE 10' W.G.
5. BTUH REQUIRED FOR HOT WATER HEATING IS HEATING GPM MULTIPLIED BY 10,000.
6. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. REFER TO MANUFACTURER FOR MORE DETAILS.
7. UNITS TO BE MOUNTED BETWEEN BEAMS AND 18" MAXIMUM ABOVE CEILING. AVOID MOUNTING OVER LIGHTS WHEREVER POSSIBLE.
8. REFER TO PIPING AT HOT WATER COIL DETAILS. PROVIDE WITH 2-WAY CONTROL VALVE UNLESS OTHERWISE SCHEDULED.

REMARKS:
1. PROVIDE WITH DCV.

PUMP

MARK	SERVICE	TYPE	GPM	HEAD (FT.)	MOTOR HORSE POWER	MAX. RPM	CURRENT CHARAC. V	P	F	MANUFACTURER	MODEL NUMBER	REMARKS
HWP-1	HEATING HOT WATER	VERTICAL INLINE	97	120.00	15.0	1800	480	3	60	ARMSTRONG	4300	1,2,3,5
HWP-2	HEATING HOT WATER	VERTICAL INLINE	97	120.00	15.0	1800	480	3	60	ARMSTRONG	4300	1,2,3,5
HWP-3	HEATING HOT WATER	INLINE CIRCULATOR	97	380.61	1.5	1800	460	3	60	ARMSTRONG	4300	3,4
HWP-4	HEATING HOT WATER	INLINE CIRCULATOR	97	380.61	1.5	1800	460	3	60	ARMSTRONG	4300	3,4
PCHWP-1	PRIMARY CHILLED WATER	HORIZONTAL END SUCTION	345	50.00	7.5	1800	480	3	60	PATTERSON	4030	1,2,3,5,6
P-9	SECONDARY CHILLED WATER	VERTICAL INLINE	440	140.00	30.0	1800	480	3	60	ARMSTRONG	4300	1,2,3,5
P-10	SECONDARY CHILLED WATER	VERTICAL INLINE	440	140.00	30.0	1800	480	3	60	ARMSTRONG	4300	1,2,3,5

GENERAL NOTES:
1. PUMP IS TO HAVE A NON-OVERLOADING MOTOR.
2. MINIMUM RECOMMENDED CLEARANCE AROUND A PUMP IS 24 INCHES. MAINTAIN MINIMUM CLEARANCES AS REQUIRED FOR SERVICE, MAINTENANCE, AND INSPECTION.

REMARKS:
1. PROVIDE WITH VARIABLE FREQUENCY DRIVE.
2. PROVIDE SUCTION DIFFUSER AT PUMP INLET.
3. PROVIDE PUMP WITH GUAGE TAPPING AND SUCTION DIFFUSER.
4. PUMP SHALL BE PROVIDED BY BOILER MANUFACTURER.
5. PROVIDE PUMP WITH BACK PULL OUT.
6. PUMP SHALL BE FURNISHED BY OWNER INSTALLED BY CONTRACTOR.

BOILER - FORCED AIR

MARK	TYPE	MINIMUM GAS INPUT (BTUH)	MINIMUM HEAT OUTPUT (BTUH)	PRESSURE DROP (FT.H20)	GPM	FLUE SIZE	ELECTRICAL BLOWER HORSEPOWER (WATT)	CURRENT CHARAC. V	P	F	MANUFACTURER	MODEL NUMBER	REMARKS
B-1	CONDENSING	2000000.0 Btu/h	1928000.0 Btu/h	10.0	97.4	10	890	208	1	60	PATTERSON-KELLEY	SC 2000	1,2,3
B-2	CONDENSING	2000000.0 Btu/h	1928000.0 Btu/h	10.0	97.4	10	890	208	1	60	PATTERSON-KELLEY	SC 2000	1,2,3

GENERAL NOTES:
1. PROVIDE 8 OUNCE GAS PRESSURE TO BOILER.
2. MAINTAIN MINIMUM CLEARANCE AROUND A BOILER OF 24 INCHES PER TEXAS BOILER LAW. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH CIRCULATING PUMP, SIZED BY BOILER MANUFACTURER TO ENSURE CONSTANT FLOW THROUGH BOILER. PUMP TO BE SHIPPED LOOSE. POWER BY ELECTRICAL CONTRACTOR BUT CONTROLLED BY BOILER. CONTRACTOR TO WIRE FROM BOILER PUMP CONTROL CIRCUIT TO PUMP STARTER RELAY.
2. PROVIDE SEALED COMBUSTION BOILER.

DUCTLESS MINI-SPLIT - OUTDOOR UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER/ SEER	CURRENT CHARAC. V	PH	F	RELATED UNIT MARK	REMARKS
DMSCU-1	17,100	95	-/15.2	208	1	60	DMS-1	1,2,3

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20 DEG F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED TO MANUFACTURER'S REQUIREMENTS.

RELIEF VENT & O.A. INTAKE

MARK	CFM	MAX. S.P. (IN.WC.)	MIN. THROAT AREA	COOK MODEL NUMBER	SERVES	REMARKS
OAI-1	320	0.10	1.00	GR	FCU-5	1,2
OAI-2	465	0.10	1.00	GR	FCU-2, FCU-4	1,2

REMARKS:
1. PROVIDE WITH ROOF CURB.
2. PROVIDE WITH BIRD SCREEN.

DUCT ATTENUATORS

MARK	CFM	DUCT DIMENSIONS WIDTH	DUCT DIMENSIONS HEIGHT	SERVE	DUCT VELOCITY (FPM)	LENGTH	MANUFACTURUER	MODEL	REMARKS
SA-1	4,785	40	18	AHU-3	957	36"	IAC ACOUSTICS1	LFL	1

GENERAL NOTES:
1. MAXIMUM STATIC PRESSURE DROP OF AIR THROUGH THE SILENCERS SHALL NOT EXCEED 0.35" W.G. ESP
2. PROVIDE WITH GALVANIZED, LOCKFORMED CASING CONSTRUCTED TO SMACNA STANDARDS. AIRTIGHT CONSTRUCTION SHALL BE ACHIEVED BY USE OF A DUCT-SEALING COMPOUND SUPPLIED AND INSTALLED BY THE CONTRACTOR AT THE JOBSITE.
3. PROVIDE WITH 2" SLIP CONNECTION AT EACH END.
4. PROVIDE WITH GALVANIZED NOSE AT INLET.
5. PROVIDE WITH GALVANIZED GAP PLATES BETWEEN SPLITTERS TO ENSURE CLOSE DIMENSIONAL TOLERANCES AT AIR PASSAGES.
6. PROVIDE WITH PERFORATED GALVANIZED SPLITTERS COMPLETE WITH PERFORATED DIFFUSER TAIL SECTIONS.
7. SPLITTERS FILLED WITH ACOUSTIC GRADE GLASS FIBER UNDER MINIMUM 15% COMPRESSION.
8. SILENCERS SHALL BE LOCATED AS CLOSE TO NOISE GENERATING EQUIPMENT AS POSSIBLE WITH 5 EQUIVALENT DUCT DIAMETERS OF STRAIGHT, UNOBSTRUCTED DUCTWORK ON INLET AND DISCHARGE SIDE OF SILENCER.
9. SILENCERS SHALL NOT FAIL STRUCTURALLY WHEN SUBJECTED TO A DIFFERENTIAL AIR PRESSURE OF 8" W.G.
10. SILENCER INLET AND OUTLET CONNECTION DIMENSIONS MUST BE EQUAL TO THE DUCT SIZES SHOWN ON THE DRAWINGS

REMARKS:
1. STRAIGHT DUCT SILENCER TYPE TO BE USED.

DUCTLESS MINI-SPLIT - INDOOR UNIT

MARK	FAN SUPPLY AIR CFM	OUTSIDE AIR CFM	EXT.STATIC PRESSURE (IN. W.C.)	HORSE POWER	CURRENT CHARAC. V	PH	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	MIN. TOTAL CAPACITY (BTUH)	MIN. SENS. CAPACITY (BTUH)	MINIMUM EER/ SEER	NUMBER OF STAGES	REMARKS
DMS-1	370	0	0.10	40.0	208	1	60	75.0	62.5	17,100	13,680	-/15.2	1	1,2,3,4,5

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
5. PROVIDE INTEGRAL MINI SPLIT CONDENSATE PUMP KIT ASP-MA-UNI MINI AQUA BY ASPEN PUMPS OR EQUAL. CONDENSATE PUMP SHALL BE INSTALLED INSIDE HIG WALL UNIT. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS.

PACKAGED AIR COOLED CHILLER - OWNER FURNISHEDCONTRACTOR INSTALLED

MARK	ACTUAL CAPACITY (TONS)	LEAVING WATER TEMP.(°F)	GPM	PRESSURE DROP (FT.)	AMBIENT AIR TEMP. (°F)	CURRENT CHARAC. V	P	F	MANUFACTURER	MODEL	MOCP	MCA	REMARKS
(E)ACC-1	143	45	345	20.0	95 °F	480	3	60	CARRIER	30RB	400	320	1,2,3,4,5

GENERAL NOTES:
1. MAXIMUM FOULING FACTOR FOR THE EVAPORATOR IS 0.0001
2. MAINTAIN MINIMUM CLEARANCES REQUIRED BY CHILLER MANUFACTURER FOR PROPER AIRFLOW TO FANS AND UNIT. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON EQUIPMENT FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT HEAD PRESSURE CONTROL.
2. PROVIDE WITH INTEGRAL MAIN ELECTRICAL DISCONNECT SWITCH.
3. PROVIDE WITH INSULATION ON ALL SUCTION LINES.
4. PROVIDE HIGH EFFICIENCY CHILLER. (MIN. OF -- EER)
5. PROVIDE WITH POLYMER CONDENSER FANS AND COMPRESSOR BLANKETS.

Revision /	Date	
1	02-16-24	City Comments 1
3	05-06-24	City Comments 3
6	04-29-25	Add

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LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, REMOVE BACK TO NEAREST ACTIVE JUNCTION BOX ABOVE CEILING SPACE. CONTRACTOR SHALL MAINTAIN CONTINUITY OF CIRCUITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.
5. UNLESS NOTED OTHERWISE, HANG ALL EXISTING LIGHT FIXTURES BY CEILING SUPPORT WIRE ABOVE CEILING TO FACILITATE DEMOLITION OF CEILING GRID. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.
6. UNLESS NOTED OTHERWISE, SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE DEMOLITION OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: EXIT SIGNS, FIRE ALARM DEVICES, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REMOVED.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL EXTERIOR ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX FOR PREPARATION OF NEW ADDITION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR RE-USE. ALL EXISTING LIGHT SWITCH BOXES SHALL REMAIN AND SHALL BE RE-USED AS PRACTICAL FOR NEW WIRING DEVICES. EXISTING BOXES NOT RE-USED SHALL BE PROVIDED WITH STAINLESS STEEL COVERPLATES.
3. DISCONNECT AND REMOVE EXISTING ELECTRIC CORD REEL AND ASSOCIATED RECEPTACLE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUIT INTACT FOR RE-USE.
4. DISCONNECT AND REMOVE EXISTING WIRING DEVICE AND ASSOCIATED WIRING BACK TO NEAREST ACTIVE JUNCTION BOX. PATCH WALL TO MATCH EXISTING OR PROVIDE SS COVER PLATE.
5. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING EXHAUST FAN AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE. UNLESS NOTED OTHERWISE, RE-LABEL EXISTING CIRCUIT BREAKER AS SPARE.
6. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.



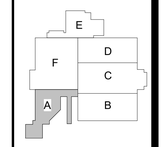
N

1 **ELECTRICAL DEMOLITION FLOOR PLAN - CMS - SECTION A**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E0.11
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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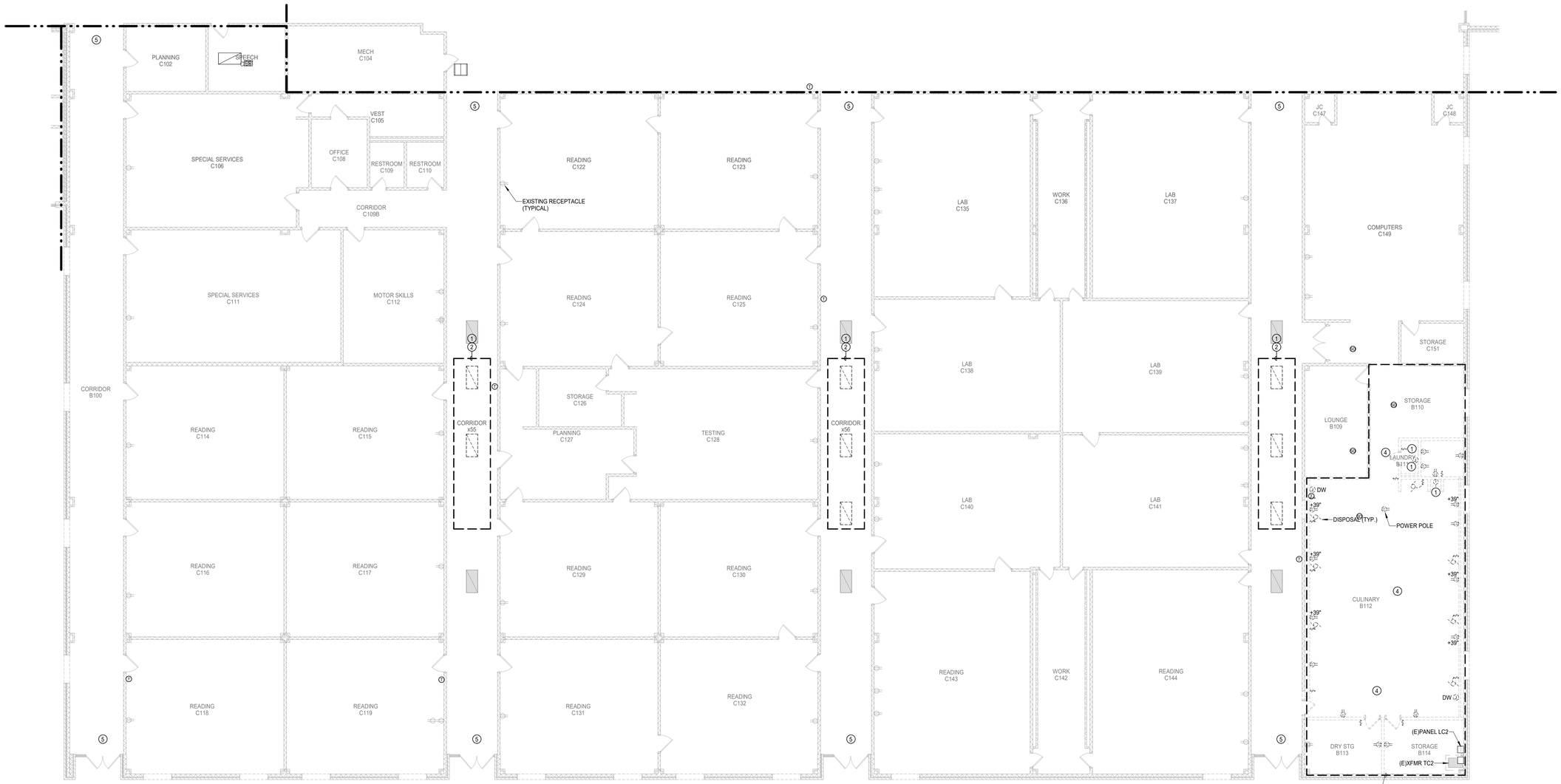
LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, REMOVE BACK TO NEAREST ACTIVE JUNCTION BOX ABOVE CEILING SPACE. CONTRACTOR SHALL MAINTAIN CONTINUITY OF CIRCUITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.
5. UNLESS NOTED OTHERWISE, HANG ALL EXISTING LIGHT FIXTURES BY CEILING SUPPORT WIRE ABOVE CEILING TO FACILITATE DEMOLITION OF CEILING GRID. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.
6. UNLESS NOTED OTHERWISE, SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE DEMOLITION OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: EXIT SIGNS, FIRE ALARM DEVICES, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REMOVED.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX OUTSIDE PERIMETER AREA TO MAKE READY FOR NEW SKYLIGHT. LEAVE CIRCUITRY INTACT FOR RECONNECTION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR RE-USE.
3. DISCONNECT AND REMOVE EXISTING WIRING DEVICE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. PATCH WALL TO MATCH EXISTING.
4. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING EXHAUST FAN AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.
5. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.



DISCONNECT AND REMOVE ALL ELECTRICAL ASSOCIATED WITH DEMOLITION OF EXISTING KITCHEN AREA BACK TO SOURCE. ELECTRICAL INCLUDES BUT NOT LIMITED TO: LIGHT FIXTURES, RECEPTACLES, LIGHT SWITCHES, LIGHTING CONTROLS, LIGHTING RELAYS, ETC. ALL EXISTING LIGHT SWITCH AND RECEPTACLE BOXES SHALL REMAIN AND SHALL BE RE-USED AS PRACTICAL FOR NEW WIRING DEVICES. EXISTING BOXES NOT RE-USED SHALL BE PROVIDED WITH STAINLESS STEEL COVERPLATES.

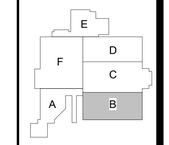
N

1 **ELECTRICAL DEMOLITION FLOOR PLAN - CMS - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL
ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION B

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No.	Sheet No.
1821-13-01	E0.12
Drawn By: DES	
Date: 10.29.2025	

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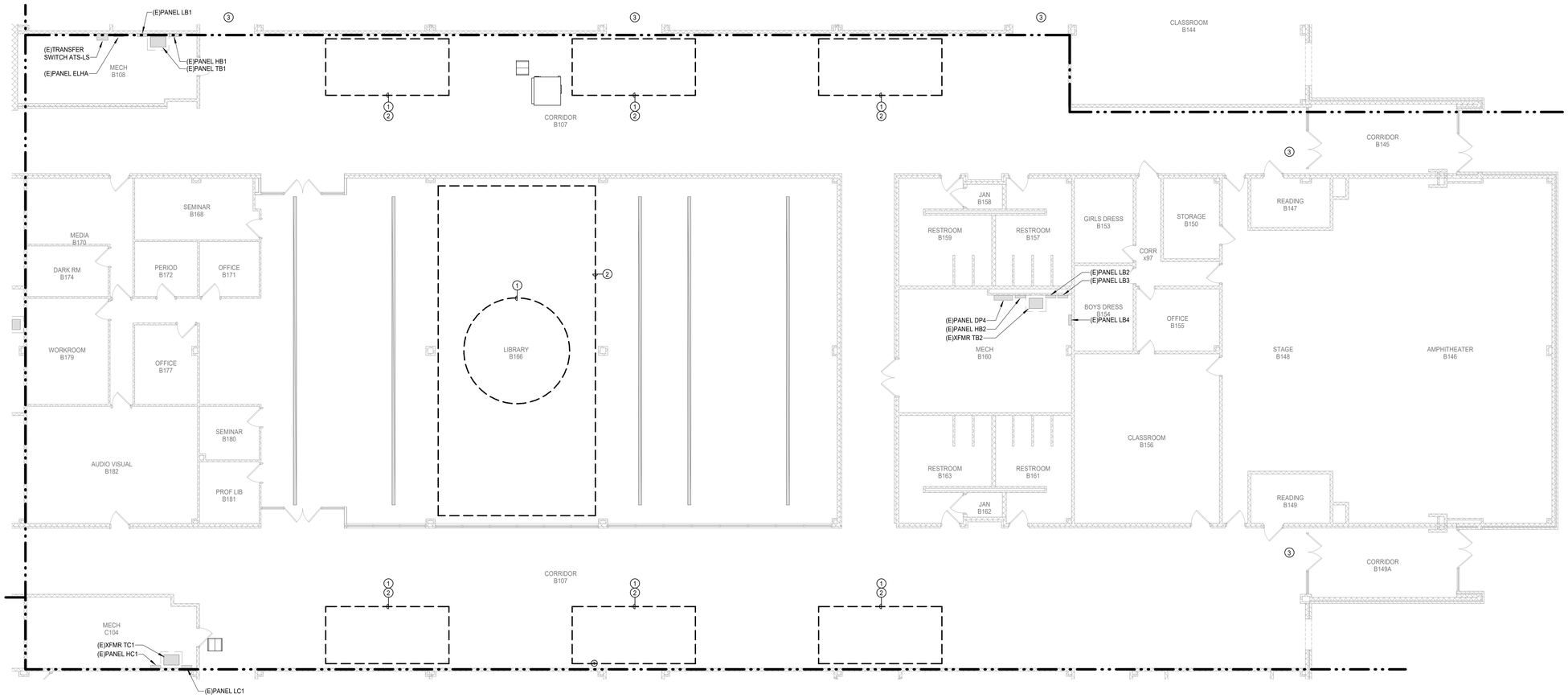
LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, REMOVE BACK TO NEAREST ACTIVE JUNCTION BOX ABOVE CEILING SPACE. CONTRACTOR SHALL MAINTAIN CONTINUITY OF CIRCUITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.
5. UNLESS NOTED OTHERWISE, HANG ALL EXISTING LIGHT FIXTURES BY CEILING SUPPORT WIRE ABOVE CEILING TO FACILITATE DEMOLITION OF CEILING GRID. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.
6. UNLESS NOTED OTHERWISE, SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE DEMOLITION OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: EXIT SIGNS, FIRE ALARM DEVICES, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REMOVED.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX OUTSIDE PERIMETER AREA TO MAKE READY FOR NEW SKYLIGHT. LEAVE CIRCUITRY INTACT FOR RECONNECTION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR RE-USE.
3. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.



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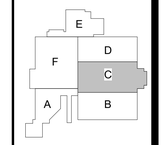
1 **ELECTRICAL DEMOLITION FLOOR PLAN - CMS - SECTION C**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION C

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E0.13
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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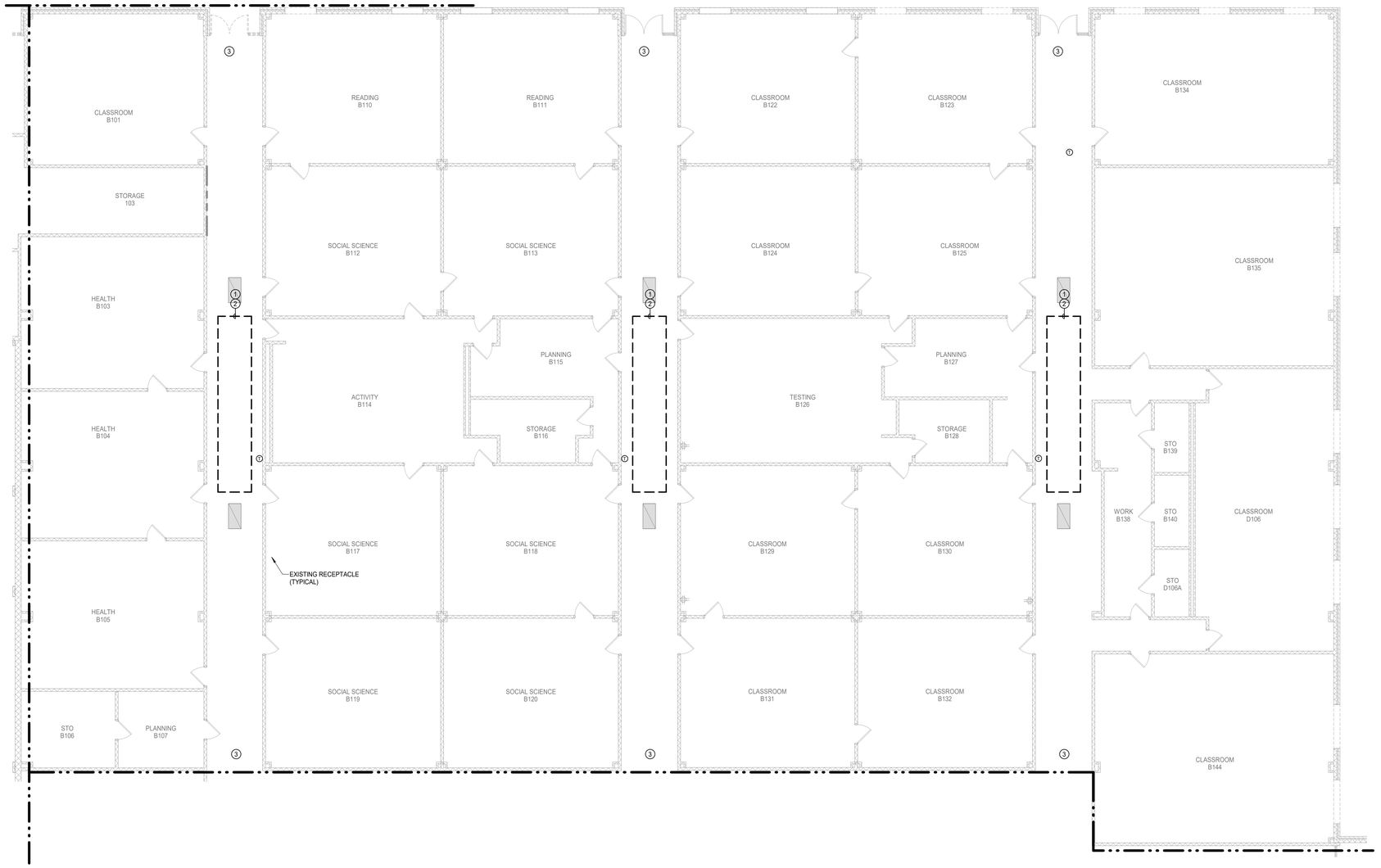
LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, REMOVE BACK TO NEAREST ACTIVE JUNCTION BOX ABOVE CEILING SPACE. CONTRACTOR SHALL MAINTAIN CONTINUITY OF CIRCUITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX OUTSIDE PERIMETER AREA TO MAKE READY FOR NEW SKYLIGHT. LEAVE CIRCUITRY INTACT FOR RECONNECTION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND EXISTING CONDUIT BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR CONNECTION OF REPLACEMENT LIGHTING FIXTURES.
3. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.



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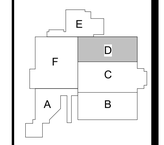
1 ELECTRICAL DEMOLITION FLOOR PLAN - CMS - SECTION D
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL
ENGINEER
STATE OF TEXAS
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION D

PACKAGE | VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111

Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: DES
Date: 10.29.2025
Sheet No. E0.14

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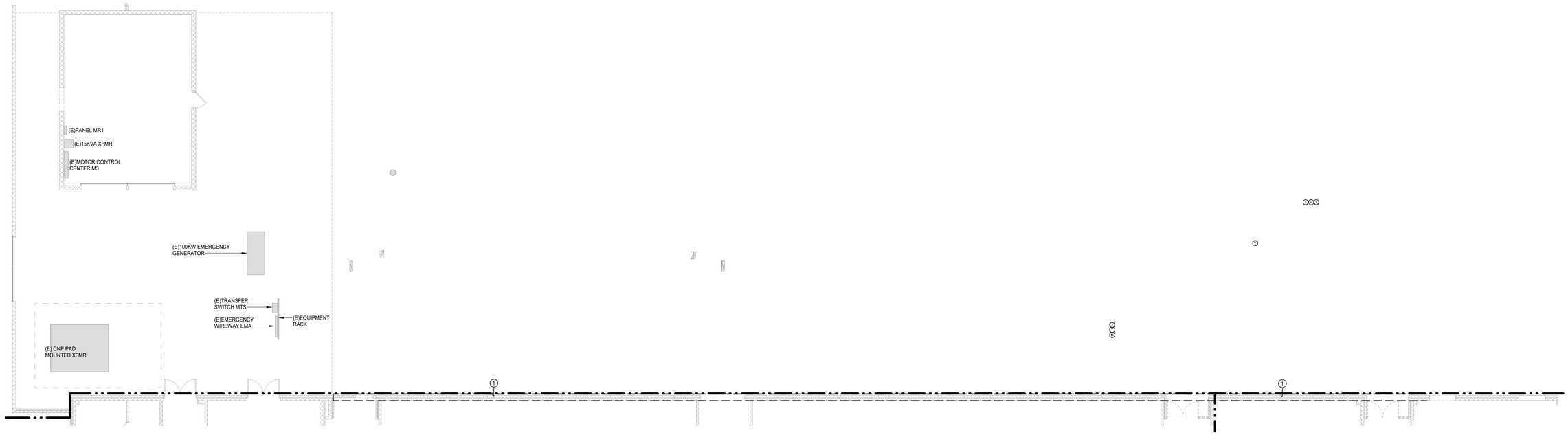
LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, REMOVE BACK TO NEAREST ACTIVE JUNCTION BOX ABOVE CEILING SPACE. CONTRACTOR SHALL MAINTAIN CONTINUITY OF CIRCUITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.

ELECTRICAL KEYED NOTES:

(1) DISCONNECT AND REMOVE ALL EXTERIOR ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX FOR PREPARATION OF NEW ADDITION.



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1 ELECTRICAL DEMOLITION FLOOR PLAN - CMS - SECTION E

Scale: 1/8" = 1'-0"

Date

Revision /

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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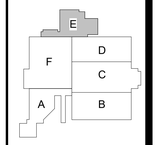

KEY PLAN - 1ST FLOOR
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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION E

PACKAGE | VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: DES
Date: 10.29.2025
Sheet No. E0.15

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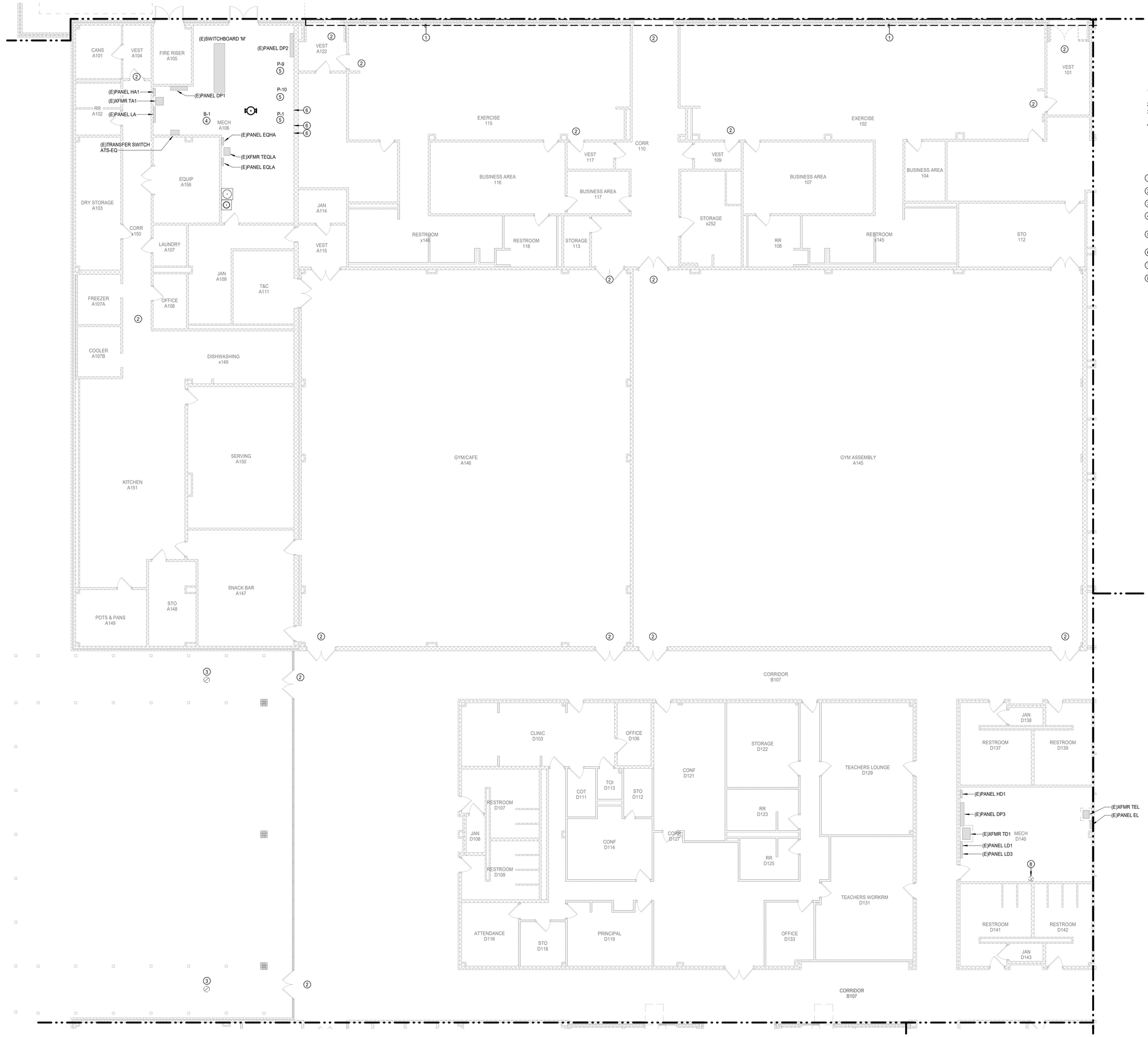

LINETYPE LEGEND

————	EXISTING TO REMAIN
- - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, REMOVE BACK TO NEAREST ACTIVE JUNCTION BOX ABOVE CEILING SPACE. CONTRACTOR SHALL MAINTAIN CONTINUITY OF CIRCUITS. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL EXTERIOR ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX FOR PREPARATION OF NEW ADDITION.
2. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.
3. DISCONNECT AND REMOVE EXISTING CANOPY LIGHT. LEAVE CIRCUITRY INTACT FOR CONNECTION OF REPLACEMENT LIGHT FIXTURE.
4. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING BOILER AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE. UNLESS NOTED OTHERWISE, RE-USE EXISTING CIRCUIT BREAKER.
5. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING PUMP AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE. UNLESS NOTED OTHERWISE, RE-USE EXISTING CIRCUIT BREAKER.
6. DISCONNECT AND REMOVE EXISTING VARIABLE FRENQUENCY DRIVE (VFD) AND RETURN TO OWNER.
7. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.
8. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING FIRE ALARM CONTROL PANEL. LEAVE CIRCUITRY INTACT FOR CONNECTION OF REPLACEMENT FIRE ALARM CONTROL PANEL.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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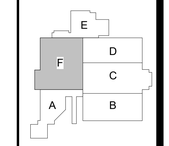

KEY PLAN - 1ST FLOOR
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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E0.16
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

N

1 **ELECTRICAL DEMOLITION FLOOR PLAN - CMS - SECTION F**
Scale: 1/8" = 1'-0"

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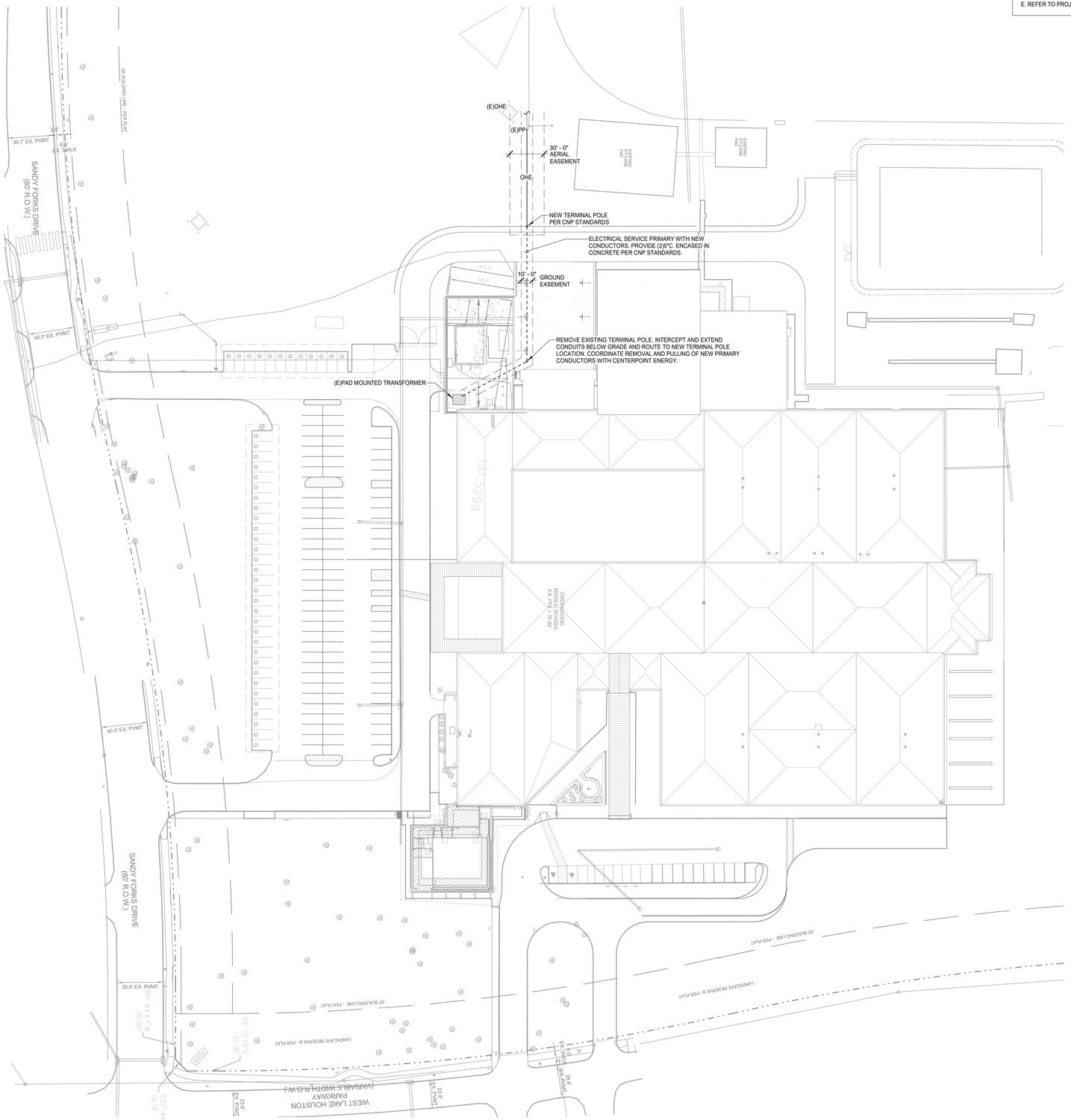
PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTING IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF ISNTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATICES, FOR INSTALLATION COMPLIANCE AND OVERALL QAULITY.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

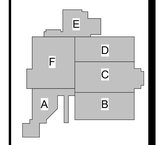


1 **ELECTRICAL SITE PLAN - CMS**
Scale: 1" = 40'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
STATE OF TEXAS
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL SITE PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E1.01
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

10/29/2025 1:57:59 PM
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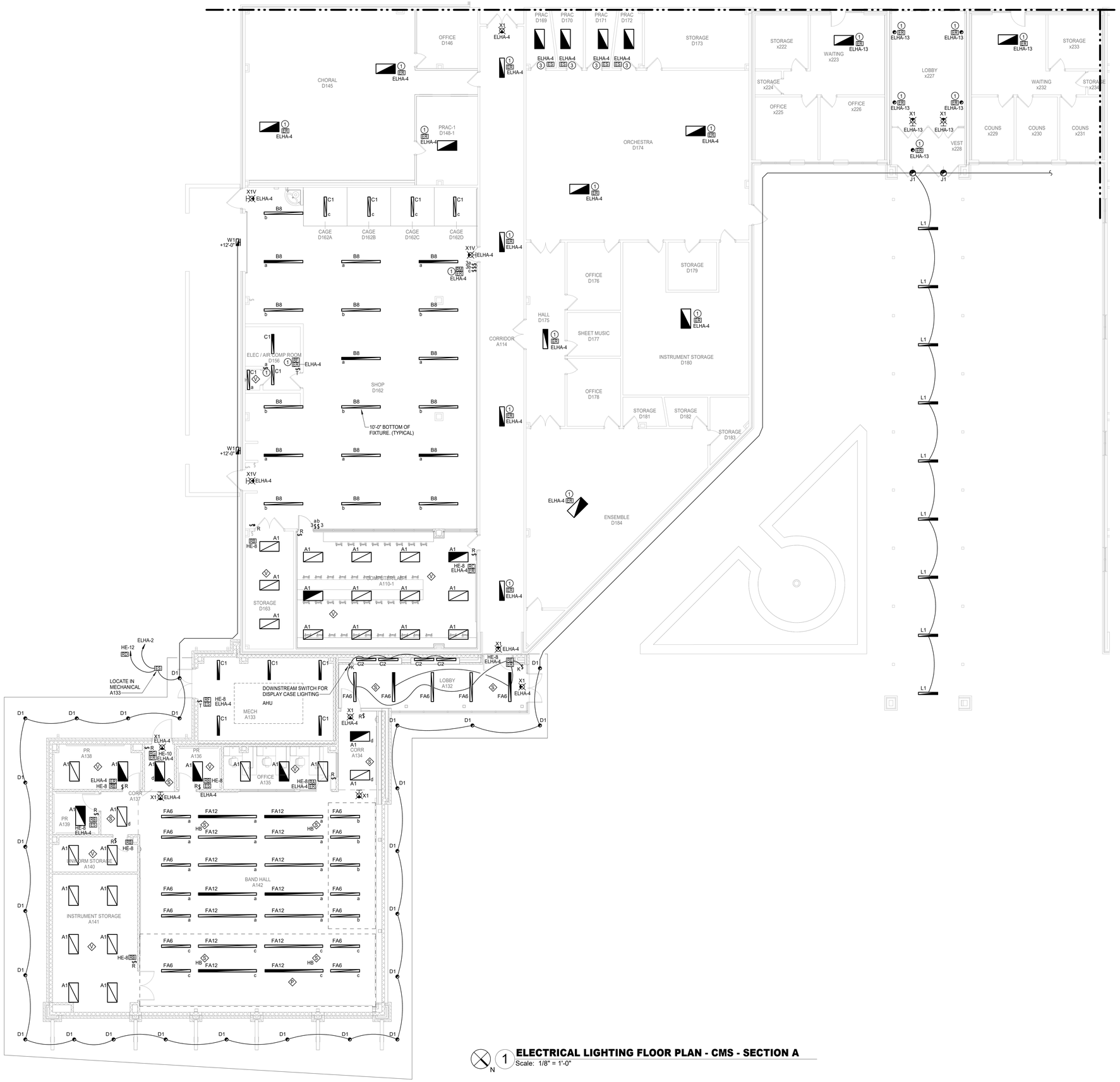


ELECTRICAL GENERAL NOTES:

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC 2015. REFER TO CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
2. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED POWER FOR EMERGENCY LOAD CONTROL RELAYS AND / OR EXIT SIGNS.
3. LOCATE DIGITAL LIGHTING CONTROLLER AND / OR EMERGENCY LOAD CONTROL RELAY ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW ADJACENT TO SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND / OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING. IN AREAS WITH NO CEILING AND / OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE PLASTIC TAPE MACHINE TYPED NAME PLATE TO BOTTOM OF CEILING T-GRID BELOW RELAY LOCATION. WHITE LETTERS ON BLACK BACKGROUND WITH 1/4" HIGH LETTERS ON 1/2" TALL LABEL FOR DIGITAL MODULE. INDICATE AS: DLM.
4. OCCUPANCY / VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED. CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER.
5. SPACES WITH MULTIPLE OCCUPANCY / VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
6. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MEPT ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES. SUSPEND OR WALL MOUNT FIXTURES WHERE PRACTICAL.
7. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. EXISTING LIGHT FIXTURE. PROVIDE WITH NEW UL924 EMERGENCY LOAD CONTROL RELAY TO CONTROL EMERGENCY LIGHTING WITH NORMAL LIGHTING. CONNECT TO NEW EMERGENCY CIRCUIT AS INDICATED AND MAKE FINAL CONNECTION TO LIGHT FIXTURE.
2. CONNECT TO EXISTING NORMAL LIGHTING CIRCUITRY PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
3. PROVIDE UL1008 EMERGENCY GENERATOR TRANSFER DEVICE (GTD) FOR CONNECTION OF EXISTING LIGHT FIXTURE. UTILIZE EXISTING NORMAL LIGHTING CIRCUIT; CONNECT TO NEW EMERGENCY CIRCUIT AS INDICATED; MAKE FINAL CONNECTION TO LIGHT FIXTURE.

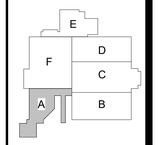
1 ELECTRICAL LIGHTING FLOOR PLAN - CMS - SECTION A

Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL LIGHTING
FLOOR PLAN - SECTION A

PACKAGE | VOLUME

Job No. 1821-13-01
Drawn By: DES
Date: 10.29.2025
Sheet No. E2.11

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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ELECTRICAL GENERAL NOTES:

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ELECTRICAL KEYED NOTES:

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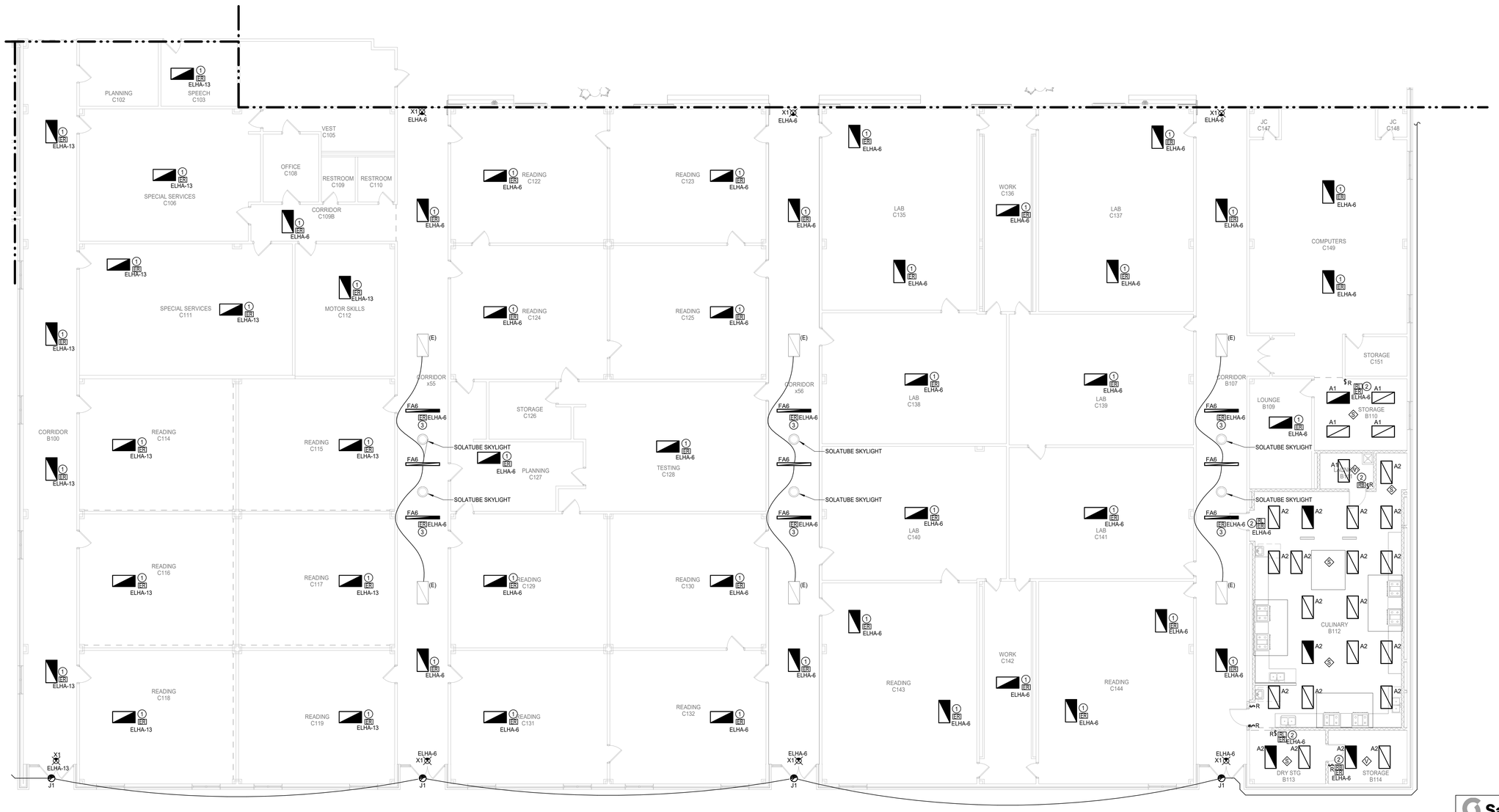
2. CONNECT TO EXISTING NORMAL LIGHTING CIRCUITRY PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
3. PROVIDE UL924 EMERGENCY LOAD CONTROL RELAY FOR NEW LIGHT FIXTURE. CONNECT TO NEW EMERGENCY CIRCUIT AS INDICATED AND MAKE FINAL CONNECTION TO LIGHT FIXTURE.



N

1 **ELECTRICAL LIGHTING FLOOR PLAN - CMS - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

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Houston
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

ELECTRICAL LIGHTING FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E2.12
Drawn By: DES	
Date: 10.29.2025	

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ELECTRICAL GENERAL NOTES:

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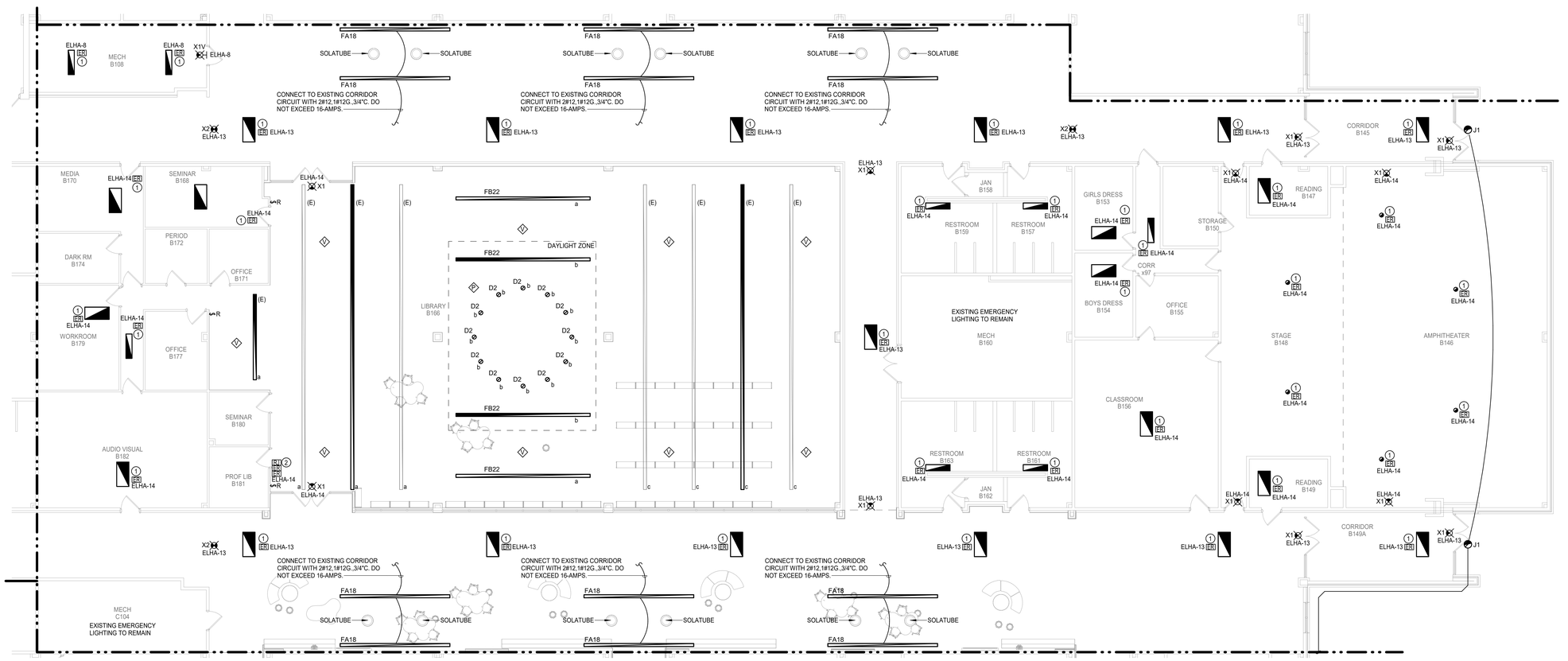

N 1 **ELECTRICAL LIGHTING FLOOR PLAN - CMS - SECTION C**
Scale: 1/8" = 1'-0"

Revision / Date

Project: CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025

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ELECTRICAL LIGHTING FLOOR PLAN - SECTION C

PACKAGE | VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111

Job No. 1821-13-01
Drawn By: DES
Date: 10.29.2025
Sheet No. E2.13

Salas O'Brien Project Number: 2022-05088-00

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ELECTRICAL GENERAL NOTES:

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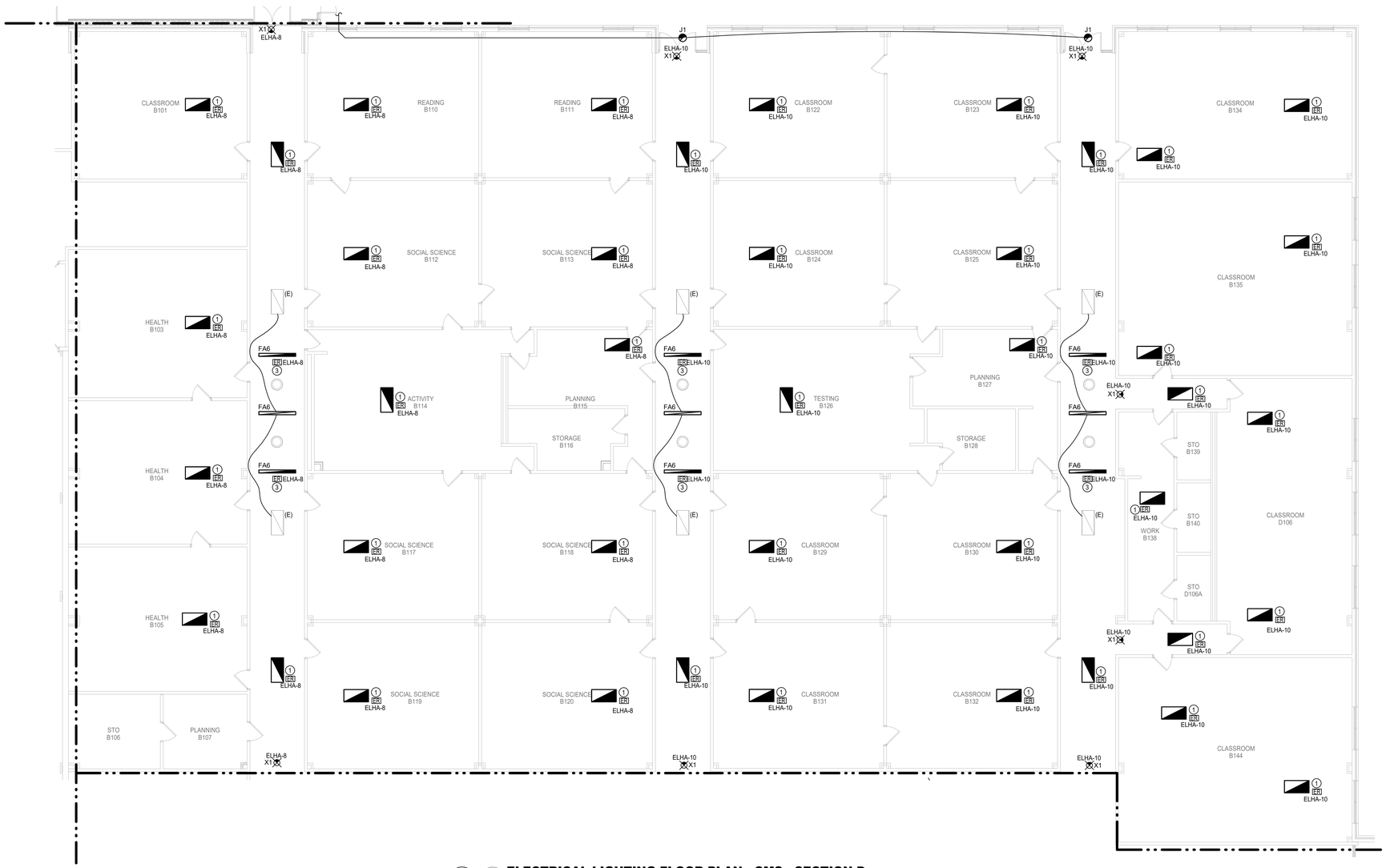

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1 **ELECTRICAL LIGHTING FLOOR PLAN - CMS - SECTION D**
Scale: 1/8" = 1'-0"

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

BRADLEY KALMANS
80219
LICENSED
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10-29-2025

KEY PLAN - 1ST FLOOR
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ELECTRICAL LIGHTING
FLOOR PLAN - SECTION D

PACKAGE | VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111

Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: DES
Date: 10.29.2025
Sheet No. E2.14

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ELECTRICAL GENERAL NOTES:

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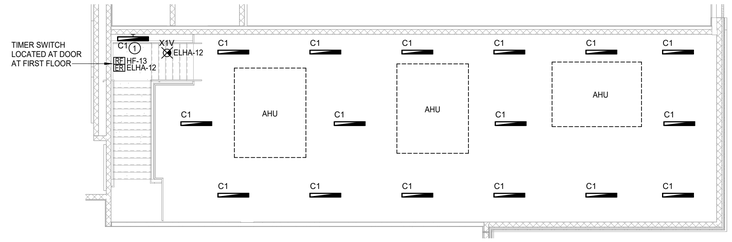
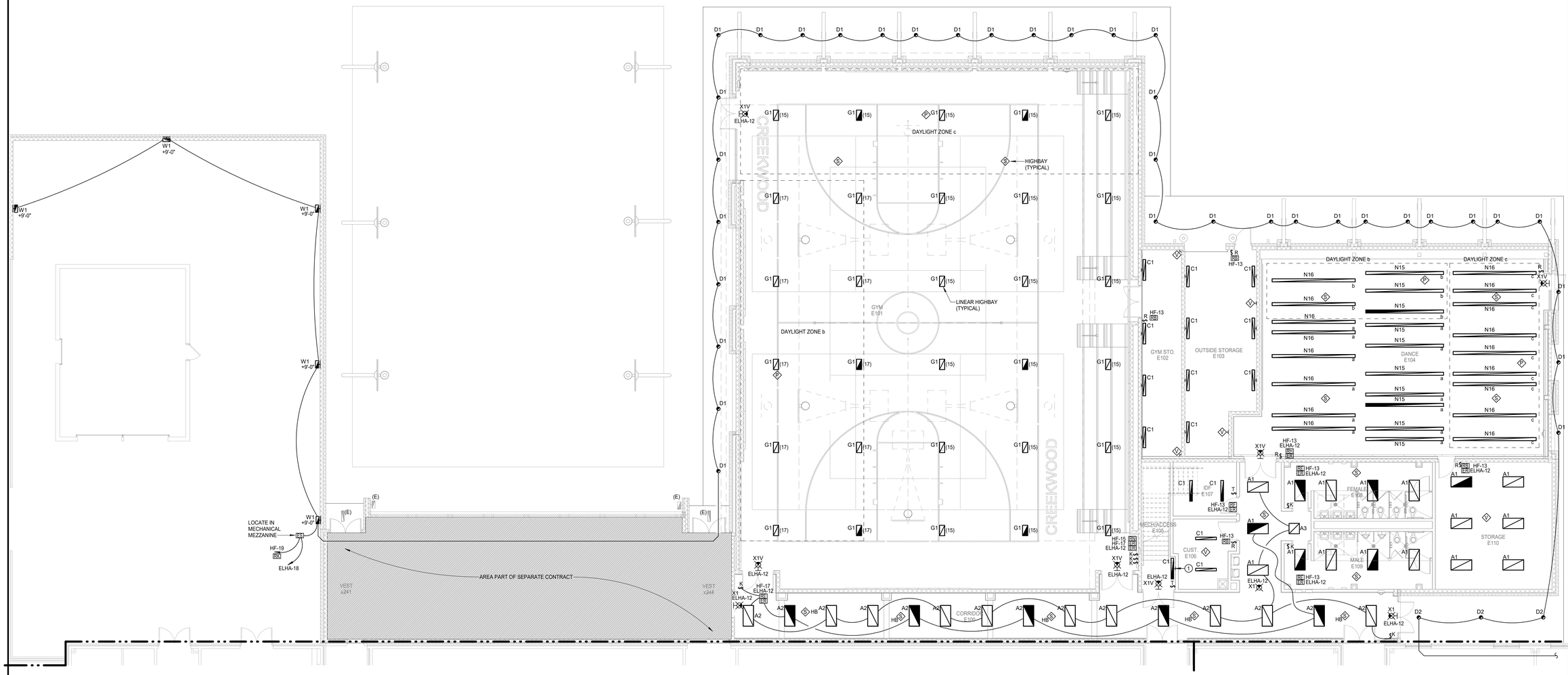
ELECTRICAL KEYED NOTES:

(1) WALL MOUNT LIGHT FIXTURE AT +9'-0" AFF.



2 ELECTRICAL LIGHTING PLAN - MECHANICAL PLATFORM x155

Scale: 1/8" = 1'-0"



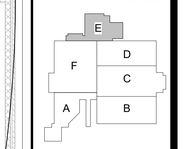
1 ELECTRICAL LIGHTING FLOOR PLAN - CMS - SECTION E

Scale: 1/8" = 1'-0"

Revision /	Date	
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL
ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL LIGHTING FLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E2.15
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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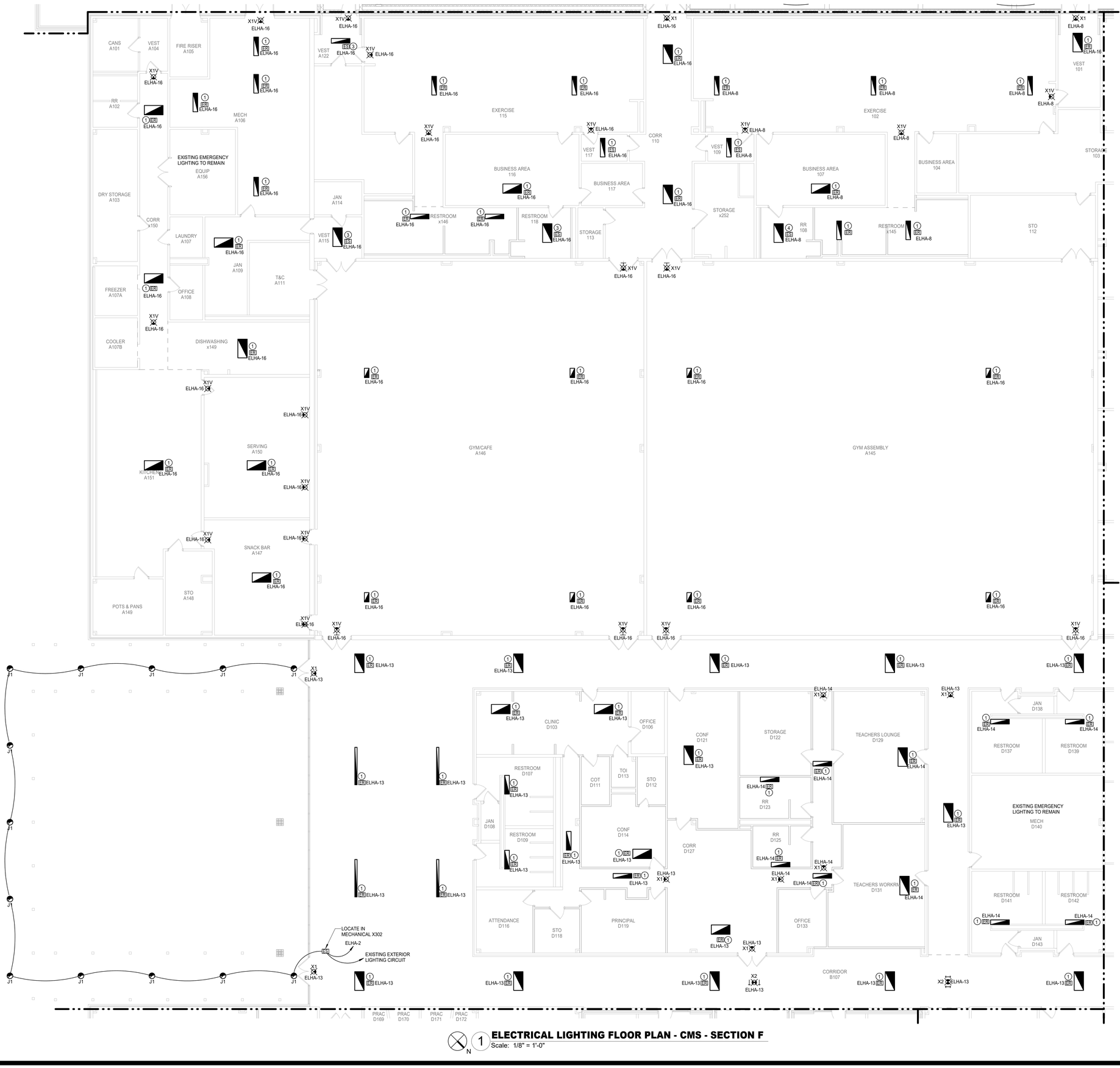

ELECTRICAL GENERAL NOTES:

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC 2015. REFER TO CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
2. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED POWER FOR EMERGENCY LOAD CONTROL RELAYS AND / OR EXIT SIGNS.
3. LOCATE DIGITAL LIGHTING CONTROLLER AND / OR EMERGENCY LOAD CONTROL RELAY ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW ADJACENT TO SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND / OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING. IN AREAS WITH NO CEILING AND / OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE PLASTIC TAPE MACHINE TYPED NAME PLATE TO BOTTOM OF CEILING T-GRID BELOW RELAY LOCATION. WHITE LETTERS ON BLACK BACKGROUND WITH 1/4" HIGH LETTERS ON 1/2" TALL LABEL FOR DIGITAL MODULE. INDICATE AS: DLM.
4. OCCUPANCY / VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED. CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER.
5. SPACES WITH MULTIPLE OCCUPANCY / VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
6. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MEPT ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES. SUSPEND OR WALL MOUNT FIXTURES WHERE PRACTICAL.
7. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. EXISTING LIGHT FIXTURE. PROVIDE WITH NEW UL924 EMERGENCY LOAD CONTROL RELAY TO CONTROL EMERGENCY LIGHTING WITH NORMAL LIGHTING. CONNECT TO NEW EMERGENCY CIRCUIT AS INDICATED AND MAKE FINAL CONNECTION TO LIGHT FIXTURE.
2. CONNECT TO EXISTING NORMAL LIGHTING CIRCUITRY PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
3. PROVIDE UL1008 EMERGENCY GENERATOR TRANSFER DEVICE (GTD) FOR CONNECTION OF EXISTING LIGHT FIXTURE. UTILIZE EXISTING NORMAL LIGHTING CIRCUIT; CONNECT TO NEW EMERGENCY CIRCUIT AS INDICATED; MAKE FINAL CONNECTION TO LIGHT FIXTURE.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
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ELECTRICAL LIGHTING FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E2.16
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

1 **ELECTRICAL LIGHTING FLOOR PLAN - CMS - SECTION F**
Scale: 1/8" = 1'-0"

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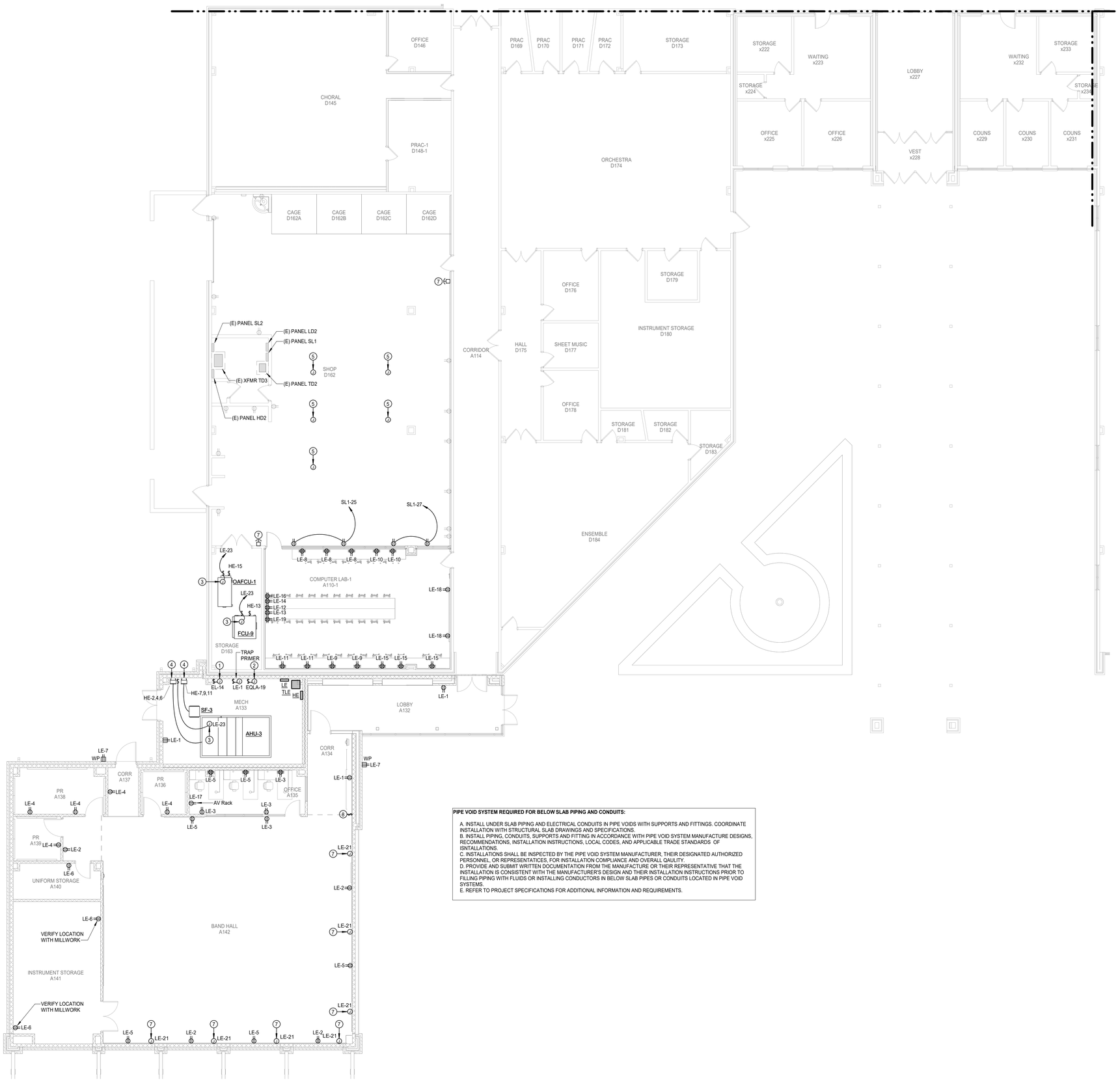

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF FIRE ALARM BOOSTER PANEL. VERIFY FINAL LOCATION WITH FIRE ALARM SHOP DRAWINGS AND MAKE FINAL CONNECTION.
2. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF BMCS PANEL. VERIFY FINAL LOCATION WITH BMCS SHOP DRAWINGS AND MAKE FINAL CONNECTION.
3. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.
4. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER (VFD), PROVIDED BY DIVISION 23, INSTALLED BY DIVISION 26.
5. PROVIDE 120V ELECTRIC CORD REEL MOUNTED TO BOTTOM OF STRUCTURE WITH GFCI DOUBLE DUPLEX RECEPTACLE. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. CONNECT TO EXISTING CORD REEL CIRCUIT PRESERVED DURING DEMOLTION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
6. PROVIDE NEW EPO (EMERGENCY POWER OFF) FOR LOCAL PANEL SHUT OFF FOR SHOP EQUIPMENT. PROVIDE SWITCH WITH COVER AND KEY RESET. APPROVED MANUFACTURER: STI OR APPROVED EQUAL.
7. PROVIDE A JUNCTION BOX FOR CONNECTION OF MOTORIZED SHADES. COORDINATE LOCATION OF LOW VOLTAGE SHADE CONTROLS WITH ARCHITECT AND MAKE ALL FINAL CONNECTIONS.
8. MOTORIZED SHADE CONTROLLER PROVIDED WITH SHADES. VERIFY EXACT LOCATION WITH ARCHITECT.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTING IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF ISNTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATICES, FOR INSTALLATION COMPLIANCE AND OVERALL QAULITY.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

N

1 **ELECTRICAL POWER FLOOR PLAN - CMS - SECTION A**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
6	04-29-25	Addendum 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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ELECTRICAL POWER FLOOR PLAN - SECTION A

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111

Job No. 1821-13-01	Sheet No. E3.11
Drawn By: DES	
Date: 10.29.2025	
Salas O'Brien Project Number: 2022-05088-00	

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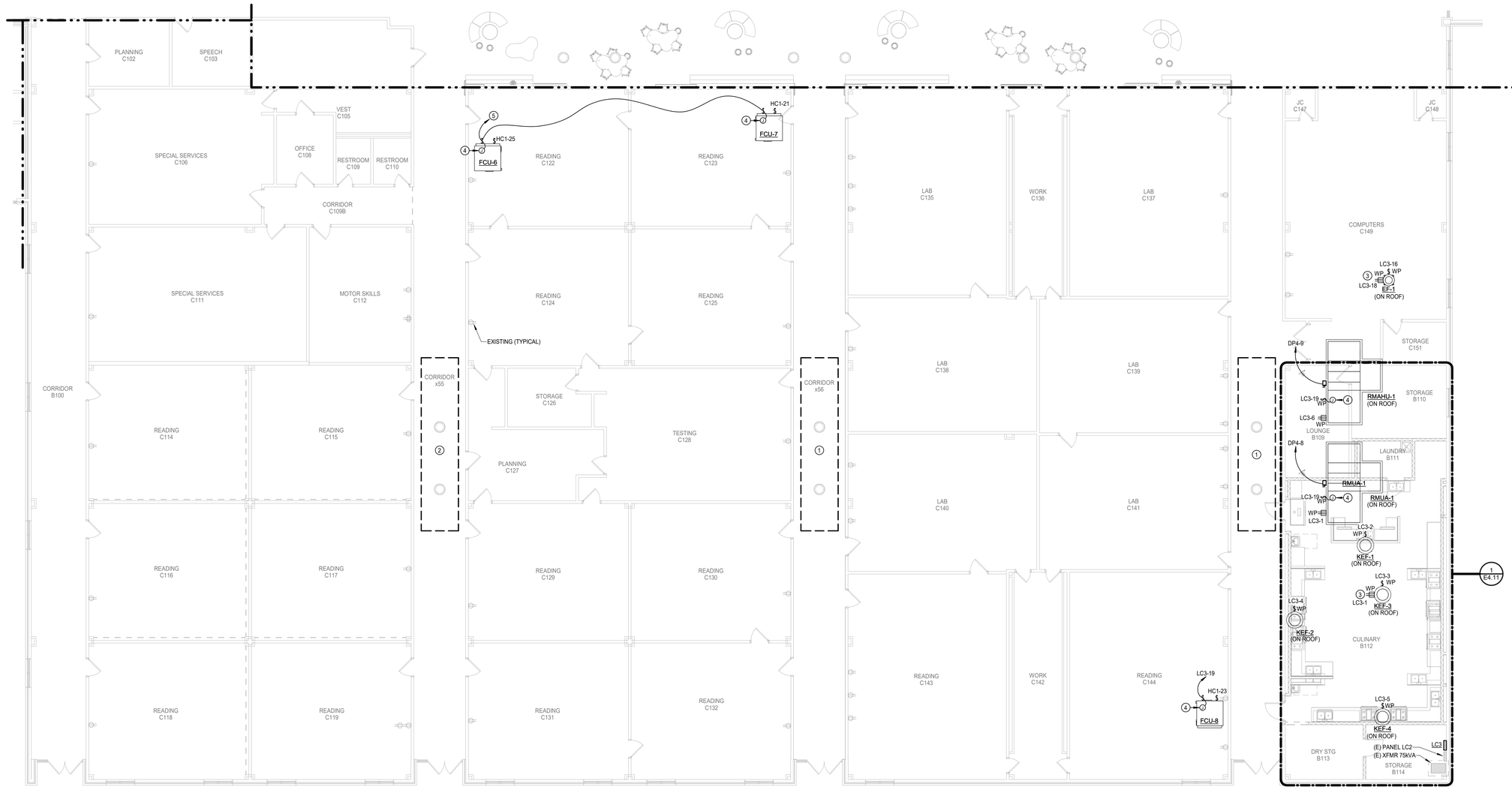
ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (3)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
2. INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (7)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
3. PROVIDE (2)3/4" RIGID GALVANIZED CONDUITS PENETRATED THROUGH ROOF FOR RECEPTACLE WIRING AND SUPPORT PER NEC 314. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATIONS.
4. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.
5. ROUTE 2#12, 1#12G., 3/4"C. TO NEW 20A/1P CIRCUIT BREAKER IN PANEL LC1. FIELD VERIFY FOR SPACE AVAILABLE.



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1 **ELECTRICAL POWER FLOOR PLAN - CMS - SECTION B**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
6	04-29-25	Addendum 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

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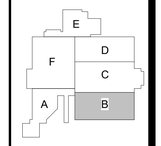

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ELECTRICAL POWER FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E3.12
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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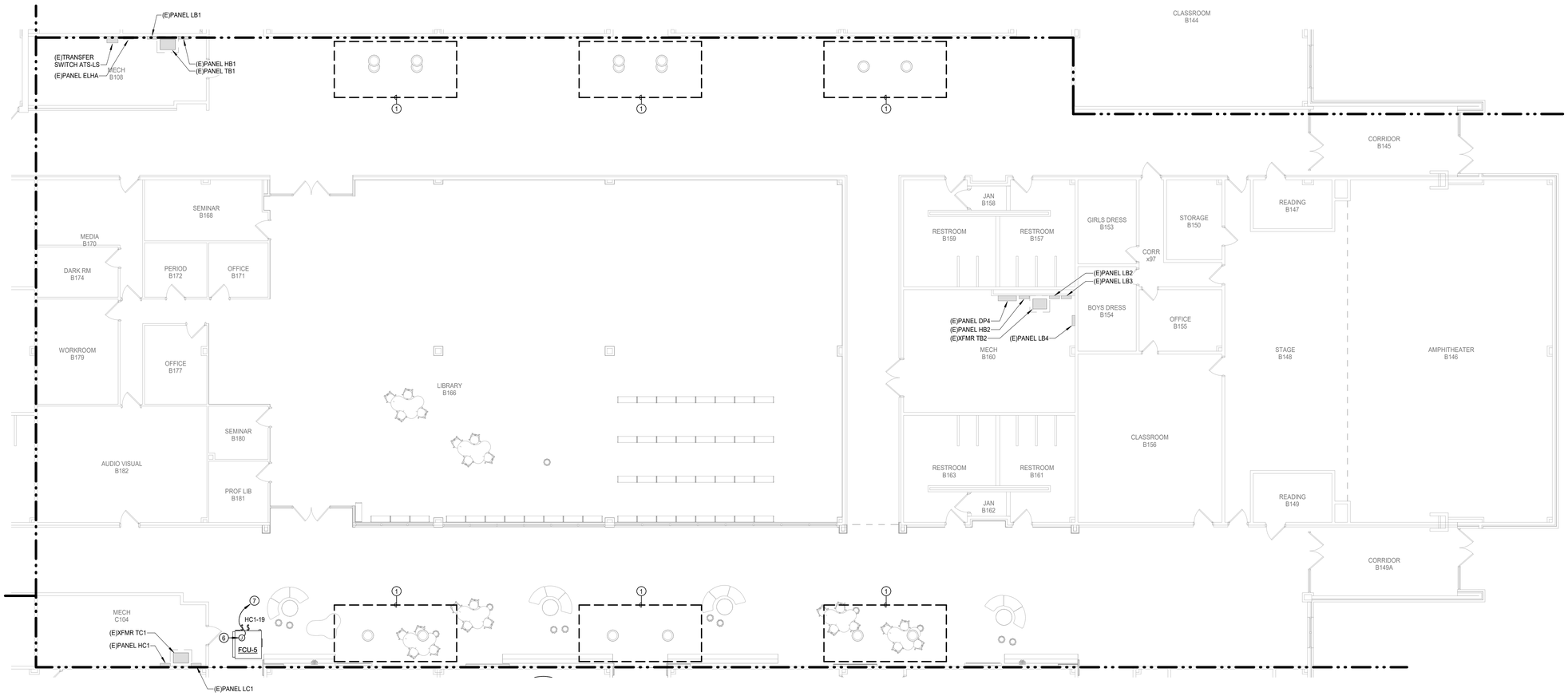
ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (5)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
2. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (10)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
3. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (7)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
4. PROVIDE (2)3/4" RIGID GALVANIZED CONDUITS PENETRATED THROUGH ROOF FOR RECEPTACLE WIRING AND SUPPORT PER NEC 314. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATIONS.
5. PROVIDE (2)3/4" RIGID GALVANIZED CONDUITS PENETRATED THROUGH ROOF FOR RECEPTACLE WIRING AND SUPPORT PER NEC 314. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATIONS.
6. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.
7. ROUTE 2#12, 1#12G, .3/4"C. TO NEW 20A/1P CIRCUIT BREAKER IN PANEL LC1. FIELD VERIFY FOR SPACE AVAILABLE.



N 1 **ELECTRICAL POWER FLOOR PLAN - CMS - SECTION C**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
6	04-29-25	Addendum 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
HUMBLE ISD
KINGWOOD, TX

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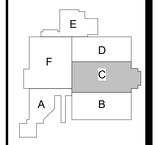

KEY PLAN - 1ST FLOOR
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ELECTRICAL POWER FLOOR PLAN - SECTION C

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E3.13
Drawn By: Author	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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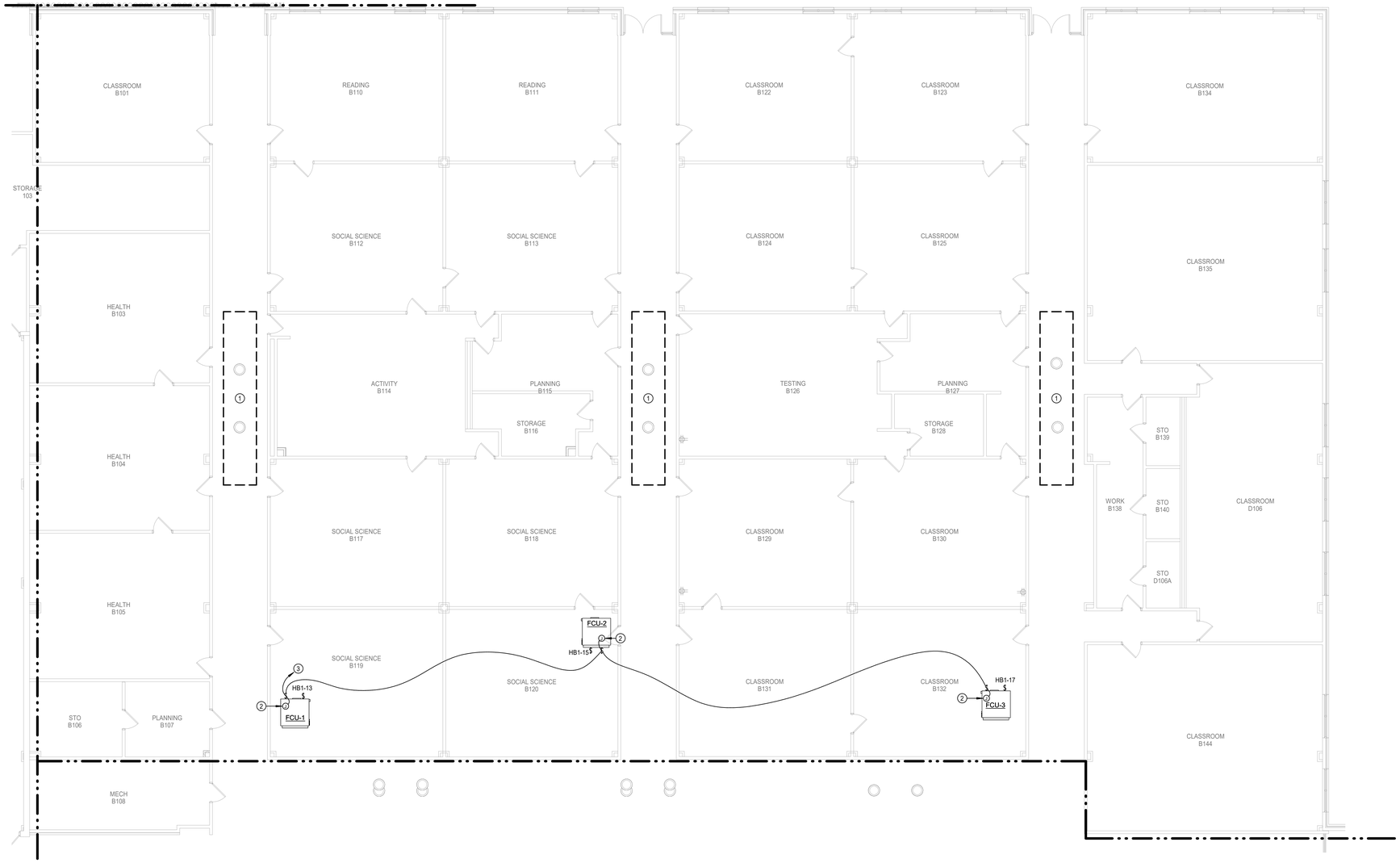
ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (3)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
2. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.
3. ROUTE 2#12, 1#12G., 3/4"C. TO NEW 20A/1P CIRCUIT BREAKER IN PANEL LB1. FIELD VERIFY FOR SPACE AVAILABLE.



N 1 **ELECTRICAL POWER FLOOR PLAN - CMS - SECTION D**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
6	04-29-25	Addendum 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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KINGWOOD, TX

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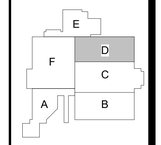
10-29-2025



KEY PLAN - 1ST FLOOR
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ELECTRICAL POWER FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E3.14
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTING IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF ISNTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATICES, FOR INSTALLATION COMPLIANCE AND OVERALL QAULITY.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSIST WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

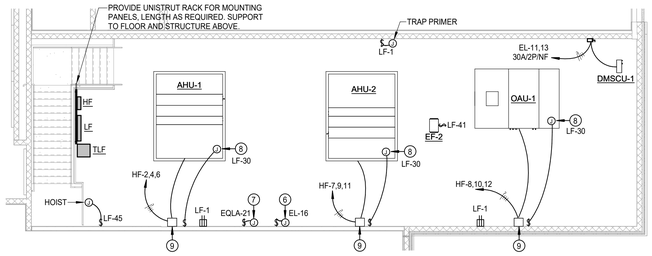
ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

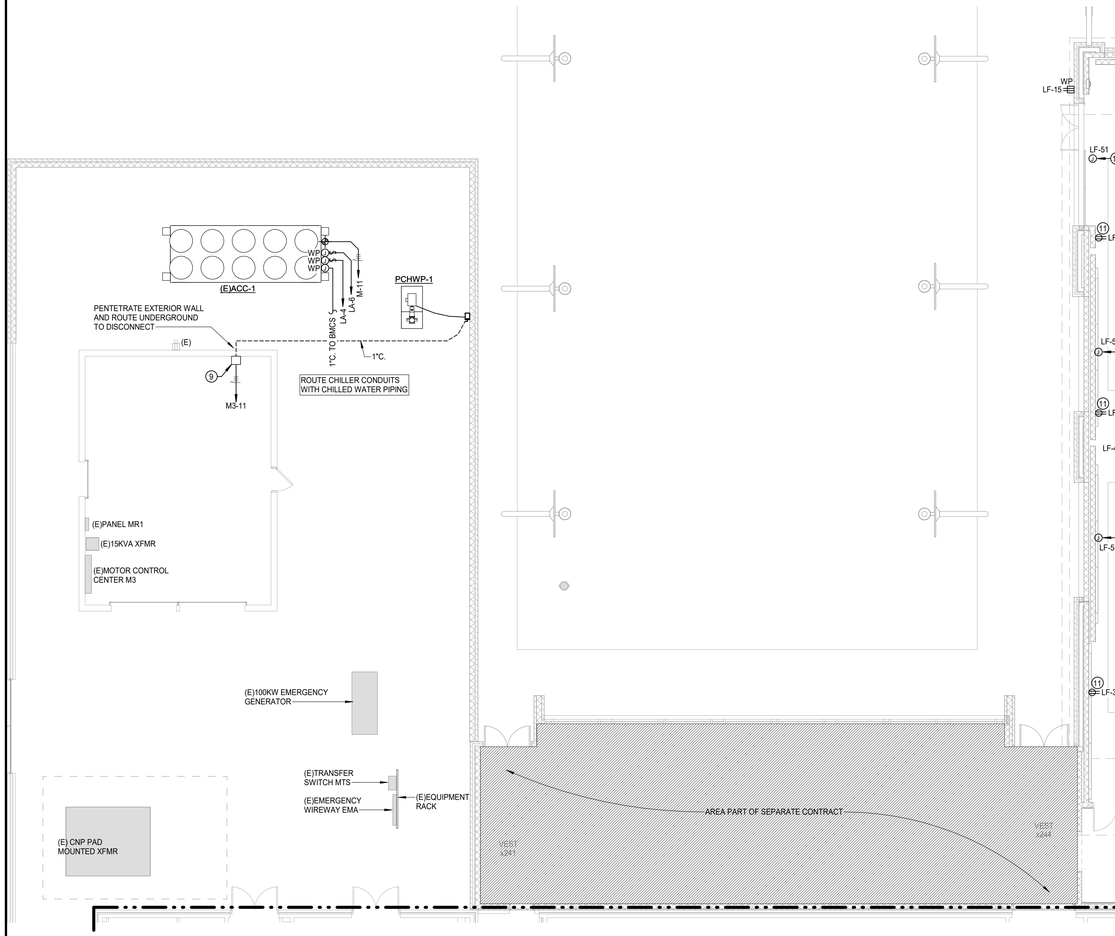
ELECTRICAL KEYED NOTES:

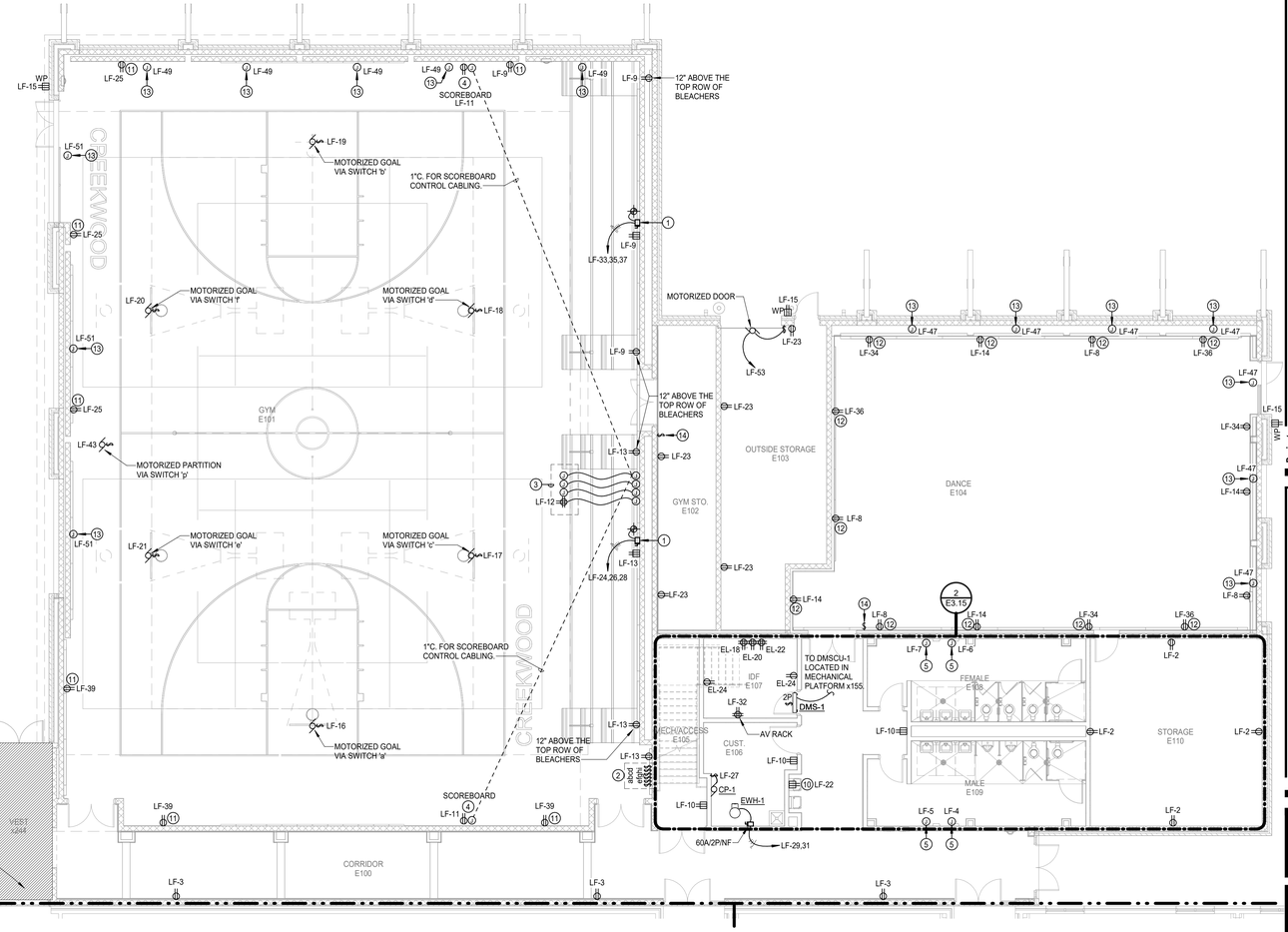
1. PROVIDE 60A/3P/NF DISCONNECT FOR CONNECTION OF BLEACHER CONTROL/CONTACTOR PANEL. INSTALL PER MANUFACUTER RECOMENDATIONS AND MAKE ALL FINAL CONNECTIONS TO BLEACHER CONTROL PANEL.
2. KEYED SWITCH LOCATION FOR BASKETBALL GOALS & BLEACHERS. PROVIDE LABEL WITH FUNCTION FOR EACH SWITCH. LOCATE SWITCHES IN RECESSED HINGED BOX WITH LOCKABLE COVER. COORDINATE KEYING AND FINAL LOCATION OF SWITCHES WITH OWNER PRIOR TO ROUGH-IN. (SWITCHES a,b,c,d,e,f,g,h,i,j,k,l,o)
3. PROPOSED SCORERS TABLE LOCATION. MOUNT MICROPHONE, DATA, POWER, ETC. IN BASEPLATE OF BOTTOM BLEACHER. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER. REFER TO DETAIL FOR ADDITIONAL INFORMATION.
4. POWER AND CONTROL DEVICES FOR SCOREBOARD. COORDINATE EXACT LOCATION OF SCOREBOARD WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO DETAIL FOR MORE INFORMATION.
5. PROVIDE JUNCTION BOX FOR CONNECTION OF ELECTRIC HAND DRYER. VERIFY EXACT LOCATION AND MAKE FINAL CONNECTION. PROVIDE WITH LOCK-OFF DEVICE AT PANEL FOR CIRCUIT BREAKER.
6. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF FIRE ALARM BOOSTER PANEL. VERIFY FINAL LOCATION WITH FIRE ALARM SHOP DRAWINGS AND MAKE FINAL CONNECTION.
7. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF BMCS PANEL. VERIFY FINAL LOCATION WITH BMCS SHOP DRAWINGS AND MAKE FINAL CONNECTION.
8. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.
9. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER (VFD), PROVIDED BY DIVISION 23, INSTALLED BY DIVISION 26.
10. RECEPTACLE FOR DRINKING FOUNTAIN. LOCATE IN READILY ACCESSIBLE LOCATION BELOW DRINKING FOUNTAIN UNDER UPPER BASIN.
11. PROVIDE TRIM KIT TO MOUNT RECEPTACLE IN GYM PADDING. COORDINATE INSTALLATION OF RECEPTACLE WITH ARCHITECT / GYM PADDING VENDOR PRIOR TO ROUGH-IN.
12. COORDINATE INSTALLATION OF RECEPTACLE WITH ARCHITECT / MIRROR VENDOR PRIOR TO ROUGH-IN. PROVIDE WITH MATCHING MIRROR COVERPLATE.
13. PROVIDE A JUNCTION BOX FOR CONNECTION OF MOTORIZED SHADES. COORDINATE LOCATION OF LOW VOLTAGE SHADE CONTROLS WITH ARCHITECT AND MAKE ALL FINAL CONNECTIONS.
14. MOTORIZED SHADE CONTROLLER PROVIDED WITH SHADES. VERIFY EXACT LOCATION WITH ARCHITECT.



2 ELECTRICAL POWER PLAN - MECHANICAL PLATFORM x155

Scale: 1/8" = 1'-0"





1 ELECTRICAL POWER FLOOR PLAN - CMS - SECTION E

Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-16-24	City Comments 1
3	06-06-24	City Comments 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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ELECTRICAL POWER FLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E3.15
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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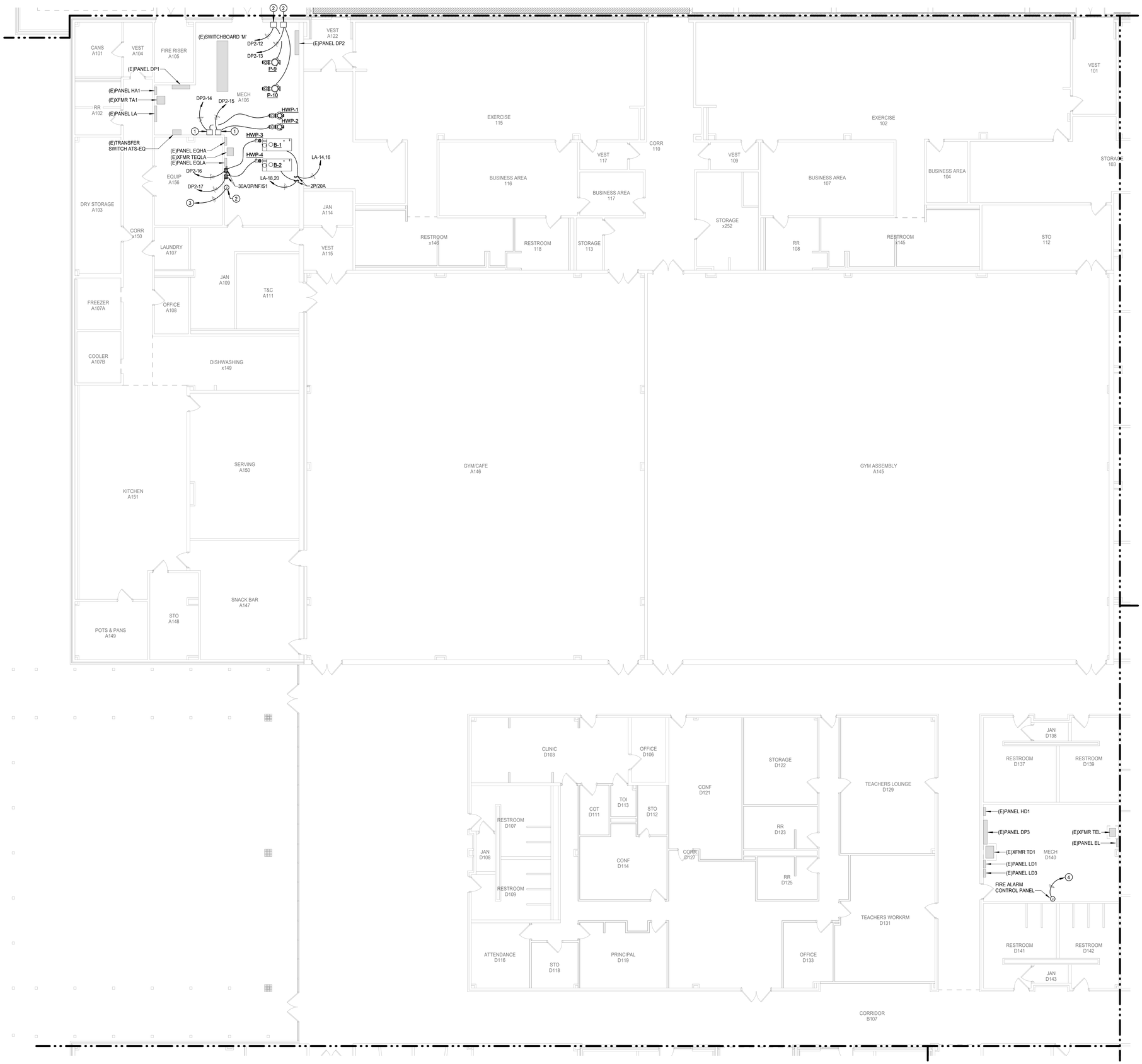

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER, PROVIDE BY DIVISION 23, INSTALLED BY DIVISION 26.
2. PROVIDE A JUNCTION BOX FOR CONNECTION OF CARBON MONOXIDE MONITORING STATION. VERIFY EXACT LOCATION AND MAKE FINAL CONNECTION.
3. CONNECT TO NEAREST CONVENIENCE RECEPTACLE CIRCUIT WITH 2#12, 1# 12G., 3/4"C.
4. CONNECT TO EXISTING CIRCUIT PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

Revision / Date
1 — 02-16-24 — City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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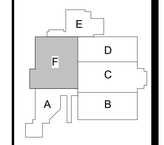
10-29-2025



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ELECTRICAL POWER FLOOR PLAN - CMS - SECTION F
Scale: 1/8" = 1'-0"

ELECTRICAL POWER FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E3.16
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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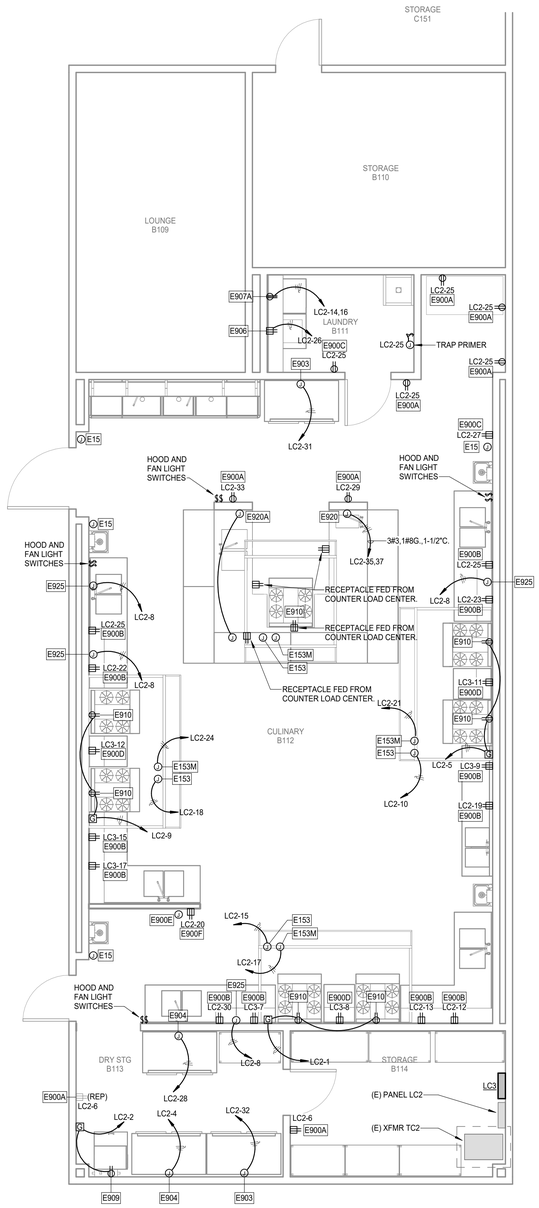
ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO FOOD SERVICE (QF-SERIES) AND TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. ALL SINGLE-PHASE RECEPTACLES RATED 150-VOLTS TO GROUND OR LESS, 50-AMPERES OR LESS AND THREE-PHASE RECEPTACLES RATED 150-VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION IN THE KITCHEN, SERVING, AND ALL OTHER ASSOCIATED KITCHEN AREAS.
4. PROVIDE ENGRAVED SWITCH-PLATES INDICATING FUNCTION FOR ALL HOOD VENT LIGHT / EXHAUST FAN SWITCHES. COORDINATE FINAL SWITCH LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
5. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT AND SCHEDULES. CONTRACTOR TO PROVIDE DISCONNECT SWITCHES AND MAKE ALL FINAL CONNECTIONS TO POWER AND CONTROL EQUIPMENT.



N 1 **ELECTRICAL KITCHEN PLAN**
Scale: 1/4" = 1'-0"

FOODSERVICE ELECTRICAL SCHEDULE

FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E15	JB	---	---	--	REMOTE FIRE PULL	WALL	48"	RE: NOTE #11 - RECESSED JB - EXTEND TO FIRE SYSTEM FOR HOOD
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC
E153M	JB	10.0A	120	1	HEAT SENSOR	CLG	DFA	BTC
E900A	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	24"	---
E900B	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	47"	---
E900C	WPR	16.0A	120	1	CONVENIENCE OUTLET	WALL	18"	---
E900D	DR	16.0A	120	1	CONVENIENCE	WALL	44"	SHUNT TRIP BREAKER
E900E	JB	---	---	--	DATA CONNECTION	WALL	24"	DATA CONNECTION FOR MOBILE TEACHING DISPLAY
E900F	DR	20.0A	120	1	MOBILE TEACHING DISPLAY	WALL	24"	DEDICATED CIRCUIT
E903	JB	14.9A	120	1	FREEZER	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E904	JB	8.2A	120	1	REFRIGERATOR	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E906	DR	16.0A	120	1	CLOTHES WASHER	WALL	48"	--
E907A	SR	30.0A	208	1	CLOTHES DRYER	WALL	48"	VERIFY NEMA PLUG RECEPTACLE
E909	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E910	DR	1.0A	120	1	6 BURNER RANGE	WALL	24"	SHUNT TRIP BREAKER
E920	JB	60.0A	240	1	LOAD CENTER	WALL	24"	BTC
E920A	JB	---	---	--	DATA CONNECTION	WALL	24"	EXTEND TO FRONT OF COUNTER WITHIN COUNTER BODY
E925	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC

Revision /	Date	
1	02-16-24	City Comments 1

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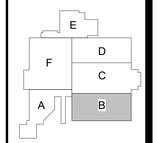

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ELECTRICAL CULINARY KITCHEN PLAN

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E4.11
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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NEW CENTERPOINT TERMINAL POLE

FAULT CURRENT VALUES WERE CALCULATED USING THE POINT TO POINT METHOD.

AVAILABLE LET-THRU CURRENT = 22,700 AMPS BASED ON CNP ENERGY PUBLISHED DATA FOR 1000KVA WYE- PAD MOUNTED TRANSFORMER

(E)PAD MOUNTED TRANSFORMER PER CENTERPOINT

(2) 6-INCH CONDUITS IN CONCRETE DUCT BANK PER CENTERPOINT ENERGY REQUIREMENTS TO POWER TERMINAL POLE.

EXISTING MAIN SWITCHBOARD 'M'
277/480V, 3PH., 4W, 2500A MLO
65,000 A.I.C.

KVAR

FAULT CURRENT: 22,111 AMPS

1	2	3	4	5	6	7	8	9	10	11	12	13	14
400A 3P	400A/3P SPARE	800A 3P	1600A/3P GFCI	300A 3P	225A 3P	500A 3P	500A 3P	NEW 100A/3P LSI TRIP	NEW 200A/3P LSI TRIP	NEW 350A/3P LSI TRIP	100A/3P LSI TRIP	100A/3P LSI TRIP	SPACE
EXISTING GROUNDING	EXISTING	EXISTING		EXISTING			(2) SETS 250KCMIL	4#3, 1#8G., 1-1/4"C.	4#3/0, 1#6G., 2"C.	3#350KCMIL, 1#3G., 3"C.	4#3, 1#8G., 1-1/4"C.	4#3, 1#8G., 1-1/4"C.	

TO EXISTING PANEL DK

NEW PANEL 'HE' — SPDL — FAULT CURRENT: 2,777 AMPS
3#8, 1#10G., 3/4"C.
XFMR 'TLE' 30 KVA 480: 120/208V., 3PH, 4W.
FAULT CURRENT: PRIM - 2,719 AMPS SEC - 1,924 AMPS
1#6G., 3/4"C.
4#3, 1#6G., 1-1/4"C.
NEW PANEL 'LE' — SPDL (2-SECTION)
FAULT CURRENT: 1,196 AMPS

NEW PANEL 'HF' — SPDL — FAULT CURRENT: 9,341 AMPS
3#4, 1#8G., 1"C.
XFMR 'TLF' 45 KVA 480: 120/208V., 3PH, 4W.
FAULT CURRENT: PRIM - 9,066 AMPS SEC - 3,472 AMPS
1#6G., 3/4"C.
4#1/0, 1#6G., 2"C.
NEW PANEL 'LF' — SPDL (2-SECTION)
FAULT CURRENT: 3,433 AMPS

MANUFACTURER PROVIDED DISC.
ACC-1

-ALL CONDUCTORS AND GROUNDS ARE COPPER UNLESS NOTED OTHERWISE-

EXIST. MOTOR CONTROL CENTER 'M3'
277/480V, 3PH., 4W, 800A MCB
22,000 A.I.C.

1	2	3	4	5	6	7	8	9	10	11
800A 3P										NEW 20A

TO CHWP-1 | TO CWP-2 | TO CWP-1 | TO CT-02 | TO CT-01 | TO CHILLER 1 | TO CHILLER 2 | TO CHWP-1

XFMR 15 KVA 480: 120/240V., 1PH, 3W.
PANEL 'MR1'

3#12, 1#12G., 3/4"C.
VFD
30A/3P/NF/N4XSS
PCHW-1

EXIST. DISTRIBUTION PANEL 'DP2'
277/480V, 3PH., 4W, 400A MLO
22,000 A.I.C.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
100A 3P	100A/3P SPARE	60A 3P	SPACE	20A 3P	20A 3P		20A 3P	20A 3P	100A/3P SPARE	100A/3P SPARE	NEW 80A/3P	NEW 80A/3P	NEW 40A/3P	NEW 40A/3P	NEW 20A/3P	NEW 20A/3P			
EXISTING (TYP.)											3#4, 1#8G., 1"C.	3#4, 1#8G., 1"C.	3#8, 1#10G., 3/4"C.	3#8, 1#10G., 3/4"C.	3#12, 1#12G., 3/4"C.	3#12, 1#12G., 3/4"C.			

PANEL 'HA1'

AHU-1 | AHU-2 | AHU-3 | HWP | P-1 | AHU-4 | P-9 | P-10 | BOILER BLOWER

VFD: P-9 | P-10 | HWP-1 | HWP-2 | HWP-3 | HWP-4

EXIST. DISTRIBUTION PANEL 'DP4'
277/480V, 3PH., 4W, 600A MLO
22,000 A.I.C.

1	2	3	4	5	6	7	8	9
100A 3P	175A 3P	30A 3P	30A 3P	100A/3P SPARE	225A 3P	30A 3P	NEW 20A	NEW 20A	SPACE

FAULT CURRENT: 8,966 AMPS

EXISTING | EXISTING | EXISTING | EXISTING | EXISTING | EXISTING | EXISTING | 3#12, 1#12G., 3/4"C. | 3#12, 1#12G., 3/4"C.

PANEL 'HB2'
TO AHU-14 | TO AHU-15 | TO AHU-16

XFMR 'TB2' 112.5 KVA 480: 120/208V., 3PH, 4W.
PANEL 'LB2' | PANEL 'LB3' | PANEL 'LB4'

XFMR 'TC2' 75 KVA 480: 120/240V., 1PH, 3W.
FAULT CURRENT: PRIM - 3,965 AMPS SEC - 4,502 AMPS
3#3, 1#8G.,1-1/4"C.
PANEL 'LC2' — FAULT CURRENT: 4,476 AMPS
PANEL 'LC3' — SPDL — FAULT CURRENT: 4,284 AMPS

VFD: 30A/3P/NF/N4XSS — RMUA-1 (ON ROOF)
VFD: 30A/3P/NF/N4XSS — RMAHU-1 (ON ROOF)

-EXISTING LABEL-

SERVICE EQUIPMENT AVAILABLE FAULT CURRENT LABELING:
PROVIDE A 2 x 3 INCH LABEL WITH BLUE LETTERING ON CONTRASTING BACKGROUND PERMANENTLY AFFIXED TO THE SERVICE DISCONNECT/EQUIPMENT PRIOR TO ENERGIZING THE SERVICE EQUIPMENT. THE LABEL SHALL INCLUDE THE DATE OF INSTALLATION AND THE DATE OF CALCULATION. THE DATE OF CALCULATION SHALL BE THE DATE INDICATED BY THE ENGINEER OF RECORD'S SEAL ON THE CONSTRUCTION DOCUMENT ELECTRICAL ONE-LINE DIAGRAM/RISER DRAWING. EXAMPLE:

SERVICE EQUIPMENT AVAILABLE FAULT CURRENT: 22,111 AMPS
DATE OF INSTALLATION: MM/DD/YY
DATE OF CALCULATION: 01/21/222
SWITCHBOARD M

277/480V., 3-PH., 4W., 100kW / 125kVA NATURAL GAS STAND-BY GENERATOR
EPO
200A/3P LSI TRIP
4#3/0, 1#4G., 2"C.

'MTS' 200A/3P MANUAL TRANSFER SWITCH
100A/3P LSI TRIP ENCLOSED BREAKER
4#3/0, 1#4G., 2"C.
WIREWAY 'EMA'
100A/3P LSI TRIP ENCLOSED BREAKER
SPDL
4#3, 1#6G., 1-1/4"C.
4#3, 1#6G., 1-1/4"C.

ATS-LS, NEMA-1 LIFE SAFETY 125A/4P 30K WCR
4#3, 1#8G., 1-1/4"C.
PANEL 'ELHA'
SPDL
3#8, 1#10G., 3/4"C.
XFMR 'EL' 30 KVA 480: 120/208V., 3PH, 4W.
2#6
4#3, 1#6G., 1-1/4"C.
PANEL 'EL'

ATS-EQ, NEMA-1 EQUIPMENT 125A/4P 30K WCR
4#3, 1#8G., 1-1/4"C.
PANEL 'EQHA'
SPDL
3#8, 1#10G., 3/4"C.
XFMR 'TELLA' 30 KVA 480: 120/208V., 3PH, 4W.
2#6
4#3, 1#6G., 1-1/4"C.
PANEL 'EQLA'
SPDL

EXIST. DISTRIBUTION PANEL 'DP3'
277/480V, 3PH., 4W, 600A MCB
22,000 A.I.C.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
600A 3P	225A 3P	70A/3P SPARE	80A 3P	100A 3P	100A 3P	100A 3P	100A 3P	125A 3P	100A/3P SPARE		20A 3P	20A 3P	20A 3P	30A 3P	50A 3P	20A 3P
	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING										

TO DC2

FCU-1 | FCU-2 | AHU-19 | AHU-18 | AHU-17 | AHU-13

PANEL 'HD2'
XFMR 'TD2' 30 KVA 480: 120/208V., 3PH, 4W.
PANEL 'SL1'
PANEL 'LD2'

PANEL 'HD1'
XFMR 'TD3' 75 KVA 480: 120/208V., 3PH, 4W.
PANEL 'SL2'

PANEL 'HC1'
XFMR 'TC1' 30 KVA 480: 120/208V., 3PH, 4W.
PANEL 'LC1'

PANEL 'HB1'
XFMR 'TB1' 30 KVA 480: 120/208V., 3PH, 4W.
PANEL 'LB1'

XFMR 'TD1' 75 KVA 480: 120/208V., 3PH, 4W.
PANEL 'LD1'
PANEL 'LD3'

EXIST. DISTRIBUTION PANEL 'DP1'
277/480V, 3PH., 4W, 225A MLO
22,000 A.I.C.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
20A/3P SPARE	100A 3P	SPACE	SPACE													
EXISTING																

AHU-9 | AHU-10 | AHU-11 | AHU-12 | F-5 | F-3 | AHU-2 | AHU-3 | F-1 | AHU-5 | AHU-6 | AHU-7 | AHU-8

XFMR 'TA1' 75 KVA 480: 120/208V., 3PH, 4W.
PANEL 'LA' (2-SECTION)

LINETYPE LEGEND

DISCONNECT AND REMOVE	- - - - - - - - - -
EXISTING TO REMAIN	————
NEW WORK	————

PANELBOARD CIRCUIT DIRECTORY:

CONTRACTOR SHALL RECORD AND/OR PRESERVE THE EXISTING CIRCUIT DIRECTORY, IF ANY, FOR THE SOLE PURPOSE UPON COMPLETION OF NEW WORK OF PRODUCING A NEW CIRCUIT DIRECTORY.

CONTRACTOR SHALL PROVIDE AS PART OF THE CONSTRUCTION DOCUMENTS A NEW, NEATLY TYPED DIRECTORY. CONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AND SHALL LEGIBLY IDENTIFY AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE. LOADS SERVED AND LOCATION AND/OR THE PANELBOARD SCHEDULE ON THE DRAWINGS. THE WORD "EXISTING" SHALL NOT BE USED ON PANELBOARD DIRECTORIES. SPARE BREAKERS ARE TO BE LISTED AS "SPARE". SPACES WITH NO BREAKERS ARE TO BE LEFT BLANK. REFER TO NEC-2017: 408.4(A)

ALL EQUIPMENT/MATERIALS TO BE INSTALLED SHALL BE LISTED AND LABELED FOR THE INTENDED USE, AND INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY. ONLY LISTED AND LABELED EQUIPMENT/MATERIALS SHALL BE USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC ARTICLE 110.3(B). CITY OF HOUSTON ELECTRICAL CODE SECTION 508, AND AUTHORITY HAVING JURISDICTION REQUIREMENTS.

THE SHORT-CIRCUIT CURRENT RATING OF TRANSFER EQUIPMENT, BASED ON THE SPECIFIC OVERCURRENT PROTECTIVE DEVICE TYPE AND SETTINGS PROTECTING THE TRANSFER EQUIPMENT, SHALL BE FIELD MARKED ON THE EXTERIOR OF THE TRANSFER EQUIPMENT. PER ARTICLE NEC 701.5(D).

ELECTRICAL LOAD ANALYSIS: MSB
480V,3PH.,4W

LOAD DESCRIPTION	LOAD KVA
PEAK KVA = 612.0 kVA @ 125%	765.0
LOAD REMOVED	-110.0
NEW LOAD	
LIGHTING @ 125%	39.0
RECEPTACLES (CONNECTED)	(24.3)
1ST 10KVA @ 100% (NEC 220-44)	10.0
REMAINDER @ 50% (NEC 220-44)	7.3
MISCELLANEOUS	39.6
HVAC: AHU'S, PUMPS, ETC	44.2
KITCHEN EQUIPMENT @ 65%	13.0
CHILLERS	201.6
TOTAL	1119.7

TOTAL / 480 /$\sqrt{3}$ = 1347.4 AMPS
EXISTING 2500 AMP SERVICE

GENERATOR LOAD ANALYSIS
480V,3PH.,4W

LOAD DESCRIPTION	LOAD KVA
EXISTING LOAD	42.0
NEW LIGHTING @ 125%	29.1
NEW RECEPTACLES @ 100%	1.4
NEW MISCELLANEOUS @ 100%	2.0
NEW HVAC @ 100%	5.1
TOTAL CONNECTED LOAD	79.6

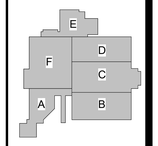
GENERATOR CAPACITY - 100KW X 1.25 = 125.0 KVA

1 ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS 80219 LICENSED 10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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Salas O'Brien Project Number: 2022-05088-00

ELECTRICAL ONE-LINE DIAGRAM

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E5.11
Drawn By: DES	
Date: 10.29.2025	

10/28/2025 1:58:47 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01_02 CREEKWOOD & RIVERWOOD MS ADD & RENO_MEPT.rvt

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Branch Panel: LA

Location: Space 131 | **Supply From:** 45 kVA, 277 V/480 V,... | **Mounting:** Surface
Volts: 120/208 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 10,000 | **Enclosure:** Type 1 | **Mains:** 225A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	2	
	3	Existing Circuit	--	20 1		0.2 / 0.5		1	20 #12	Chiller Heater(30mA EGFI)	4	1,G
	5	Existing Circuit	--	20 1			0.2 / 0.5	1	20 #12	Chiller Controls / Valves	6	1
--	7	Space	--	-- 1	0.0 / 0.2			1	20 --	Existing Circuit	8	
--	9	Space	--	-- 1		0.0 / 0.2		1	20 --	Existing Circuit	10	
	11	Existing Circuit	--	30 1			0.2 / 0.2	1	20 --	Existing Circuit	12	
	13	Existing Circuit	--	20 1	0.2 / 1.0			2	20 #12	Boiler (B-1)	14	1
	15	Existing Circuit	--	20 1		0.2 / 1.0					16	
	17	Existing Circuit	--	20 1			0.2 / 1.0	2	20 #12	Boiler (B-2)	18	1
	19	Existing Circuit	--	20 1	0.2 / 1.0						20	
	21	Existing Circuit	--	20 1		0.2 / 0.0		1	-- --	Space	22	--
	23	Existing Circuit	--	20 1			0.2 / 0.0	1	-- --	Space	24	--
--	25	Space	--	-- 1	0.0 / 0.2			1	20 --	Existing Circuit	26	
	27	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	28	
	29	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	30	
	31	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	32	
	33	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	34	
	35	Existing Circuit	--	20 1			0.2 / 0.0	1	-- --	Space	36	--
	37	Existing Circuit	--	20 1	0.2 / 0.0			1	-- --	Space	38	--
	39	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	40	
	41	Existing Circuit	--	20 1			0.2 / 0.0	1	-- --	Space	42	--
--	43	Space	--	-- 1	0.0 / 0.2			1	20 --	Existing Circuit	44	
--	45	Space	--	-- 1		0.0 / 0.2		1	20 --	Existing Circuit	46	
	47	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	48	
	49	Existing Circuit	--	20 1	0.2 / 0.1						50	
--	51	Space	--	-- 1		0.0 / 0.1		3	30 --	Existing Circuit	52	
--	53	Space	--	-- 1			0.0 / 0.1				54	
	55	Existing Circuit	--	20 1	0.2 / 0.0			1	-- --	Space	56	--
	57	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	58	
--	59	Space	--	-- 1			0.0 / 0.2	1	20 --	Existing Circuit	60	
	61	Existing Circuit	--	20 2	0.1 / 0.1			2	20 --	Existing Circuit	62	
	63					0.1 / 0.1					64	
	65	Existing Circuit	--	20 2			0.1 / 0.1	2	20 --	Existing Circuit	66	
	67				0.1 / 0.1						68	
	69	Existing Circuit	--	20 2		0.1 / 0.1		2	20 --	Existing Circuit	70	
	71						0.1 / 0.1				72	
	73	Existing Circuit	--	20 1	0.2 / 0.1			2	20 --	Existing Circuit	74	
	75	Existing Circuit	--	20 1		0.2 / 0.1					76	
	77	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	78	
	79	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	80	
	81	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	82	
	83	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	84	
	85	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	86	
	87	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	88	
	89	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	90	
	91	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	92	
	93	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	94	
	95	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	96	
--	97	Space	--	-- 1	0.0 / 0.2			1	20 --	Existing Circuit	98	
	99	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	100	
	101	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	102	
	103	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	104	
	105	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	106	
	107	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	108	
	109	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	110	
	111	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	112	
	113	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	114	
	115	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	116	
	117	Existing Circuit	--	20 1		0.2 / 0.2		1	20 --	Existing Circuit	118	
	119	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	120	
	121	Existing Circuit	--	20 1	0.2 / 0.2			1	20 --	Existing Circuit	122	
	123	Existing Circuit	--	20 1		0.2 / 0.1		2	20 --	Existing Circuit	124	
	125	Existing Circuit	--	20 1			0.2 / 0.1				126	
	127	Existing Circuit	--	20 1	0.2 / 0.1			2	20 --	Existing Circuit	128	
	129	Existing Circuit	--	20 1		0.2 / 0.1					130	
	131	Existing Circuit	--	20 1			0.2 / 0.2	1	20 --	Existing Circuit	132	
		Total Load:			8.5 kVA	8.3 kVA	8.3 kVA					
		Total Amps:			71 A	69 A	69 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Miscellaneous	5.2 kVA	100.00%	5.2 kVA		
Existing Circuit	20.0 kVA	100.00%	20.0 kVA	**Total Conn. Load:**	25.2 kVA
				Total Est. Demand:	25.2 kVA
				Total Conn. Current:	70 A
				Total Est. Demand...	70 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LF

Location: MECHANICAL... | **Supply From:** TLF | **Mounting:** Surface
Volts: 120/208 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 10,000 | **Enclosure:** Type 1 | **Mains:** 150A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Receptacles MECHANICAL	#12	20 1	0.5 / 0.7			1	20 #12	Receptacles STORAGE x130	2	
	3	Receptacles CORRIDOR x157	#12	20 1		0.5 / 2.5		1	30 #10	Electric Hand Dryer	4	LF
LF	5	Electric Hand Dryer	#10	30 1			2.5 / 2.5	1	30 #10	Electric Hand Dryer	6	LF
LF	7	Electric Hand Dryer	#10	30 1	2.5 / 0.7			1	20 #12	Receptacles DANCE E104	8	
	9	Receptacles Room E101	#12	20 1		0.7 / 0.5		1	20 #12	Receptacles MECHACCESS...	10	
	11	Gym Scoreboard	#12	20 1			2.0 / 0.4	1	20 #12	Receptacles GYM E101	12	
	13	Receptacles Room x135, x136, -	#12	20 1	0.7 / 0.7			1	20 #12	Receptacles DANCE E104	14	
	15	Receptacles	#8	20 1		0.5 / 0.5		1	20 #12	Motorized Basketball Goal	16	
	17	Motorized Basketball Goal	#12	20 1			0.5 / 0.5	1	20 #12	Motorized Basketball Goal	18	
	19	Motorized Basketball Goal	#12	20 1	0.5 / 0.5			1	20 #12	Motorized Basketball Goal	20	
	21	Motorized Basketball Goal	#12	20 1		0.5 / 0.4		1	20 #12	Drinking Fountain	22	
	23	Receptacles DANCE X 13	#12	20 1			0.9 / 1.3				24	
	25	Receptacles GYM E101		20 1	0.5 / 1.3			3	20 #12	Motorized Gym Bleacher	26	
	27	Miscellaneous CUST. E106	#12	20 1		0.5 / 1.3					28	
	29	EWH-1	#12	20 2			1.5 / 1.5	1	20 #12	Miscellaneous MECHANICAL...	30	
	31				1.5 / 0.4			1	20 #12	Receptacles IDF E107	32	
	33					1.3 / 0.5		1	20 #12	Receptacles DANCE E104	34	
	35	Motorized Gym Bleacher	#12	20 3			1.3 / 0.5	1	20 #12	Receptacles DANCE E104	36	
	37				1.3 / 0.0						38	
	39	Receptacles GYM E101	#12	20 1		0.5 / 0.0		3	30 --	SPDL	40	--
	41	EF-2	#12	20 1			0.3 / 0.0				42	
	43	Motorized Partition	#12	20 1	0.5 / 0.0			1	20 --	Spare	44	--
	45	Motorized Hoist	#12	20 1		0.5 / 0.0		1	20 --	Spare	46	--
	47	Motorized Shades	#12	20 1			1.1 / 0.0	1	20 --	Spare	48	--
	49	Motorized Shades	#12	20 1	0.8 / 0.0			1	20 --	Spare	50	--
	51	Motorized Shades	#12	20 1		0.5 / 0.0		1	20 --	Spare	52	--
	53	Motorized Door	#12	20 1			0.5 / 0.0	1	20 --	Spare	54	--
--	55	Spare	--	20 1	0.0 / 0.0			1	20 --	Spare	56	--
--	57	Spare	--	20 1		0.0 / 0.0		1	20 --	Spare	58	--
--	59	Spare	--	20 1			0.0 / 0.0	1	20 --	Spare	60	--
--	61	Spare	--	20 1	0.0 / 0.0			1	20 --	Spare	62	--
--	63	Spare	--	20 1		0.0 / 0.0		1	20 --	Spare	64	--
--	65	Spare	--	20 1			0.0 / 0.0	1	20 --	Spare	66	--
--	67	Spare	--	20 1	0.0 / 0.0			1	20 --	Spare	68	--
--	69	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	70	--
--	71	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	72	--
--	73	Space	--	-- 1	0.0 / 0.0			1	-- --	Space	74	--
--	75	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	76	--
--	77	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	78	--
--	79	Space	--	-- 1	0.0 / 0.0			1	-- --	Space	80	--
--	81	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	82	--
--	83	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	84	--
		Total Load:			13.2 kVA	11.4 kVA	17.3 kVA					
		Total Amps:			112 A	95 A	146 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	3.3 kVA	100.00%	3.3 kVA		
Miscellaneous	29.3 kVA	100.00%	29.3 kVA	**Total Conn. Load:**	41.9 kVA
Receptacles	9.4 kVA	100.00%	9.4 kVA	**Total Est. Demand:**	41.9 kVA
				Total Conn. Current:	116 A
				Total Est. Demand...	116 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: HF

Location: MECHANICAL... | **Supply From:** M | **Mounting:** Surface
Volts: 277/480 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 18,000 | **Enclosure:** Type 1 | **Mains:** 200A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1				13.2 / 3.4						2	
	3	XFMR TLF	1-L	70 3		11.4 / 3.4		3	20 #12	AHU-1	4	
	5						17.3 / 3.4				6	
	7				1.7 / 1.7						8	
	9	AHU-2	#12	20 3		1.7 / 1.7		3	20 #12	OAU-1	10	
	11						1.7 / 1.7				12	
	13	Lighting	#12	20 1	2.9 / 0.0			1	-- --	Space	14	--
	15	Lighting	#12	20 1		2.6 / 0.0		1	-- --	Space	16	--
	17	Lighting	#12	20 1			2.3 / 0.0	1	-- --	Space	18	--
	19	Exterior Lighting	#8	20 1	1.2 / 0.0			1	-- --	Space	20	--
--	21	Spare	--	20 1		0.0 / 0.0		1	-- --	Space	22	--
--	23	Spare	--	20 1			0.0 / 0.0	1	-- --	Space	24	--
--	25	Spare	--	20 1	0.0 / 0.0			1	-- --	Space	26	--
--	27	Spare	--	20 1		0.0 / 0.0		1	-- --	Space	28	--
--	29	Spare	--	-- 1			0.0 / 0.0	1	-- --	Space	30	--
--	31	Spare	--	-- 1	0.0 / 0.0			1	-- --	Space	32	--
--	33	Spare	--	-- 1		0.0 / 0.0		1	-- --	Space	34	--
--	35	Spare	--	-- 1			0.0 / 0.0	1	-- --	Space	36	--
--	37	Spare	--	-- 1	0.0 / 0.0						38	
--	39	Spare	--	-- 1		0.0 / 0.0		3	30 --	SPDL	40	--
--	41	Spare	--	-- 1			0.0 / 0.0				42	
		Total Load:			23.6 kVA	20.2 kVA	25.7 kVA					
		Total Amps:			87 A	73 A	95 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	23.6 kVA	100.00%	23.6 kVA		
Lighting	9.0 kVA	125.00%	11.3 kVA	**Total Conn. Load:**	69.4 kVA
Miscellaneous	29.3 kVA	100.00%	29.3 kVA	**Total Est. Demand:**	71.7 kVA
Receptacles	9.4 kVA	100.00%	9.4 kVA	**Total Conn. Current:**	84 A
				Total Est. Demand...	86 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: ELHA

EXISTING

Location: Space 35 | **Supply From:** ATS-LS | **Mounting:** Surface
Volts: 277/480 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 18,000 | **Enclosure:** Type 1 | **Mains:** 100A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	3.0 / 0.9			1	20 #8	Emergency Lighting	2	
	3	Existing Circuit	--	20 1		3.0 / 3.0		1	20 #8	Emergency Lighting	4	
	5	Existing Circuit	--	20 1			3.0 / 3.2	1	20 #8	Emergency Lighting	6	
	7				4.4 / 2.2			1	20 #8	Emergency Lighting	8	1
	9	XFMR TEL	EX.	45 3		2.4 / 2.1		1	20 #8	Emergency Lighting	10	1
	11						4.3 / 1.7	1	20 #8	Emergency Lighting	12	1
1	13	Emergency Lighting	#8	20 1	3.3 / 3.3			1	20 #8	Emergency Lighting	14	1
--	15	Space	--	-- 1		0.0 / 3.0		1	20 #8	Emergency Lighting	16	1
--	17	Space	--	-- 1			0.0 / 1.3	1	20 #8	Emergency Lighting	18	1
--	19	Space	--	-- 1	0.0 / 0.0						20	
--	21	Space	--	-- 1		0.0 / 0.0		3	30 --	(E)SPD	22	--
--	23	Space	--	-- 1			0.0 / 0.0				24	
		Total Load:			17.0 kVA	13.3 kVA	13.4 kVA					
		Total Amps:			61 A	48 A	48 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	5.1 kVA	100.00%	5.1 kVA		
Lighting	23.9 kVA	125.00%	29.9 kVA	**Total Conn. Load:**	43.6 kVA
Miscellaneous	1.0 kVA	100.00%	1.0 kVA	**Total Est. Demand:**	49.6 kVA
Receptacles	1.4 kVA	100.00%	1.4 kVA	**Total Conn. Current:**	52 A
Existing Circuit	12.9 kVA	100.00%	12.9 kVA	**Total Est. Demand...**	60 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LE

NEW

Location: MECH A133 | **Supply From:** TLE | **Mounting:** Surface
Volts: 120/208 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 10,000 | **Enclosure:** Type 1 | **Mains:** 100A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Receptacles Room X.04, x4, X.0...	#12	20 1	0.7 / 0.7			1	20 #12	Receptacles BAND HALL X.02	2	
	3	Receptacles OFFICE X.30	#12	20 1		0.9 / 0.9		1	20 #12	Receptacles Room X.32, X.23,...	4	
	5	Receptacles BAND HALL X.02	#12	20 1			1.4 / 0.5	1	20 #12	Receptacles Room x143, X.27	6	
	7	Receptacles	#12	20 1	0.4 / 1.1			1	20 #12	Receptacles COMPUTER LAB...	8	
	9	Receptacles COMPUTER LAB...	#12	20 1		0.7 / 0.7		1	20 #12	Receptacles COMPUTER LAB...	10	
	11	Receptacles COMPUTER LAB...	#12	20 1			0.7 / 0.4	1	20 #12	Receptacles COMPUTER LAB...	12	
	13	Receptacles COMPUTER LAB...	#12	20 1	0.4 / 0.4			1	20 #12	Receptacles COMPUTER LAB...	14	
	15	Receptacles COMPUTER LAB...	#12	20 1		1.1 / 0.4		1	20 #12	Receptacles COMPUTER LAB...	16	
	17	AV Rack RM. A135	#12	20 1			0.2 / 0.4	1	20 #12	Receptacles COMPUTER LAB...	18	
	19	Receptacles COMPUTER LAB...	#12	20 1	0.4 / 0.0			1	20 --	Spare	20	--
	21	Motorized Shades	#12	20 1		0.1 / 0.0		1	20 --	Spare	22	--
	23	Air Purification	#12	20 1			0.9 / 0.0	1	20 --	Spare	24	--
--	25	Spare	--	20 1	0.0 / 0.0			1	20 --	Spare	26	--
--	27	Spare	--	20 1		0.0 / 0.0		1	20 --	Spare	28	--
--	29	Spare	--	20 1			0.0 / 0.0	1	20 --	Spare	30	--
--	31	Spare	--	20 1	0.0 / 0.0			1	20 --	Spare	32	--
--	33	Spare	--	20 1		0.0 / 0.0		1	20 --	Spare	34	--
--	35	Spare	--	20 1			0.0 / 0.0	1	20 --	Spare	36	--
--	37	Spare	--	20 1	0.0 / 0.0						38	
--	39	Spare	--	20 1		0.0 / 0.0		3	30 --	SPDL	40	--
--	41	Spare	--	20 1			0.0 / 0.0				42	
		Total Load:			4.0 kVA	4.8 kVA	4.5 kVA					
		Total Amps:			33 A	40 A	38 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	0.4 kVA	100.00%	0.4 kVA		
Miscellaneous	0.8 kVA	100.00%	0.8 kVA	**Total Conn. Load:**	13.2 kVA
Receptacles	12.1 kVA	91.46%	11.0 kVA	**Total Est. Demand:**	12.2 kVA
				Total Conn. Current:	37 A
				Total Est. Demand...	34 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: HB1

EXISTING

Location: Space 35 | **Supply From:** DP3 | **Mounting:** Surface
Volts: 277/480 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 18,000 | **Enclosure:** Type 1 | **Mains:** 100A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	3.0 / 3.0			1	20 --	Existing Circuit	2	
	3	Existing Circuit	--	20 1		3.0 / 3.0		1	20 --	Existing Circuit	4	
	5	Existing Circuit	--	20 1			3.0 / 3.0	1	20 --	Existing Circuit	6	
	7	Existing Circuit	--	20 1	3.0 / 3.0			1	20 --	Existing Circuit	8	
	9	Existing Circuit	--	20 1		3.0 / 3.0		1	20 --	Existing Circuit	10	
	11	Existing Circuit	--	20 1			3.0 / 3.0	1	20 --	Existing Circuit	12	
1	13	FCU-1	#12	20 1	1.9 / 0.0						14	
1	15	FCU-2	#12	20 1		1.9 / 0.0		3	50 --	XFMR TB1	16	
1	17	FCU-3	#12	20 1			1.9 / 0.0				18	
--	19	Space	--	-- 1	0.0 / 0.0						20	
--	21	Space	--	-- 1		0.0 / 0.0		3	80 --	EXISTING CIRCUIT	22	--
--	23	Space	--	-- 1			0.0 / 0.0				24	
--	25	Space	--	-- 1	0.0 / 0.0			1	-- --	Space	26	--
--	27	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	28	--
--	29	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	30	--
--	31	Space	--	-- 1	0.0 / 0.0			1	-- --	Space	32	--
--	33	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	34	--
--	35	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	36	--
--	37	Space	--	-- 1	0.0 / 0.0			1	-- --	Space	38	--
--	39	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	40	--
--	41	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	42	--
		Total Load:			13.6 kVA	13.6 kVA	13.6 kVA					
		Total Amps:			49 A	49 A	49 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	5.6 kVA	100.00%	5.6 kVA		
Existing Circuit	36.0 kVA	100.00%	36.0 kVA	**Total Conn. Load:**	40.8 kVA
				Total Est. Demand:	40.8 kVA
				Total Conn. Current:	49 A
				Total Est. Demand...	49 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: HC1

EXISTING

Location: Space 20 | **Supply From:** DP3 | **Mounting:** Surface
Volts: 277/480 Wye | **Phases:** 3 | **Wires:** 4
A.I.C. Rating: 18,000 | **Enclosure:** Type 1 | **Mains:** 100A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	3.0 / 3.0			1	20 --	Existing Circuit	2	
	3	Existing Circuit	--	20 1		3.0 / 3.0		1	20 --	Existing Circuit	4	
	5	Existing Circuit	--	20 1			3.0 / 3.0	1	20 --	Existing Circuit	6	
	7	Existing Circuit	--	20 1	3.0 / 3.0			1	20 --	Existing Circuit	8	
	9	Existing Circuit	--	20 1		3.0 / 3.0		1	20 --	Existing Circuit	10	
--	11	Space	--	-- 1			0.0 / 1.5				12	
	13				3.3 / 1.5			2	30	Existing Circuit	14	
	15	EX. XFMR TC1	EX.	50 3		3.5 / 0.0		1	-- --	Space	16	--
	17						2.9 / 0.0	1	-- --	Space	18	--
1	19	FCU-5	#12	20 1	1.9 / 1.0						20	
1	21	FCU-7	#12	20 1		1.9 / 1.0		3	80 --	Existing Circuit	22	
1	23	FCU-8	#8	20 1			1.9 / 1.0				24	
1	25	FCU-6	#12	20 1	1.9 / 0.0			1	-- --	Space	26	--
--	27	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	28	--
--	29	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	30	--
--	31	Space	--	-- 1	0.0 / 0.0			1	-- --	Space	32	--
--	33	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	34	--
--	35	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	36	--
--	37	Space	--	-- 1	0.0 / 0.0			1	-- --	Space	38	--
--	39	Space	--	-- 1		0.0 / 0.0		1	-- --	Space	40	--
--	41	Space	--	-- 1			0.0 / 0.0	1	-- --	Space	42

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Branch Panel: EL

EXISTING

Location: Space 335 | **Supply From:** TEL | **Mounting:** Surface | **Volts:** 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **A.I.C. Rating:** 10,000 | **Enclosure:** Type 1 | **Mains:** 80A MCB

Phase in kVA

Note	CK T	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CK T	Note
	1	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	2	
	3	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	4	
	5	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	6	
	7	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	8	
	9	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	10	
	11	DMS-1 / DMSCU-1	#8	30	2	2.5 / 0.5			1	20	#8	Fire Alarm Booster Panel	14	1,LO
	13							2.5 / 0.3	1	30	--	Existing Circuit	12	
	15	Existing Circuit	--	20	1		0.3 / 0.5		1	20	#8	Fire Alarm Booster Panel	16	1,LO
	17	Existing Circuit	--	20	1			0.3 / 0.4	1	20	#8	IDF Receptacle	18	1
--	19	Space	--	--	1	0.0 / 0.4			1	20	#8	IDF Receptacle	20	1
--	21	Space	--	--	1		0.0 / 0.4		1	20	#8	IDF Receptacle	22	1
--	23	Space	--	--	1			0.0 / 0.4	1	20	#8	IDF Receptacle	24	1
			Total Load:			4.4 kVA	2.4 kVA	4.3 kVA						
			Total Amps:			39 A	20 A	38 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals
HVAC	5.1 kVA	100.00%	5.1 kVA	
Miscellaneous	1.0 kVA	100.00%	1.0 kVA	**Total Conn. Load:** 11.0 kVA
Receptacles	1.4 kVA	100.00%	1.4 kVA	**Total Est. Demand:** 11.0 kVA
Existing Circuit	3.9 kVA	100.00%	3.9 kVA	**Total Conn. Current:** 30 A
				Total Est. Demand... 30 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: EQLA

EXISTING

Location: Space 131 | **Supply From:** TEQLA | **Mounting:** Surface | **Volts:** 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **A.I.C. Rating:** 10,000 | **Enclosure:** Type 1 | **Mains:** 100A MCB

Phase in kVA

Note	CK T	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CK T	Note
	1					2.9 / 0.8							2	
	3	Existing Circuit	#8	35	3		2.9 / 0.8		3	20	#12	Existing Circuit	4	
	5							2.9 / 0.8					6	
	7	Existing Circuit	#12	20	1	1.0 / 0.5			1	20	#12	Existing Circuit	8	
	9	Existing Circuit	#12	20	2		1.1 / 1.1		2	20	#12	Existing Circuit	10	
	11							1.1 / 1.1					12	
	13	Existing Circuit	#12	20	1	0.5 / 0.0			1	--	--	Space	14	--
	15	Existing Circuit	#12	20	1		0.5 / 0.0		1	--	--	Space	16	--
	17	Existing Circuit	#10	20	1			0.5 / 0.0	1	--	--	Space	18	--
1,LO	19	BMCS	#8	20	1	0.5 / 0.0			1	--	--	Space	20	--
1,LO	21	BMCS	#8	20	1		0.5 / 0.0		1	--	--	Space	22	--
--	23	Spare	--	20	1			0.0 / 0.0	1	--	--	Space	24	--
--	25	Spare	--	20	1	0.0 / 0.1			1	20			26	
--	27	Spare	--	20	1		0.0 / 0.1		3	30	--	SPDL	28	
--	29	Spare	--	20	1			0.0 / 0.1					30	
			Total Load:			6.3 kVA	7.0 kVA	6.5 kVA						
			Total Amps:			53 A	59 A	54 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals
Miscellaneous	1.0 kVA	100.00%	1.0 kVA	
Existing Circuit	18.8 kVA	100.00%	18.8 kVA	**Total Conn. Load:** 19.8 kVA
				Total Est. Demand: 19.8 kVA
				Total Conn. Current: 55 A
				Total Est. Demand... 55 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

Abbreviations:
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LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: SL1

EXISTING

Location: ELEC / AIR COMP... | **Supply From:** TD2 | **Mounting:** Surface | **Volts:** 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **A.I.C. Rating:** 10,000 | **Enclosure:** Type 1 | **Mains:** 50A

Phase in kVA

Note	CK T	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CK T	Note
	1	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	2	
	3	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	4	
	5	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	6	
	7	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	8	
	9	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	10	
	11	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	12	
	13	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	14	
	15	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	16	
	17	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	18	
	19	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	20	
	21	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	22	
	23	Existing Circuit	--	20	1			0.3 / 0.0	1	--	--	Space	24	--
1	25	Receptacles SHOP A107	#12	20	1	0.4 / 0.0			1	--	--	Space	26	--
1	27	Receptacles SHOP A107	#12	20	1		0.4 / 0.0		1	--	--	Space	28	--
--	29	Space	--	--	1			0.0 / 0.0	1	--	--	Space	30	--
--	31	Space	--	--	1	0.0 / 0.0			1	--	--	Space	32	--
--	33	Space	--	--	1		0.0 / 0.0		1	--	--	Space	34	--
--	35	Space	--	--	1			0.0 / 0.0	1	--	--	Space	36	--
--	37	Space	--	--	1	0.0 / 0.0			1	--	--	Space	38	--
--	39	Space	--	--	1		0.0 / 0.0		1	--	--	Space	40	--
--	41	Space	--	--	1			0.0 / 0.0	1	--	--	Space	42	--
--	43	Space	--	--	1	0.0 / 0.0			1	--	--	Space	44	--
--	45	Space	--	--	1		0.0 / 0.0		1	--	--	Space	46	--
--	47	- - - SHUNT TRIP - - -	--	20	1			0.0 / 0.0	1	--	--	Space	48	--
	49					0.0 / 0.0			1	--	--	Space	50	--
--	51	MAIN	--	50	3		0.0 / 0.0		1	--	--	Space	52	--
	53							0.0 / 0.0	1	--	--	Space	54	--
			Total Load:			2.8 kVA	2.8 kVA	2.1 kVA						
			Total Amps:			24 A	24 A	18 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals
Receptacles	0.7 kVA	100.00%	0.7 kVA	
Existing Circuit	6.9 kVA	100.00%	6.9 kVA	**Total Conn. Load:** 7.6 kVA
				Total Est. Demand: 7.6 kVA
				Total Conn. Current: 21 A
				Total Est. Demand... 21 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LC1

Location: Space 20 | **Supply From:** 75 kVA, 277 V/480 V,... | **Mounting:** Surface | **Volts:** 120/208 Wye | **Phases:** 3 | **Wires:** 4 | **A.I.C. Rating:** 10,000 | **Enclosure:** Type 1 | **Mains:** 100A MCB

Phase in kVA

Note	CK T	Circuit Description	Wire	Breaker		A	B	C	Breaker		Wire	Circuit Description	CK T	Note
	1	Existing Circuit	--	20	1	0.3 / 0.2							2	
	3	Existing Circuit	--	20	1		0.3 / 0.2		2	20	--	Existing Circuit	4	
	5	Existing Circuit	--	20	1			0.3 / 0.2					6	
	7	Existing Circuit	--	20	1	0.3 / 0.2							8	
	9	Existing Circuit	--	20	1		0.3 / 0.3		2	20	--	Existing Circuit	10	
	11	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	12	
	13	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	14	
	15	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	16	
	17	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	18	
	19	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	20	
	21	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	22	
	23	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	24	
	25	Existing Circuit	--	20	1	0.3 / 0.0			1	--	--	Space	26	--
	27	Existing Circuit	--	20	1		0.3 / 0.0		1	--	--	Space	28	--
--	29	Space	--	--	1			0.0 / 0.0	1	--	--	Space	30	--
	31	Existing Circuit	--	20	1	0.3 / 0.3			1	20	--	Existing Circuit	32	
	33	Existing Circuit	--	20	1		0.3 / 0.3		1	20	--	Existing Circuit	34	
	35	Existing Circuit	--	20	1			0.3 / 0.3	1	20	--	Existing Circuit	36	
--	37	Space	--	--	1	0.0 / 0.3			1	20	--	Existing Circuit	38	
	39	Existing Circuit	--	20	1		0.3 / 0.0		1	--	--	Space	40	--
--	41	Space	--	--	1			0.0 / 0.0	1	--	--	Space	42	--
--	43	Space	--	--	1	0.0 / 0.0							44	
--	45	Space	--	--	1		0.0 / 0.0		3	100	--	MAIN	46	--
--	47	Space	--	--	1			0.0 / 0.0					48	
			Total Load:			3.3 kVA	3.5 kVA	2.9 kVA						
			Total Amps:			28 A	29 A	24 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals
Existing Circuit	9.6 kVA	100.00%	9.6 kVA	
				Total Conn. Load: 9.6 kVA
				Total Est. Demand: 9.6 kVA
				Total Conn. Current: 27 A
				Total Est. Demand... 27 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LC2

EXISTING

Location: Space 280 | **Supply From:** TC2 | **Mounting:** Surface | **Volts:** 120/240 Single | **Phases:** 1 | **Wires:** 3 | **A.I.C. Rating:** 10,000 | **Enclosure:** Type 1 | **Mains:** 400A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	Breaker		Wire	Circuit Description	CKT	Note
1,ST	1	Burner Range (E910)	#12	20	1	0.2 / 1.5		1	20	#12	Ice Machine (E909)	2	
--	3	- - - SHUNT TRIP - - -	--	20	1		0.0 / 1.0	1	20	#12	Refrigerator (E904)	4	LF
1,ST	5	Burner Range (E910)	#12	20	1	0.3 / 0.5		1	20	#12	Receptacles Room x41, x158, x42	6	
--	7	- - - SHUNT TRIP - - -	--	20	1		0.0 / 0.5	1	20	#12	Fire Protection System (E925)	8	
1,ST	9	Burner Range (E910)	#12	20	1	0.3 / 1.2		1	20	#12	Hood Lights (E909)	10	
--	11	- - - SHUNT TRIP - - -	--	20	1		0.0 / 1.0	1	20	#12	Convenience Receptacle (E900B)	12	
1	13	Convenience Receptacle (E900B)	#12	20	1	1.0 / 1.5		1	20			14	
1	15	Hood Lights (E909)	#12	20	1		1.2 / 1.5	2	30	#10	Dryer	16	
1	17	Heat Sensor (E909M)	#12	20	1	1.2 / 1.2		1	20	#12	Hood Lights (E909)	18	
1	19	Receptacles CULINARY x158	#12	20	1		1.0 / 1.0	1	20	#12	Convenience Receptacle (E900F)	20	
	21	Heat Sensor (E909M)	#12	20	1	1.2 / 1.0		1	20	#12	Receptacles CULINARY x158	22	
	23	Convenience Receptacle (E900B)	#12	20	1		1.0 / 1.2	1	20	#12	Heat Sensor (E909M)	24	
G	25	Convenience Receptacles	#12	20	1	2.3 / 1.5		1	20	#12	Clothes Washer (E906)	26	
	27	Convenience Receptacle (E900C)	#12	20	1		1.0 / 1.0	1	20	#12	Refrigerator (E904)	28	LF
1,G	29	Convenience Receptacle (E900A)	#12	20	1	1.5 / 1.0		1	20	#12	Convenience Receptacle (E900B)	30	
1,LF	31	Freezer (E903)	#12	20	1		1.8 / 1.7	1	20	#12	Freezer (E903)	32	LF
1,G	33	Convenience Receptacle (E900A)	#12	20	1	1.5 / 5.5						34	
1	35	Load Center (E920)	#3	100	2		7.0 / 8.2	2	100	1-L	LC3	36	1
	37					7.0 / 0.0		1	20	--	Spare	38	--
--	39	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	40	--
--	41	Spare	--	20	1	0.0 / 0.0		1	20	--	Spare	42	--
			Total Load:			31.3 kVA	29.8 kVA						
			Total Amps:			261 A	249 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals
HVAC	6.7 kVA	100.00%	6.7 kVA	
Kitchen Equipment	22.1 kVA	65.00%	14.4 kVA	**Total Conn. Load:** 61.2 kVA
Miscellaneous	28.3 kVA	100.00%	28.3 kVA	**Total Est. Demand:** 53.4 kVA
Power	0.4 kVA	100.00%	0.4 kVA	**Total Conn. Current:** 255 A
Receptacles	4.5 kVA	100.00%	4.5 kVA	**Total Est. Demand...** 223 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

**Remove un-used breakers and replace with 20A/1P spare.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LC3

Location: STORAGE B114 | **Supply From:** LC2 | **Mounting:** Surface | **Volts:** 120/240 Single | **Phases:** 1 | **Wires:** 3 | **A.I.C. Rating:** 10,000 | **Enclosure:** Type 1 | **Mains:** 125A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker		A	B	Breaker		Wire	Circuit Description	CKT	Note
	1	Receptacles	#12	20	1	0.4 / 1.1		1	20	#12	KEF-1	2	
	3	KEF-3	#10	30	1		1.8 / 1.8	1	30	#10	KEF-2	4	
	5	KEF-4	#10	30	1	1.8 / 0.2		1	20	#12	Receptacles	6	
	7	Convenience Receptacle (E900B)	#12	20	1		1.0 / 1.0	1	20	#12	Convenience Receptacle (E900D)	8	ST
	9	Convenience Receptacle (E900B)	#12	20	1	1.0 / 0.0		1	20	--	- - - SHUNT TRIP - - -	10	--
ST	11	Convenience Receptacle (E900D)	#12	20	1		1.0 / 0.2	1	20	#12	Convenience Receptacle (E900D)	12	ST
--	13	- - - SHUNT TRIP - - -	--	20	1	0.0 / 0.0		1	20	--	- - - SHUNT TRIP - - -	14	--
	15	Convenience Receptacle (E900B)	#12	20	1		1.0 / 0.1	1	20	#12	EF-1	16	
	17	Convenience Receptacle (E900B)	#12	20	1	1.0 / 0.2		1	20	#12	Receptacles	18	
	19	Air Purification	#12	20	1		0.5 / 0.0	1	--	--	Space	20	--
--	21	Space	--	--	1	0.0 / 0.0		1	--	--	Space	22	--
--	23	Space	--	--	1		0.0 / 0.0	1	--	--	Space	24	--
--	25	Space	--	--	1	0.0 / 0.0		1	--	--	Space	26	--
--	27	Space	--	--	1		0.0 / 0.0	1	--	--	Space	28	--
--	29	Space	--	--	1	0.0 / 0.0		1	--	--	Space	30	--
--	31	Space	--	--	1		0.0 / 0.0	1	--	--	Space	32	--
--	33	Space	--	--	1	0.0 / 0.0		1	--	--	Space	34	--
--	35	Space	--	--	1		0.0 / 0.0	1	--	--	Space	36	--
--	37	Space	--	--	1	0.0 / 0.0		1	--	--	Space	38	--
--	39	Space	--	--	1		0.0 / 0.0	2	30	--	SPDL	40	
--	41	Space	--	--	1	0.0 / 0.0						42	--
			Total Load:			5.5 kVA	8.2 kVA						
			Total Amps:			46 A	68 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals
HVAC	6.7 kVA	100.00%	6.7 kVA	
Kitchen Equipment	6.0 kVA	65.00%	3.9 kVA	**Total Conn. Load:** 13.6 kVA
Miscellaneous	0.5 kVA	100.00%	0.5 kVA	**Total Est. Demand:** 11.6 kVA
Receptacles	0.9 kVA	100.00%	0.9 kVA	**Total Conn. Current:** 57 A
				Total Est. Demand... 48 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

**Remove un-used breakers and replace with 20A/1P spare.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Revision / 6 | Date 04-29-25 | Addendum 3

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

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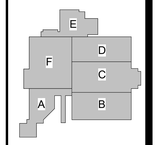
10-29-2025



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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

ELECTRICAL PANEL SCHEDULES

PACKAGE | VOLUME
Job No. 1821-13-01
Drawn By: DES
Date: 10.29.2025
Sheet No. E6.12

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LIGHTING FIXTURE SCHEDULE

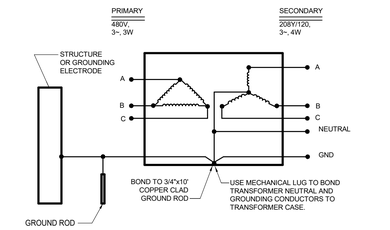
Type	Manufacturer	Model	Mounting	Driver / Light Engine: Type/Lumens	Color Temperature	CRI	Voltage	Input Wattage	Remarks
A1	METALUX	24FP4740C	RECESSED	LED / 4700 LUMENS	4000 K	80+	277 V	47 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
A2	METALUX	24FP6440C	RECESSED	LED / 6400 LUMENS	4000 K	80+	277 V	60 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
A3	METALUX	22FP3240C	RECESSED	LED / 3200 LUMENS	4000 K	80+	277 V	30 W	2x2 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
B8	CORELITE	RZL-NL-40L-8-40L840-1D-UNV-STD-W-AC48-8 FT	SUSPENDED	LED / 8000 LUMENS	4000 K	80+	277 V	70 W	8-FOOT ARCHITECTURAL LINEAR, FROSTED PRIMATIC LENS, AIRCRAFT CABLE, DLC LISTED.
C1	METALUX	4SNLED-LD5-41SLLW-UNV-L840-CD-1-U + WG/SNF-4FT + AYC-CHAIN/SET	SURFACE / CHAIN HANG	LED / 4100 LUMENS	4000 K	80+	277 V	35 W	4-FOOT STRIP, FROSTED LENS, WIREGUARD, 0-10V DIMMING, CHAIN HANG KIT, DLC LISTED.
C2	METALUX	4SNLED-LD5-41SLLW-UNV-L840-CD-1-U	SURFACE	LED / 4100 LUMENS	4000 K	80+	277 V	35 W	4-FOOT STRIP, FROSTED LENS, 0-10V DIMMING, DLC LISTED.
D1	HALO	HC620D010-HM60525840-61WDH	RECESSED	LED / 2000 LUMENS	4000 K	80+	277 V	21 W	6-INCH OPEN DOWNLIGHT, WIDE BEAM, SEMI SPECULAR CLEAR TRIM, ENERGY STAR LISTED.
D2	HALO	HC615D010-HM60525840-61WDH	RECESSED	LED / 1500 LUMENS	4000 K	80+	277 V	15 W	6-INCH OPEN DOWNLIGHT, WIDE BEAM, SEMI SPECULAR CLEAR TRIM, ENERGY STAR LISTED.
FA6	NEO-RAY	S124DR-S575D840-ETG-6FO-1UDD-F-W	RECESSED	LED / 575 LU/FT	4000 K	80+	277 V	29 W	6-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
FA12	NEO-RAY	S124DR-S575D840-ETG-12FO-1UDD-F-W	RECESSED	LED / 575 LU/FT	4000 K	80+	277 V	58 W	12-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
FA18	NEO-RAY	S124DR-S575D840-ETG-18FO-1UDD-F-W	RECESSED	LED / 575 LU/FT	4000 K	80+	277 V	87 W	18-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
FB22	NEO-RAY	S124DR-S795D840-ETG-22FO-1UDD-F-W	RECESSED	LED / 795 LU/FT	4000 K	80+	277 V	149 W	22-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
G1	METALUX	LHBS-1824-UNV-L84050-U + LHBS-WG14	SURFACE	LED / 18000 LUMENS	4000 K	80+	277 V	160 W	LINEAR HIGH BAY, DIFFUSED LENS, 0-10V DIMMING, WIREGUARD, DLC LISTED.
J1	FAIL-SAFE	TRO15-LD4-30W-40-OPL-BK-UNV-ED-C1	SURFACE	LED / 2125 LUMENS	4000 K	80+	277 V	30 W	15-INCH SURFACE ROUND, HIGH ABUSE POLYCARBONATE LENS, BLACK FINISH.
L1	ALW	L3.5SMBWL-S4-LOW-80-4000K-EXT/F-SW-UNV-END-FEED	SURFACE	LED 635 LU/FT	4000 K	90+	277 V	25 W	4-FOOT WET LOCATION LINEAR, LOW PROFILE, DIFFUSE LENS, EXTRUDED ALUMINUM, END FEED. MOUNT IN UPPER CAVITY OF AVADEK CANOPY.
N15	NEO-RAY	S122DR-S290D840-ETG-15FO-1UDD-F-W	RECESSED	LED / 290 LU/FT	4000 K	80+	277 V	45 W	15-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
N16	NEO-RAY	S122DR-S290D840-ETG-16FO-1UDD-F-W	RECESSED	LED / 290 LU/FT	4000 K	80+	277 V	48 W	16-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
W1	McGRAW EDISON	IST-SA1-1000-740-U-T4W-BK	WALL	LED / 7089 LUMENS	4000 K	70+	277 V	60 W	ARCHITECTURAL WALLPACK, FORWARD THROW DISTRIBUTION, FULL CUT OFF, DLC LISTED. LIGHT SQUARE TRIM PLATE TO MATCH HOUSING FINISH. COLOR SELECTED BY ARCHITECT.
X1	SURE-LITES	EUX6RWH	UNIVERSAL	LED		-	277 V	1 W	SINGLE-FACED EDGE-LIT EXIT SIGN, WHITE HOUSING, RED LETTERING, MIRROR BACKGROUND. PROVIDE CHEVRON DIRECTIONAL ARROWS PER PLANS OR ASDIRECTED BY AHJ.
X1V	SURE-LITES	UX61WH	UNIVERSAL	LED		-	277 V	1 W	SINGLE-FACED VANDAL RESISTANT EXIT SIGN, WHITEHOUSING, RED LETTERING. PROVIDE CHEVRON DIRECTIONAL ARROWS PER PLANS OR AS DIRECTED BY AHJ.
X2	SURE-LITES	EUX6RWH	UNIVERSAL	LED		-	277 V	1 W	DOUBLE-FACED EDGE-LIT EXIT SIGN, WHITE HOUSING, RED LETTERING, MIRROR BACKGROUND. PROVIDE CHEVRON DIRECTIONAL ARROWS PER PLANS OR AS DIRECTED BY AHJ.

1 REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT INDICATED IN THE LIGHTING FIXTURE SCHEDULE. WHERE THERE IS AN INCONSISTENCY BETWEEN THE LIGHTING FIXTURE SCHEDULE AND THE SPECIFICATIONS, THE GREATER QUANTITY OR HIGHER QUALITY OF WORK SHALL BE INCLUDED IN THE PROPOSAL.

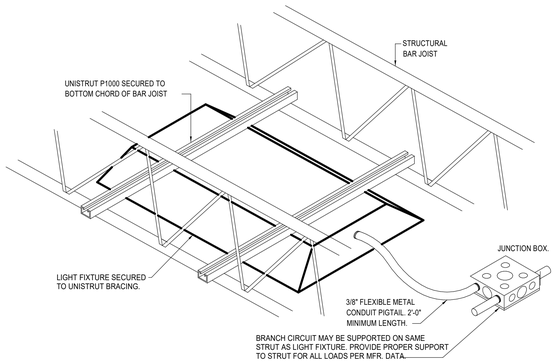
2 LIGHTING FIXTURE MANUFACTURERS OTHER THAN THOSE LISTED IN THE LIGHTING FIXTURE SCHEDULE AND DESIRING TO BID THIS PROJECT SHALL REQUEST PRIOR APPROVAL OF THE FIXTURES THEY WISH TO SUBSTITUTE. PRIOR APPROVAL REQUEST SHALL INCLUDE FIXTURE CUT SHEETS.

LIGHTING CONTROLS SCHEDULE

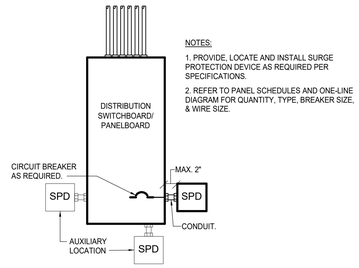
Type	Sensor Operation	# of Lighting Zones	Description
ER	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
RA	VACANCY - MANUAL ON / AUTO OFF	1	DIGITAL KEYPAD; ON/OFF WITH RAISE/LOWER; 0-10V DIMMING.
RB	VACANCY - MANUAL ON / AUTO OFF	1	DIGITAL KEYPAD; ON/OFF MOMENTARY SWITCH; 0-10V DIMMING.
RC	VACANCY - MANUAL ON / AUTO OFF	1	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING.
RD	NONE	1	EXTERIOR LIGHTING; CIRCUIT SHALL BE CONTROLLED VIA CONTACTOR, CONTACTOR CONTROLLED VIA BMCS. LOCATE CONTACTOR IN NEAREST MECHANICAL ROOM.
RE	OCCUPANCY - AUTO ON / AUTO OFF	1	ON/OFF KEYED SWITCH.
RF	NONE	1	12-HOUR WITH HOLD SPRING WOUND TIMER SWITCH. WIRE MULTIPLE TIMER SWITCHES IN PARALLEL.
RG	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	4	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.
RH	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	3	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.
RJ	VACANCY - MANUAL ON / AUTO OFF PHOTOCELL - CLOSED LOOP	3	MULTI-SCENE DIGITAL KEYPAD; ON/OFF SWITCHING; NO DIMMING ZONE (a;c); PHOTOCELL AND 0-10V DIMMING FOR DAYLIGHT ZONE ONLY.
RK	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	1	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.
RL	OCCUPANCY - AUTO ON @ 50% / AUTO OFF	1	DIGITAL KEYPAD; ON/OFF WITH RAISE LOWER; 0-10V DIMMING.
RM	NONE	2	ON/OFF SWITCH
RN	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	3	ON/OFF KEYED SWITCH; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.



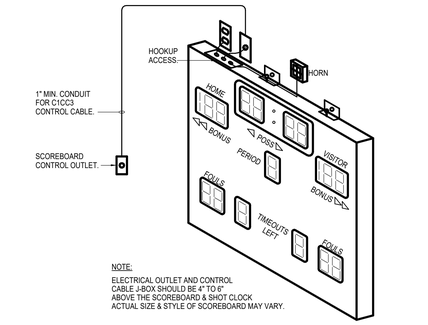
4 TRANSFORMER GROUNDING DETAIL
SCALE: NONE



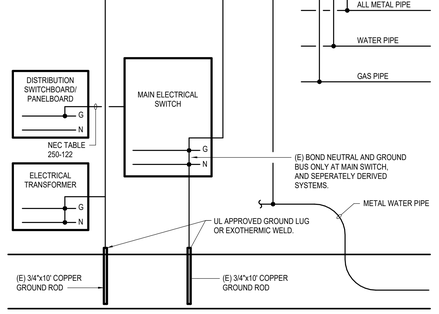
7 GYM LIGHT FIXTURE MOUNTING DETAIL
SCALE: NONE



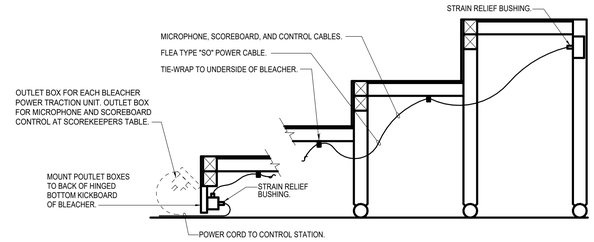
3 SURGE PROTECTION DETAIL
SCALE: NONE



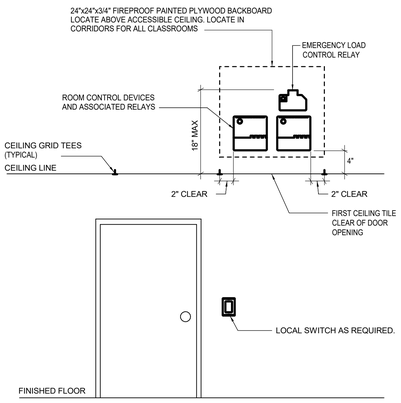
6 GYMNASIUM SCOREBOARD DIAGRAM
SCALE: NONE



2 GROUNDING DETAIL
SCALE: NONE



5 GYMNASIUM BLEACHERS
SCALE: NONE



1 TYPICAL LIGHTING CONTROLS ELEVATION
SCALE: NONE

SYMBOL SCHEDULE

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
	LIGHT FIXTURE - RECESSED OR SURFACE MOUNTED
	LIGHT FIXTURE - RECESSED OR SURFACE MOUNTED ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
	LIGHT FIXTURE - WALL MOUNTED
	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT - CEILING MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT - WALL MOUNTED ON EMERGENCY CIRCUIT
LIGHTING CONTROLS & DEVICES	
$	LINE VOLTAGE SINGLE POLE SWITCH
$3	LINE VOLTAGE 3-WAY SWITCH
$4	LINE VOLTAGE 4-WAY SWITCH
$K	LINE VOLTAGE MOMENTARY DPST KEYED SWITCH
$D	LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
$T	6-HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O.
	PUSH BUTTON EPO SWITCH WITH COVER
$MC	LOW VOLTAGE MOMENTARY CONTACT SWITCH
$R	LOW VOLTAGE DIGITAL KEYPAD
$B	LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH
	OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES)
	VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES)
	PHOTOCELL SENSOR
RF	LIGHTING CONTROL SYSTEM. ('#' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE)
ER	EMERGENCY LOAD CONTROL RELAY. MINIMUM 16A AND 0-10V COMPATIBLE. PROVIDE U.L. 924 U.N.O.
RECEPTACLES AND OUTLETS	
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
U	DUPLEX RECEPTACLE WITH TWO USB CHARGING PORTS.
	125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE
	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
U	DOUBLE DUPLEX WITH TWO USB CHARGING PORTS IN 2-GANG BOX WITH SINGLE COVER PLATE
	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	FLUSH FLOOR DUPLEX RECEPTACLE OUTLET
	FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE OUTLET
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DUPLEX RECEPTACLE AND DATA OUTLET. REFER TO TECHNOLOGY SERIES DRAWINGS FOR DATA CABLE QUANTIES.
	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE AND DATA OUTLET. REFER TO TECHNOLOGY SERIES DRAWINGS FOR DATA CABLE QUANTIES.
	JUNCTION BOX
	FLUSH REMOTE GFCI DEVICE (LOCATE IN READILY ACCESSIBLE LOCATION)
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
$	MOTOR-RATED SWITCH. 20A UNLESS INDICATED OTHERWISE.
	DISCONNECT SWITCH AS REQUIRED
	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
VFD	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
HF	HIGH EFFICIENCY HARMONIC FILTER FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
T	LOW VOLTAGE TRANSFORMER, SIZE AND TYPE AS REQUIRED.
C	CONTACTOR, SIZE AS REQUIRED. REFER TO CONTACTOR SCHEDULE.
	CHIME/BUZZER
ELECTRICAL EQUIPMENT	
	ELECTRICAL PANELBOARD; REFER TO FLOOR PLANS FOR VOLTAGE.
	DRY TYPE TRANSFORMER
	PLYWOOD TELEPHONE BACKBOARD
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
	3/4"C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; LONG HATCH & HOOK, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN.
	PARTIAL ELECTRICAL HOME RUN
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES 'WEATHERPROOF'
H	INDICATES 'HORIZONTAL'
NL	INDICATES 'NIGHT LIGHT'.
TP	INDICATES 'TAMPER PROOF'
(KS)	INDICATES 'KNEE SPACE'. LOCATE WIRING DEVICE IN KNEESPACE
U.N.O.	INDICATES 'UNLESS NOTED OTHERWISE'
(E)	INDICATES EXISTING TO REMAIN
(REP)	INDICATES REPLACE DEVICE AND COVERPLATE.
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES
GENERAL NOTES:	
-ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-4X MINIMUM. -ALL EXTERIOR RECEPTACLES SHALL BE WATER RESISTANT TYPE.	

ELECTRICAL GENERAL NOTES:

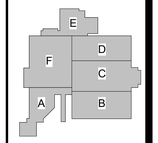
1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.
2. ALL LIGHT FIXTURES IN MECHANICAL AREAS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING EQUIPMENT TO AVOID CONFLICTS. LOCATE LIGHT FIXTURES ON PERIMETER WALLS OF MECHANICAL AREAS WHERE PRACTICAL.
3. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
4. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM.
5. VERIFY MOUNTING HEIGHTS OF RECEPTACLES WITH CASEWORK ELEVATIONS PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DRAWINGS FOR ROOM ELEVATIONS FOR LOCATION AND COORDINATION OF ELECTRICAL OUTLETS. AT KNEESPACE LOCATIONS, LOCATE ELECTRICAL OUTLETS WITHIN KNEESPACE, UNLESS NOTED OTHERWISE. AT COUNTERS WITH OUT KNEESPACE, LOCATE OUTLETS HORIZONTALLY 6" ABOVE BACK SPLASH, UNLESS NOTED OTHERWISE.
6. ALL FIRE ALARM DEVICES, RECEPTACLES, SWITCHES, AND WIRING DEVICES IN MECHANICAL AND ELECTRICAL ROOMS ARE TO BE RECESSED IN WALLS.
7. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE. USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE.
10. CENTER ALL EXIT SIGNS OVER DOORS.

ALL EQUIPMENT/MATERIALS TO BE INSTALLED SHALL BE LISTED AND LABELED FOR THE INTENDED USE, AND INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY. ONLY LISTED AND LABELED EQUIPMENT/MATERIALS SHALL BE USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC ARCTICAL 110.3(B), CITY OF HOUSTON ELECTRICAL CODE SECTION 508, AND AUTHORITY HAVING JURISDICTION.

Revision /	Date	
1	02-16-24	City Comments 1

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS — 80219 — LICENSED PROFESSIONAL ENGINEER — STATE OF TEXAS
10-29-2025



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ELECTRICAL SYMBOLS, LEGENDS, & SCHEDULES

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. E7.11
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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TECHNOLOGY LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
*# ▼	WALL MOUNTED NETWORK OUTLET D#: NUMBER OF DATA DROPS IN OUTLET AP: WIRELESS ACCESS POINT	+18" AFF, UNLESS OTHERWISE NOTED	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
V# ▽	COMMUNICATIONS OUTLET	FIELD COORDINATE	FIELD COORDINATE	
W ▼	WALL MOUNTED NETWORK OUTLET	+44" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
B ▽	WALL MOUNTED BOX FOR FUTURE USE.	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
D# ▼	FLOOR MOUNTED NETWORK OUTLET	N/A	COORDINATE WITH ELECTRICAL CONTRACTOR	FINISHED HARDWARE PROVIDED BY DIV 27
#AP	CEILING MOUNTED NETWORK OUTLET AP: WIRELESS ACCESS POINT D#: NETWORK OUTLET	ABOVE CEILING	CEILING BRACKET WITH BISCUIT BLOCK	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. CONDUIT STUB UP AND SLEEVES SHALL HAVE A SOLID UNCUT PLASTIC PROTECTIVE BUSHING.
5. NO CONDUITS SHALL EXCEED FOR 40% MAXIMUM FILL RATIO. CONTRACTOR TO PROVIDE ADDITIONAL CONDUITS REQUIRED.

ACCESS CONTROL LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ACP	ACCESS CONTROL SYSTEM, CONTROL PANEL.	+60" AFF TO CENTER	AS REQUIRED	COORDINATE POWER. NOTE #4.
CR #*	ACCESS CONTROL PROXIMITY CARD READER. *W - INDICATES WALL MOUNTED READER *M - INDICATES MULLION MOUNTED READER	+42" A.F.F.	1-G, 3/4" C	
CR	DOOR MOUNTED ACCESS CONTROL PROXIMITY CARD READER THAT IS INTEGRATED INTO THE DOOR HARDWARE.	+42" AFF	N/A	
DS #*	2-WAY AUDIO/VIDEO INTERCOM DOOR STATION. *W - INDICATES WALL MOUNTED READER. *M - INDICATES MULLION MOUNTED READER	+42" AFF	*W: 1-G, 3/4" C *M: 3/4"C	COORDINATE POWER. NOTE #4.
DS	DOOR MOUNTED, 2-WAY AUDIO/VIDEO INTERCOM DOOR STATION.	+42" AFF, FIELD COORDINATE		COORDINATE POWER. NOTE #4
MS	2-WAY AUDIO/VIDEO INTERCOM MASTER STATION.	DESK MOUNTED UNO		COORDINATE POWER. NOTE #4
DR	DOOR RELEASE BUTTON	COORDINATE WITH GC	1-G, 3/4" C	
REX	PIR MOTION REQUEST TO EXIT DEVICE			
DP	DOOR PROP ALARM	CEILING MOUNTED UNO	N/A	N/A
DC	DPDT MAGNETIC DOOR CONTACT/DOOR POSITION SENSOR.	FLUSH MOUNTED IN DOOR FRAME	N/A	PROVIDED BY ACS CONTRACTOR.
RFID	VEHICLE RFID TAG READER.		FIELD COORDINATE RACEWAYS AND BACK BOXES	PROVIDE NECESSARY EQUIPMENT FOR A FULLY FUNCTIONAL VEHICLE ENTRY POINT

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

INTERCOM LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ICS	INTERCOM COMMUNICATIONS SYSTEM HEAD END UNIT.	FLOOR MOUNTED	COORDINATE WITH EC	COORDINATE POWER WITH EC
S	CEILING MOUNT INTERCOM SPEAKER, LAY-IN CEILING.	CEILING	CONTRACTOR PROVIDED	
S2	CEILING MOUNT INTERCOM SPEAKER, HARD CEILING.	CEILING	CONTRACTOR PROVIDED	
S3	WALL MOUNT INTERIOR INTERCOM SPEAKER	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
S4	WALL MOUNT, RECESSED EXTERIOR INTERCOM SPEAKER.	+10' AFF UNO	CONTRACTOR PROVIDED	
S5	PENDANT MOUNT INTERCOM SPEAKER	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
S6	SURFACE MOUNT INTERCOM SPEAKER, MOUNT TO STRUCTURE.	CEILING	CONTRACTOR PROVIDED	
# IP	IP BASED SPEAKER. '#' TO BE REPLACED WITH S, S2, S3, S4 INDICATING THE SPECIFIC TYPE OF SPEAKER.	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	NOTE #5
VC	WALL MOUNTED VOLUME CONTROL	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
CB	INTERCOM CALL BUTTON	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C	SINGLE FACE CLOCK.	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C2	DOUBLE FACE CLOCK	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
RPS	REMOTE PROGRAM SOURCE	DESK TOP	COORDINATE WITH EC	NOTE #5
ACS	ADMINISTRATIVE CALL STATION.	DESK TOP	N/A	NOTE #5
LD	LOCKDOWN BUTTON	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
LMB ▼	LARGE MESSAGE BOARD, POE+ POWERED	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5

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VIDEO SURVEILLANCE LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
	WALL/CORNER MOUNT 4-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5, #6
	CEILING MOUNTED 4-SENSOR CAMERA	CEILING		NOTE #5, #6
	2-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5, #6
	1-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5, #6
	SYMBOL INDICATES THAT A VIDEO SURVEILLANCE DEVICE IS WALL MOUNTED			

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5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK.
6. VIDEO SURVEILLANCE CAMERAS ARE OFOI.

AUDIO/VIDEO LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
WMP ▽	WALL MOUNTED PROJECTOR	REFERENCE FLOOR PLANS.	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
CMP	CEILING MOUNTED PROJECTOR	CEILING MOUNTED	N/A	NOTE #5
AV-1 ▽	WALL MOUNTED AUDIO/VIDEO INPUT OUTLET	+18" AFF UNO	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	
FSD-1 ▽	WALL MOUNTED FLAT SCREEN DISPLAY	REFERENCE FLOOR PLAN	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5
FSD-2 ▽	WALL MOUNTED FLAT SCREEN DISPLAY ASSOCIATED WITH AV-1 INPUT OUTLET	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
IVD ▽	INTERACTIVE VIDEO DISPLAY	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
CP ▽	AV CONTROL PANEL	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
PS	LOCAL INSTRUCTIONAL SPACE PRESENTATION SPEAKER	CEILING	CONTRACTOR PROVIDED CEILING BOX	COORDINATE POWER WITH EC
◯◁	STREAMING CAMERA	CEILING UNO	N/A	NOTE #5

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LOCAL SOUND SYSTEM LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
LS	LOCAL SOUND SYSTEM SPEAKER P: POLE MOUNTED SPEAKER	CEILING MOUNT UNO	CONTRACTOR PROVIDED BACK BOX OR 4"X4"X2 1/8" J BOX WITH COVER, 1"C.	
LSC	LOCAL SOUND SYSTEM CONTROL PLATE	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
MI	MICROPHONE INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
MA	COMBINATION OUTLET CONSISTING OF ONE (1) MICROPHONE INPUT AND ONE (1) AUXILIARY INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
AI	3.5MM STEREO AUDIO AUXILIARY INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
H	HANGING MICROPHONE	CEILING MOUNT	N/A	
ABM	AUXILIARY INPUT AND BLUETOOTH MIXER	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
RACK	VENUE SPECIFIC LOCAL SOUND SYSTEM HEAD END RACK	WALL MOUNT UNO	N/A	
WA	WIRELESS ANTENNA	WALL MOUNT UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
ALA	ASSISTED LISTENING ANTENNA	WALL MOUNT UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
SUB	SUBWOOFER	CEILING MOUNT UNO		

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INTRUSION LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
IDP	INTRUSION DETECTION SYSTEM CONTROL PANEL	+60" AFF	TWO(2) - 1"C TO CONTRACTOR PROVIDED BACK BOX	COORDINATE POWER WITH EC. NOTE #5
KP	INTRUSION DETECTION SYSTEM KEYPAD.	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
MD	CEILING MOUNTED MOTION DETECTOR	CEILING		
MD	WALL MOUNTED MOTION DETECTOR LR: LONG RANGE	REFERENCE FLOOR PLAN	N/A	
GB	CEILING MOUNTED GLASS BREAK DETECTOR	CEILING	N/A	
DC	DPDT MAGNETIC DOOR CONTACT/DOOR POSITION SENSOR.	FLUSH MOUNTED IN DOOR FRAME	N/A	DEVICE PROVIDED BY ACS CONTRACTOR.
SDC	SURFACE MOUNT MAGNETIC DOOR CONTACT.	SURFACE MOUNTED ON DOOR FRAME	N/A	
ODC	OVERHEAD DOOR MOUNT MAGNETIC DOOR CONTACT.	SURFACE MOUNTED ON DOOR FRAME	N/A	
DB	DURESS PANIC BUTTON	UNDER DESK UNO	N/A	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. REFERENCE DIVISION 28 SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK.

SUBSCRIPTS AND ABBREVIATIONS

TEXT	DESCRIPTION
'WP'	DEVICE SHALL BE WEATHER PROOF AND RATED FOR EXTERIOR CONDITIONS
●	FIELD COORDINATE ELEVATION.
AFF	ABOVE FINISHED FLOOR
'UC'	DEVICE IS TO BE MOUNTED ON THE UNDERSIDE OF THE ELEVATED CANOPY.
'WG'	WIRE GUARD TO BE PROVIDED AND INSTALLED TO PROTECT ASSOCIATED DEVICE.

FIRE ALARM

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL
FAA	FIRE ALARM ANNUNCIATOR PANEL

NOTES:
1. FIRE ALARM SYSTEM IS PERFORMANCE BASED PER SPECIFICATIONS. CONTRACTOR TO REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. A LICENSED FIRE ALARM PLANNING SUPERINTENDENT CERTIFIED TO A MINIMUM LEVEL 3, IN THE SUBFIELD OF FIRE ALARM SYSTEMS THROUGH THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET), SHALL PROVIDE PLANS AND CALCULATIONS FOR A MANUAL AND AUTOMATIC FIRE DETECTION AND ALARM SYSTEM TO COMPLY WITH THE BUILDING SPACE LAYOUT, BUILDING OCCUPANCY, CURRENT NFPA 72, LOCAL AND STATE CODE REQUIREMENTS, AND THE FIRE ALARM AND DETECTION SYSTEM SPECIFICATIONS.

NOTES TO CONTRACTOR

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS.
2. SYSTEM INSTALLERS SHALL COORDINATE LOCATIONS AND CONNECTIONS WITH THE PROJECT'S ELECTRICAL CONTRACTOR.
3. CONTRACTOR TO PROVIDE PROPERLY GROUNDED LIGHTING PROTECTION ON ALL CABLING ENTERING AND EXITING THE BUILDING.

SUBSCRIPTS LEGEND - EXISTING DEVICES

TEXT	DESCRIPTION
'E'	EXISTING TO REMAIN
'D'	DEVICE IS EXISTING AND IS TO BE REMOVED. CONTRACTOR TO REMOVE THE DEVICE AND RETURN TO OWNER.
'R'	REMOVE EXISTING DEVICE AND RELOCATE TO A LOCATION INDICATED ON THE DRAWINGS.
'D*'	EXISTING CABLING AND FACEPLATE TO BE REMOVED. BACKBOX AND CONDUIT TO REMAIN. EXISTING OUTLET TO BE RECABLED PER TECHNOLOGY SCOPE NOTES ON FLOOR PLANS. CONTRACTOR TO INSTALL NEW FACEPLATE.

Revision / Date
5 04-24-25 Addendum 2

Project:
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KINGWOOD, TX

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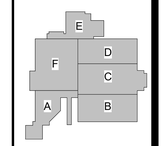

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY NOTES AND LEGENDS

PACKAGE | VOLUME

Job No. 1821-13-01
Drawn By: NY
Date: 10.29.2025
Sheet No. T0.00

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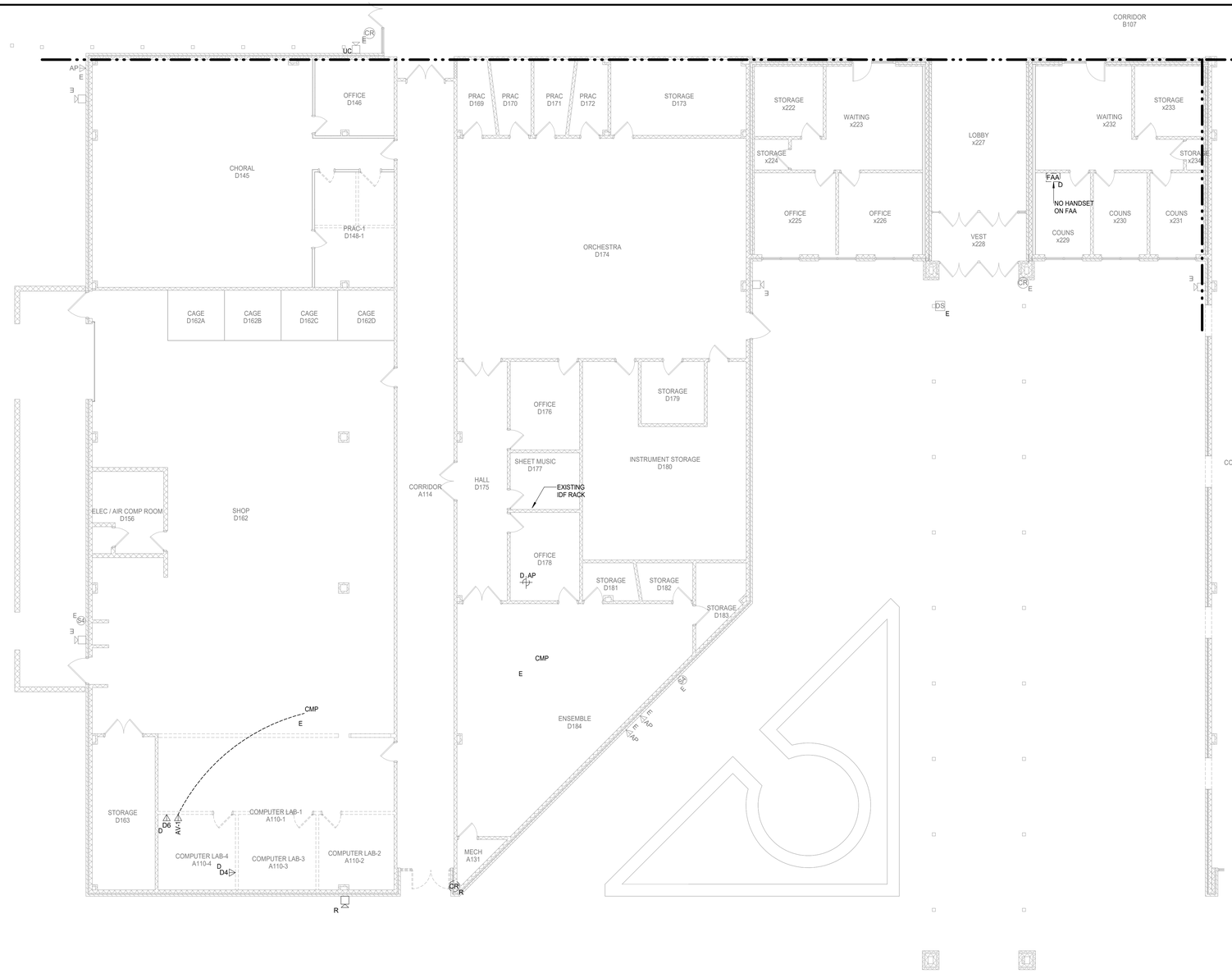

TECH DEMO PLAN GENERAL NOTES

A CONTRACTOR SHALL PROVIDE NEW CEILING TILES IN INSTANCES WHERE CEILING DEVICES ARE REMOVED, REPLACED OR ADDED. CONTRACTOR SHALL COORDINATE WITH ARCHITECT ON CORRECT MANUFACTURER AND MODEL PRIOR TO REMOVAL OF EXISTING TILE.

B CONTRACTOR SHALL HAVE EACH LOW VOLTAGE SYSTEM TESTED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SYSTEMS SHALL INCLUDE BUT NOT BE LIMITED TO:
1) FIRE ALARM
2) INTERCOM
3) STRUCTURED CABLING
4) INTRUSION DETECTION
5) ACCESS CONTROL
6) AUDIO VIDEO
7) VIDEO SURVEILLANCE
TESTING SHALL INCLUDE THE FUNCTIONALITY OF ALL FIELD DEVICES AND EQUIPMENT. ANY FAILURES OR ITEMS FOUND NOT TO BE FUNCTIONING TO SPECIFICATION, SHALL BE REPORTED PRIOR TO CONSTRUCTION. ANY ITEMS FOUND TO BE IMPROPERLY OR NON-FUNCTIONING UPON THE COMPLETION OF THE PROJECT, SHALL BE REPLACED AND/OR REPAIRED, BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE PROJECT OR THE OWNER.

C CONTRACTOR SHALL REMOVE ANY DEVICES WHERE CONSTRUCTION OCCURS TO PREVENT POSSIBLE DAMAGE TO THE DEVICE. REMOVAL OF ANY DEVICES WHICH SUPPORT USER CONNECTION OR OTHER SYSTEMS, SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVAL AND/OR TAKING OFF LINE. REMOVAL SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING DEVICES AND ASSOCIATED SUPPORT INFRASTRUCTURE:
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3) WIRELESS ACCESS POINTS
4) TELEPHONES
5) VIDEO SURVEILLANCE CAMERAS
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G ALL CABLING ASSOCIATED WITH DEVICES THAT ARE TO BE DEMOLISHED, SHALL BE REMOVED FROM THE DEVICE LOCATION TO THE CABLES POINT OF ORIGIN. NO CABLE SHALL BE ABANDONED IN PLACE.

H ALL EXISTING DEVICES SHOWN ARE EXISTING TO REMAIN. CONTRACTOR TO REMOVE EXISTING DEVICES DURING CONSTRUCTION AND REINSTALL THE DEVICE IN THE SAME LOCATION, UNLESS NOTED OTHERWISE.

I REFERENCE EXISTING DEVICE SUBSCRIPT LEGEND ON THE NOTES AND LEGENDS SHEET.

J ALL EXISTING DATA AND AV OUTLETS IN CLASSROOMS ARE SURFACE MOUNTED TO WALLS (MOSTLY CMU). DATA AND AV AND ASSOCIATED RACEWAYS SHALL BE DEMOLISHED. NEW DATA AND AV LAYOUTS SHALL BE PROVIDED ON NEW FLOOR PLANS.

1 **TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION A**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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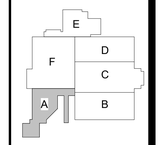

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. T0.11
Drawn By: NY	
Date: 10.29.2025	

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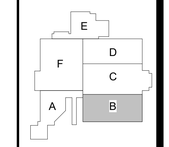

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1 **TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION B**
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TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION B

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Job No. 1821-13-01	Sheet No. T0.12
Drawn By: NY	
Date: 10.29.2025	

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Salas O'Brien Project Number: 2022-05088-00

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6) AUDIO VIDEO
7) VIDEO SURVEILLANCE
TESTING SHALL INCLUDE THE FUNCTIONALITY OF ALL FIELD DEVICES AND EQUIPMENT. ANY FAILURES OR ITEMS FOUND NOT TO BE FUNCTIONING TO SPECIFICATION, SHALL BE REPORTED PRIOR TO CONSTRUCTION. ANY ITEMS FOUND TO BE IMPROPERLY OR NON-FUNCTIONING UPON THE COMPLETION OF THE PROJECT, SHALL BE REPLACED AND/OR REPAIRED, BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE PROJECT OR THE OWNER.

C CONTRACTOR SHALL REMOVE ANY DEVICES WHERE CONSTRUCTION OCCURS TO PREVENT POSSIBLE DAMAGE TO THE DEVICE. REMOVAL OF ANY DEVICES WHICH SUPPORT USER CONNECTION OR OTHER SYSTEMS, SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVAL AND/OR TAKING OFF LINE. REMOVAL SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING DEVICES AND ASSOCIATED SUPPORT INFRASTRUCTURE:
1) FIRE ALARM DEVICES
2) INTERCOM DEVICES
3) WIRELESS ACCESS POINTS
4) TELEPHONES
5) VIDEO SURVEILLANCE CAMERAS
6) INTRUSION DETECTION DEVICES
7) ACCESS CONTROL DEVICES
8) VIDEO PROJECTION DEVICES
9) VIDEO DISPLAY DEVICES
ANY DEVICES, NOT BEING REINSTALLED, SHALL BE RETURNED TO THE OWNER.

D CONTRACTOR SHALL DOCUMENT THE LOCATION AND ANY ID TAG, MAC ADDRESS, IP ADDRESS, OR BAR CODE OF ANY EXISTING DEVICE THAT IS TO BE REMOVED FROM ITS CURRENT LOCATION. DEVICES THAT ARE TO REMAIN, SHALL BE REINSTALLED IN THE EXACT LOCATION THAT THEY RESIDE IN PRIOR TO CONSTRUCTION, UNLESS NOTED OTHERWISE.

E ANY INDIVIDUAL THAT WILL BE REMOVING. RELOCATING, REINSTALLING, AND/OR TAMPERING WITH ANY EXISTING DEVICES; SHALL BE CERTIFIED BY THE MANUFACTURER OF THE SPECIFIC SYSTEM AND/OR LICENSED AS REQUIRED BY THE STATE TO PERFORM WORK ON THE SYSTEM. THE INDIVIDUAL SHALL BE A FULL-TIME EMPLOYEE OF THE FIRM CONTRACTED TO CONDUCT SUCH WORK ON THE PROJECT AND THAT FIRM SHALL ALSO HOLD ANY CERTIFICATIONS AND/OR LICENSES REQUIRED TO CONDUCT WORK ON THE SPECIFIC SYSTEM.

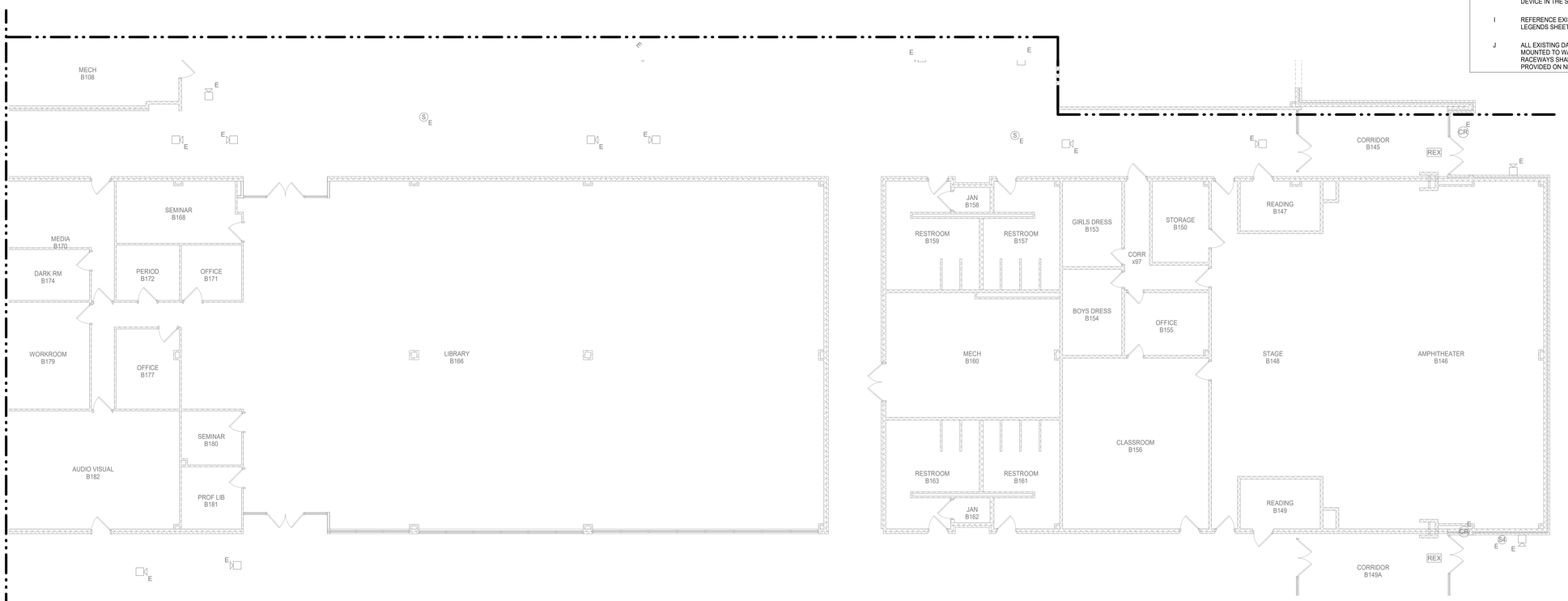
F ANY INDIVIDUAL/FIRM THAT WILL BE REMOVING, RELOCATING, REINSTALLING, OR TAMPERING WITH IN ANY DEVICES; SHALL BE LICENSED BY THE STATE, AS APPLICABLE, AND CERTIFIED BY THE MANUFACTURER OF THE SYSTEM.

G ALL CABLING ASSOCIATED WITH DEVICES THAT ARE TO BE DEMOLISHED, SHALL BE REMOVED FROM THE DEVICE LOCATION TO THE CABLES POINT OF ORIGIN. NO CABLE SHALL BE ABANDONED IN PLACE.

H ALL EXISTING DEVICES SHOWN ARE EXISTING TO REMAIN. CONTRACTOR TO REMOVE EXISTING DEVICES DURING CONSTRUCTION AND REINSTALL THE DEVICE IN THE SAME LOCATION, UNLESS NOTED OTHERWISE.

I REFERENCE EXISTING DEVICE SUBSCRIPT LEGEND ON THE NOTES AND LEGENDS SHEET.

J ALL EXISTING DATA AND AV OUTLETS IN CLASSROOMS ARE SURFACE MOUNTED TO WALLS (MOSTLY CMU). DATA AND AV AND ASSOCIATED RACEWAYS SHALL BE DEMOLISHED. NEW DATA AND AV LAYOUTS SHALL BE PROVIDED ON NEW FLOOR PLANS.



1 **TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION C**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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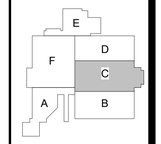

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TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION C

PACKAGE VOLUME

Job No. 1821-13-01
Sheet No. T0.13
Drawn By: NY
Date: 10.29.2025

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Salas O'Brien Project Number: 2022-05088-00

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1 **TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION D**
Scale: 1/8" = 1'-0"

TECH DEMO PLAN GENERAL NOTES

A CONTRACTOR SHALL PROVIDE NEW CEILING TILES IN INSTANCES WHERE CEILING DEVICES ARE REMOVED, REPLACED OR ADDED. CONTRACTOR SHALL COORDINATE WITH ARCHITECT ON CORRECT MANUFACTURER AND MODEL PRIOR TO REMOVAL OF EXISTING TILE.

B CONTRACTOR SHALL HAVE EACH LOW VOLTAGE SYSTEM TESTED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SYSTEMS SHALL INCLUDE BUT NOT BE LIMITED TO:
1) FIRE ALARM
2) INTERCOM
3) STRUCTURED CABLING
4) INTRUSION DETECTION
5) ACCESS CONTROL
6) AUDIO VIDEO
7) VIDEO SURVEILLANCE
TESTING SHALL INCLUDE THE FUNCTIONALITY OF ALL FIELD DEVICES AND EQUIPMENT. ANY FAILURES OR ITEMS FOUND NOT TO BE FUNCTIONING TO SPECIFICATION, SHALL BE REPORTED PRIOR TO CONSTRUCTION. ANY ITEMS FOUND TO BE IMPROPERLY OR NON-FUNCTIONING UPON THE COMPLETION OF THE PROJECT, SHALL BE REPLACED AND/OR REPAIRED, BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE PROJECT OR THE OWNER.

C CONTRACTOR SHALL REMOVE ANY DEVICES WHERE CONSTRUCTION OCCURS TO PREVENT POSSIBLE DAMAGE TO THE DEVICE. REMOVAL OF ANY DEVICES WHICH SUPPORT USER CONNECTION OR OTHER SYSTEMS, SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVAL AND/OR TAKING OFF LINE. REMOVAL SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING DEVICES AND ASSOCIATED SUPPORT INFRASTRUCTURE:
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D CONTRACTOR SHALL DOCUMENT THE LOCATION AND ANY ID TAG, MAC ADDRESS, IP ADDRESS, OR BAR CODE OF ANY EXISTING DEVICE THAT IS TO BE REMOVED FROM ITS CURRENT LOCATION. DEVICES THAT ARE TO REMAIN, SHALL BE REINSTALLED IN THE EXACT LOCATION THAT THEY RESIDE IN PRIOR TO CONSTRUCTION, UNLESS NOTED OTHERWISE.

E ANY INDIVIDUAL THAT WILL BE REMOVING, RELOCATING, REINSTALLING, AND/OR TAMPERING WITH ANY EXISTING DEVICES; SHALL BE CERTIFIED BY THE MANUFACTURER OF THE SPECIFIC SYSTEM AND/OR LICENSED AS REQUIRED BY THE STATE TO PERFORM WORK ON THE SYSTEM. THE INDIVIDUAL SHALL BE A FULL-TIME EMPLOYEE OF THE FIRM CONTRACTED TO CONDUCT SUCH WORK ON THE PROJECT AND THAT FIRM SHALL ALSO HOLD ANY CERTIFICATIONS AND/OR LICENSES REQUIRED TO CONDUCT WORK ON THE SPECIFIC SYSTEM.

F ANY INDIVIDUAL/FIRM THAT WILL BE REMOVING, RELOCATING, REINSTALLING, OR TAMPERING WITH IN ANY DEVICES; SHALL BE LICENSED BY THE STATE, AS APPLICABLE, AND CERTIFIED BY THE MANUFACTURER OF THE SYSTEM.

G ALL CABLING ASSOCIATED WITH DEVICES THAT ARE TO BE DEMOLISHED, SHALL BE REMOVED FROM THE DEVICE LOCATION TO THE CABLES POINT OF ORIGIN. NO CABLE SHALL BE ABANDONED IN PLACE.

H ALL EXISTING DEVICES SHOWN ARE EXISTING TO REMAIN. CONTRACTOR TO REMOVE EXISTING DEVICES DURING CONSTRUCTION AND REINSTALL THE DEVICE IN THE SAME LOCATION, UNLESS NOTED OTHERWISE.

I REFERENCE EXISTING DEVICE SUBSCRIPT LEGEND ON THE NOTES AND LEGENDS SHEET.

J ALL EXISTING DATA AND AV OUTLETS IN CLASSROOMS ARE SURFACE MOUNTED TO WALLS (MOSTLY CMU). DATA AND AV AND ASSOCIATED RACEWAYS SHALL BE DEMOLISHED. NEW DATA AND AV LAYOUTS SHALL BE PROVIDED ON NEW FLOOR PLANS.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
HUMBLE ISD
KINGWOOD, TX

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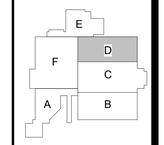
PROFESSIONAL ENGINEER
STATE OF TEXAS
10-29-2025



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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. T0.14
Drawn By: NY	
Date: 10.29.2025	

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TECH DEMO PLAN GENERAL NOTES

A. CONTRACTOR SHALL PROVIDE NEW CEILING TILES IN INSTANCES WHERE CEILING DEVICES ARE REMOVED, REPLACED OR ADDED. CONTRACTOR SHALL COORDINATE WITH ARCHITECT ON CORRECT MANUFACTURER AND MODEL PRIOR TO REMOVAL OF EXISTING TILE.

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E. ANY INDIVIDUAL THAT WILL BE REMOVING, RELOCATING, REINSTALLING, AND/OR TAMPERING WITH ANY EXISTING DEVICES, SHALL BE CERTIFIED BY THE MANUFACTURER OF THE SPECIFIC SYSTEM AND/OR LICENSED AS REQUIRED BY THE STATE TO PERFORM WORK ON THE SYSTEM. THE INDIVIDUAL SHALL BE A FULL-TIME EMPLOYEE OF THE FIRM CONTRACTED TO CONDUCT SUCH WORK ON THE PROJECT AND THAT FIRM SHALL ALSO HOLD ANY CERTIFICATIONS AND/OR LICENSES REQUIRED TO CONDUCT WORK ON THE SPECIFIC SYSTEM.

F. ANY INDIVIDUAL/FIRM THAT WILL BE REMOVING, RELOCATING, REINSTALLING, OR TAMPERING WITH IN ANY DEVICES, SHALL BE LICENSED BY THE STATE, AS APPLICABLE, AND CERTIFIED BY THE MANUFACTURER OF THE SYSTEM.

G. ALL CABLING ASSOCIATED WITH DEVICES THAT ARE TO BE DEMOLISHED, SHALL BE REMOVED FROM THE DEVICE LOCATION TO THE CABLES POINT OF ORIGIN. NO CABLE SHALL BE ABANDONED IN PLACE.

H. ALL EXISTING DEVICES SHOWN ARE EXISTING TO REMAIN. CONTRACTOR TO REMOVE EXISTING DEVICES DURING CONSTRUCTION AND REINSTALL THE DEVICE IN THE SAME LOCATION, UNLESS NOTED OTHERWISE.

I. REFERENCE EXISTING DEVICE SUBSCRIPT LEGEND ON THE NOTES AND LEGENDS SHEET.

J. ALL EXISTING DATA AND AV OUTLETS IN CLASSROOMS ARE SURFACE MOUNTED TO WALLS (MOSTLY CMU). DATA AND AV AND ASSOCIATED RACEWAYS SHALL BE DEMOLISHED. NEW DATA AND AV LAYOUTS SHALL BE PROVIDED ON NEW FLOOR PLANS.

1 **TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION F**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
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KINGWOOD, TX

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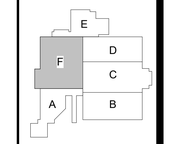

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TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION F

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Date: 10.29.2025	

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Salas O'Brien Project Number: 2022-05088-00

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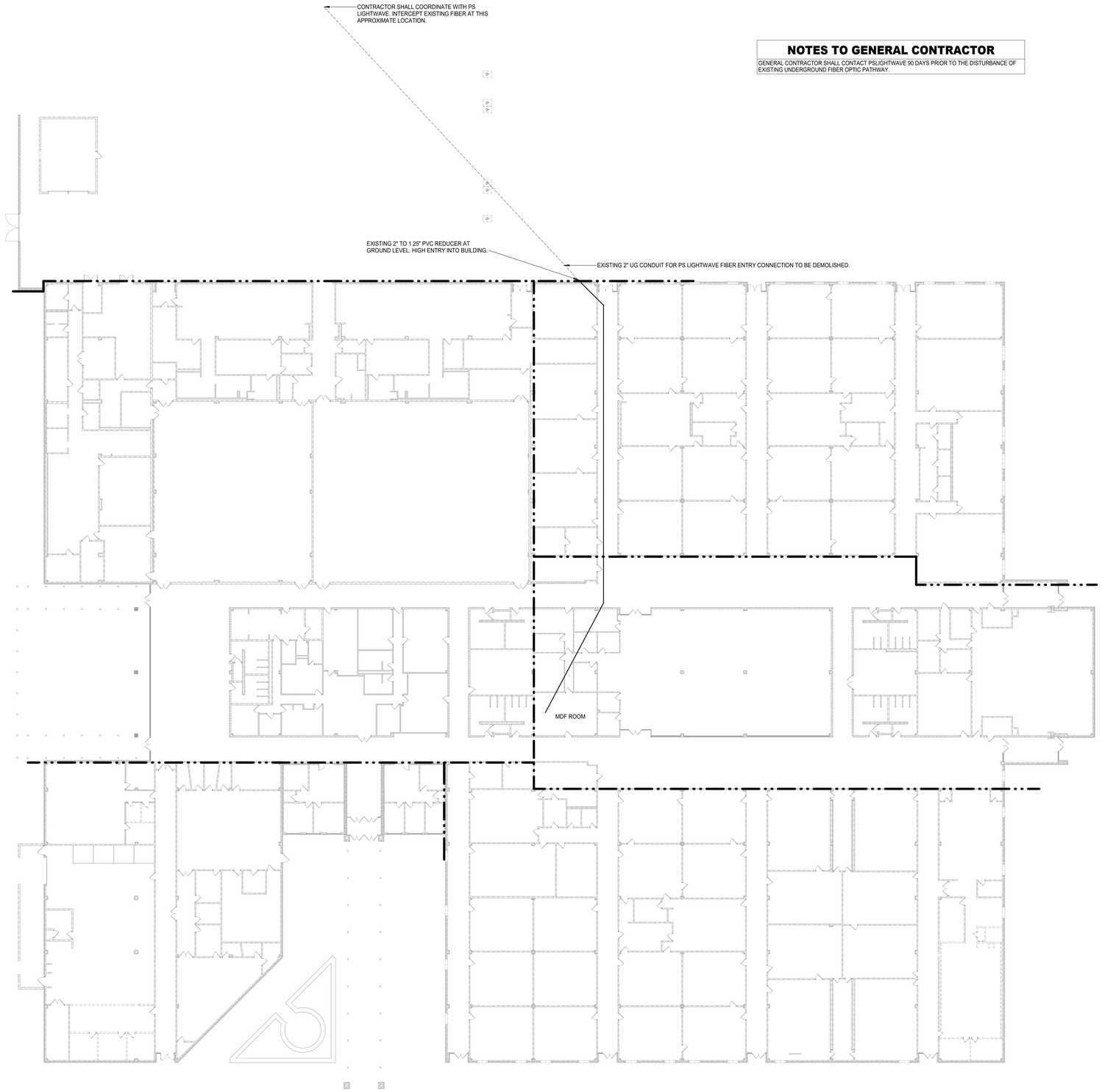

NOTES TO GENERAL CONTRACTOR

GENERAL CONTRACTOR SHALL CONTACT PSLIGHTWAVE 90 DAYS PRIOR TO THE DISTURBANCE OF EXISTING UNDERGROUND FIBER OPTIC PATHWAY.

1 **TECHNOLOGY EXISTING COMPOSITE PLAN - CREEKWOOD**
Scale: 1" = 20'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
HUMBLE ISD
KINGWOOD, TX

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PROFESSIONAL ENGINEER
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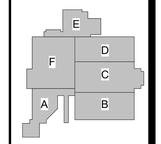

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TECHNOLOGY EXISTING COMPOSITE PLAN - CREEKWOOD

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Job No. 1821-13-01	Sheet No. T1.10
Drawn By: NY	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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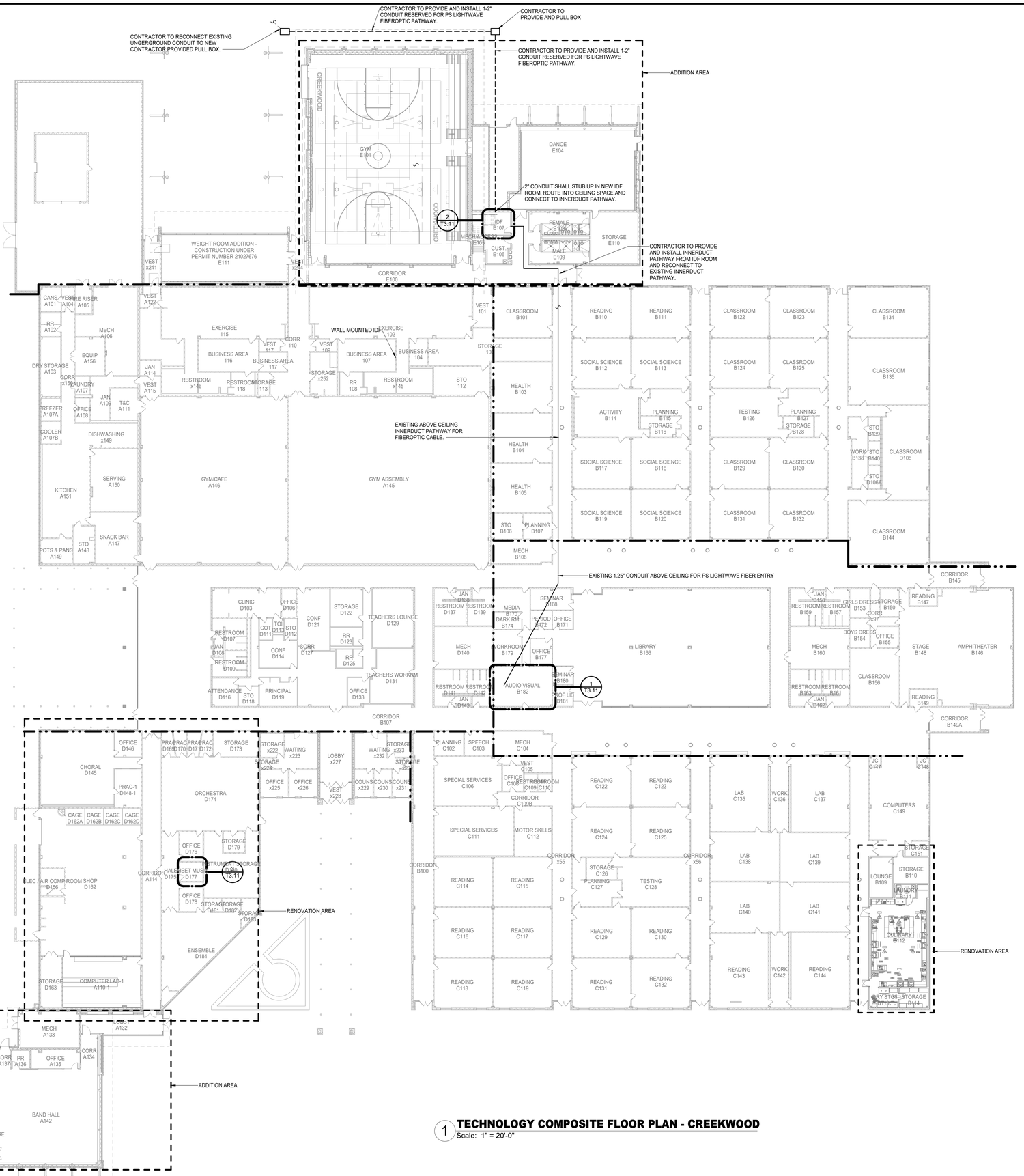
CONTRACTOR TO PROVIDE AND INSTALL 1-2" CONDUIT RESERVED FOR PS LIGHTWAVE FIBEROPTIC PATHWAY.
CONTRACTOR TO PROVIDE AND PULL BOX
CONTRACTOR TO RECONNECT EXISTING UNGERGROUND CONDUIT TO NEW CONTRACTOR PROVIDED PULL BOX.
CONTRACTOR TO PROVIDE AND INSTALL 1-2" CONDUIT RESERVED FOR PS LIGHTWAVE FIBEROPTIC PATHWAY.
ADDITION AREA
2" CONDUIT SHALL STUB UP IN NEW IDF ROOM. ROUTE INTO CEILING SPACE AND CONNECT TO INNERDUCT PATHWAY.
CONTRACTOR TO PROVIDE AND INSTALL INNERDUCT PATHWAY FROM IDF ROOM AND RECONNECT TO EXISTING INNERDUCT PATHWAY.
WALL MOUNTED IDF
EXISTING ABOVE CEILING INNERDUCT PATHWAY FOR FIBEROPTIC CABLE.
EXISTING 1.25" CONDUIT ABOVE CEILING FOR PS LIGHTWAVE FIBER ENTRY
RENOVATION AREA
ADDITION AREA
RENOVATION AREA
CREEKWOOD
GYM E101
DANCE E104
IDF E107
FEMALE E108
MALE E109
STORAGE E110
CUST E106
MECH/A E105
WEIGHT ROOM ADDITION - CONSTRUCTION UNDER PERMIT NUMBER 21027676 E111
CORRIDOR E100
CLASSROOM B101
HEALTH B103
HEALTH B104
HEALTH B105
MECH B108
STO B106
PLANNING B107
GYM/CAFE A146
GYM ASSEMBLY A145
KITCHEN A151
CLINIC D103
PRINCIPAL D119
TEACHERS LOUNGE D129
TEACHERS WORKRM D131
MEDIA B170
DARK RM B174
LIBRARY B166
AUDIO VISUAL B182
MECH B140
MECH B160
STAGE B148
AMPHITHEATER B146
CLASSROOM B156
CORRIDOR B107
CORRIDOR B100
CORRIDOR B145
CORRIDOR B149A
CHORAL D145
ORCHESTRA D174
ENSEMBLE D184
BAND HALL A142
MECH A133
SPECIAL SERVICES C106
SPECIAL SERVICES C111
MOTOR SKILLS C112
COMPUTERS C149
LOUNGE B109
LAUNDRY B111
STORAGE B110
STORAGE B114
MECH C104
PLANNING C102
SPEECH C103
CORRIDOR x55
CORRIDOR x56
CORRIDOR A114
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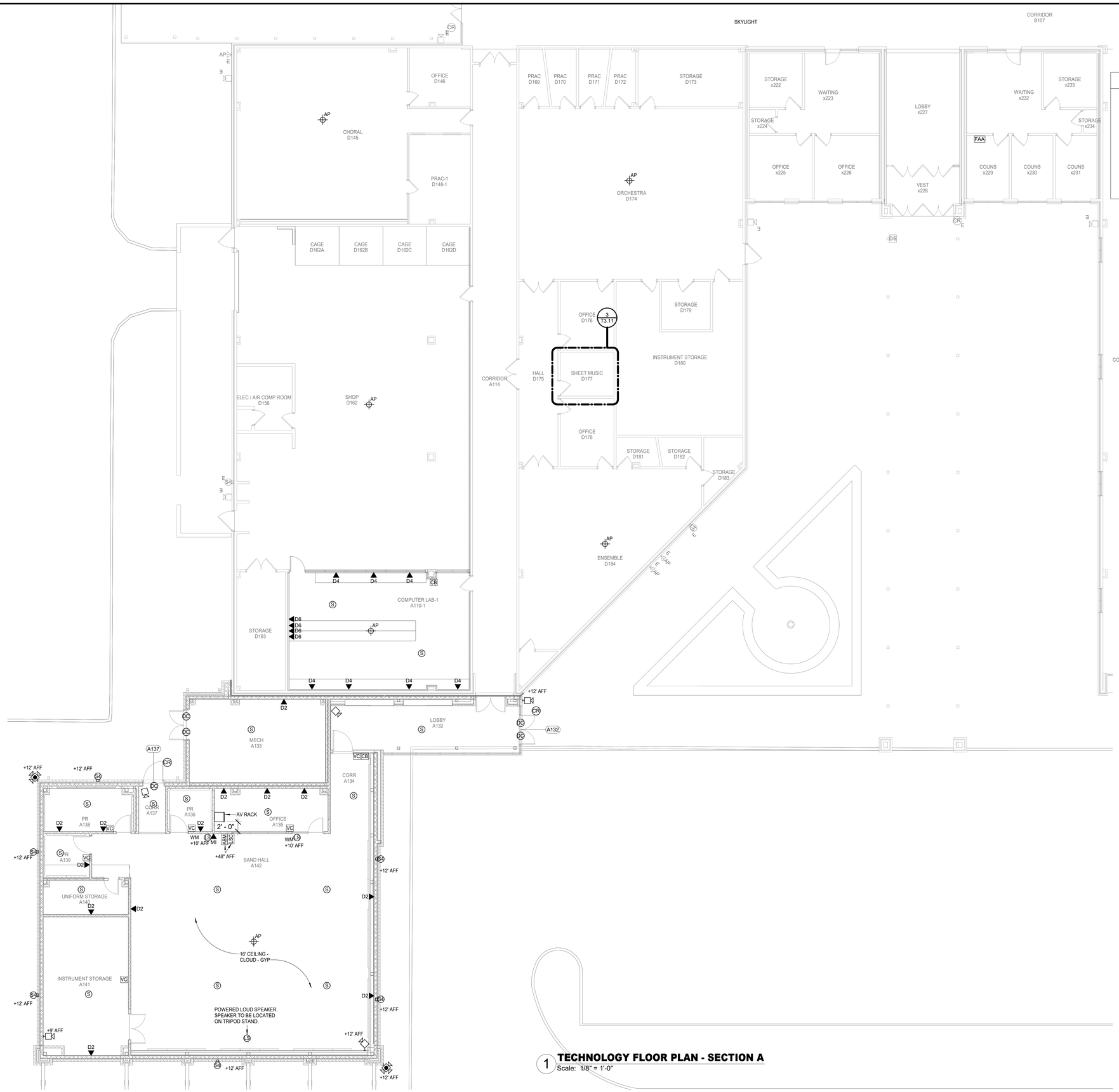

1 **TECHNOLOGY FLOOR PLAN - SECTION A**
Scale: 1/8" = 1'-0"

TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
B	COORDINATE ALL CEILING DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS AND INTERIOR DESIGN CONSULTANT(IF APPLICABLE) PRIOR TO ROUGH-IN.
C	REFERENCE TECHNOLOGY FLOOR PLANS, COMPOSITE PLANS, NOTES & LEGENDS AND DETAILS FOR ADDITIONAL INFORMATION AND DEVICE/OUTLET LOCATIONS.
D	CONTRACTOR TO COORDINATE INTERCOM SPEAKER MOUNTING TYPES WITH ARCHITECTURAL CEILING PLANS PRIOR TO FINAL SPEAKER SELECTION. COORDINATE WITH ENGINEER ON ANY DISCREPANCIES.
E	ALL NEW ACCESS CONTROL DOUBLE DOORS SHALL HAVE INTERNAL REX ON BOTH ACTIVE AND INACTIVE LEAFS.

Revision / Date

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TECHNOLOGY FLOOR PLAN - SECTION A

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Drawn By: NY	
Date: 10.29.2025	

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TECHNOLOGY PLAN KEYED NOTES

1	CONTRACTOR TO ADJUST LOCATIONS OF EXISTING DEVICES THAT ARE LOCATED WHERE NEW SOLAR TUBES WILL BE INSTALLED. TYPICAL FOR ALL SHOWN
2	ALL DIVISION 27 AND 28 EXISTING CABLING THAT IS IN THE AREA OF SOLAR TUBE INSTALLATION SHALL BE PROTECTED AND ADJUSTED AS NEEDED. TYPICAL FOR ALL SHOWN.
3	EXISTING SURFACE AND RECESSED NETWORK OUTLETS IN THESE LOCATIONS. ALL DIVISION 27 AND 28 EXISTING CABLING THAT IS IN THE AREA OF NEW EXTERIOR WINDOWS SHALL BE PROTECTED AND ADJUSTED AS NEEDED. TYPICAL FOR ALL SHOWN.
4	OUTLETS TO BE INSTALLED IN BASEPLATE OF THE BLEACHERS. REFERENCE ELECTRICAL POWER PLANS FOR MORE INFORMATION.
5	DEVICES INSTALLED IN A SEPERATE PROJECT.

TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
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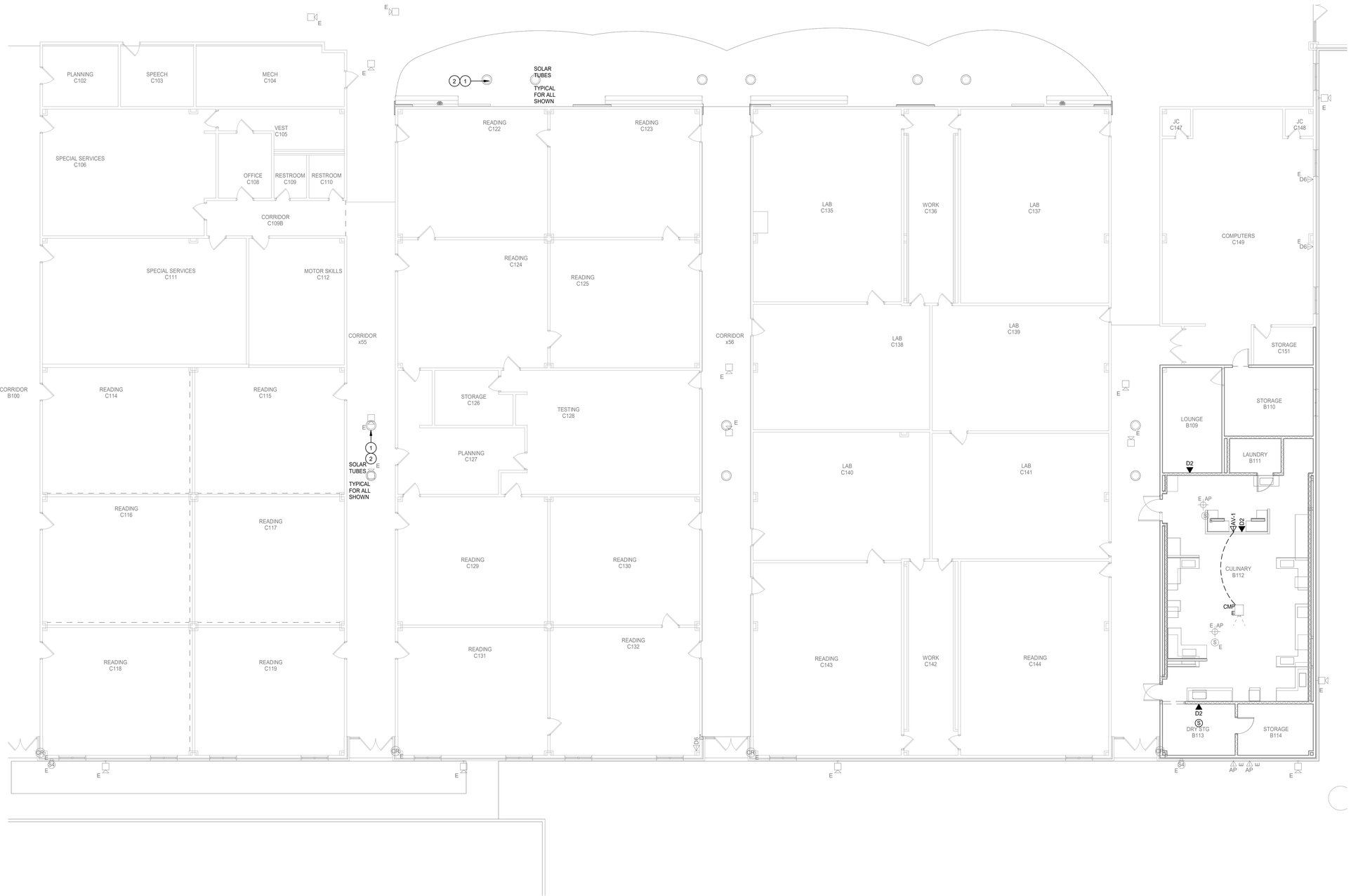
C	REFERENCE TECHNOLOGY FLOOR PLANS, COMPOSITE PLANS, NOTES & LEGENDS AND DETAILS FOR ADDITIONAL INFORMATION AND DEVICE/OUTLET LOCATIONS.
D	CONTRACTOR TO COORDINATE INTERCOM SPEAKER MOUNTING TYPES WITH ARCHITECTURAL CEILING PLANS PRIOR TO FINAL SPEAKER SELECTION. COORDINATE WITH ENGINEER ON ANY DISCREPANCIES.
E	ALL NEW ACCESS CONTROL DOUBLE DOORS SHALL HAVE INTERNAL REX ON BOTH ACTIVE AND INACTIVE LEAFS.



1 **TECHNOLOGY FLOOR PLAN - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

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TECHNOLOGY FLOOR PLAN - SECTION B

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: NY
Date: 10.29.2025
Sheet No. T2.12

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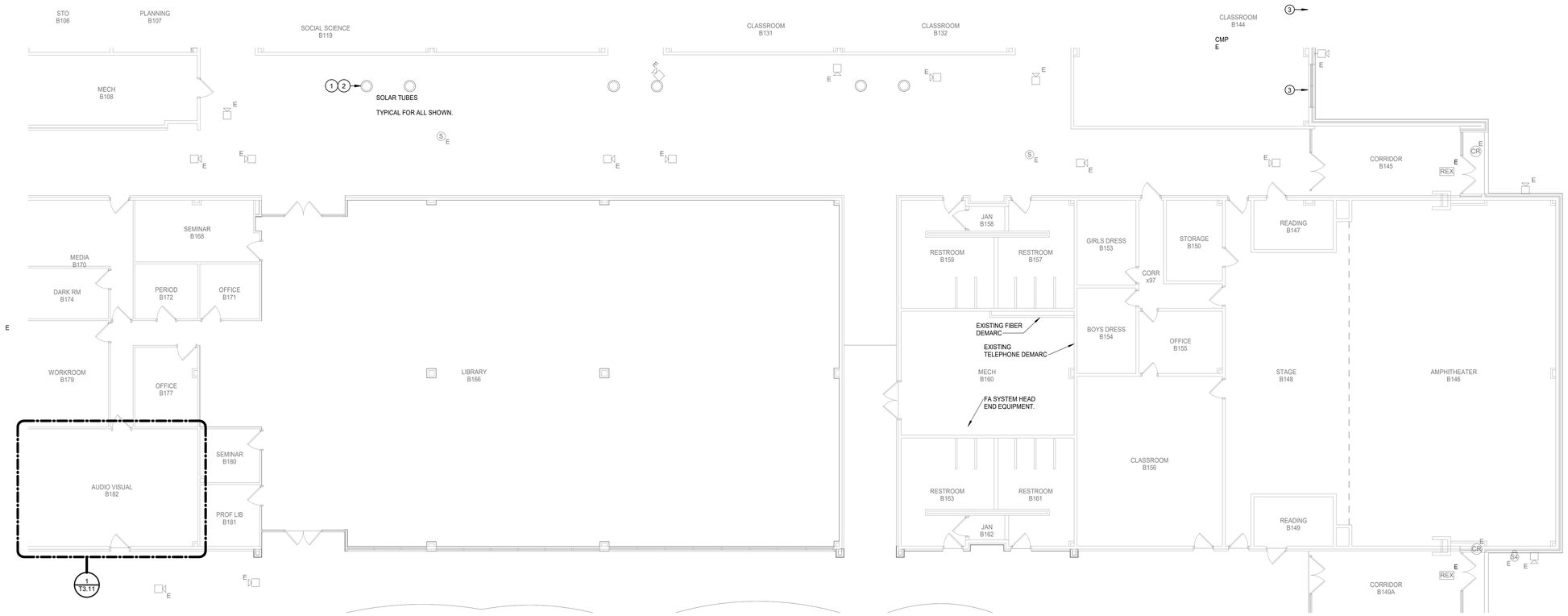
TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
B	COORDINATE ALL CEILING DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS AND INTERIOR DESIGN CONSULTANT(IF APPLICABLE) PRIOR TO ROUGH-IN.
C	REFERENCE TECHNOLOGY FLOOR PLANS, COMPOSITE PLANS, NOTES & LEGENDS AND DETAILS FOR ADDITIONAL INFORMATION AND DEVICE/OUTLET LOCATIONS.
D	CONTRACTOR TO COORDINATE INTERCOM SPEAKER MOUNTING TYPES WITH ARCHITECTURAL CEILING PLANS PRIOR TO FINAL SPEAKER SELECTION. COORDINATE WITH ENGINEER ON ANY DISCREPANCIES.
E	ALL NEW ACCESS CONTROL DOUBLE DOORS SHALL HAVE INTERNAL REX ON BOTH ACTIVE AND INACTIVE LEAFS.

TECHNOLOGY PLAN KEYED NOTES

1	CONTRACTOR TO ADJUST LOCATIONS OF EXISTING DEVICES THAT ARE LOCATED WHERE NEW SOLAR TUBES WILL BE INSTALLED. TYPICAL FOR ALL SHOWN
2	ALL DIVISION 27 AND 28 EXISTING CABLING THAT IS IN THE AREA OF SOLAR TUBE INSTALLATION SHALL BE PROTECTED AND ADJUSTED AS NEEDED. TYPICAL FOR ALL SHOWN.
3	EXISTING SURFACE AND RECESSED NETWORK OUTLETS IN THESE LOCATIONS. ALL DIVISION 27 AND 28 EXISTING CABLING THAT IS IN THE AREA OF NEW EXTERIOR WINDOWS SHALL BE PROTECTED AND ADJUSTED AS NEEDED. TYPICAL FOR ALL SHOWN.
4	OUTLETS TO BE INSTALLED IN BASEPLATE OF THE BLEACHERS. REFERENCE ELECTRICAL POWER PLANS FOR MORE INFORMATION.
5	DEVICES INSTALLED IN A SEPERATE PROJECT.



1 **TECHNOLOGY FLOOR PLAN - SECTION C**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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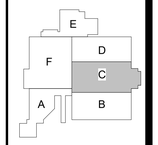
PROFESSIONAL ENGINEER
10-29-2025



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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY FLOOR PLAN - SECTION C

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. T2.13
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Date: 10.29.2025	

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TECHNOLOGY PLAN KEYED NOTES

1	CONTRACTOR TO ADJUST LOCATIONS OF EXISTING DEVICES THAT ARE LOCATED WHERE NEW SOLAR TUBES WILL BE INSTALLED. TYPICAL FOR ALL SHOWN
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4	OUTLETS TO BE INSTALLED IN BASEPLATE OF THE BLEACHERS. REFERENCE ELECTRICAL POWER PLANS FOR MORE INFORMATION.
5	DEVICES INSTALLED IN A SEPERATE PROJECT.

TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
B	COORDINATE ALL CEILING DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS AND INTERIOR DESIGN CONSULTANT(IF APPLICABLE) PRIOR TO ROUGH-IN.
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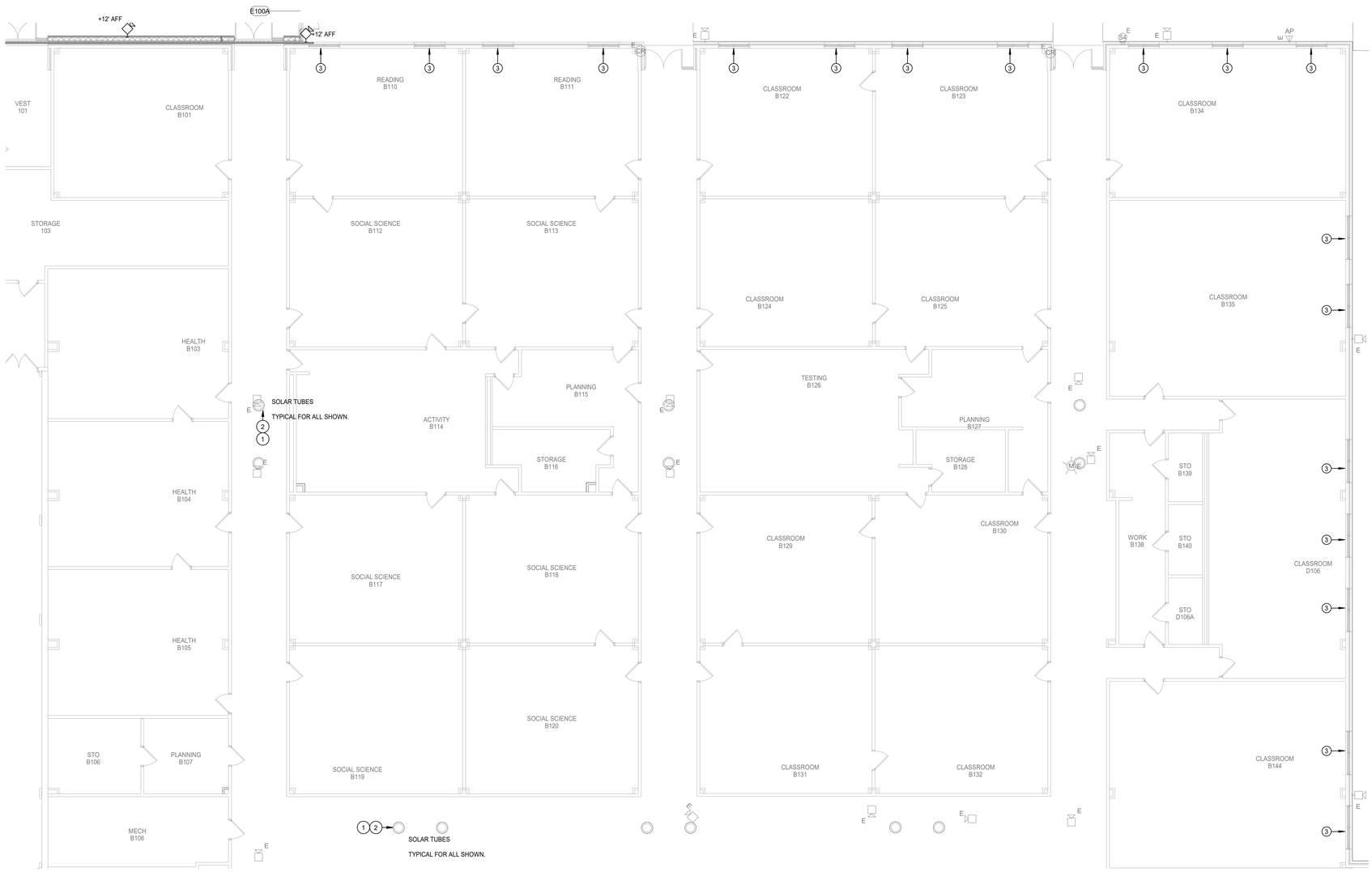

1 **TECHNOLOGY FLOOR PLAN - SECTION D**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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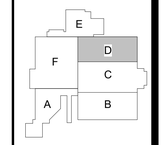

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TECHNOLOGY FLOOR PLAN - SECTION D

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Job No. 1821-13-01
Sheet No. T2.14
Drawn By: NY
Date: 10.29.2025

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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TECHNOLOGY PLAN KEYED NOTES

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5	DEVICES INSTALLED IN A SEPERATE PROJECT.

TECHNOLOGY PLAN GENERAL NOTES

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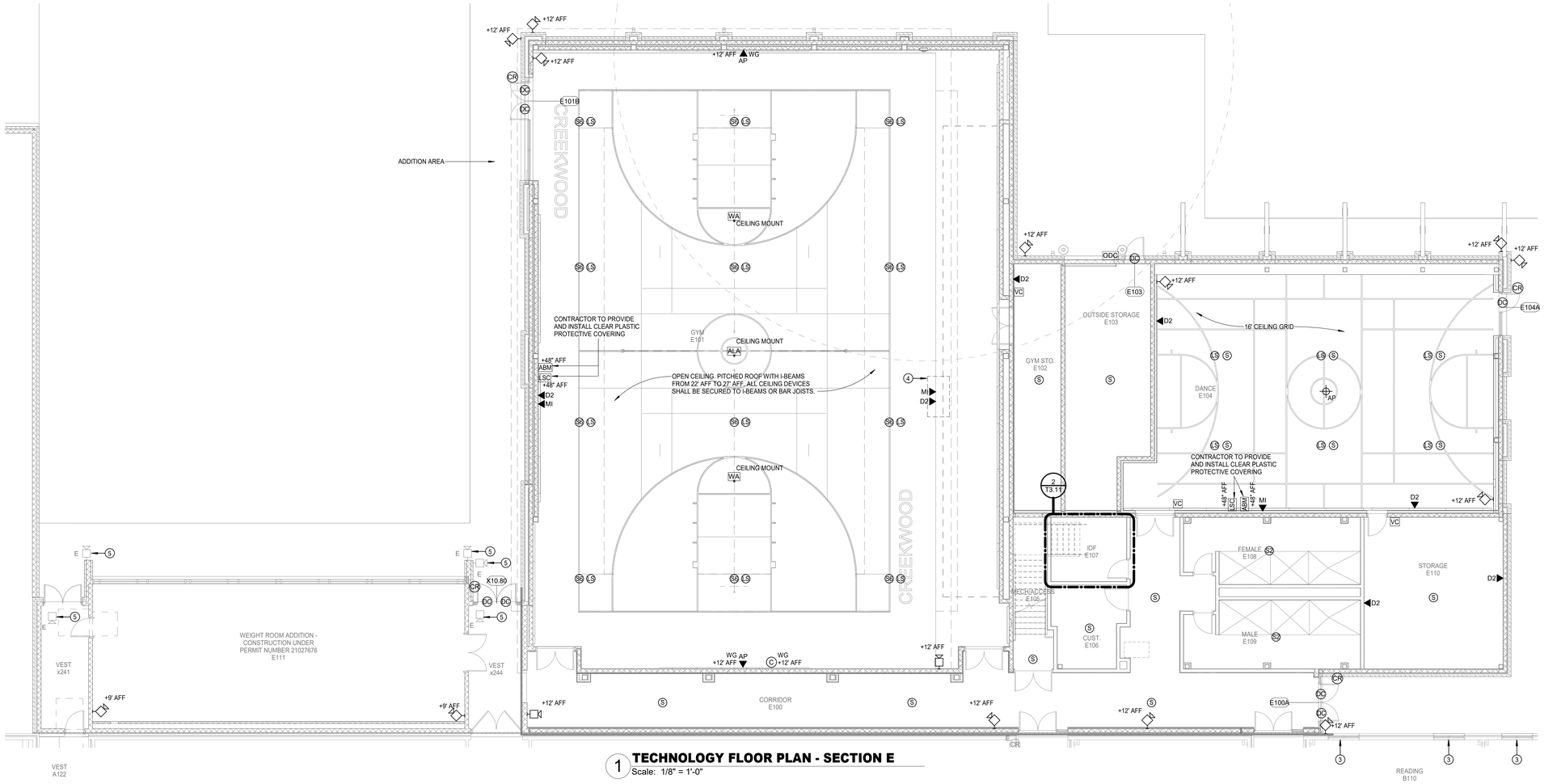

1 **TECHNOLOGY FLOOR PLAN - SECTION E**
Scale: 1/8" = 1'-0"

Revision /	Date	
3	06-06-24	City Comments 3

Project:
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FOR
HUMBLE ISD
KINGWOOD, TX

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TECHNOLOGY FLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. T2.15
Drawn By: NY	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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1 **TECHNOLOGY FLOOR PLAN - SECTION F**
Scale: 1/8" = 1'-0"

TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
B	COORDINATE ALL CEILING DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS AND INTERIOR DESIGN CONSULTANT(IF APPLICABLE) PRIOR TO ROUGH-IN.
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TECHNOLOGY PLAN KEYED NOTES

1	CONTRACTOR TO ADJUST LOCATIONS OF EXISTING DEVICES THAT ARE LOCATED WHERE NEW SOLAR TUBES WILL BE INSTALLED. TYPICAL FOR ALL SHOWN
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4	OUTLETS TO BE INSTALLED IN BASEPLATE OF THE BLEACHERS. REFERENCE ELECTRICAL POWER PLANS FOR MORE INFORMATION.
5	DEVICES INSTALLED IN A SEPERATE PROJECT.

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
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KINGWOOD, TX

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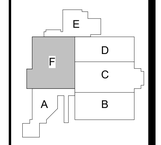

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TECHNOLOGY FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-01	Sheet No. T2.16
Drawn By: NY	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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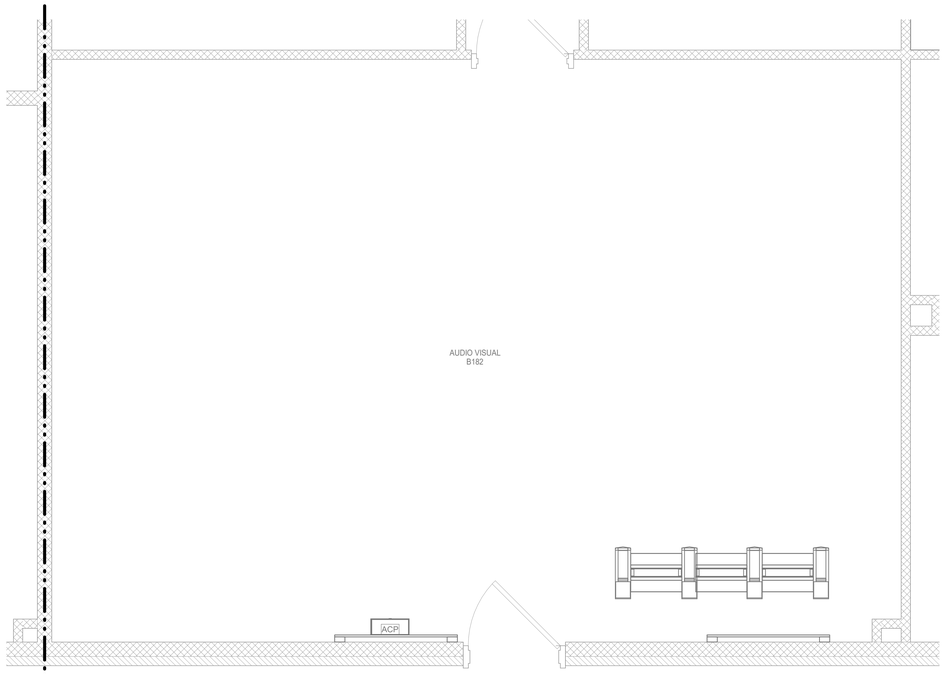
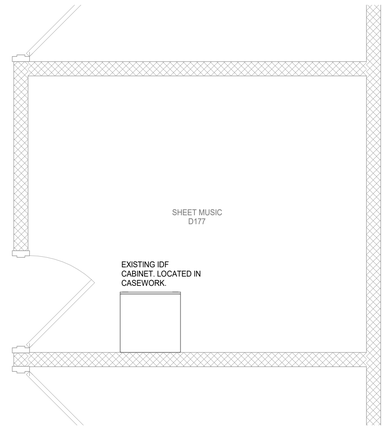


1 **TECHNOLOGY ENLARGED PLAN - MDF**
Scale: 1/2" = 1'-0"



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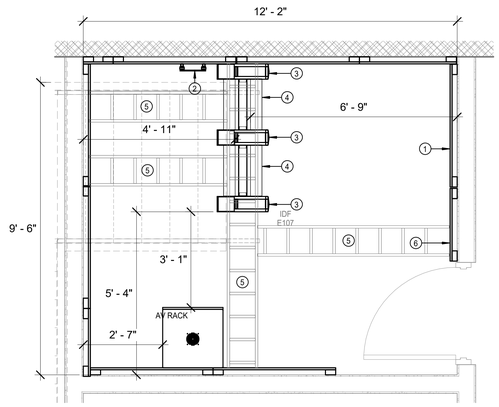
Scale: 1/2" = 1'-0"



2 **TECHNOLOGY ENLARGED PLAN - NEW IDF E107**
Scale: 1/2" = 1'-0"

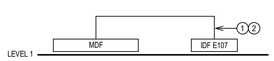
TECH ENLARGED PLAN GENERAL NOTES

A	ALL RACK LOCATIONS SHALL BE COORDINATED WITH THE PROJECT'S TECHNOLOGY CONSULTANT AND OWNER PRIOR TO INSTALLATION. NO RACKS AND/OR ASSOCIATED CABLE TRAY SYSTEM SHALL BE PERMANENTLY INSTALLED PRIOR TO DOCUMENTED ACCEPTANCE.
B	PATCH PANEL QUANTITY SHALL BE DETERMINED BY STATION CABLE DROP COUNTS SHOWN ON TECHNOLOGY PLANS AND THE ASSOCIATED PROJECT MATRIX. ENSURE PATCH PANEL QUANTITY IS SUFFICIENT TO SUPPORT THE NUMBER OF PORTS REQUIRED BY TECHNOLOGY PLANS PLUS AN ADDITIONAL 25% FOR FUTURE GROWTH.
C	CONTRACTOR SHALL NOT MOUNT EXCEED MORE THAN A 50% RACK FILL RATIO ON ANY RACK.
D	REFERENCE SPECIFICATIONS FOR MATERIALS AND METHODS
E	ALL RACKS, LADDER TRAYS, LIGHTNING PROTECTION ENCLOSURES AND ANY OTHER DEVICES, PART OF THE STRUCTURED CABLING SYSTEM, SHALL BE GROUNDED TO A GROUND BUS BAR LOCATED IN THE TELECOMMUNICATIONS ROOM WITH A #6AWG GROUND CABLE. DAISY CHAINING WILL NOT BE ACCEPTED. ALL ITEMS SHALL HAVE A DEDICATED GROUND CABLE TO BUS BAR. GROUND CABLE SHALL BE GREEN IN COLOR.

TECH ENLARGED PLAN KEYED NOTES

1	INDICATES THE LOCATION OF A 8' TALL, 3/4" FIRE RATED PLYWOOD CONTRACTOR TO PROVIDE AND INSTALL PLYWOOD AND ALL REQUIRED MOUNTING HARDWARE. PLYWOOD SHALL BE PAINTED WHITE WITH FIRE RATED PAINT. TYPICAL FOR ALL SHOWN ON DRAWING.
2	INDICATES THE LOCATION OF A NEW WALL MOUNTED TELECOMMUNICATION GROUND BUS BAR (TGBB). CABLING CONTRACTOR TO PROVIDE BUS BAR AND ALL REQUIRED MATERIAL TO MOUNT AT THE LOCATION SHOWN. TGBB TO BE MOUNTED AT +90" A.F.F.
3	PROVIDE AND INSTALL ONE (1) 7'X6", FRONT AND REAR MANAGED, VERTICAL CABLE MANAGER (BLACK IN COLOR). CABLE MANAGERS SHALL BE INSTALLED ON EACH END OF THE RACK SYSTEMS AND BETWEEN EACH RACK. CABLE MANAGERS SHALL HAVE A SINGLE, SOLID, FULL HEIGHT HINGED DOOR IN THE FRONT AND WIDE SPACED CABLE RINGS WITH SPIN-OPEN LATCHES IN THE REAR. TYPICAL FOR ALL SHOWN IN THE ENTIRE PROJECT.
4	PROVIDE AND INSTALL ONE (1) 2-POST, FLOOR MOUNTED, 7' RELAY RACK (BLACK IN COLOR). PROVIDE BONDING WASHERS, BOLTS, AND NUTS AT ALL MECHANICALLY CONNECTED LOCATIONS OF THE RACK TO ENSURE THAT ALL PIECES OF THE RACK ARE COMPLETELY BONDED. SCRAPING PAINT FROM RACKS TO MAKE A BOND WILL NOT BE ACCEPTED. ALL RACK MOUNTED COMPONENTS SHALL BE MOUNTED WITH BONDING SCREWS AND THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (50) ADDITIONAL BONDING SCREWS FOR THE INSTALLATION OF OWNER EQUIPMENT. NO DAISY CHAINING GROUNDS FROM RACK TO CABLE TRAY OR TO OTHER RACKS WILL BE ACCEPTED. ALL GROUNDS SHALL BE HOME RUN TO THE TELECOMMUNICATIONS GROUND BUS BAR (TGBB). TYPICAL FOR ALL SHOWN ON THE ENTIRE PROJECT.
5	PROVIDE AND INSTALL A 12" WIDE, UNIVERSAL LADDER TRAY AND ALL REQUIRED MOUNTING HARDWARE. LADDER TRAY SHALL BE BLACK IN COLOR. TYPICAL FOR ALL SHOWN ON ENTIRE PROJECT.
6	CONTRACTOR TO PROVIDE AND INSTALL 2-4" CONDUIT SLEEVES ABOVE CEILING. FIELD COORDINATE FINAL LOCATION.

KEYED NOTES:
1. PROVIDE AND INSTALL FIBER OPTIC CALBE CONNECTION FROM MDF TO NEW IDF. REFERENCE TECHNOLOGY SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. PROVIDE AND INSTALL VOICE CALBE CONNECTION FROM MDF TO NEW IDF. REFERENCE TECHNOLOGY SPECIFICATIONS FOR ADDITIONAL INFORMATION.



4 TECHNOLOGY TYPICAL BACKBONE DIAGRAM

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
FOR
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KINGWOOD, TX

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80219
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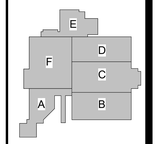

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TECHNOLOGY ENLARGED PLAN

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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: NY
Date: 10.29.2025
Sheet No. T3.11

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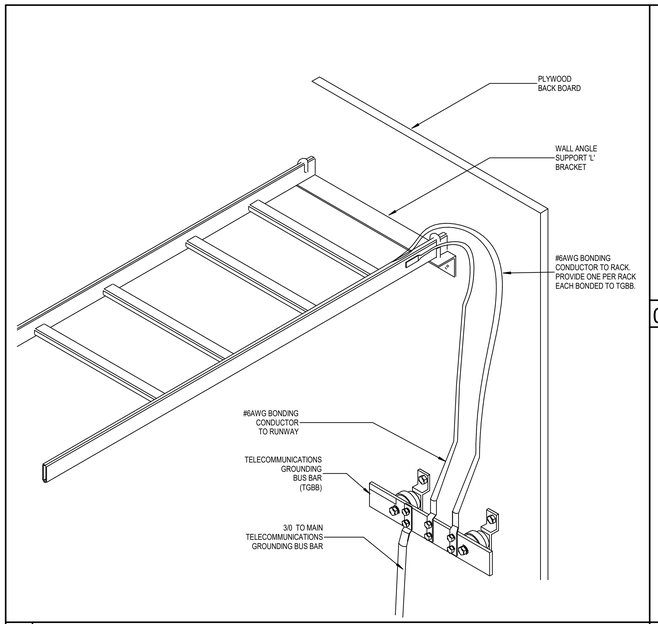
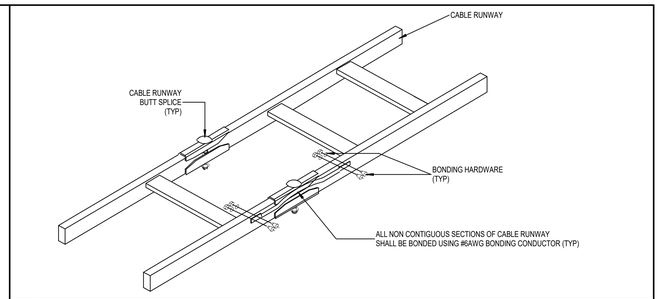
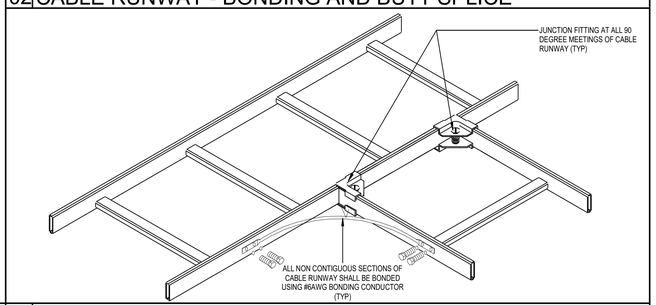


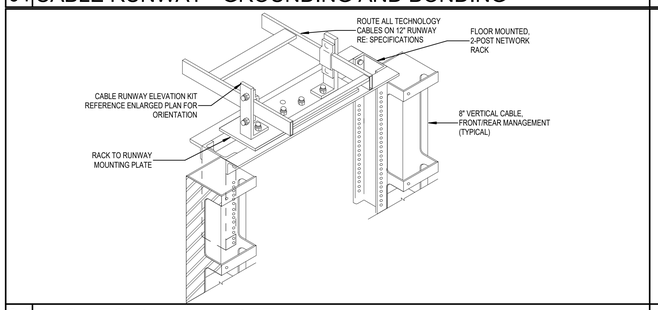
01 CABLE RUNWAY - GROUNDING AND BONDING — NOT TO SCALE



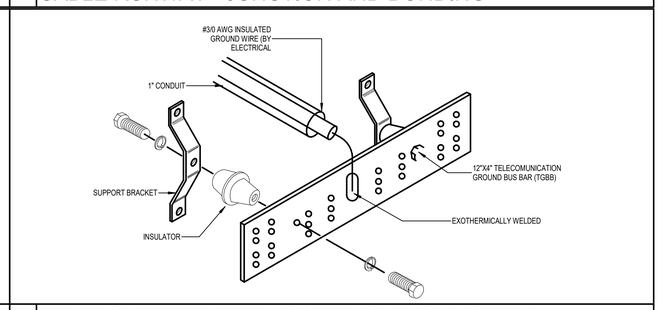
02 CABLE RUNWAY - BONDING AND BUTT SPLICE — NOT TO SCALE



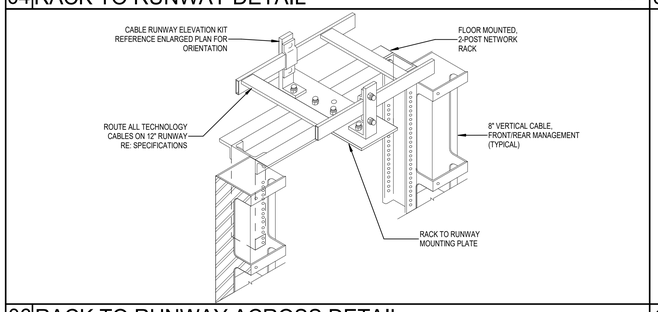
03 CABLE RUNWAY - JUNCTION AND BONDING — NOT TO SCALE



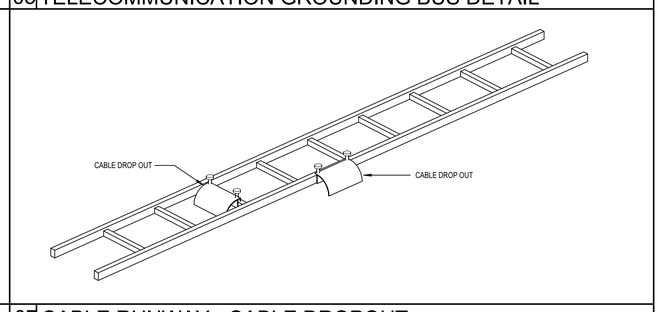
04 RACK TO RUNWAY DETAIL — NOT TO SCALE



05 TELECOMMUNICATION GROUNDING BUS DETAIL — NOT TO SCALE



06 RACK TO RUNWAY ACROSS DETAIL — NOT TO SCALE



07 CABLE RUNWAY - CABLE DROPOUT — NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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KINGWOOD, TX

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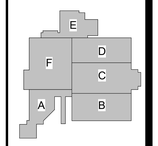

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Job No. 1821-13-01
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Date: 10.29.2025
Sheet No. T5.01

Salas O'Brien
Houston
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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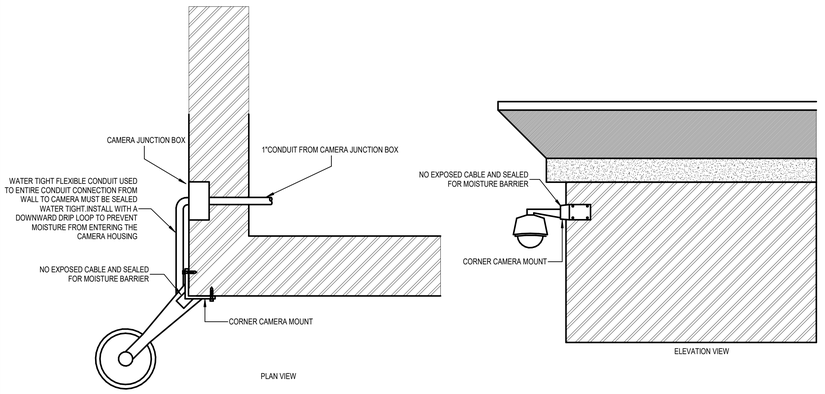
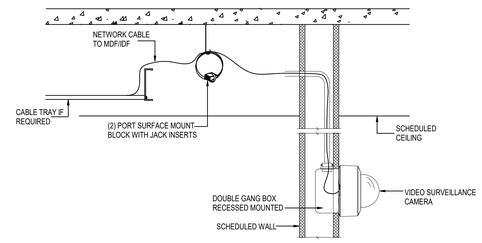


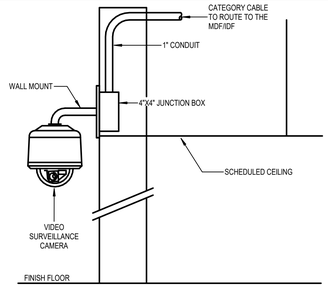
NOTE:

ELECTRICAL CONTRACTOR SHALL PROVIDE 1" CONDUIT WITH PULL STRING TO NEAREST AVAILABLE PLENUM SPACE. SECURITY CONTRACTORS SHALL PROVIDE CABLE FEED-THROUGH MOUNT FOR CAMERA. NO EXPOSED CABLE WILL BE ALLOWED. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.

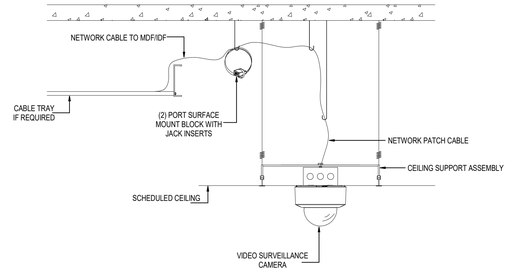
01 CORNER MOUNTING DETAIL NOT TO SCALE



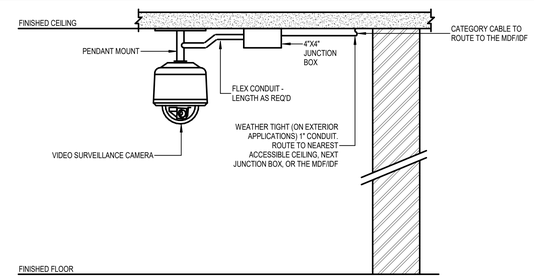
02 INTERIOR WALL MOUNT CAMERA-VERTICAL NOT TO SCALE



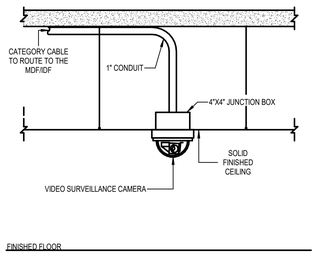
03 INTERIOR WALL MOUNTED DOME CAMERA NOT TO SCALE



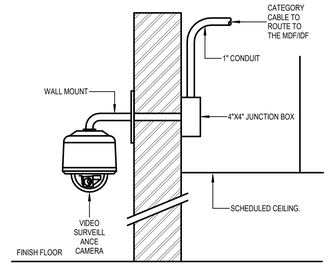
04 INTERIOR LAY-IN CEILING MOUNTED CAMERA NOT TO SCALE



05 EXT./INT. PENDANT MOUNTED DOME CAMERA NOT TO SCALE



06 EXTERIOR/INTERIOR SOLID CEILING MOUNT CAMERA NOT TO SCALE



07 EXTERIOR WALL MOUNTED DOME CAMERA NOT TO SCALE

GENERAL NOTES:

A. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUITS AND BACK BOXES. CONDUITS SHALL ROUTE TO THE NEAREST, ACCESSIBLE PLENUM SPACE.

B. ALL WALL, CORNER, PENDANT, AND UNDER CANOPY MOUNTING HEIGHTS. SHALL BE COORDINATED WITH THE OWNER AND SECURITY CONSULTANT PRIOR TO ROUGH-IN.

C. CABLE FEED-THROUGH MOUNT FOR CAMERA. NO EXPOSED CABLE WILL BE ALLOWED. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.

08 NOTES NOT TO SCALE

Revision / Date

Project:
CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
3603 W LAKE HOUSTON PKWY, KINGWOOD, TX 77339
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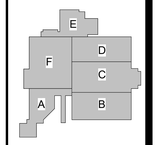

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Salas O'Brien Project Number: 2022-05088-00

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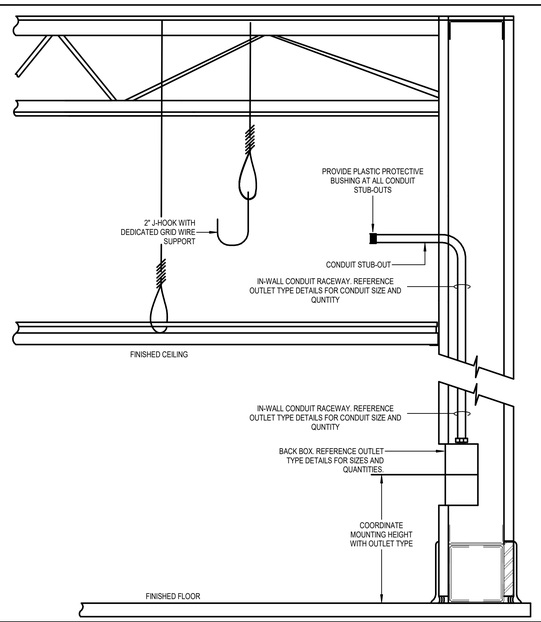
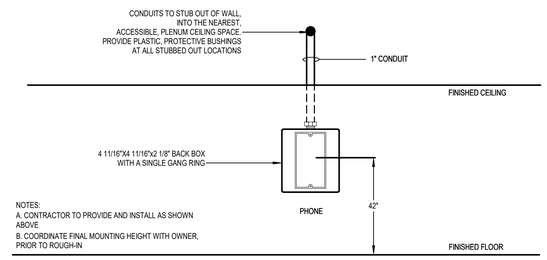
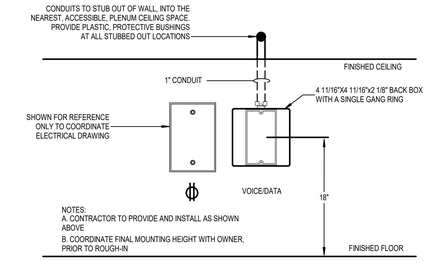


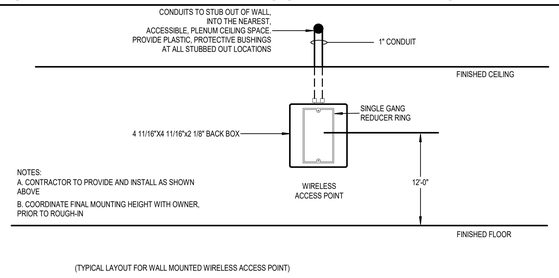
01 LOW VOLTAGE ELEVATION - IN-WALL RACEWAY NOT TO SCALE



02 RACEWAY DETAIL - WALL MOUNTED TELEPHONE NOT TO SCALE

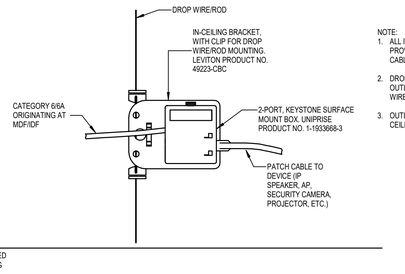


03 RACEWAY DETAIL - TYPICAL VOICE/DATA OUTLET NOT TO SCALE



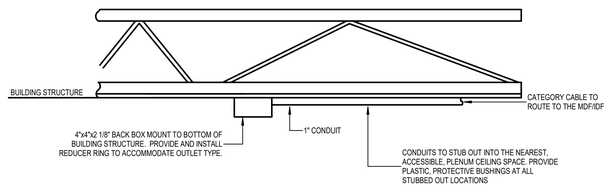
(TYPICAL LAYOUT FOR WALL MOUNTED WIRELESS ACCESS POINT)

04 RACEWAY DETAIL - WALL MOUNTED WIRELESS AP NOT TO SCALE



NOTE:
1. ALL ITEMS SHOWN IN THIS DETAIL SHALL BE PROVIDED AND INSTALLED BY THE STRUCTURED CABLING SYSTEM INSTALLER.
2. DROP WIRE SUPPORT SHALL BE DEDICATED TO THE OUTLET. DO NOT MOUNT TO EXISTING CEILING GRID WIRE.
3. OUTLET SHALL BE LOCATED WITHIN 3' OF THE CEILING AND WITH 5' FROM THE IP DEVICE.

05 ABOVE CEILING STAND ALONE OUTLET NOT TO SCALE



06 OPEN CEILING STRUCTURAL SURFACE MOUNT OUTLET NOT TO SCALE

1. FACEPLATE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THEN 1/4" IN HEIGHT
2. PROVIDE BLANK INSERTS FOR ANY UNUSED PORTS
3. COORDINATE EXACT LABELING SCHEME WITH OWNER AND ENGINEER.

07 FACEPLATE LABEL DETAIL NOT TO SCALE

IF CABLE SERVERS BUILDING INTERCOM SYSTEM PROVIDE AN "I" BETWEEN THE TR IDENTIFIER AND THE PANEL: EXAMPLE I1-I-C-01

1. WRAP AROUND CABLE LABEL TO BE INSTALLED AT BOTH THE WORK AREA OUTLET AND CLOSET ENDS OF ALL CABLES. INSTALL LABEL 1" FROM THE END OF THE CABLE JACKET AT BOTH ENDS.
2. CABLE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THEN 1/8" IN HEIGHT.
3. COORDINAE EXACT LABELING SCHEME WITH OWNER AND ENGINEER.

08 CABLE LABEL DETAIL NOT TO SCALE

Revision / Date

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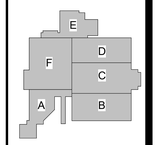

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Salas O'Brien Project Number: 2022-05088-00

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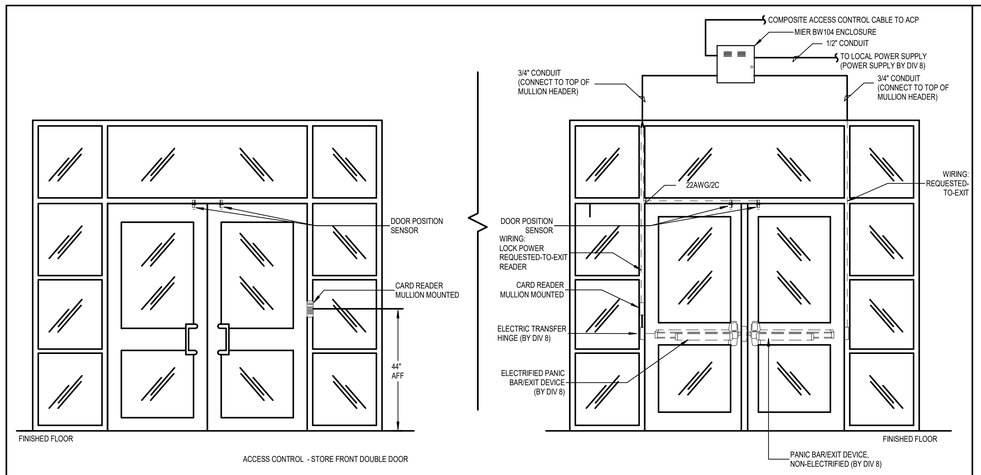
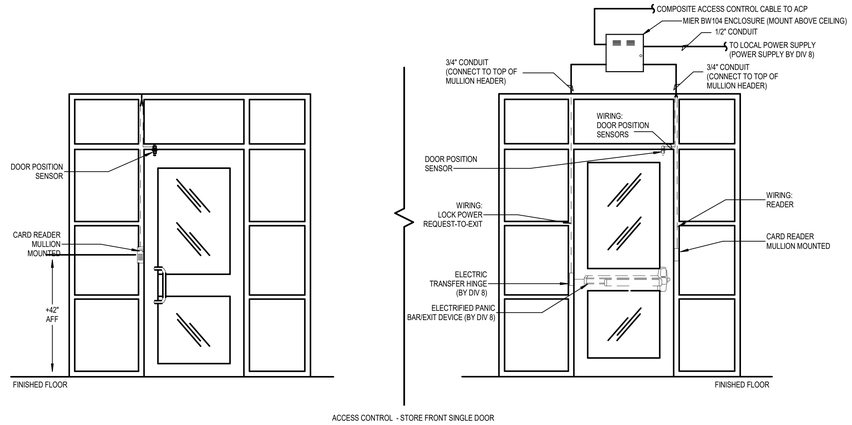


ACCESS CONTROL - STORE FRONT DOUBLE DOOR

01 ACCESS CONTROL - STORE FRONT DOUBLE DOOR

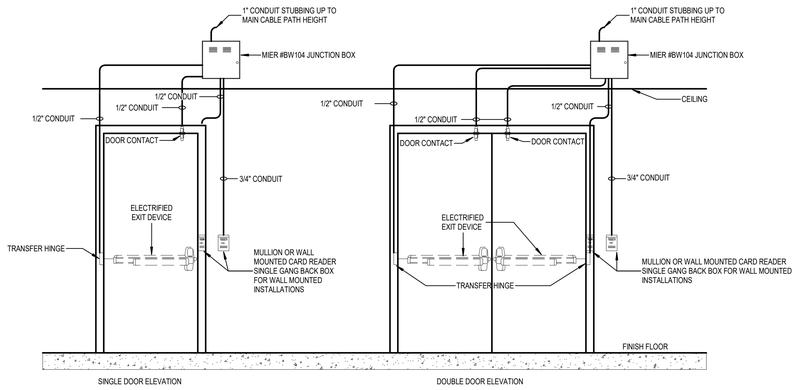
NOT TO SCALE



ACCESS CONTROL - STORE FRONT SINGLE DOOR

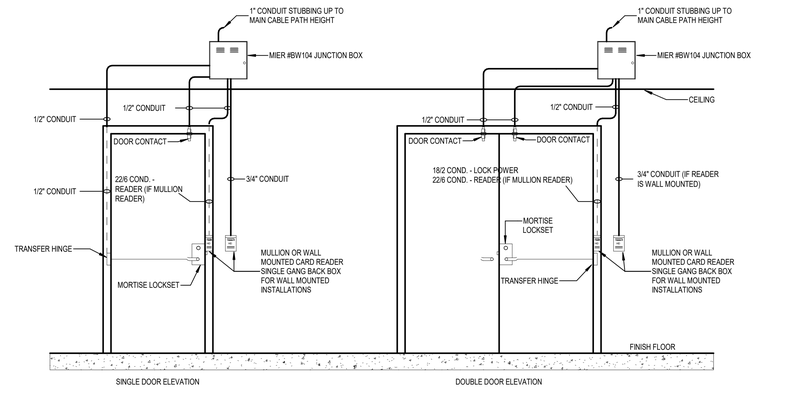
02 ACCESS CONTROL - STORE FRONT SINGLE DOOR

NOT TO SCALE



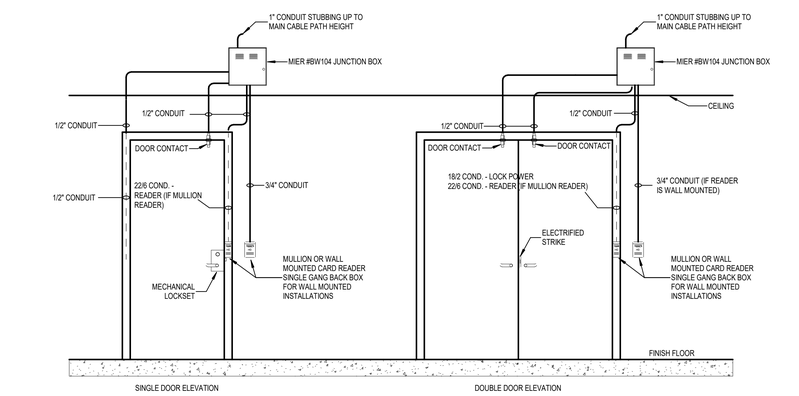
03 ACCESS CONTROL - EXIT DEVICE DOOR ELEVATION

NOT TO SCALE



04 ACCESS CONTROL - MORTISE LOCK DOOR ELEVATION

NOT TO SCALE



05 ACCESS CONTROL - ELECTRIFIED STRIKE DOOR ELEVATION

NOT TO SCALE

Revision / Date

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CREEKWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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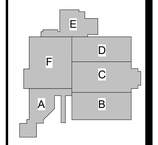

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Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-01
Drawn By: NY
Date: 10.29.2025
Sheet No. T5.04

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HUMBLE INDEPENDENT SCHOOL DISTRICT

CSP# 2026-08

RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS

2910 HIGH VALLEY DR,
KINGWOOD, TX 77345-1852



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STRUCTURAL:
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MATRIXSTRUCTURAL.COM

CIVIL ENGINEERING
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1400 WOODLOCH FOREST DR #225
THE WOODLANDS, TX, 77380
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PROPOSED 2 ADDITIONS - A GYMNASIUM/DANCE STUDIO AT FIRE BUILDING #2 AND A BAND HALL AT FIRE BUILDING #1. ALTERATION TO EXISTING BUILDING TO INCLUDE NEW EXTERIOR WINDOWS.

PROJECT DESCRIPTION

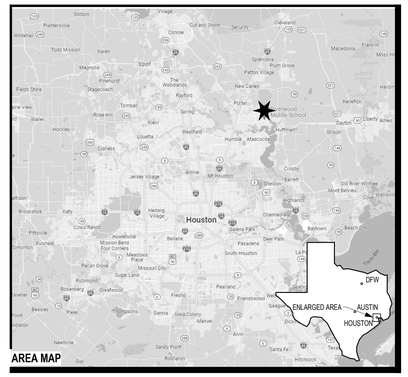
INDEPENDENT PRICING 1: ADDITIONAL PARKING. REF. SHT. AS1.01 (PLAN WEST OF SERVICE YARD AND EXPANSION OF MAIN PARKING LOT NEAR KINGWOOD DRIVE)

INDEPENDENT PRICING

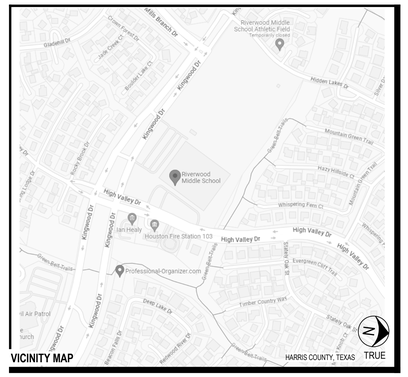
AB	ANCHOR BOLT
AC	AIR CONDITIONER
ACC	ACCESSIBLE
ACMU	ARCHITECTURAL CONCRETE MASONRY UNIT
ADA	AMERICANS WITH DISABILITIES ACT / ADA STANDARDS FOR ACCESSIBLE DESIGN (LATEST VERSION)
ADDN'L	ADDITIONAL
ADJ	ADJUSTABLE
ADH	ADHESIVE/ADHERE
ADMIN	ADMINISTRATION
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AG	AGRICULTURE
AHU	AIR HANDLING UNIT
AL	ALUMINUM
ALT	ALTERNATE
ALUM	ALUMINUM
AP	ACOUSTICAL PANELS
AP	ASSISTANT PRINCIPAL
APPROX	APPROXIMATE
ARCH	ARCHITECTURAL
B	BEYOND
B/B	BACK TO BACK
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOD	BOTTOM OF DECK
BOM	BOTTOM OF MASONRY
BOS	BOTTOM OF STEEL
BOT	BOTTOM
BP	BASE, PORCELAIN TILE
BR	BASE, RUBBER
BRES	BASE, RESINOUS INTEGRAL
BRG	BEARING
BRK	BRICK
BRV	BASE, RUBBER VENTED
BTC	BASE, TILE CERAMIC
BTZP	BASE, TERRAZZO PRECAST
BS	BOTH SIDES
BTWN	BETWEEN
BW	BOTH WAYS
BWD	BASE, WOOD
C/C	CENTER TO CENTER
CAB	CABINET
CCD	COILING COUNTER DOOR
CCPS	CERAMIC CLADDING PANEL SYSTEM
CDW	CUSTOM DIGITAL WALLCOVERINGS
CDAP	CUSTOM DIGITALLY PRINTED ACOUSTIC PANEL
CFMF	COLD-FORMED METAL FRAMING
CH	CHANNEL
CI	CONTINUOUS INSULATION
CJ	CONTROL JOINT
CL	CENTERLINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTRD	CENTERED
CO	CLEAN OUT/CASED OPENING
COL	COLUMN
CONC	CONCRETE
CONF	CONFIGURATIONS / CONFERENCE
CONN(S)	CONNECTION(S)
CONT	CONTINUOUS
COORD	COORDINATE
COP	CONCRETE (POLISHED)
CORR	CORRIDOR
COS	CONCRETE SEALED
CPT	CARPET, SHEET
CPY	CANOPY
CR	CLASSROOM
CS	CAST STONE
CSM	CONCRETE STONE MASONRY
CU	CONDENSING UNIT
CUST	CUSTODIAN
CT	CARPET, TILED
CTE	CAREER TRAINING ED
CTRL	CONTROL
CW	CURTAIN WALL
CWF	CUSTOM WINDOW FILM
DBL	DOUBLE
DET	DETAIL
DH	DOOR HARDWARE
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DN	DOWN
DS	DOWNSPOUT
DTL	DETAIL
DWG	DRAWING
DWR	DRAWER
EA	EACH
EBWS	EPOXY BASED WALL SYSTEM
ED	EDUCATION
EF	EACH FACE
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
ENGR	ENGINEER
EPNT	EPOXY PAINT
EQ	EQUAL (EQUALLY)
EQUIP	EQUIPMENT
EW	EACH WAY
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
EXTNG	EXTINGUISHER
F/F	FACE TO FACE
FC	FURRING CHANNEL
FD	FLOOR DRAIN
FDC	FIRE DEPARTMENT CONNECTION
FDN	FOUNDATION
FE	FIRE EXTINGUISHER (SURFACE MOUNT)
FEC	FIRE EXTINGUISHER CABINET (SEMI-RECESSED)
FFE	FINISHED FLOOR ELEVATION
FHC	FIRE HOSE CABINET (SEMI-RECESSED)
FIN	FINISH(ED)
FIN FLR	FINISHED FLOOR
FL	FLUSH (FLUSHED)
FLR	FLOOR
FR	FRAME
FRP	FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM FIBERGLASS REINFORCED PANELING
FRT	FIRE RETARDANT TREATED
FRTW	FIRE RETARDANT TREATED WOOD
FTG	FOOTING
FV	FIELD VERIFY
GA	GAGE OR GAUGE
GALV	GALVANIZED
GB	GRAB BAR / GRADE BEAM
GEN	GENERAL
GFRC	GLASS FIBER REINFORCED CONCRETE
GRF	GROUND FACE CMU (BURNISHED)
GUT	GUTTER
GYM	GYMNASIUM
GYP	GYPSUM
HB	HOSE BIB
HDWD	HARD WOOD
HM	HOLLOW METAL
HO	HOLD OPEN
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HVAC	HEATING, VENTILATION, & A/C
ICF	INSULATED CONCRETE FORMS / INSULATED CONCRETE FORMING
IDF	INTERMEDIATE DISTRIBUTION FRAME
INFO	INFORMATION
INSUL	INSULATION
INT	INTERIOR
JT	JOINT
JST(S)	JOIST(S)
L	ANGLE
LAB	LABORATORY
LAV	LAVATORY
LEPC	LOCAL EMERGENCY PLANNING COMMITTEE
LONG	LONGITUDINAL
LVT	LUXURY VINYL TILE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MB	MARKER BOARD
MCM	METAL COMPOSITE MATERIAL
MDF	MAIN DISTRIBUTION FRAME
MECH	MECHANICAL
MEZZ	MEZZANINE
MFG	MANUFACTURER
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MP	METAL WALL PANELS
MPF	MULTI-PURPOSE FACILITY
MSK	MOP SINK
MS	METAL SOFFIT
MSL	MEAN SEA LEVEL
MTL	METAL
NB	NO BASE
NF	NO FINISH
NIC	NOT IN CONTRACT
NO	NUMBER
NS	NATURAL STONE
NTS	NOT TO SCALE
OC	ON CENTER
OCC	OCCUPANTS / OCCUPANCY
OCEW	ON CENTER EACH WAY
OCD	OVERHEAD COILING DOOR
OCG	OVERHEAD COILING GRILLE
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFF	OFFICE
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OPPOSITE HAND
OHD	OVERHEAD
OPP	OPPOSITE
OS	OVERFLOW SCUPPER
P/C	PRECAST CONCRETE
PEMB	PRE-ENGINEERED METAL BUILDING
PERIM	PERIMETER
PERP	PERPENDICULAR
PLA	PLATE / PLASTER
PL	PLASTIC LAMINATE
PLP	PLASTIC LAMINATE PANEL SYSTEM
PNT	PAINT
PR	PRACTICE ROOM
PREFIN	PREFINISHED
PREP	PREPARATION
PROJ	PROJECTION
PS	PROJECTION SCREEN
PT	POINT
PW	PLYWOOD
QTZ	QUARTZ SURFACING
R	RISER
RAD	RADIUS
RAFF	RESILIENT ATHLETIC FLUID FLOORING
RAFP	RESILIENT ATHLETIC FLOORING POLYURETHANE
RAFS	RUBBER FLOORING SHEET
RAFV	RESILIENT ATHLETIC FLOORING VINYL
L	ANGLE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCING
RES	RESINOUS
REQ'D	REQUIRED
RM	ROOM
RO	ROUGH OPENING
RR	RESTROOM
RT	RUBBER TILE
RTR	RUBBER TREADS AND RISERS
RTU	ROOFTOP UNIT
SB	SPLASH BLOCK
SCHED	SCHEDULE
SEC	SECURITY
SECT	SECTION
SF	STOREFRONT / SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SL	SLOPE
SP	SPLASH PAN (METAL)
SPEC	SPECIFICATIONS
SPF	SPLIT-FACE CONCRETE MASONRY UNIT
SPS	SOLID POLYMER SURFACE
SS	STAINLESS STEEL
SSM	SOLID SURFACE MATERIAL
STD	STANDARD
STL	STEEL
STN	STAIN
STOR	STORAGE
STRUCT	STRUCTURE
SVT	SOLID VINYL TILE
SYMM	SYMMETRICAL
T&B	TOP & BOTTOM
T&G	TONGUE & GROOVE
TAS	TEXAS ACCESSIBILITY STANDARDS (LATEST VERSION)
TB	TACK BOARD
TC	TILE, CERAMIC
TH	THRESHOLD
TLT	TOILET
TOB	TOP OF BEAM
TOC	TOP OF CURB
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOSF	TOP OF METAL STUD FRAMING
TOW	TOP OF WALL
TPC	TILE, PORCELAIN
TQ	TILE, QUARRY
TR	TREATED
TRAN	TRANSVERSE / TRANSPARENT
TRIM	METAL FLASHINGS AND COPINGS
TS	TACKABLE SURFACE
TYP	TYPICAL
TZ	TERRAZZO
TZP	TERRAZZO, PRECAST STAIR TREADS AND RISERS
TZT	TERRAZZO TILE
U	URINAL
UL	UNDERWRITERS LABORATORIES
UNO	UNLESS NOTED OTHERWISE
UP	UPHOLSTERY
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
VEST	VESTIBULE
VSF	VINYL SHEET FLOORING
W	WITH
WIN	WITHIN
W/O	WITHOUT
WASH	WASH STATION
WC	WATER CLOSET
WD	WOOD
WH	WATER HEATER / WALL HYDRANT
WMP	WOOD (MAPLE) STRIP AND PLANK FLOORING
WMS	MASONITE WOOD FLOORING
WOM	WALK-OFF MAT
WOT	WALK-OFF TILE
WP	WORKPOINT
WT	WEIGHT
WWF	WELDED WIRE MESH (FABRIC)
XB	X-BRACING
>=	LARGER THAN OR EQUAL TO
<=	LESS THAN OR EQUAL TO

(NOT ALL ABBREVIATIONS MAY BE USED)

ABBREVIATIONS



AREA MAP



VICINITY MAP

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Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISH
TX 24614
STATE OF TEXAS
10/24/2025

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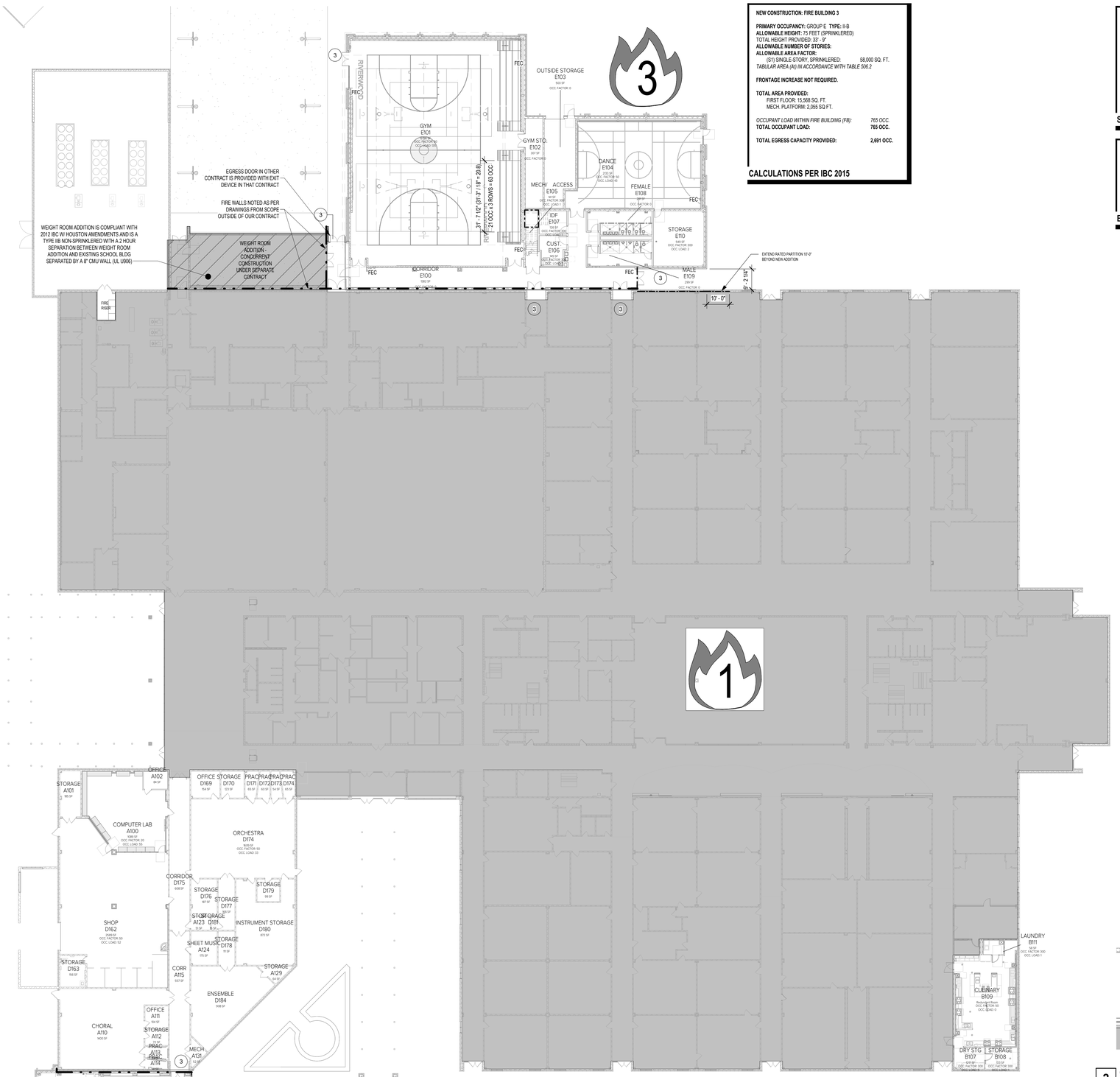
GENERAL DATA

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC G1.02
Drawn By: MK	
Date: 01.22.2025	

10/29/2025 3:42:51 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD REMOVR1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt



NEW CONSTRUCTION: FIRE BUILDING 3

PRIMARY OCCUPANCY: *GROUP E* **TYPE:** II-B
ALLOWABLE HEIGHT: 75 FEET (SPRINKLERED)
TOTAL HEIGHT PROVIDED: 33' - 9"
ALLOWABLE NUMBER OF STORIES:
ALLOWABLE AREA FACTOR:
(S1) SINGLE-STORY, SPRINKLERED: 58,000 SQ. FT.
TABULAR AREA (Aі) IN ACCORDANCE WITH TABLE 506.2

FRONTAGE INCREASE NOT REQUIRED.

TOTAL AREA PROVIDED:
FIRST FLOOR: 15,568 SQ. FT.
MECH. PLATFORM: 2,055 SQ FT.

OCCUPANT LOAD WITHIN FIRE BUILDING (FB): 765 OCC.
TOTAL OCCUPANT LOAD: **765 OCC.**

TOTAL EGRESS CAPACITY PROVIDED: **2,691 OCC.**

CALCULATIONS PER IBC 2015

NEW CONSTRUCTION: FIRE BUILDING 2

PRIMARY OCCUPANCY: *GROUP E* **TYPE:** II-B
ALLOWABLE HEIGHT: 75 FEET (SPRINKLERED)
TOTAL HEIGHT PROVIDED: 19' - 4"
ALLOWABLE NUMBER OF STORIES:
ALLOWABLE AREA FACTOR:
(S1) SINGLE-STORY, SPRINKLERED: 58,000 SQ. FT.
TABULAR AREA (Aі) IN ACCORDANCE WITH TABLE 506.2

FRONTAGE INCREASE NOT REQUIRED.

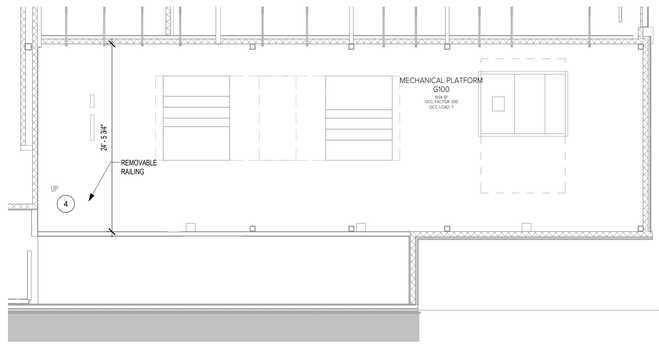
TOTAL AREA PROVIDED:
5,220 SQ. FT.

OCCUPANT LOAD WITHIN FIRE BUILDING (FB): 204 OCC.
TOTAL OCCUPANT LOAD: 204 **OCC.**

TOTAL EGRESS CAPACITY PROVIDED: **746 OCC.**

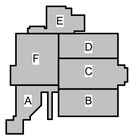
CALCULATIONS PER IBC 2015

1 CODE ANALYSIS PLAN - FF1
1" = 20'-0"



2 CODE ANALYSIS PLAN - MECHANICAL MEZZANINE PLAN
1/8" = 1'-0"

PLAN N



KEY PLAN - 1ST FLOOR
N.T.S

1) FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS SHALL BE LABELED NOT LESS THAN 30'-0" O.C. HORIZONTALLY IN ACCESSIBLE, CONCEALED FLOOR, FLOOR/CEILING OR ATTIC SPACES. LABELING SHALL CONSIST OF 3" HIGH RED STENCILED LETTERING STATING, "FIRE AND/OR SMOKE BARRIER - PROTECT ALL OPENINGS."

2) FIRE WALLS SHALL BE LABELED NOT LESS THAN 30'-0" O.C. HORIZONTALLY IN ACCESSIBLE, CONCEALED FLOOR, FLOOR/CEILING, OR ATTIC SPACES. LABELING SHALL CONSIST OF 3" HIGH RED STENCILED LETTERING STATING, "FIRE WALL - PROTECT ALL OPENINGS - MAY NOT BE STABLE AFTER FIRE EXPOSURE."

SMOKE & FIRE BARRIER MARKINGS

COUNTY: HARRIS
CLIMATE ZONE: 2A*

THE I.E.C.C. ESTABLISHES THE REQUIREMENTS FOR INSULATING THE BUILDING. THE MINIMUM REQUIREMENTS THAT ARE ACCEPTABLE (FOR STANDARD OCCUPIED BUILDINGS) ARE: ROOF= R-25c, MASS WALLS= R-5.7/c, MTL FRAMED= R-13 + 5ci, METAL BUILDINGS= R-19 + 11LS & CRAWL SPACES= R-30

ENERGY CODE R VALUES

THE EMERGENCY ACCESS LOCK BOX(ES) SHALL BE AS SPECIFIED. REFER TO SPECIFICATIONS SECTION 10 4400. BOTTOM ELEVATION OF BOX SHALL BE 6'-0" ABOVE GROUND LEVEL (VERIFY WITH FIRE MARSHAL)

FIREMAN'S EMERGENCY LOCK BOX(ES)

1 HR. FIRE PARTITION
1 HR. FIRE BARRIER
2 HR. FIRE BARRIER
2 HR. FIRE WALL

WALLS SHALL MEET ALL CODE REQUIREMENTS FOR RATED CONSTRUCTION. WINDOW ASSEMBLIES SHALL COMPLY WITH IBC AND BE U.L. LABELED. DOORS SHALL HAVE CLOSERS, BE U.L. LABELED, AND RATED AS SCHEDULED.

FIRE RATED CONSTRUCTION LEGEND

1) THIS CODE ANALYSIS PLAN IS PROVIDED AS A TOOL FOR VIEWING THE OVERALL CODE COMPLIANCE FOR THE ENTIRE FACILITY. WHILE STATED U.L. RATINGS REQUIRED THROUGH WALLS MUST BE MET, ALL CONTRACTORS MUST CONSTRUCT THIS FACILITY FROM THE MATERIALS AND IN THE DIMENSIONS DESCRIBED IN THE CONSTRUCTION DOCUMENTS. ANY APPARENT CONFLICT SHALL BE RESOLVED WITH THE ARCHITECT.

2) FIRE RATED WALLS NOT DESIGNED TO EXTEND ABOVE ROOF LEVEL SHALL EXTEND TO THE ROOF DECK WITH U.L. APPROVED CLOSURE TO THE DECK U.N.O.

3) ALL PENETRATIONS OF FIRE RATED WALLS SHALL BE CLOSED WITH CODE APPROVED METHODS AND MATERIALS TO MAINTAIN THE SPECIFIED RATING, INCLUDING FIRE TREATED BLOCKING / PLYWD.

4) REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS FOR FIRE AND SMOKE DAMPERS.

5) REFER TO G3 SHEETS FOR TYP WALL CONSTRUCTION DETAILS.

6) SQUARE FOOT (SF) AREAS INDICATED ARE FOR CODE ANALYSIS ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFYING AREAS FOR CONSTRUCTION PURPOSES.

CODE ANALYSIS PLAN NOTES

EXISTING BUILDING/RENOVATIONS: FIRE BUILDING 1
IEBC LEVEL 2 RENOVATION

PRIMARY OCCUPANCY: *GROUP E* **TYPE:** II-B
ALLOWABLE HEIGHT: 55 FEET (NON-SPRINKLERED)
TOTAL HEIGHT PROVIDED: 26' - 9"
ALLOWABLE NUMBER OF STORIES:
ALLOWABLE AREA FACTOR:
(NS) NON-SPRINKLERED: 14,500 SQ. FT. **[OR]**
TABULAR AREA (Aі) IN ACCORDANCE WITH TABLE 506.2

TOTAL FRONTAGE INCREASE ALLOWED: 7,395 SQ. FT.
If = 100 x [F/P - 0.25] x W/30 **(IBC 2015, EQ. 5-5)**
F = 1472' P = 1,935' W = 29.7'
100 x [1472/1935 - 0.25] x 29.7/30
100 x [0.511] x 0.99
If = 51% (0.51)

TOTAL AREA ALLOWED: 65,395 SQ. FT.
SINGLE-OCCUPANCY, ONE-STORY
Aa = At + (NS x If) **(IBC 2015, EQ. 5-1)**
At = 58,000sf If = 51%
Aa = 58,000 + (14,500 x 51%)

TOTAL AREA PROVIDED:
FIRST FLOOR: 138,355 SQ. FT. (EXISTING NON-CONFORMING)

CALCULATIONS PER IBC 2015

INFORMATION PROVIDED FOR CODE COMPLIANCE EVALUATION; NOT TO BE USED FOR BIDDING PURPOSES.

1) PROJECT IDENTIFICATION
A) OWNER: HUMBLE I.S.D.
B) PROJECT NAME: RIVERWOOD MS ADDITION & RENOVATIONS
C) PHYSICAL ADDRESS: 2910 HIGH VALLEY DRIVE, HUMBLE, TEXAS 77345

2) STUDENT CAPACITY
A) EXISTING STUDENT CAPACITY: 1,200
B) ADDED STUDENT CAPACITY: 0
C) TOTAL STUDENT CAPACITY: 1,200
D) GRADES SERVED: 6TH - 8TH

3) FACULTY & STAFF: XXX (ESTIMATED)

4) APPLICABLE CODES
A) INTERNATIONAL BUILDING CODE (IBC) 2015
B) INTERNATIONAL PLUMBING CODE 2015
C) INTERNATIONAL MECHANICAL CODE 2015
D) NATIONAL ELECTRICAL CODE (NEC) 2023
E) INTERNATIONAL FIRE CODE 2015
F) ELIMINATION OF ARCHITECTURAL BARRIERS ACT, TEXAS DEPT. OF LICENSING AND REGULATION
G) INTERNATIONAL ENERGY CONSERVATION CODE 2015
H) INTERNATIONAL EXISTING BUILDING CODE 2015
J) WITH ALL CITY OF HOUSTON AMENDMENTS

5) OCCUPANCY CLASSIFICATION
A) OCCUPANCY: GROUP E
B) SEPARATED USES: NONE
C) INCIDENTAL USE AREAS: RATED PER TABLE 509
D) ACCESSORY OCCUPANCIES

6) TYPE OF CONSTRUCTION / FIRE-RESISTIVE REQUIREMENTS
A) CONSTRUCTION TYPE: XX-X

TABLE 601

BUILDING ELEMENT	TYPE II B
PRIMARY STRUCTURAL FRAME	0
BEARING WALLS	
EXTERIOR	0
INTERIOR	0
NON-BEARING WALLS & PARTITIONS (EXTERIOR)	0
NON-BEARING WALLS & PARTITIONS (INTERIOR)	0
FLOOR CONSTRUCTION	0
ROOF CONSTRUCTION & SECONDARY MEMBERS	0

7) FIRE-PROTECTION SYSTEMS
A) AUTOMATIC SPRINKLER SYSTEM: WILL BE ADDED TO ADDITIONS AND EXISTING BUILDING.
B) PORTABLE FIRE EXTINGUISHERS SHALL BE PROVIDED PER INTERNATIONAL FIRE CODE
C) FIRE ALARM PROVIDED: YES
D) EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM PROVIDED: WILL BE ADDED FOR BOTH ADDITIONS AND EXISTING BUILDING.

8) EXIT REQUIREMENTS
A) TRAVEL DISTANCES
1) ALLOWED, SPRINKLERED BUILDING:
TO EXIT FROM WITHIN A SPACE FOR OCCUPANCY LOAD GREATER THAN 50 = 250 FT.
TO EXIT FROM WITHIN BUILDING = 250 FT.
COMMON PATH OF EGRESS TRAVEL = 75 FT.
2) ACTUAL - REFER TO PLAN FOR PATHS & DISTANCE

9) TOTAL BUILDING AREA: 159,347

BUILDING DESIGN CRITERIA

EGRESS (SPRINKLERED)

1. 3'-0" DOOR (32" CLR) AT 0.15" / OCCUPANT = 213 OCCUPANTS
2. 4'-0" DOOR (44" CLR) AT 0.15"/OCCUPANT = 293 OCCUPANTS
3. PAIR OF 3'-0" DOOR (68" CLR) AT 0.15" / OCCUPANT = 453 OCCUPANTS
4. STAIRS (62" CLR) AT 0.2"/OCCUPANT = 310 OCCUPANTS

EGRESS FACTORS LEGEND

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Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT SUSAN F. WISNIEWSKI TX 24614 STATE OF TEXAS
10/24/2025

Huckabee
AUSTIN • DALLAS • FORT WORTH
HOUSTON • SAN ANTONIO • WACO
www.huckabee-inc.com
BOO.6871229

CODE ANALYSIS PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC G2.01
Drawn By: RM	
Date: 01.22.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt

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EXTERIOR WALL TYPE TAGS

W200 — WALL ASSEMBLY IN SECTION VIEW

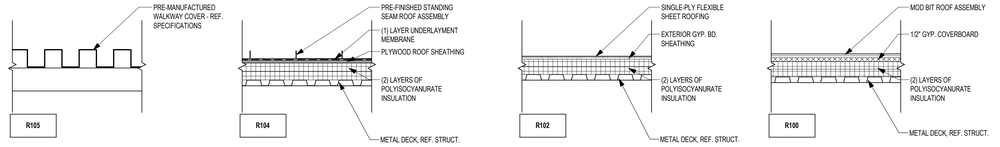
LETTER INDICATES EXTERIOR WALL

NUMBER INDICATES BACKUP CONSTRUCTION AS FOLLOWS:
- **100** - CFMF
- **200** - CMU
- **300** - N/A
- **400** - N/A

EXTERIOR WALL TYPE LEGEND

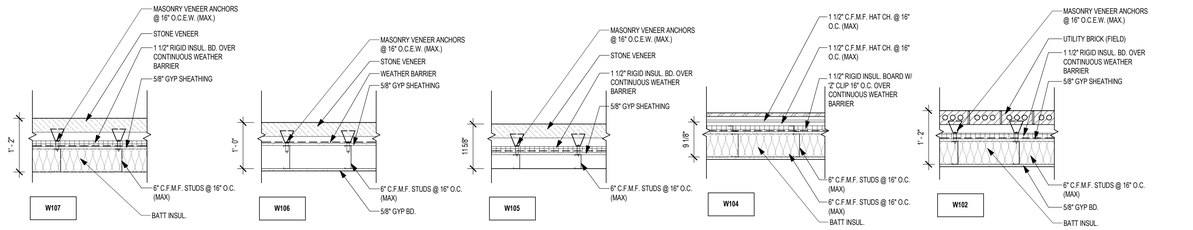
REQUIRED R-VALUE FOR ALL ROOFING CONDITIONS
(2) LAYERS OF R-25 C.I. WITH THE EXCEPTION OF R105

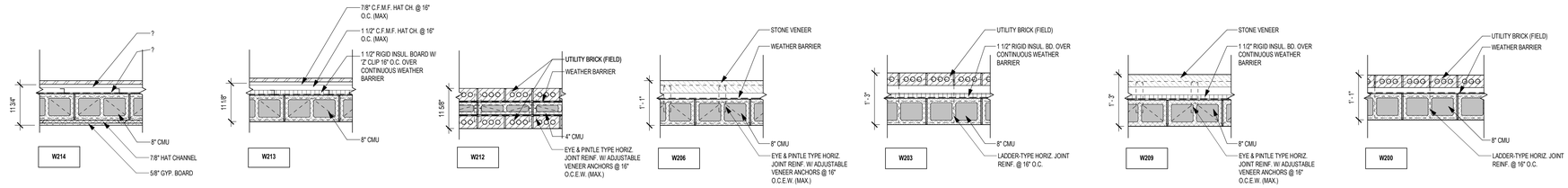
ENVELOPE R-VALUES



REQUIRED R-VALUE FOR ALL EXTERIOR WALLS
R-9.5 CI RIGID INSULATION
R-19 BATT INSULATION

ENVELOPE R-VALUES





Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

REGISTERED ARCHITECT
SUSAN F. WISE
TX 24614
STATE OF TEXAS
10/24/2025

Huckabee
AUSTIN • DALLAS • FORT WORTH
HOUSTON • SAN ANTONIO • WACO
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EXTERIOR WALL & ROOF TYPES

PACKAGE **VOLUME**

Job No. 1821-13-02	**Sheet No.** G3.01
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Date: 01.22.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/21821-13-02 - RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt

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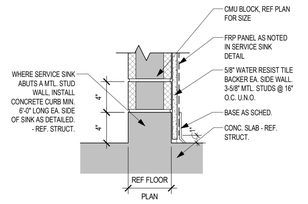
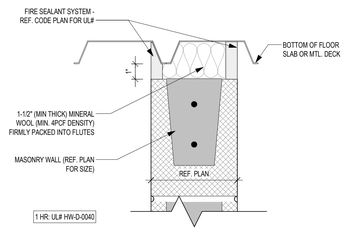
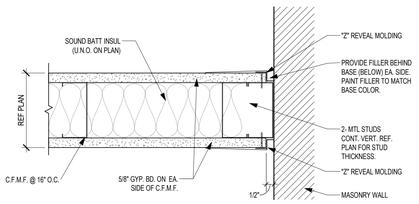


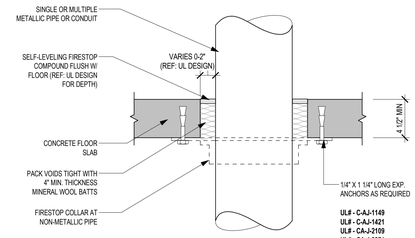
14 TYPICAL CURB DETAIL
1 1/2" = 1'-0"



13 FIRE / SOUND RATED CXN OF WALL PARALLEL TO DECK
3" = 1'-0"

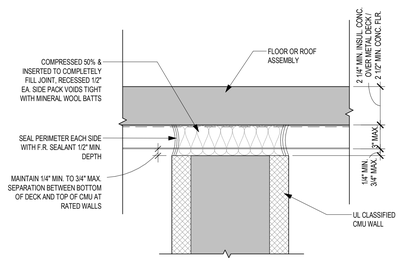


12 TYP DETAIL OF MTL STUD PARTITION TO CMU
3" = 1'-0"



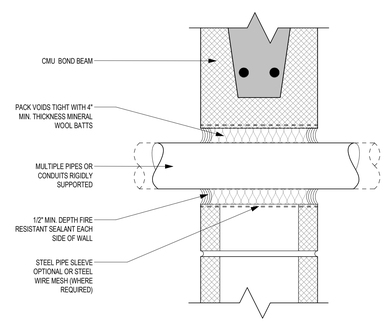
ULI# C-AJ-1149
ULI# C-AJ-1421
ULI# CA-J-2109
ULI# CA-J-2271
ULI# F-A-5032

11 PIPE PENETRATION DETAIL
3" = 1'-0"



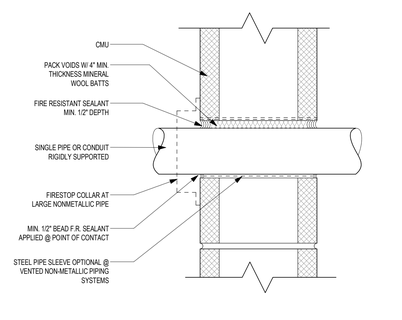
ULI# - HW-D-0081

10 CLOSURE DETAIL
3" = 1'-0"



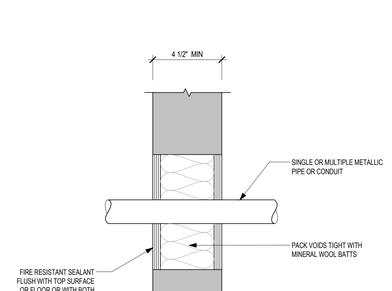
ULI# C-AJ-8143
ULI# C-AJ-8148

9 MULTIPLE PIPE PENETRATION
3" = 1'-0"

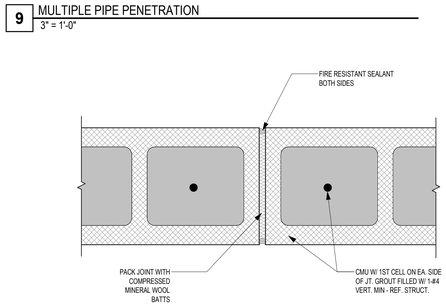


ULI# C-AJ-1380
ULI# C-AJ-1421
ULI# C-AJ-1453
ULI# C-AJ-2109

8 SINGLE PIPE PENETRATION
3" = 1'-0"

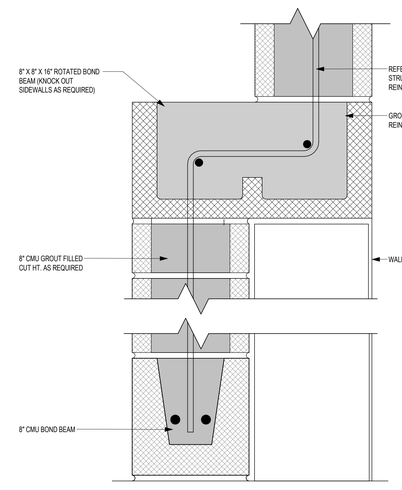


7 PIPE PENETRATION DETAIL
3" = 1'-0"



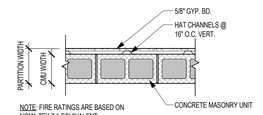
ULI# C-AJ-7051
ULI# C-AJ-7084
ULI# W-J-7109

6 DUCT PENETRATION DETAIL
3" = 1'-0"



ULI# U905

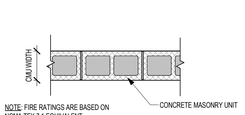
WALL TYPE	CMU WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING: NO SOUND ATTENUATION	STC RATING: WITH SOUND ATTENUATION
B6	5 5/8"	7 1/8"	1 HR	U906	45	50
B8	7 5/8"	9 1/8"	2 HR	U905	47	54



NOTE: FIRE RATINGS ARE BASED ON NCMA TEK 7.1 EQUIVALENT THICKNESS CALCULATIONS FOR LIGHT WEIGHT CMU OF EXPANDED CLAY, SHALE, OR SLATE.

B — GYP. BD. FURRING ON CMU

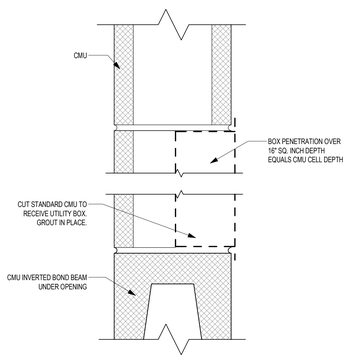
WALL TYPE	CMU WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING: NO SOUND ATTENUATION	STC RATING: WITH SOUND ATTENUATION
A6	5 5/8"	5 5/8"	1 HR	U906	45	50
A8	7 5/8"	7 5/8"	2 HR	U905	47	54



NOTE: FIRE RATINGS ARE BASED ON NCMA TEK 7.1 EQUIVALENT THICKNESS CALCULATIONS FOR LIGHT WEIGHT CMU OF EXPANDED CLAY, SHALE, OR SLATE.

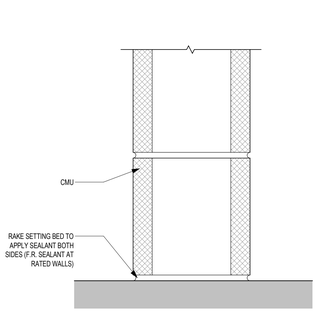
A — SINGLE-WYTHE CMU

5 WALL CONTROL JOINT
3" = 1'-0"



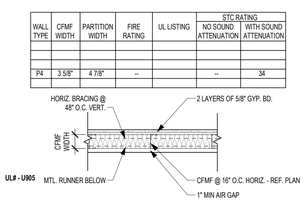
ULI# - U905

4 DEEP BOX PENETRATION
3" = 1'-0"



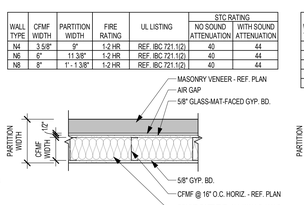
ULI# U905

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING: NO SOUND ATTENUATION	STC RATING: WITH SOUND ATTENUATION
P4	3 5/8"	4 7/8"	--		--	34



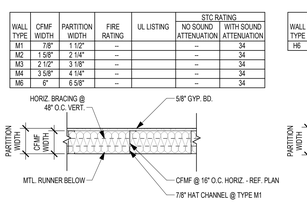
P — (2 LAYERS) GYP. BD. FURRING ON CFMF

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING: NO SOUND ATTENUATION	STC RATING: WITH SOUND ATTENUATION
N4	3 5/8"	9"	1-2 HR	REF. IBC 721.1(2)	40	44
N6	6"	11 3/8"	1-2 HR	REF. IBC 721.1(2)	40	44
N8	8"	1'- 1 3/8"	1-2 HR	REF. IBC 721.1(2)	40	44



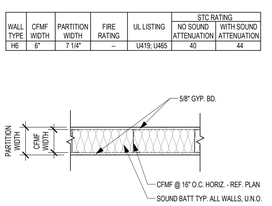
N — MASONRY VENEER ON CFMF

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING: NO SOUND ATTENUATION	STC RATING: WITH SOUND ATTENUATION
M1	7/8"	1 1/2"	--		--	34
M2	1 5/8"	2 1/4"	--		--	34
M3	2 1/2"	3 1/8"	--		--	34
M4	3 5/8"	4 1/4"	--		--	34
M6	6"	6 5/8"	--		--	34



M — GYP. BD. FURRING ON CFMF

WALL TYPE	CFMF WIDTH	PARTITION WIDTH	FIRE RATING	UL LISTING	STC RATING: NO SOUND ATTENUATION	STC RATING: WITH SOUND ATTENUATION
H6	6"	7 1/4"	--	U419; U465	40	44



H — GYP. BD. ON CFMF

3 BOX PENETRATION - PLAN DTL
1 1/2" = 1'-0"

2 BOX PENETRATION DETAIL
3" = 1'-0"

1 CLOSURE DETAIL
3" = 1'-0"

PARTITION TYPE TAGS

A3 | D

WALL ASSEMBLY'N PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

- D — WALL TO **D**ECK / STRUCTURE
- C — WALL TO 6" (MIN.) ABOVE **C**EILING
- FR — **F**IRE **R**ATED WALL TO DECK / STRUCTURE
- AD — **A**COUSTICAL WALL TO **D**ECK / STRUCTURE
- AC — **A**COUSTICAL WALL TO 6" (MIN.) ABOVE **C**EILING
- AR — **A**COUSTICAL **R**ATED WALL TO DECK / STRUCTURE
- GD — **G**YP WALL ABOVE TO **D**ECK / STRUCTURE
- SR — **S**MOKE **R**ESISTANT PARTITION

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF OR CMU
- 6 - 6" CFMF OR 5 5/8" CMU OR 6" CORE ICF
- 8 - 8" CFMF OR 7 5/8" CMU OR 8" CORE ICF
- 10 - 9 5/8" CMU OR 10" CORE ICF
- 12 - 11 5/8" CMU OR 12" CORE ICF

WALL / PARTITION NOTES:

1) ALL INTERIOR WALL/PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

2) **UNTAGGED WALL/PARTITIONS AND COLUMN FURRINGS** SHOULD BE ASSUMED TO BE **"TYPICAL"** FOR BIDDING PURPOSES. THE "TYPICAL" **GYP BOARD WALL/PARTITION** IS TYPE **N4**, ACOUSTICAL, TO 6" ABOVE CEILING, AND THE "TYPICAL" GYP BOARD **COLUMN FURRING** AND CHASES IS **M4**, NON-ACOUSTICAL, TO 6" ABOVE CEILING U.N.O. THE "TYPICAL" **MASONRY WALL/PARTITION** IS TYPE **A8**, NON-ACOUSTICAL AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS **A6**, NON-ACOUSTICAL. CMU IS TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

3) WALL TYPES IDENTIFIED AS CMU MAY INCLUDE ACMU. FLOOR PLAN HATCH PATTERNS WILL DIFFERENTIATE REGULAR SMOOTH FACE CMU FROM ARCHITECTURAL CMU. FINISH PLANS AND SCHEDULES WILL IDENTIFY ACMU SELECTIONS (GROUND FACE, SPLIT FACE, ETC.) AND IDENTIFY WHICH SIDE OF A SINGLE WYTHE ACMU WALL IS THE FINISH SIDE.

4) WALL/PARTITION TYPES IDENTIFIED AS INCLUDING VENEER MAY INCLUDE BRICK, STONE, OR ACMU. FLOOR PLAN HATCH PATTERNS WILL DIFFERENTIATE REGULAR SMOOTH FACE CMU, BRICK, STONE, OR ARCHITECTURAL CMU. FINISH PLANS AND SCHEDULES WILL IDENTIFY ACMU SELECTIONS (GROUND FACE, SPLIT FACE, ETC.)

5) WALL/PARTITIONS INDICATED BY TAG "GYP WALL ABOVE TO DECK" SHALL BE CONSTRUCTED OF THE SPECIFIED WALL TYPE TO ONE FULL COURSE (MIN.) ABOVE THE CEILING, BRACED, AND AN H4 (OR M4) WALL/PARTITION (H6 OR M6 WHERE REQUIRED BY UNBRACED HEIGHT) SHALL BE BUILT FROM THE TOP OF WALL TO DECK. WALL/PARTITIONS INDICATED BY TAG "ACOUSTICAL GYP WALL ABOVE TO DECK" SHALL BE CONSTRUCTED OF THE SPECIFIED WALL TYPE TO A ONE FULL COURSE (MIN.) ABOVE THE CEILING, BRACED, AND AN H4 (OR M4) WALL/PARTITION (H6 OR M6 WHERE REQUIRED BY UNBRACED HEIGHT) WITH BATT INSULATION SHALL BE BUILT FROM THE TOP OF WALL TO DECK. WHERE INDICATED BY THE FIRE CODE PLAN TO BE FIRE RATED, ALL CONNECTIONS SHALL MEET RATING REQUIREMENTS.

6) FIRE-RATED WALL/PARTITIONS ARE INDICATED ON THE FIRE CODE PLANS ON THE G2 SHEETS. ALL GYP BOARD IN A RATED ASSEMBLY MUST BE 5/8" TYPE "X" AND CONSTRUCTION MUST MATCH THE ASSIGNED UL NUMBER. REFERENCE THE TYPE SCHEDULES ON THIS SHEET FOR UL NUMBERS WHERE APPLICABLE. SUBSTITUTE UL ASSEMBLIES MAY BE PRESENTED FOR THE CONSIDERATION OF THE ARCHITECT , BUT MUST NOT BE USED UNLESS APPROVED IN WRITING. PARTITIONS NOT IDENTIFIED AS RATED SHALL BE BUILT WITH STANDARD GYP BOARD.

7) WHERE FIRE-RATED MASONRY WALL/PARTITIONS ARE INDICATED TO EXTEND TO DECK, ANY VENEER OR ACMU MAY TERMINATE ABOVE CEILING LEVEL. THE CMU WALL/PARTITION SHALL EXTEND TO DECK WITH REGULAR CMU OF SAME THICKNESS AS THE CMU (OR ACMU) IN THE WALL ASSEMBLY.

8A) ALL ACOUSTICAL GYP BD WALL/PARTITIONS REQUIRE HIGHER QUALITY CONSTRUCTION AND SHALL BE FULL HEIGHT SOUND ATTENUATING BATT INSULATION. IN ORDER TO ACHEIVE THE INDICATED STC RATING, ALL WALL/PARTITIONS ARE TO HAVE ALL PIN HOLES & VOIDS, PIPES, DUCTS, CONDUITS, ETC ACOUSTICALLY FILLED ON BOTH SIDES. ALL WALL BOXES ON BOTH SIDES OF WALL/PARTITION ARE TO HAVE ACOUSTICAL PUTTY PADS ON THE INTERIOR SIDE AS DETAILED. BOTH SIDES OF WALL/PARTITION SHALL BE SEALED TIGHT TO DECK AS DETAILED. THE FLOOR TRACK SHALL BE SET ON AN ACOUSTICAL ISOLATOR PAD.

8B) ALL ACOUSTICAL CMU WALL/PARTITIONS REQUIRE A HIGHER QUALITY CONSTRUCTION, SHALL BE NORMAL WEIGHT CMU BLOCK, EXTEND TO DECK AND HAVE FULL HEAD JOINTS. ALL PENETRATIONS SHALL BE ACOUSTICALLY SEALED ON BOTH SIDES OF WALL. MORTAR JOINTS TO BE FILLED W/ NO PIN HOLES OR VOIDS. HEAD OF WALL SHALL BE SEALED TIGHT TO DECK AS DETAILED.

9) ALL COLD FORM METAL FRAMING ARE SUBJECT TO THE DESIGN OF A QUALIFIED STRUCTURAL ENGINEER. FINAL DETERMINATION OF GAUGE AND DIMENSIONS OF FRAMING WILL BE DETERMINED BY STRUCTURAL DESIGN. ENGINEERS RECOMMENDATIONS WHICH WOULD SIGNIFICANTLY IMPACT WALL THICKNESS MUST BE COORDINATED WITH THE ARCHITECT FOR ALIGNMENT PRIOR TO CONSTRUCTION.

10) REFER TO TYPICAL INTERIOR WALL/PARTITION BRACING DETAILS FOR ADDITIONAL INFORMATION REGARDING FLOOR AND DECK CONNECTIONS. FIRE-RATED WALLS SHALL USE FIRE STOPPING SEALANTS OR ASSEMBLIES WHERE THE WALL/PARTITION ABUTS THE DECK, INCLUDING MINERAL WOOL INSULATION WHERE APPLICABLE. NON-RATED PARTITIONS SHALL USE ACOUSTICAL SEALANTS AND INSULATION WHERE THE WALL/PARTITION ABUTS THE DECK.

11) FOR ANY DISCREPANCY BETWEEN WALL/PARTITION TYPES AND WALL SECTIONS, WALL SECTION SHALL SUPERCEDE.

12) NOT ALL WALL/PARTITION TYPES SHOWN WILL BE USED IN EVERY PROJECT.

INTERIOR PARTITION TYPE LEGEND

1. PENETRATION DETAILS 4 THROUGH 9 ARE FOR CONDUIT, PIPE, DUCT, ETC. PENETRATIONS THROUGH FIRE RATED FLOORS AND PARTITIONS AND ARE GENERIC IN NATURE. THE CONTRACTOR IS REQUIRED TO SUBMIT FOR APPROVAL TO THE ARCHITECT, DETAILS SPECIFIC TO THE SEALANT AND FIRE-PROOFING MATERIAL MANUFACTURER'S TESTED AND APPROVED SYSTEMS INCLUDING SPECIFIC TEST DATA.
2. CLOSURE DETAILS 10 AND 11 ARE TYPICAL CLOSURE DETAILS FOR ALL FULL-HEIGHT FIRE RATED AND NON-FIRE-RATED PARTITIONS (REFER PARTITION TYPES).
3. DETAILS AND U.L. DESIGN NUMBERS SHOWN ARE REPRESENTATIVE OF THE MOST TYPICAL CONDITIONS ONLY AND OTHER ASSEMBLIES MAY BE REQUIRED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO SELECT, SUBMIT AND INSTALL U.L. DESIGNS THAT ARE APPROPRIATE FOR ANY GIVEN CONDITION TO ACHIEVE THE REQUIRED FIRE-RESISTIVE RATING .

WALL PENETRATION NOTES

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INTERIOR PARTITION TYPES

PACKAGE — VOLUME

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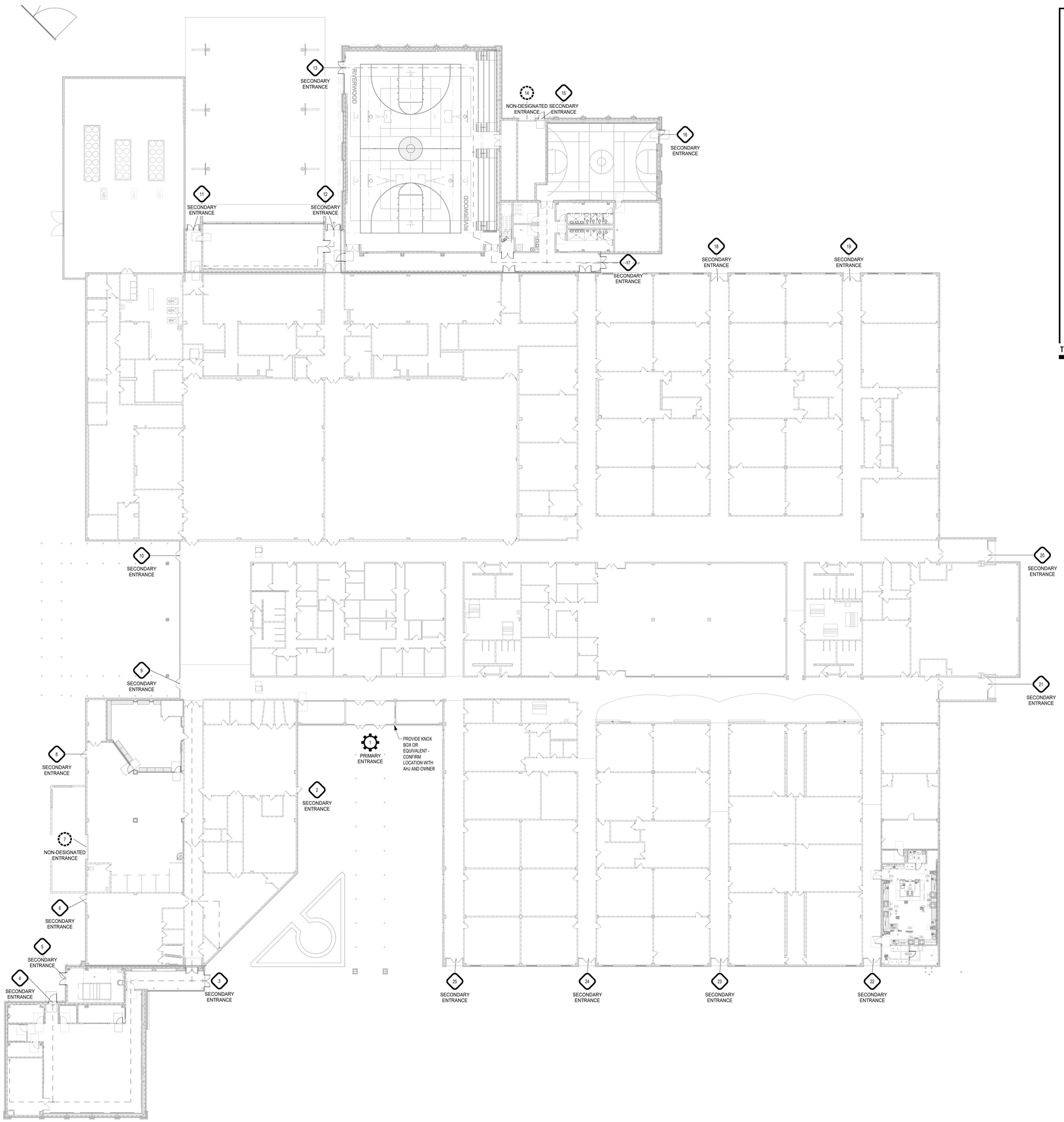

1 TEA ENTRANCE PLAN - FF1
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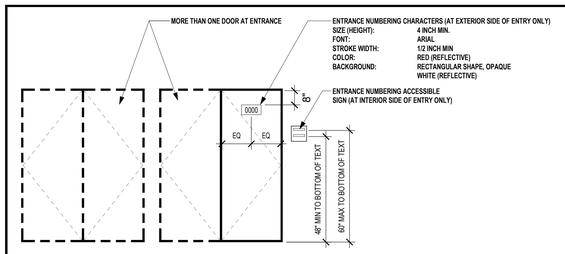

ENTRANCE DOOR ELEVATION

NOTES

1. ENTRANCE NUMBERING CHARACTERS SHALL BE ALPHA-NUMERIC AND PER A CAMPUS-WIDE SEQUENCING SYSTEM
2. THE DESIGNATED MAIN PRIMARY ENTRANCE SHALL BE FIRST IN ALPHA-NUMERIC SEQUENCING, BUT IS THE ONLY ENTRANCE NOT REQUIRED TO ACTUALLY DISPLAY NUMBERING SEQUENCE ON EXTERIOR SIDE OF ENTRANCE
3. NUMBERING OF ENTRANCES SHALL START AT THE DESIGNATED MAIN PRIMARY ENTRANCE AND CONTINUE IN CLOCKWISE DIRECTION THROUGHOUT
4. EACH ENTRANCE LOCATION SHALL HAVE ALPHA-NUMERIC CHARACTERS AT EXTERIOR SIDE ONLY OF SUCH ENTRANCE
5. AT EXTERIOR SIDE ONLY OF EACH ENTRANCE LOCATION, ENTRANCE NUMBERING CHARACTERS SHALL C OMPLY WITH IFC 505, AND BE VINYL, PERMANENTLY AFFIXED
6. AT EXTERIOR SIDE ONLY OF EACH ENTRANCE LOCATION, DEPENDING UPON DOOR TYPE, AFFIX NUMBERING CHARACTERS ON GLAZING OR DOOR MATERIAL IN LOCATION AS INDICATED
7. AT INTERIOR SIDE ONLY OF EACH ENTRANCE LOCATION, PROVIDE ENTRANCE NUMBERING BY ACCESSIBLE SIGNAGE; SUCH INTERIOR ALPHA-NUMERIC NUMBERING SEQUENCE SHALL MATCH ALPHA-NUMERIC NUMBERING SEQUENCE OF EXTERIOR OF SAME ENTRANCE LOCATION; ACCESSIBILITY OF SUCH SIGNAGE SHALL BE PER ALL APPLICABLE ACCESSIBILITY REQUIREMENTS
8. AT EACH ENTRANCE LOCATION WITH MULTIPLE DOORS AND/OR MULTIPLE DOOR LEAFS, ALPHA-NUMERIC NUMBERING CHARACTERS SHALL BE APPLIED ON APPROACHING RIGHT-HAND SIDE DOOR ONLY AT EXTERIOR SIDE OF SUCH ENTRANCE
9. AT EACH ENTRANCE LOCATION WITH MULTIPLE DOORS AND/OR MULTIPLE DOOR LEAFS, ENTRANCE NUMBERING ACCESSIBLE SIGNAGE SHALL BE PROVIDED IN LOCATION PER ALL APPLICABLE ACCESSIBILITY REQUIREMENTS AT INTERIOR SIDE ONLY OF SUCH ENTRANCE

TEA ENTRANCE LEGEND

INSTRUCTIONAL CAPACITY

METHOD

- ■ MAXIMUM INSTRUCTIONAL CAPACITY (QUANTITATIVE METHOD)
- ☐ ADJUSTED MAXIMUM INSTRUCTIONAL CAPACITY (QUALITATIVE METHOD)

LEVEL OF FLEXIBILITY	ELEMENTARY SCHOOL (ES) PRE-K - GRADE 6	MIDDLE SCHOOL (MS) GRADE 6 - GRADE 8	HIGH SCHOOL (HS) GRADE 9 - GRADE 12
☐ FLEXIBILITY LEVEL 1 (L1)	☐ 36 SF	☐ 32 SF	☐ 32 SF
■ FLEXIBILITY LEVEL 2 (L2)	☐ 36 SF	■ 32 SF	☐ 32 SF
☐ FLEXIBILITY LEVEL 3 (L3)	☐ 42 SF	☐ 36 SF	☐ 36 SF
☐ FLEXIBILITY LEVEL 4 (L4)	☐ 42 SF	☐ 36 SF	☐ 36 SF

INSTRUCTIONAL CAPACITY

1,250 STUDENTS X 32 SF PER STUDENT = 40,000 SF (AGGREGATE) REQUIRED

48,101 SF (AGGREGATE) PROVIDED = 1,504 ACTUAL CAPACITY PROVIDED

STAFF CAPACITY

1,504 ACTUAL INSTRUCTIONAL CAPACITY PROVIDED x 0.10 (10 PERCENT) = 151 STAFF*

*ESTIMATED

TEA ENTRANCE TAGS

- XXXX PRIMARY ENTRANCE — MAIN ENTRANCE TO AN INSTRUCTIONAL FACILITY THAT IS CLOSEST TO OR DIRECTLY CONNECTED TO THE RECEPTION AREA; **OR** ANY EXTERIOR DOOR THE SCHOOL DISTRICT INTENDS TO ALLOW VISITORS TO USE TO ENTER THE FACILITY DURING SCHOOL HOURS EITHER THROUGH POLICY OR PRACTICE; **OR** ANY EXTERIOR DOOR THE SCHOOL DISTRICT INTENDS TO ALLOW TO REMAIN UNLOCKED DURING SCHOOL HOURS
- XXXX SECONDARY ENTRANCE — ANY EXTERIOR DOOR THAT IS NOT ONE OF THE FOLLOWING: A PRIMARY ENTRANCE; A NON-DESIGNATED ENTRANCE
- XXXX NON-DESIGNATED ENTRANCE — A DOOR THAT IS NOT OPERABLE FROM THE EXTERIOR AND IS DESIGNED TO ONLY ALLOW FOR EMERGENCY EGRESS

TEA ENTRANCE LEGEND

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TEA COMPLIANCE PLAN

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DIVISION 3 - CONCRETE

CONCRETE FINISHING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
COS	CONCRETE, SEALED				CLEAR						

DIVISION 4 - MASONRY

UNIT MASONRY

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
BRK01	BRICK UNIT MASONRY	ACME BRICK COMPANY			MUSHROOM BROWN	UTILITY				FIELD BRICK	CHRIS PELTON CPELTON@BRICK.COM 832.948.3312
BRK02	BRICK UNIT MASONRY	ACME BRICK COMPANY			CRANBERRY	UTILITY				ACCENT BRICK	CHRIS PELTON CPELTON@BRICK.COM 832.948.3312

STONE

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
NS01	NATURAL STONE	ACME BRICK COMPANY			LUEDERS BUFF						CHRIS PELTON CPELTON@BRICK.COM 832.948.3312
INS01	NATURAL STONE	ACME BRICK COMPANY	THINSET STONE		LUEDERS BUFF					DISPLAY CASE SURROUNDS AT BAND HALL LOBBY	CHRIS PELTON CPELTON@BRICK.COM 832.948.3312

DIVISION 5 - METALS

METAL FABRICATIONS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	METAL RAILINGS & HANDRAILS				PNT02						

DIVISION 6 - WOOD-PLASTICS

FIBERGLASS REINFORCED PANELING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
FRP01	FIBERGLASS REINFORCED PANELING	PANOLAM SURFACE SYSTEMS			SILVER FRP					AT MOP SINKS REF DETAIL ON A9 SHEETS FOR EXTENTS	

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

ROOFING AND SIDING PANELS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
MP01	METAL SOFFITS	PAC CLAD	PVDF WOOD GRAIN SERIES		COPPER						

FLASHING AND SHEET METAL

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	DOWNSPOUTS				MATCH PAC CLAD SLATE GRAY						
	GUTTERS				MATCH PAC CLAD SLATE GRAY						
	METAL FLASHING, COPING, & TRIM				MATCH PAC CLAD SLATE GRAY						

DIVISION 8 - OPENINGS

DOORS AND FRAMES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	ALUMINUM DOORS & FRAMES				CLEAR ANODIZED ALUM						
	ALUMINUM WINDOWS				CLEAR ANODIZED ALUM						
	COILING DOORS & GRILLES				PAINT TO MATCH CLEARN ANODIZED ALUM FRAMES						
HM	HOLLOW METAL DOORS & FRAMES				PAINT TO MATCH CLEAR ANODIZED FRAMES						
	LOUVERS				CLEAR ANODIZED ALUM						
SC	SOLID CORE DOORS	WILSONART			PINNACLE WALNUT 7992		38 FINE VELVET TEXTURE FINISH				
	VISBLE DOOR HARDWARE				CLEAR ANODIZED ALUM						

DIVISION 9 - FINISHES

TILING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
BTP01	BASE, TILE, PORCEAIN	DALTILE	DELEGATE	CLASS A	LIGHT GREY DL26	6"x12"	MATTE		RESTROOM WALL BASE		
	GROUT	MAPEI			TIMBERWOLF 104						
TC01	TILE, CERAMIC	DALTILE	COLOR WHEEL LINEAR	CLASS A	ARTIC WHITE RECTANGLE 0190	6"x18"	GLOSSY	STACK BOND	CULINARY WALLS		
TM01	TILE, MOSAIC	DALTILE	DELEGATE	CLASS A	OFF WHITE DL25	RANDOM LINEAR	MATTE		RESTROOM ACCENT		
	GROUT	MAPEI			ALABASTER 01						
TM02	TILE, MOSAIC	DALTILE	DELEGATE	CLASS A	LIGHT GREY DL26	RANDOM LINEAR	MATTE		RESTROOM ACCENT		
	GROUT	MAPEI			TIMBERWOLF 104						
TP01	TILE, PORCELAIN	CROSSVILLE	BASALT	CLASS A	SILICA	12"x24"	UNPOLISHED	STACK BOND	CORRIDOR WALLS		
	GROUT	MAPEI			BISCUIT 14						
TP02	TILE, PORCELAIN	CROSSVILLE	BASALT	CLASS A	MAFIC	12"x24"	UNPOLISHED	STACK BOND	CORRIDOR WALLS		
	GROUT	MAPEI			GRAY 09						
TP03	TILE, PORCELAIN	DALTILE	DELEGATE	CLASS A	OFF WHITE DL25	12"X24"	MATTE	STACK BOND	RESTROOM WALLS		
	GROUT	MAPEI			ALABASTER 01						
TP04	TILE, PORCELAIN	DALTILE	DELEGATE	CLASS A	LIGHT GREY DL26	12"X24"	MATTE	STACK BOND	RESTROOM FLOORS		
	GROUT	MAPEI			TIMBERWOLF 104						
TP05	TILE, PORCELAIN	DALTILE	SADDLE BROCK	CLASS A	FARMHOUSE				BAND HALL LOBBY, BAND HALL & ATHLETIC CORRIDOR FLOOR		
GROUT	GROUT	MAPEI			MOCHA 42						
TQ01	TILE, QUARRY	DALTILE		CLASS A	TBD						

CEILINGS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH...	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
L1	ACOUSTICAL CEILING TILE	CERTAINTEED		CLASS A	WHITE, U.N.O.	24"x24"					
L4	ACOUSTICAL CEILING TILE	CERTAINTEED		CLASS A	WHITE, U.N.O.	24"x24"			CULINARY		
L6	ACOUSTICAL CEILING TILE	CERTAINTEED		CLASS A	WHITE, U.N.O.				BAND HALL		

WOOD FLOORING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
WMP									DANCE & GYM FLOORS	SEE FINISH PLAN FOR ADDITIONAL INFORMATION	

RESILIENT FLOORING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
BR01	BASE, RUBBER	TARKETT	WALL BASE - RUBBER	CLASS I	CANYON	4" HIGH					

CARPETING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
CPT01	CARPET, SHEET	TARKETT	TUNDRA FLOWER	CLASS I	NEW FRONTIER				OFFICES		

WALL FINISHES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
CDW01	CUSTOM DIGITAL WALLCOVERING	MDC DIGITAL WALLCOVERINGS	SUBSTRATE TO BE SUEDE						BAND HALL LOBBY	REFER TO DWGS FOR LOCATIONS; REQUEST ARTWORK FROM ARCHITECT	
CDW02	CUSTOM DIGITAL WALLCOVERING	MDC DIGITAL WALLCOVERINGS	SUBSTRATE TO BE SUEDE						GYM	REFER TO DWGS FOR LOCATIONS; REQUEST ARTWORK FROM ARCHITECT	

ACOUSTIC TREATMENT

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
AP01	ACOUSTICAL PANELS	DESIGNTEX	GAMUT	CLASS A	MIST						
AP02	ACOUSTICAL PANELS	DESIGNTEX	GAMUT	CLASS A	PEBBLE						
AP03	ACOUSTICAL PANELS	DESIGNTEX	REPPWEAVE	CLASS A	RED ORANGE 3747-701						

PAINTING AND COATING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
PNT01	PAINT	SHERWIN WILLIAMS			SHOJI WHITE 7042		EGGSHELL				
PNT02	PAINT	SHERWIN WILLIAMS			FELTED WOOL 9171		EGGSHELL				
PNT03	PAINT	SHERWIN WILLIAMS			INVIGORATE 6886		EGGSHELL				
PNT04	PAINT	SHERWIN WILLIAMS			URBANE BRONZE 7048		EGGSHELL				
PNT05	PAINT	SHERWIN WILLIAMS			IRON ORE 7069				EXPOSED CEILING IN BAND HALL AND DANCE		

DIVISION 10 - SPECIALTIES

INFORMATION SPECIALTIES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	DISPLAY CASES	THE TABLET AND TICKET CO.	9000C		CLEAR ANODIZED						
	DISPLAY CASE TACKABLE SURFACE	CLARIDGE	CLARIDGE CORK	CLASS B	SMOKE 1111						
	EXTERIOR SIGNAGE				COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	INTERIOR SIGNAGE				COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	BACKGROUND				COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	ACCENT STRIPE				COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
	LETTERS				COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						
MB	MARKER BOARD FRAMES				CLEAR ANODIZED						
TB	TACKBOARD FRAMES				CLEAR ANODIZED						
	TACK BOARD CORK	CLARIDGE	CLARIDGE CORK	CLASS B	SMOKE 1111						

INTERIOR SPECIALTIES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	CUBICLE CURTAIN	MAHARAM	SEMBLANCE	AS/NZS 1530.3	PLANK 283730-001						
	TOILET PARTITIONS	ASI		CLASS A	MOCHA 9212						

EXTERIOR SPECIALTIES

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALLATION	LOCATION	NOTES	CONTACT
	PRE-MANUFACTURED CANOPIES										

ATHLETIC EQUIPMENT

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
	SCOREBOARDS				COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						

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SCHEDULE OF MATERIALS AND COLORS

PACKAGE VOLUME

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	WALL PADDING	PORTER		CLASS A	GRAY						

DIVISION 12 - FURNISHINGS

WINDOW TREATMENTS

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
	BLINDS										
	SHADES	MECHOSHADE	3% OPEN		COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						

ARCHITECTURAL CASEWORK

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
PL01	PLASTIC LAMINATE	WILSONART		CLASS B							
PL02	PLASTIC LAMINATE	WILSONART		CLASS B	PINNACLE WALNUT 7992		38 FINE VELVET TEXTURE FINISH				

MULTIPLE SEATING

KEY	TYPE	MANUFACTURER	MODEL/SERIES	INTERIOR FINISH CLASSIFICATION	COLOR/NUMBER	SIZE	FINISH	INSTALL/PATTERN	LOCATION	NOTES	CONTACT
	TELESCOPING BLEACHERS	HUSSEY SEATING			COLOR TO BE SELECTED FROM MFR FULL RANGE OF COLOR OPTION BY SUBMITTAL						

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SCHEDULE OF MATERIALS AND COLORS CONT' D

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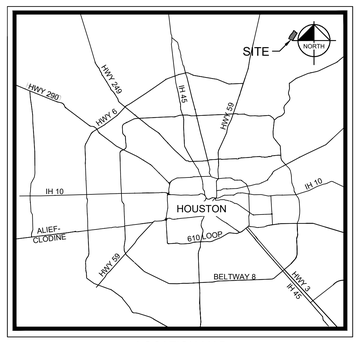
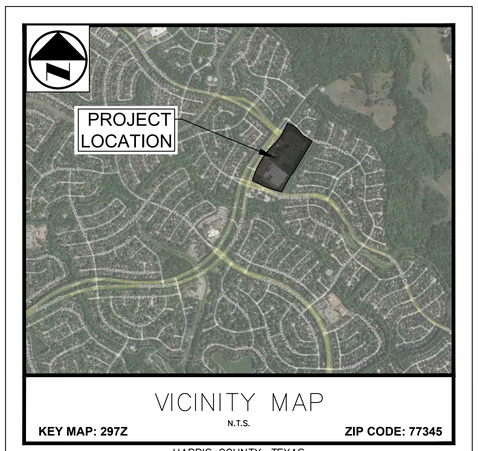
CIVIL SITEWORK PLANS
FOR
HUMBLE ISD
RIVERWOOD MIDDLE SCHOOL ADDITION

2910 HIGH VALLEY DRIVE
HUMBLE, TEXAS 77345



LOCATION MAP
N.T.S.



VICINITY MAP
N.T.S.

KEY MAP: 297Z **ZIP CODE: 77345**

HARRIS COUNTY, TEXAS

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REFERENCE BENCHMARKS
BENCHMARK - Elevation = 66.03'. 1/2" IRON ROD SET IN FIELD NORTHEAST OF KINGWOOD MIDDLE SCHOOL. APPROXIMATELY 111' EAST OF TREE #2969 AND 86' NORTH OF CONTAINER.
TEMPORARY BENCHMARK - Elevation = 65.29'. 1/2" IRON ROD SET IN GROUND NORTH OF HIGH VALLEY DR. APPROXIMATELY 51' NORTHEAST OF STMH #1217 AND 88' SOUTHWEST OF INLET #2576.
TEMPORARY BENCHMARK - Elevation = 64.91'. 1/2" IRON ROD SET IN GROUND NORTH OF HIGH VALLEY DR. APPROXIMATELY 36' EAST OF TREE #2568 AND NORTH OF TREE #2579.

AS PART OF THE BASE BID FOR THIS PROJECT, CONTRACTOR SHALL ADHERE TO THE PROJECT GEOTECHNICAL REPORT FOR ALL RECOMMENDATIONS FOR BOTH MATERIALS AND PRACTICE OF INSTALLATION GIVEN IN THE PROJECT GEOTECHNICAL REPORT FOR EARTHWORK, SITE SUBGRADE PREPARATION, BUILDING PAD SUBGRADE PREPARATION, PAVING, AND WET/SOFT SOILS CONDITIONS ALONG WITH ANY OTHER SECTIONS PROVIDED IN THE REPORT.

TITLE: HUMBLE ISD RIVERWOOD MIDDLE SCHOOL ADDITIONS
BY: TERRACON
DATED: JULY 20, 2023

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

COH ILMS NUMBER: 23122271

OWNER:
HUMBLE INDEPENDENT SCHOOL DISTRICT
10203 BIRCHRIDGE DRIVE
HUMBLE, TX 77338
CONTACT: (281) 641-1000

SURVEYOR:
GOODWIN-LASITER-STRONG
16090 S. CHESTNUT, SUITE 202
LUFKIN, TX 75901
(936) 637-4900

PREPARED BY:

Kimley»Horn
11700 Katy Freeway, Suite 800
Houston, Texas 77079
Tel. No. (281) 597-9300
Certificate of Authorization F-928
Contact: RASHARD HARRIS, P.E.

Know what's **below.** **Call** before you dig.

CAUTION!!

EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D HUMBLE, TX

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01/17/2025

STATE OF TEXAS
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COVER SHEET

Job. No.	Sheet No.
1821-13-02	C0.0
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Date: 01/17/2025	

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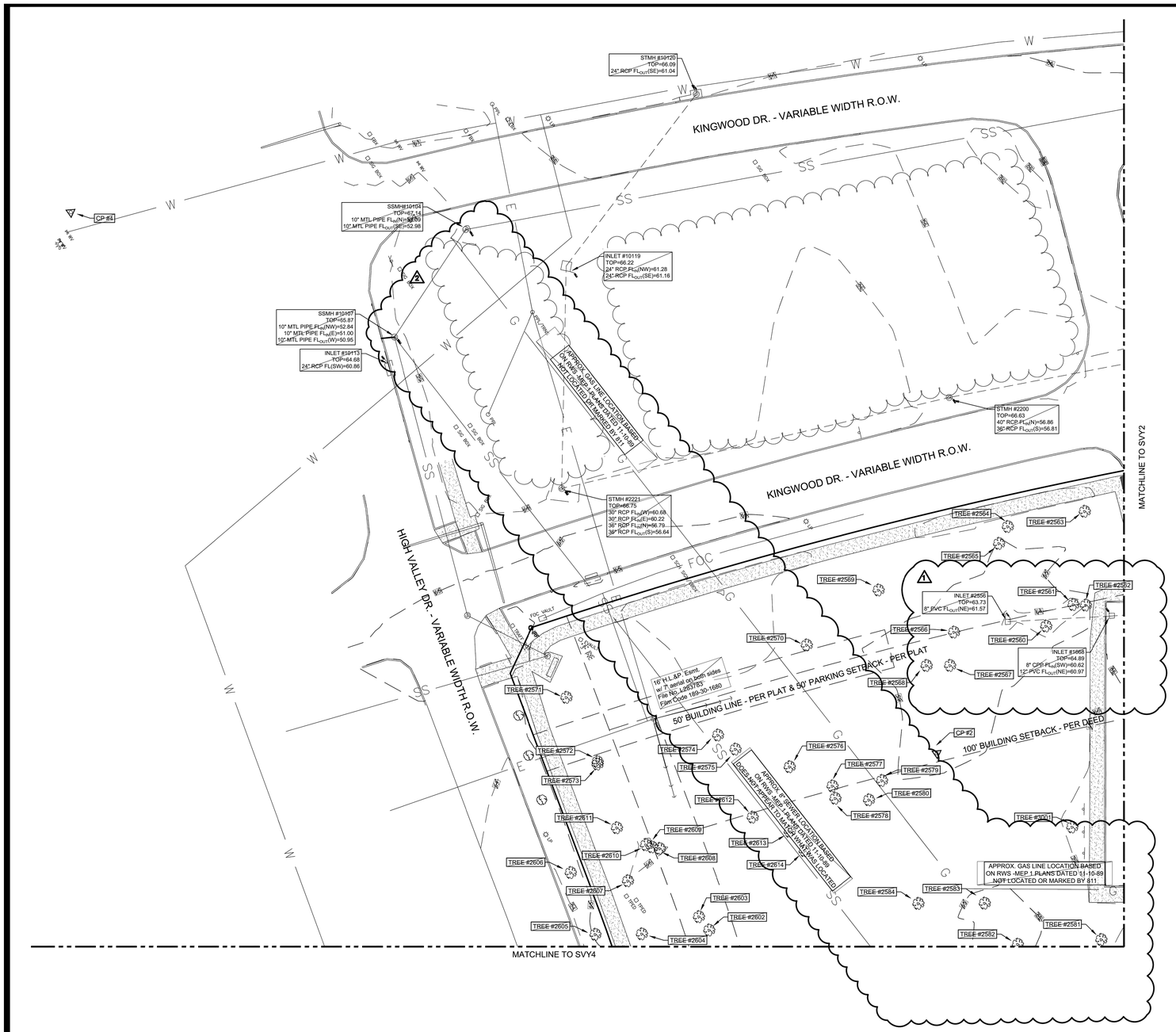

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #4	1/2" IRON ROD SET IN GROUND SOUTH OF HIGH VALLEY DR. APPROXIMATELY 14' NORTHWEST OF FIRE HYDRANT AND 117' S OF TRAFFIC SIGNAL.	N:13953613.79' E:3183757.76' ELEV: 67.53'
CP #2	1/2" IRON ROD SET IN GROUND NORTH OF HIGH VALLEY DR. APPROXIMATELY 36' EAST OF TREE #2568 AND NORTH OF TREE #2579.	N:13953779.86' E:3184143.66' ELEV: 64.91'

0 10 20 40
SCALE: 1"=20'-0"

Creekwood Middle School Tree Survey

2560	Live Oak(Quercus virginiana)	13.5
2561	Loblolly Pine (Pinus taeda)	19.5
2562	Loblolly Pine (Pinus taeda)	12.5
2563	Live Oak(Quercus virginiana)	14.5
2564	Live Oak(Quercus virginiana)	12.5
2565	Cedar Elm (Ulmus crassifolia)	16
2566	Cedar Elm (Ulmus crassifolia)	4
2567	Cedar Elm (Ulmus crassifolia)	7
2568	Cedar Elm (Ulmus crassifolia)	5.5
2569	Swamp White Oak (Quercus bicolor)	16.5
2570	Shumard Oak (Quercus shumardii)	23.5
2571	Live Oak(Quercus virginiana)	17.5
2572	Loblolly Pine (Pinus taeda)	9
2573	Cedar Elm (Ulmus crassifolia)	8.5
2574	Loblolly Pine (Pinus taeda)	12.5
2575	Loblolly Pine (Pinus taeda)	18.5
2576	Loblolly Pine (Pinus taeda)	15.5
2577	Loblolly Pine (Pinus taeda)	12.5
2578	Loblolly Pine (Pinus taeda)	13
2579	Texas Persimmon (Diospyros texana)	6
2580	Cedar Elm (Ulmus crassifolia)	5
2581	Live Oak(Quercus virginiana)	3
2582	Willow Oak (Quercus phellos)	22
2583	Loblolly Pine (Pinus taeda)	6
2584	Shumard Oak (Quercus shumardii)	26
2602	Loblolly Pine (Pinus taeda)	11
2603	Cedar Elm (Ulmus crassifolia)	6
2604	Loblolly Pine (Pinus taeda)	15
2605	Live Oak(Quercus virginiana)	19
2606	Loblolly Pine (Pinus taeda)	13
2607	Loblolly Pine (Pinus taeda)	12
2608	Loblolly Pine (Pinus taeda)	19.5
2609	Loblolly Pine (Pinus taeda)	8
2610	Loblolly Pine (Pinus taeda)	11.5
2611	Cedar Elm (Ulmus crassifolia)	8.5
2612	Loblolly Pine (Pinus taeda)	13
2613	Post Oak (Quercus stellata)	18.5
2614	Loblolly Pine (Pinus taeda)	13.5
3001	Cedar Elm (Ulmus crassifolia)	10.5

Topographical Survey — 1" = 20'-0" — 1

NO.	DATE	REVISIONS
1	9-28-23	STORM REVISIONS
2	11-29-23	SEWER AND GAS REVISIONS
3		
4		

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DRAWN BY: HLS | APP'D BY: KR | ISSUED: 9-28-23

T.B.P.E.L.S FIRM NO. F-413
T.B.A.E. FIRM NO. BR 351
T.B.P.E.L.S FIRM NO. 10110800
T.B.P.E.L.S FIRM NO. 10110801

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2555 ACE ROAD STE. 107 · TYLER, TEXAS 75503 · (903)581-3400

Topographic Survey of a Portion of the Riverwood Middle School Campus in the A. Turner Survey, A-757, Harris County Texas

JOB NUMBER 219108

SHEET NO. SVY1

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D HUMBLE, TX

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SURVEY (1 OF 7)

Job. No. 1821-13-02	Sheet No. C0.1
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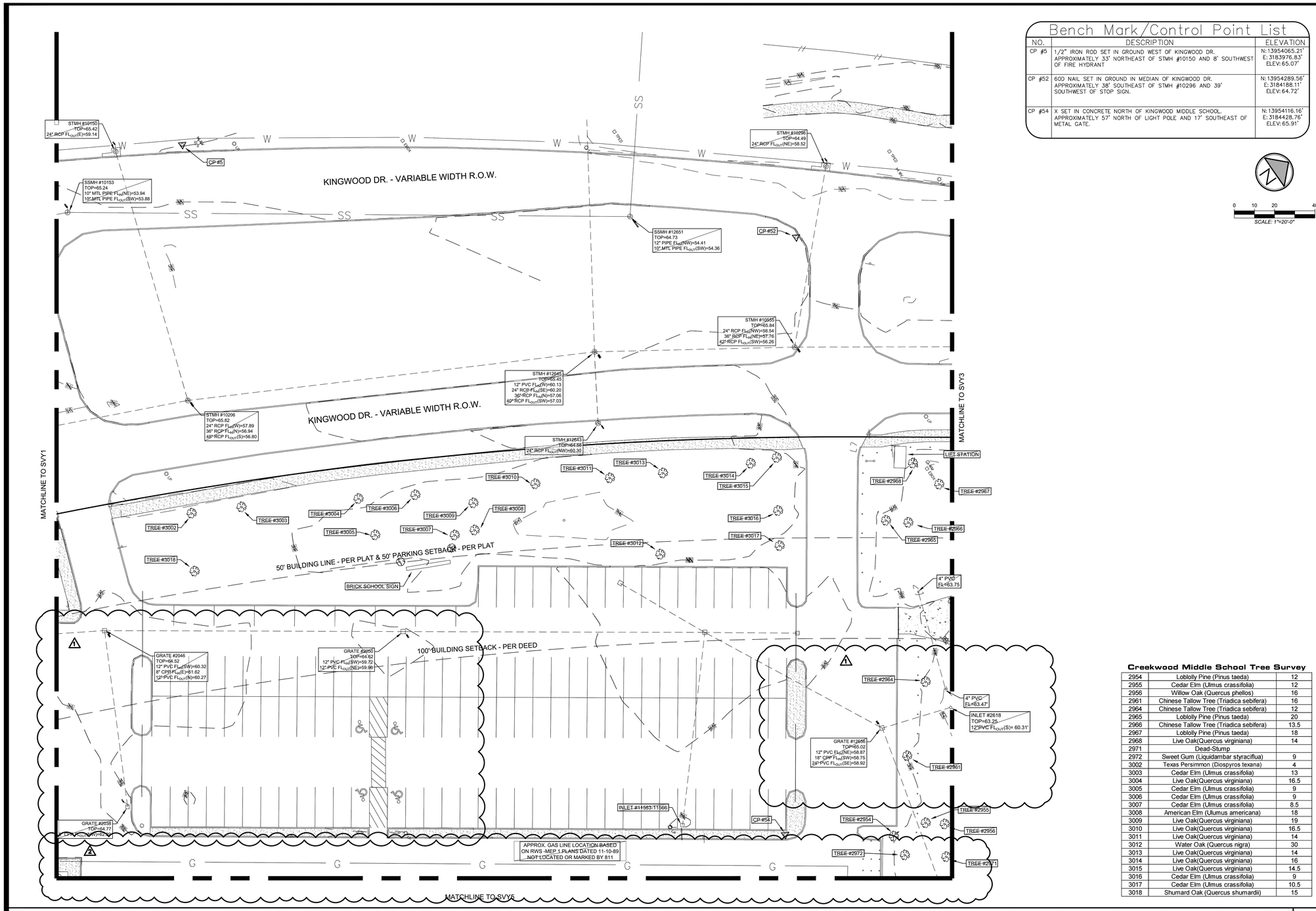

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #5	1/2" IRON ROD SET IN GROUND WEST OF KINGWOOD DR. APPROXIMATELY 33' NORTHEAST OF STMH #10150 AND 8' SOUTHWEST OF FIRE HYDRANT	N:13954065.21' E:3183976.83' ELEV: 65.07'
CP #52	60D NAIL SET IN GROUND IN MEDIAN OF KINGWOOD DR. APPROXIMATELY 38' SOUTHEAST OF STMH #10296 AND 39' SOUTHWEST OF STOP SIGN.	N:13954289.56' E:3184188.11' ELEV: 64.72'
CP #54	X SET IN CONCRETE NORTH OF KINGWOOD MIDDLE SCHOOL, APPROXIMATELY 57' NORTH OF LIGHT POLE AND 17' SOUTHEAST OF METAL GATE.	N:13954116.16' E:3184428.76' ELEV: 65.91'

REVISIONS	DATE	
1	9-28-23	STORM REVISIONS
2	11-29-23	SEWER AND GAS REVISIONS
3		
4		

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DRAWN BY: HLS | APPV'D BY: KR | ISSUED: 9-28-23

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T.B.A.E. FIRM NO. BR 351
T.B.P.E.L.S FIRM NO. 101139(X)
T.B.P.E.L.S FIRM NO. 101139(1)

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Topographic Survey of a Portion of the Riverwood Middle School Campus in the A. Turner Survey, A-757, Harris County Texas

JOB NUMBER 219108

SHEET NO. SVY2

Creekwood Middle School Tree Survey

2954	Loblolly Pine (Pinus taeda)	12
2955	Cedar Elm (Ulmus crassifolia)	12
2956	Willow Oak (Quercus phellos)	16
2961	Chinese Tallow Tree (Triadica sebifera)	16
2964	Chinese Tallow Tree (Triadica sebifera)	12
2965	Loblolly Pine (Pinus taeda)	20
2966	Chinese Tallow Tree (Triadica sebifera)	13.5
2967	Loblolly Pine (Pinus taeda)	18
2968	Live Oak(Quercus virginiana)	14
2971	Dead-Stump	
2972	Sweet Gum (Liquidambar styraciflua)	9
3002	Texas Persimmon (Diospyros texana)	4
3003	Cedar Elm (Ulmus crassifolia)	13
3004	Live Oak(Quercus virginiana)	16.5
3005	Cedar Elm (Ulmus crassifolia)	9
3006	Cedar Elm (Ulmus crassifolia)	9
3007	Cedar Elm (Ulmus crassifolia)	8.5
3008	American Elm (Ulumus americana)	18
3009	Live Oak(Quercus virginiana)	19
3010	Live Oak(Quercus virginiana)	16.5
3011	Live Oak(Quercus virginiana)	14
3012	Water Oak (Quercus nigra)	30
3013	Live Oak(Quercus virginiana)	14
3014	Live Oak(Quercus virginiana)	16
3015	Live Oak(Quercus virginiana)	14.5
3016	Cedar Elm (Ulmus crassifolia)	9
3017	Cedar Elm (Ulmus crassifolia)	10.5
3018	Shumard Oak (Quercus shumardii)	15

Topographical Survey | 1" = 20'-0" | 1

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D HUMBLE, TX

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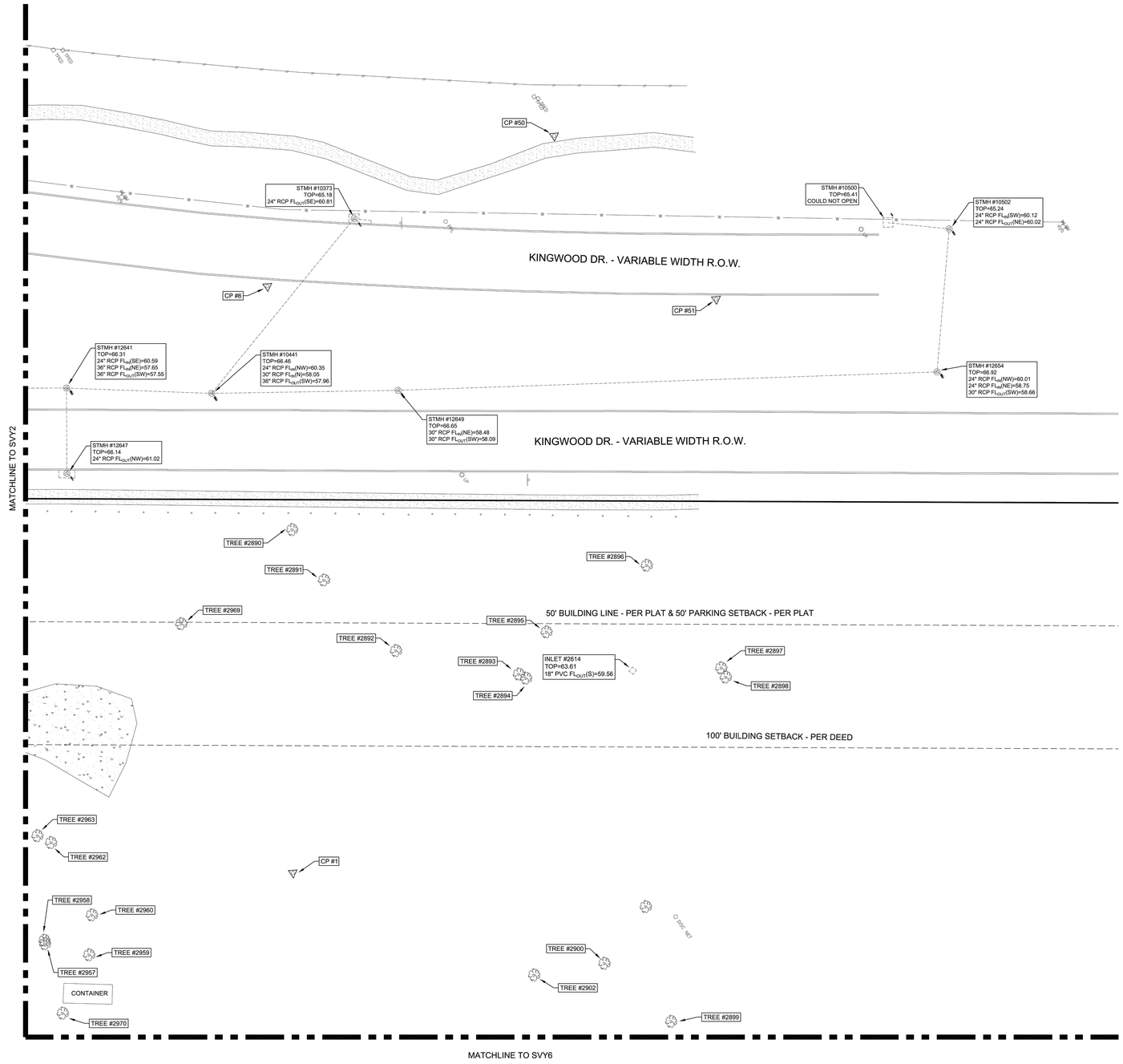

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #6	1/2" IRON ROD SET IN GROUND IN THE MEDIAN OF KINGWOOD DR. APPROXIMATELY 45' SOUTH OF STMH #10373 AND 49' NORTHWEST OF STMH #10441.	N:13954426.70' E:3184298.93' ELEV: 65.51'
CP #50	60D NAIL SET IN GROUND NORTH OF KINGWOOD DR. APPROXIMATELY 16' EAST OF TELEPHONE PEDESTAL AND 56' NORTH OF POWER POLE.	N:13954557.46' E:3184315.14' ELEV: 65.93'
CP #51	60D NAIL SET IN GROUND IN THE MEDIAN OF KINGWOOD DR. APPROXIMATELY 65' SOUTH OF LIGHT POLE AND 95' SOUTHWEST OF STMH #12654.	N:13954573.71' E:3184407.18' ELEV: 65.58'
CP #1	1/2" IRON ROD SET IN FIELD NORTHEAST OF KINGWOOD MIDDLE SCHOOL. APPROXIMATELY 111' EAST OF TREE #2969 AND 86' NORTH OF CONTAINER.	N:13954299.41' E:3184500.85' ELEV: 66.03'

0 10 20 40
SCALE: 1"=20'-0"

Creekwood Middle School Tree Survey

2890	Loblolly Pine (Pinus taeda)	18
2891	Loblolly Pine (Pinus taeda)	18
2892	Willow Oak (Quercus phellos)	23
2893	Shumard Oak (Quercus shumardii)	8
2894	Shumard Oak (Quercus shumardii)	7
2895	Cedar Elm (Ulmus crassifolia)	5
2896	Loblolly Pine (Pinus taeda)	13
2897	Loblolly Pine (Pinus taeda)	14
2898	Loblolly Pine (Pinus taeda)	13
2899	Willow Oak (Quercus phellos)	16
2900	Texas Persimmon (Diospyros texana)	6
2902	Shumard Oak (Quercus shumardii)	24
2957	Loblolly Pine (Pinus taeda)	14
2958	Loblolly Pine (Pinus taeda)	6
2959	Willow Oak (Quercus phellos)	15
2960	Loblolly Pine (Pinus taeda)	14
2962	Loblolly Pine (Pinus taeda)	15
2963	Loblolly Pine (Pinus taeda)	6
2969	Cedar Elm (Ulmus crassifolia)	12
2970	Chinese Tallow Tree (Triadica sebifera)	20

Topographical Survey | 1" = 20'-0" | 1

NO.	DATE	REVISIONS
1	9-29-23	STORM REVISIONS
2		
3		
4		

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T.B.A.E. FIRM NO. BR 351
T.B.P.E.L.S FIRM NO. 10110900
T.B.P.E.L.S FIRM NO. 10110901

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Topographic Survey of a Portion of the
Riverwood Middle School Campus in the
A. Turner Survey, A-757, Harris County Texas

JOB NUMBER 219108

SHEET NO. SVY3

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

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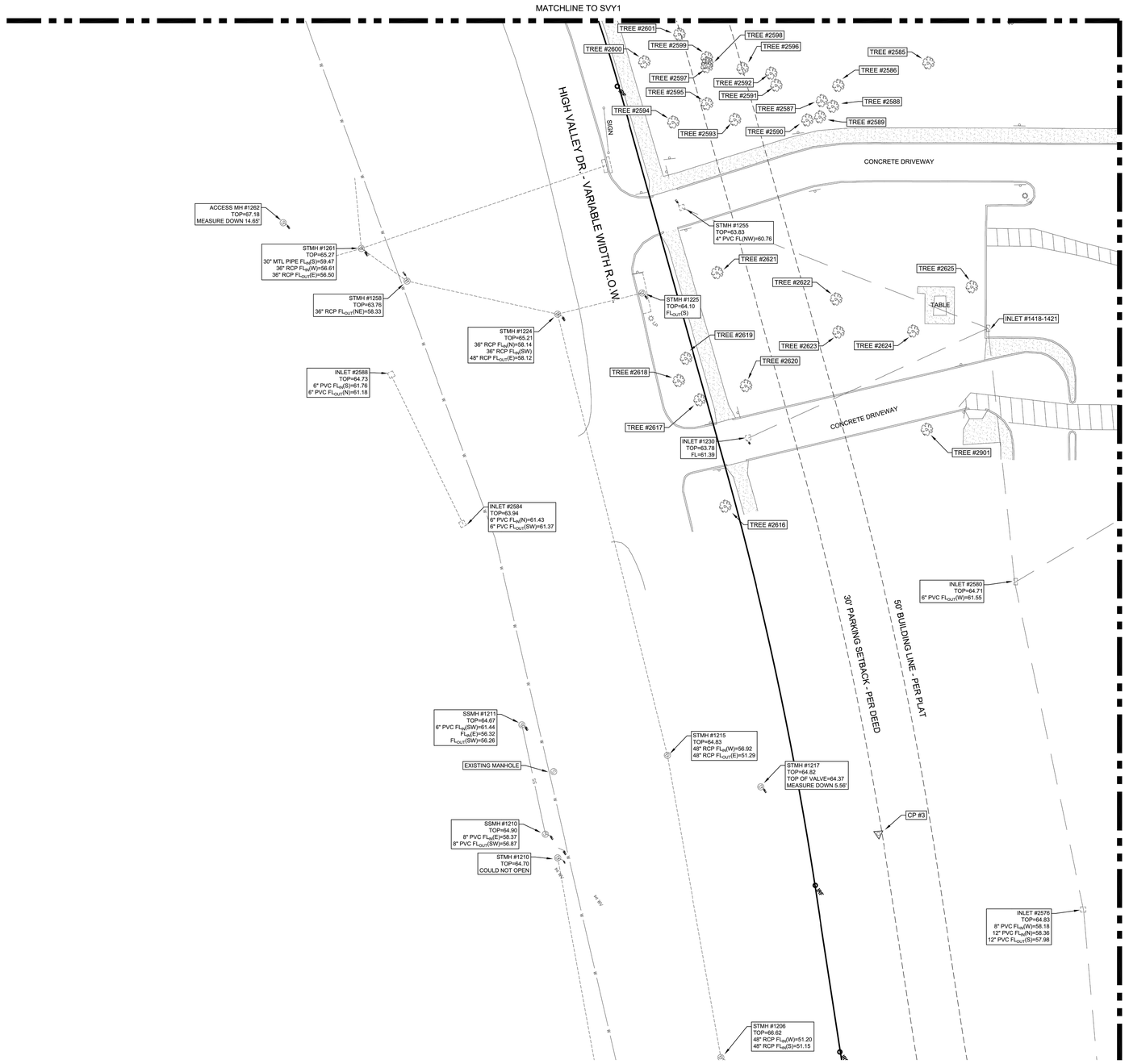

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #3	1/2" IRON ROD SET IN GROUND NORTH OF HIGH VALLEY DR. APPROXIMATELY 51' NORTHEAST OF STMH #1217 AND 88' SOUTHWEST OF INLET #2576.	N:13953536.73' E:3184467.42' ELEV:65.29'

0 10 20 40

SCALE: 1"=20'-0"

Creekwood Middle School Tree Survey

2585	Loblolly Pine (Pinus taeda)	15
2586	Loblolly Pine (Pinus taeda)	10.5
2587	Loblolly Pine (Pinus taeda)	12
2588	Loblolly Pine (Pinus taeda)	14.5
2589	Loblolly Pine (Pinus taeda)	12.5
2590	Loblolly Pine (Pinus taeda)	10.5
2591	Loblolly Pine (Pinus taeda)	14
2592	Loblolly Pine (Pinus taeda)	9
2593	Loblolly Pine (Pinus taeda)	13.5
2594	Live Oak(Quercus virginiana)	15.5
2595	Loblolly Pine (Pinus taeda)	15
2596	Loblolly Pine (Pinus taeda)	8
2597	Loblolly Pine (Pinus taeda)	15.5
2598	Cedar Elm (Ulmus crassifolia)	8
2599	Loblolly Pine (Pinus taeda)	11.5
2600	Cedar Elm (Ulmus crassifolia)	8.5
2601	Loblolly Pine (Pinus taeda)	12.5
2616	Willow Oak (Quercus phellos)	16.5
2617	Crape Myrtle	
2618	Crape Myrtle	
2619	Crape Myrtle	
2620	Willow Oak (Quercus phellos)	17
2621	Shumard Oak (Quercus shumardii)	9
2622	Cedar Elm (Ulmus crassifolia)	12
2623	Shumard Oak (Quercus shumardii)	19.5
2624	Shumard Oak (Quercus shumardii)	19.5
2625	Loblolly Pine (Pinus taeda)	22
2901	Loblolly Pine (Pinus taeda)	21.5

Topographical Survey

1" = 20'-0" | 1

NO.	DATE	REVISIONS
1	9-29-23	STORM REVISIONS
2		
3		
4		

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DRAWN BY: HLS | APP'D BY: KR | ISSUED: 9-29-23

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T.B.P.E.L.S FIRM NO. 10110900
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Topographic Survey of a Portion of the Riverwood Middle School Campus in the A. Turner Survey, A-757, Harris County Texas

JOB NUMBER 219108

SHEET NO. SVY4

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D HUMBLE, TX

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01/17/2025

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SURVEY (4 OF 7)

Job. No. 1821-13-02	Sheet No. C0.4
Drawn By: CSH	
Date: 01/17/2025	

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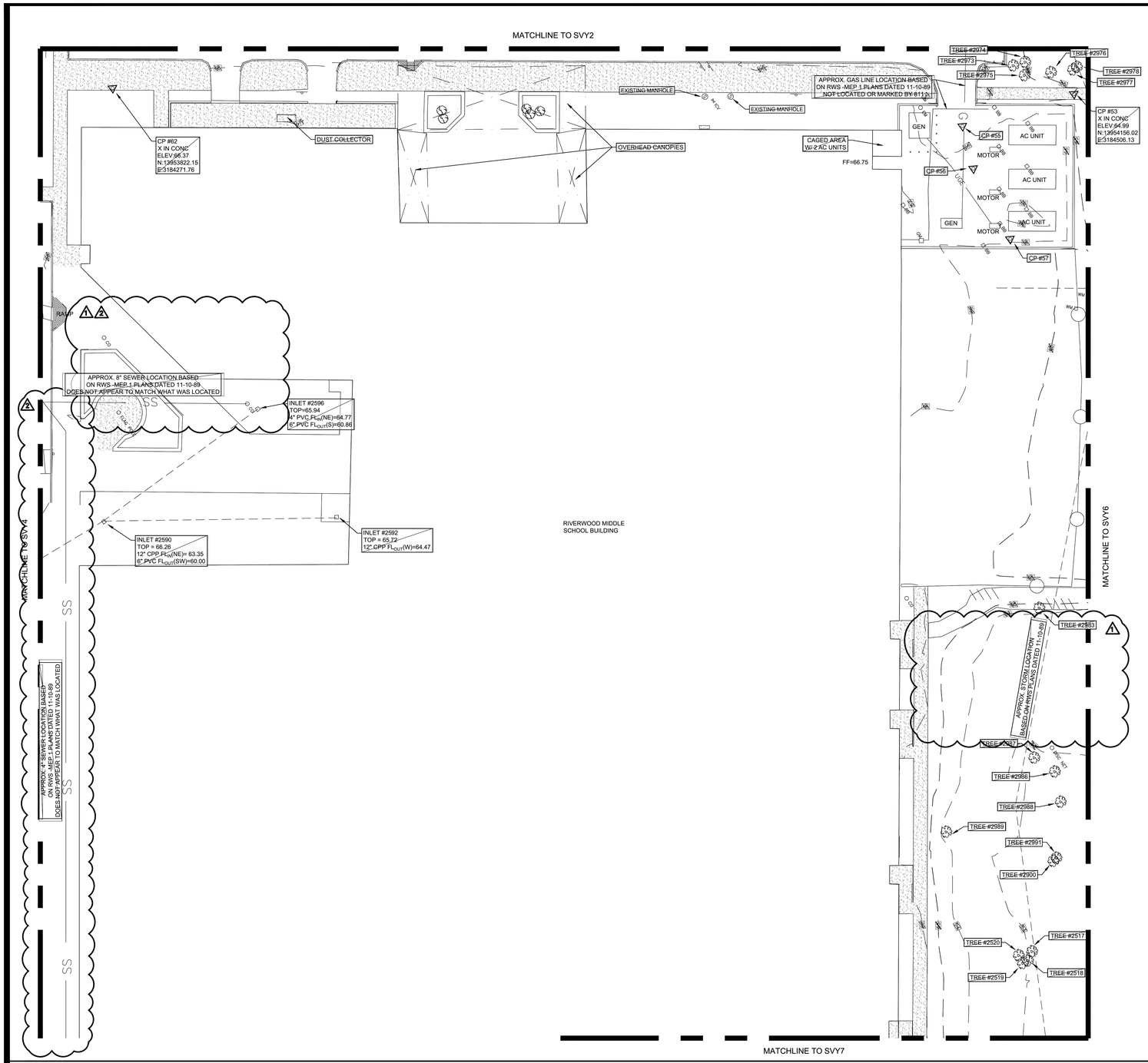

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #53	X SET IN CONCRETE SIDEWALK NORTH OF KINGWOOD MIDDLE SCHOOL. APPROXIMATELY 4' NW OF CORNER OF BRICK WALL AND 13' EAST OF TREE #2976.	N: 13954156.02' E: 3184506.13' ELEV: 64.99'
CP #55	X SET IN CONCRETE NEAR GENERATOR AND NORTHEASTERN MOTOR. APPROXIMATELY 14' NORTHEAST OF GENERATOR AND 10' SOUTH OF CORNER OF BRICKWALL.	N: 13954109.36' E: 3184490.40' ELEV: 65.87'
CP #56	TRIANGLE SET IN CONCRETE BETWEEN MOTORS AND GENERATOR. APPROXIMATELY 22' EAST OF GENERATOR AND 14' WEST OF BREAKER BOX.	N: 13954102.89' E: 3184507.83' ELEV: 66.12'
CP #57	SQUARE SET IN CONCRETE BETWEEN AC UNIT AND BRICK WALL. APPROXIMATELY 6' EAST OF MOTOR AND 3' SOUTHWEST OF AC UNIT.	N: 13954098.72' E: 3184541.30' ELEV: 66.28'
CP #62	X SET IN CONCRETE SIDEWALK NORTHEAST OF KINGWOOD MIDDLE SCHOOL APPROXIMATELY 51' SOUTHEAST OF INLET #2038 ON SVY2 AND 24' SOUTHWEST OF CORNER OF BRICK WALL.	N: 13953822.15' E: 3184271.76' ELEV: 66.37'

Creekwood Middle School Tree Survey

2517	Chinese Tallow Tree (Triadica sebifera)	12
2518	Chinese Tallow Tree (Triadica sebifera)	8
2519	Chinese Tallow Tree (Triadica sebifera)	8
2520	Chinese Tallow Tree (Triadica sebifera)	9
2900	Loblolly Pine (Pinus taeda)	18
2973	Loblolly Pine (Pinus taeda)	15
2974	Loblolly Pine (Pinus taeda)	12
2975	Loblolly Pine (Pinus taeda)	9
2976	Loblolly Pine (Pinus taeda)	14
2977	Loblolly Pine (Pinus taeda)	4
2978	Loblolly Pine (Pinus taeda)	12
2983	Loblolly Pine (Pinus taeda)	12
2986	Chinese Tallow Tree (Triadica sebifera)	9
2987	Chinese Tallow Tree (Triadica sebifera)	13
2988	Chinese Tallow Tree (Triadica sebifera)	6
2989	Willow Oak (Quercus phellos)	16
2991	Willow Oak (Quercus phellos)	13

Topographical Survey

1" = 20'-0" | 1

REVISIONS	DATE	
1	9-28-23	STORM REVISIONS
2	11-29-23	SEWER REVISIONS
3		
4		

D:\219\219108 Riverwood Middle School\219108_Cad 3b\REVISIONS.dwg 11/15/2023 8:4

DRAWN BY: HLS | APPV'D BY: KR | ISSUED: 9-28-23

T.B.P.E.L.S FIRM NO. F-413
T.B.A.E. FIRM NO. BR 351
T.B.P.E.L.S FIRM NO. 10113800
T.B.P.E.L.S FIRM NO. 10118801

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2155 RICE ROAD STE. 107 · TYLER, TEXAS 75703 · (903)581-3200

Topographic Survey of a Portion of the Riverwood Middle School Campus in the A. Turner Survey, A-757, Harris County Texas

JOB NUMBER 219108

SHEET NO. SVY5

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D HUMBLE, TX

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TBPE FIRM REGISTRATION # F-928

01/17/2025

STATE OF TEXAS
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SURVEY (5 OF 7)

Job. No. 1821-13-02	Sheet No. C0.5
Drawn By: CSH	
Date: 01/17/2025	

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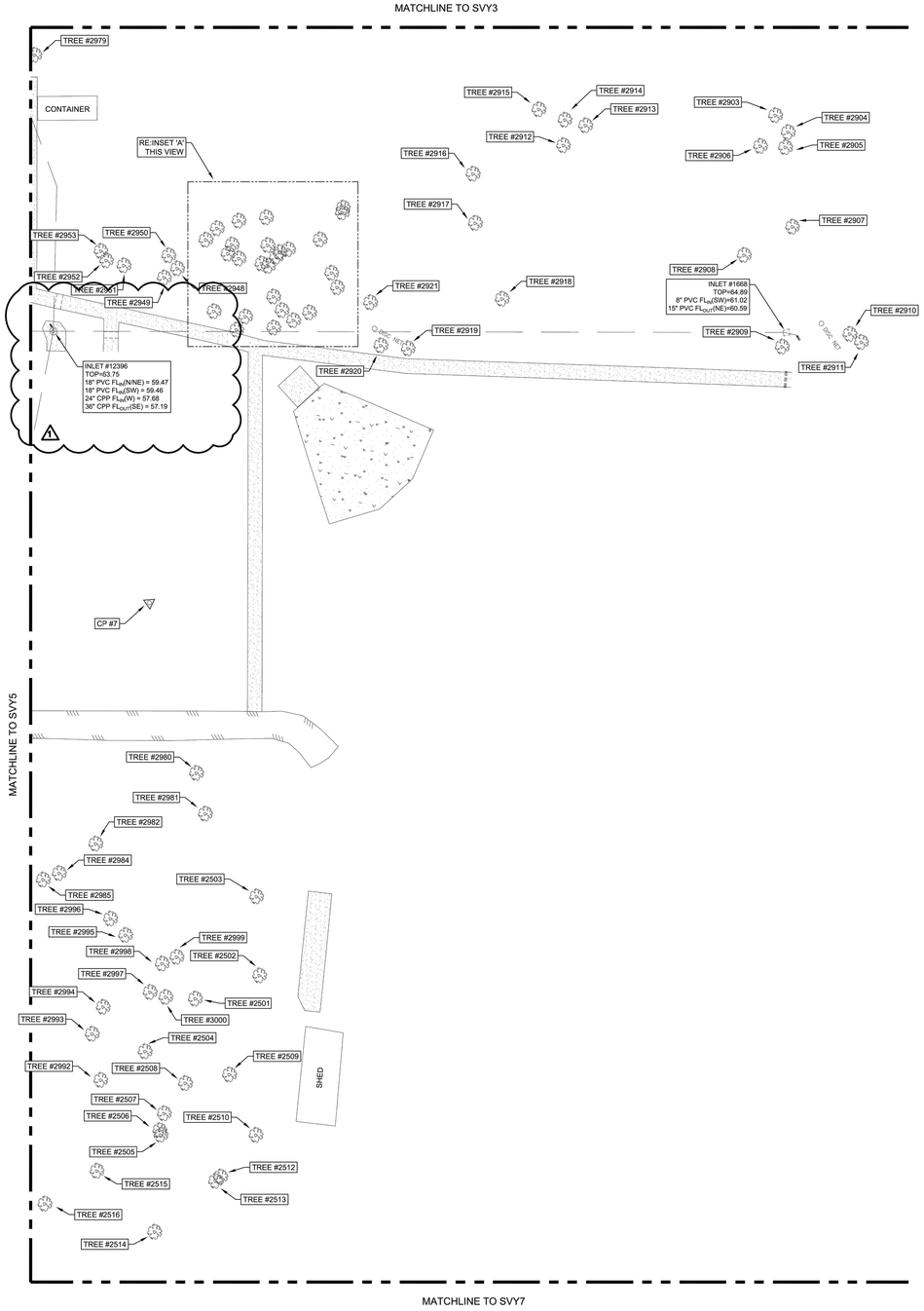


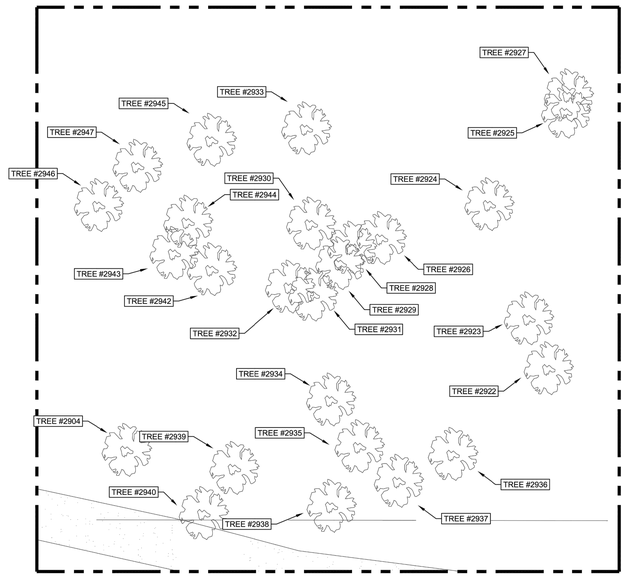
Creekwood Middle School Tree Survey

2501	Willow Oak (Quercus phellos)	9
2502	Willow Oak (Quercus phellos)	29.5
2503	Willow Oak (Quercus phellos)	29
2504	Loblolly Pine (Pinus taeda)	6
2505	Loblolly Pine (Pinus taeda)	9
2506	Loblolly Pine (Pinus taeda)	4
2507	Willow Oak (Quercus phellos)	9
2508	Loblolly Pine (Pinus taeda)	8
2509	Willow Oak (Quercus phellos)	9
2510	Willow Oak (Quercus phellos)	24
2512	Loblolly Pine (Pinus taeda)	7
2513	Loblolly Pine (Pinus taeda)	15
2514	Willow Oak (Quercus phellos)	31
2515	Willow Oak (Quercus phellos)	15
2516	Chinese Tallow Tree (Triadica sebifera)	12
2903	Loblolly Pine (Pinus taeda)	12
2904	Loblolly Pine (Pinus taeda)	9
2905	Loblolly Pine (Pinus taeda)	12
2906	Loblolly Pine (Pinus taeda)	6
2907	Loblolly Pine (Pinus taeda)	6
2908	Loblolly Pine (Pinus taeda)	10
2909	Shumard Oak (Quercus shumardii)	13
2910	Loblolly Pine (Pinus taeda)	9
2911	Loblolly Pine (Pinus taeda)	12
2912	Loblolly Pine (Pinus taeda)	11
2913	Loblolly Pine (Pinus taeda)	14
2914	Loblolly Pine (Pinus taeda)	13
2915	Loblolly Pine (Pinus taeda)	11
2916	Cedar Elm (Ulmus crassifolia)	6
2917	Sweet Gum (Liquidambar styraciflua)	8
2918	Loblolly Pine (Pinus taeda)	10
2919	Loblolly Pine (Pinus taeda)	12
2920	Loblolly Pine (Pinus taeda)	10.5
2921	Loblolly Pine (Pinus taeda)	14
2948	Loblolly Pine (Pinus taeda)	4
2949	Loblolly Pine (Pinus taeda)	11
2950	Loblolly Pine (Pinus taeda)	7
2951	Loblolly Pine (Pinus taeda)	13
2952	Willow Oak (Quercus phellos)	17.5
2953	Loblolly Pine (Pinus taeda)	12
2979	Loblolly Pine (Pinus taeda)	15
2980	Willow Oak (Quercus phellos)	9
2981	Willow Oak (Quercus phellos)	12
2982	Willow Oak (Quercus phellos)	26
2984	American Elm (Ulumus americana)	14
2985	Loblolly Pine (Pinus taeda)	10
2992	Loblolly Pine (Pinus taeda)	12
2993	Loblolly Pine (Pinus taeda)	11
2994	Loblolly Pine (Pinus taeda)	12
2995	Loblolly Pine (Pinus taeda)	9
2996	Loblolly Pine (Pinus taeda)	9
2997	Willow Oak (Quercus phellos)	4
2998	Loblolly Pine (Pinus taeda)	9
2999	Loblolly Pine (Pinus taeda)	12
3000	Willow Oak (Quercus phellos)	10

Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #7	1/2" IRON ROD SET NORTHEAST OF KINGWOOD MIDDLE SCHOOL. APPROXIMATELY 96' SOUTHEAST OF STMH #12396 AND 59' NORTHWEST OF TREE #2980.	N:13954097.97' E:3184676.89' ELEV: 64.63'

0 10 20 40
SCALE: 1"=20'-0"



INSET A
1" = 5'-0"

Creekwood Middle School Tree Survey

2904	Loblolly Pine (Pinus taeda)	9
2922	Loblolly Pine (Pinus taeda)	12
2923	Loblolly Pine (Pinus taeda)	12
2924	Loblolly Pine (Pinus taeda)	17
2925	Loblolly Pine (Pinus taeda)	13.5
2926	Loblolly Pine (Pinus taeda)	9
2927	Loblolly Pine (Pinus taeda)	11
2928	Loblolly Pine (Pinus taeda)	9
2929	Loblolly Pine (Pinus taeda)	5
2930	Loblolly Pine (Pinus taeda)	9
2931	Loblolly Pine (Pinus taeda)	5
2932	Loblolly Pine (Pinus taeda)	9
2933	Loblolly Pine (Pinus taeda)	13
2934	Loblolly Pine (Pinus taeda)	5
2935	Loblolly Pine (Pinus taeda)	8
2936	Loblolly Pine (Pinus taeda)	9
2937	Loblolly Pine (Pinus taeda)	12
2938	Loblolly Pine (Pinus taeda)	6
2939	Loblolly Pine (Pinus taeda)	6
2940	Loblolly Pine (Pinus taeda)	7.5
2942	Loblolly Pine (Pinus taeda)	9
2943	Loblolly Pine (Pinus taeda)	6
2944	Loblolly Pine (Pinus taeda)	11
2945	Loblolly Pine (Pinus taeda)	9
2946	Loblolly Pine (Pinus taeda)	9
2947	Loblolly Pine (Pinus taeda)	13

Topographical Survey

1" = 20'-0" | 1

REVISIONS

	DATE	STORM REVISIONS
1	9-29-23	
2		
3		
4		

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DRAWN BY: HLS | APPV'D BY: KR | ISSUED: 9-29-23

T.B.P.E.L.S FIRM NO. F-3413
T.B.A.E. FIRM NO. BR 3850
T.B.P.E.L.S FIRM NO. 10110800
T.B.P.E.L.S FIRM NO. 10115901

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Topographic Survey of a Portion of the Riverwood Middle School Campus in the A. Turner Survey, A-757, Harris County Texas

JOB NUMBER 219108

SHEET NO.

SVY6

Revision / Date

Project:

RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

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01/17/2025

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SURVEY (6 OF 7)

Job. No. 1821-13-02	Sheet No. C0.6
Drawn By: CSH	
Date: 01/17/2025	

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Creekwood Middle School Tree Survey

2521	Arizona Ash (Fraxinus velutina)	7
2522	Chinese Tallow Tree (Triadica sebifera)	12
2523	Chinese Tallow Tree (Triadica sebifera)	5
2524	Chinese Tallow Tree (Triadica sebifera)	5
2525	Chinese Tallow Tree (Triadica sebifera)	6
2526	Loblolly Pine (Pinus taeda)	13
2527	Water Oak (Quercus nigra)	9
2528	Willow Oak (Quercus phellos)	15.5
2529	Cedar Elm (Ulmus crassifolia)	8
2530	Chinese Tallow Tree (Triadica sebifera)	7
2531	Chinese Tallow Tree (Triadica sebifera)	7
2532	Chinese Tallow Tree (Triadica sebifera)	7
2533	Chinese Tallow Tree (Triadica sebifera)	7
2534	Chinese Tallow Tree (Triadica sebifera)	7
2535	Loblolly Pine (Pinus taeda)	10
2536	Sweet Gum (Liquidambar styraciflua)	7
2537	Loblolly Pine (Pinus taeda)	13
2538	Loblolly Pine (Pinus taeda)	13
2539	Loblolly Pine (Pinus taeda)	18
2540	Cedar Elm (Ulmus crassifolia)	12
2541	Willow Oak (Quercus phellos)	8
2542	Willow Oak (Quercus phellos)	11
2543	Loblolly Pine (Pinus taeda)	16
2544	Willow Oak (Quercus phellos)	8
2545	Loblolly Pine (Pinus taeda)	13
2546	Loblolly Pine (Pinus taeda)	13
2547	Loblolly Pine (Pinus taeda)	14
2548	Loblolly Pine (Pinus taeda)	9
2549	Sweet Gum (Liquidambar styraciflua)	9
2550	Willow Oak (Quercus phellos)	5.5
2551	Loblolly Pine (Pinus taeda)	16
2552	Loblolly Pine (Pinus taeda)	14
2553	Willow Oak (Quercus phellos)	14
2554	Loblolly Pine (Pinus taeda)	15
2555	Cedar Elm (Ulmus crassifolia)	6
2556	Loblolly Pine (Pinus taeda)	16
2557	Loblolly Pine (Pinus taeda)	20.5
2558	Willow Oak (Quercus phellos)	22
2559	Loblolly Pine (Pinus taeda)	13

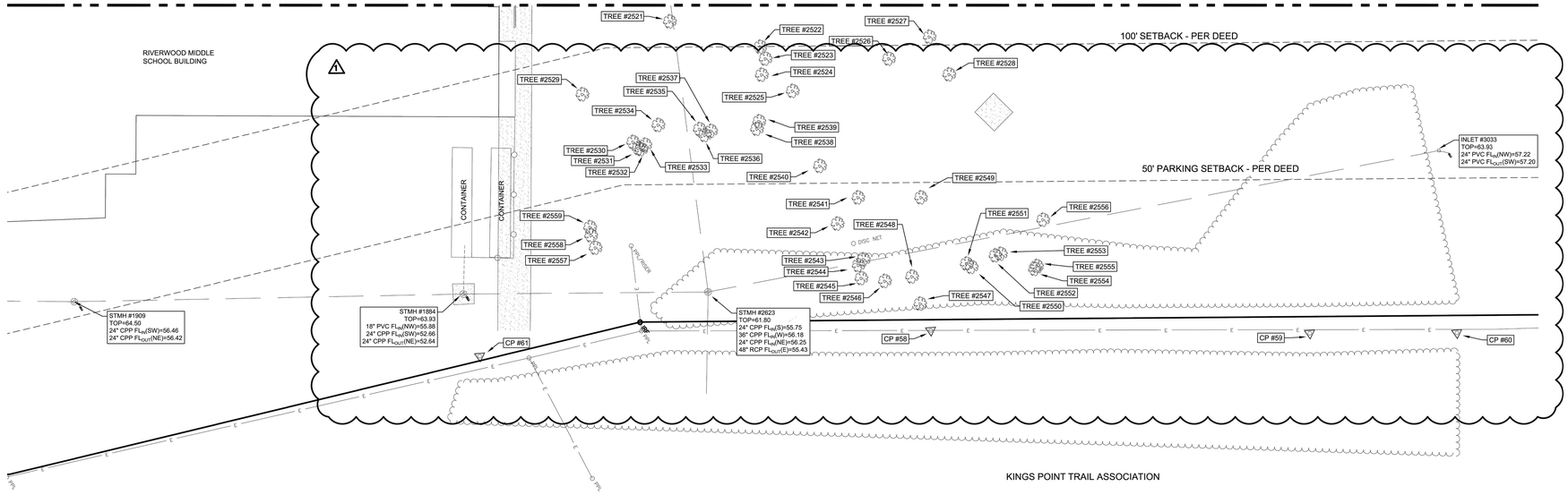
Bench Mark/Control Point List

NO.	DESCRIPTION	ELEVATION
CP #58	60D NAIL SET ALONG OVERHEAD ELECTRICAL LINE. APPROXIMATELY 10' EAST OF TREE #2547 AND 105' NORTHEAST OF POWER POLE.	N: 13953928.29' E: 3184980.01' ELEV: 63.53'
CP #59	60D NAIL SET ALONG OVERHEAD ELECTRICAL LINE. APPROXIMATELY 102' NORTHEAST OF TREE #2554 AND 243' NORTHEAST OF POWER POLE.	N: 13954040.97' E: 3185059.40' ELEV: 63.72'
CP #60	60D NAIL SET ALONG OVERHEAD ELECTRICAL LINE. APPROXIMATELY 155' NORTHEAST OF TREE #2554 AND 297' NORTHEAST OF POWER POLE.	N: 13954085.07' E: 3184089.78' ELEV: 63.81'
CP #61	60D NAIL SET ALONG OVERHEAD ELECTRICAL LINE. APPROXIMATELY 23' STMH #1884 AND 18' SOUTHWEST OF POWER POLE.	N: 13953787.94' E: 3184894.22' ELEV: 64.51'

0 10 20 40

SCALE: 1"=20'-0"

MATCHLINE TO SVY5,SVY6



Topographical Survey

1" = 20'-0" | 1

NO.	DATE	REVISIONS
1	9-29-23	STORM REVISIONS
2		
3		
4		

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DRAWN BY: HLS | APPV'D BY: KR | ISSUED: 9-29-23

T.B.P.E.L.S FIRM NO. F-413
T.B.A.E. FIRM NO. BR 351
T.B.P.E.L.S FIRM NO. 10110800
T.B.P.L.S FIRM NO. 10110901

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Topographic Survey of a Portion of the Riverwood Middle School Campus in the A. Turner Survey, A-757, Harris County Texas

JOB NUMBER 219108

SHEET NO. SVY7

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D HUMBLE, TX

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TBPE F-928 REGISTRATION F-928

01/17/2025

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SURVEY (7 OF 7)

Job. No.	Sheet No.
1821-13-02	C0.7
Drawn By: CSH	
Date: 01/17/2025	

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M117858

LINE TABLE

LINE	BEARING	LENGTH
L1	N74°56'50"E	44.87'
L2	S15°03'10"E	23.54'
L3	S74°56'50"W	196.15'
L4	N15°03'10"W	106.15'
L5	S74°56'50"W	24.29'
L6	N15°03'10"W	43.57'

NOTE TABLE

NOTE	DISTANCE OR ARC LENGTH	BEARING OR RADIUS
1	21.71'	N79°56'50"E
2	47.36'	S55°03'10"E
3	56.00'	S40°51'35"E
4	68.04'	N63°57'24"E
5	104.49'	N75°57'44"E
6	20.86'	N29°56'50"E

CALE : 1" 100'

ACRE ACRE

ACREAGE

REPLAT OF

SAND CREEK VILLAGE

SECTION THREE

VOL. 332 PG. 119

JOHN W. ASBURY SURVEY, A-91
AMASA TURNER SURVEY, A-757

H. C. M. R.

KINGWOOD DRIVE
(VARYING WIDTH)
F.I.N. NO. 141-03
FILM CODE NO. 189-30-1680
H.C.D.R.P.R.P.

HIGH VALLEY DRIVE
(60' R.O.W.)

RESTRICTED RESERVE "A"
(RESTRICTED TO SCHOOL SITE)
24.883 AC. 1,083,922 SQ.FT.

SITE DRAINAGE PLANS FOR FUTURE DEVELOPMENT MUST BE APPROVED BY THE HARRIS COUNTY ENGINEERS OFFICE AND THE HARRIS COUNTY FLOOD CONTROL DISTRICT.

ELEVATED STORAGE TANK

S 34°56'50" E 835.00'

S 55°03'10" E 163.32'

S 34°56'50" E 70.13'

S 51°07'39" W 236.65'

S 30°56'05" W 347.00'

N 10°55'37" W 156.93'

50' R.O.W.

C1 C2 C3 C4 C5 C6

N1 N2 N3 N4 N5

RECORDER'S MEMORANDUM
At the time of recordation, the instrument was found to be inadequate for the best photographic reproduction because of illegibility, carbon or photo copy, discolored paper, etc. All blackouts additions and changes were present at the time the instrument was filed and recorded

THIS CERTIFICATE IS VALID ONLY AS TO THE INSTRUMENT ON WHICH THE ORIGINAL SIGNATURE IS AFFIXED AND ONLY THEN IF THE CONTENT OF SUCH INSTRUMENT IS NOT ALTERED OR CHANGED AFTER RECORDING

OFFICE OF
ANITA RODEHEAVER
COUNTY CLERK HARRIS COUNTY TEXAS

MAP RECORDS OF COUNTY CLERK

VOL. 341 PAGE 74

KINGS POINT MIDDLE SCHOOL SITE

THIS IS PAGE 1 OF 1 PAGES

NOTES:

1. B.L. INDICATES BUILDING LINE
2. U.E. INDICATES STORM SEWER EASEMENT.
3. S.S.E. INDICATES SANITARY SEWER EASEMENT.
4. W.L.E. INDICATES WATERLINE EASEMENT
5. ALL BEARINGS ARE REFERENCED TO THE TEXAS COORDINATE SYSTEM, SOUTH CENTRAL ZONE.
6. THIS SURVEY IS NOT TIED TO THE OFFICIAL CITY OF HOUSTON SURVEY SYSTEM IN COMPLIANCE WITH ORDINANCE NO. 69-1978 BECAUSE A CITY SURVEY MARKER HAS NOT BEEN ESTABLISHED WITHIN 2,000 FEET OF THIS PROPERTY.

VICINITY MAP SCALE: 1" = 2 MILES

STATE OF TEXAS
COUNTY OF HARRIS

FRIENDSWOOD DEVELOPMENT COMPANY AND KING RANCH, INC., HEREIN CALLED "OWNERS" OF THE 24.883 ACRE TRACT DESCRIBED IN THE ABOVE AND FOREGOING MAP OF KINGS POINT MIDDLE SCHOOL SITE, DO HEREBY MAKE AND ESTABLISH SAID SUBDIVISION OF SAID PROPERTY ACCORDING TO ALL LINES, DEDICATIONS, RESTRICTIONS AND NOTATIONS ON SAID MAP OR PLAT AND HEREBY DEDICATE TO THE USE OF THE PUBLIC FOREVER, ALL STREETS, ALLEYS, PARKS, WATER COURSES, DRAINS, EASEMENTS AND PUBLIC PLACES SHOWN THEREON FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED, AND DO HEREBY BIND THEMSELVES, THEIR SUCCESSORS AND ASSIGNS TO WARRANT AND FOREVER DEFEND THE TITLE TO THE LAND SO DEDICATED.

FURTHER, OWNERS HAVE DEDICATED AND BY THESE PRESENTS DO DEDICATE TO THE USE OF THE PUBLIC FOR PUBLIC UTILITY PURPOSES, FOREVER UNOBSTRUCTED AERIAL EASEMENTS FIVE FEET, SIX INCHES (5'-6") IN WIDTH FOR PERIMETER LOTS, SEVEN FEET (7'-0") IN WIDTH FOR BACK-TO-BACK LOTS FROM A PLANE SIXTEEN FEET (16'-0") ABOVE THE GROUND LEVEL UPWARD, LOCATED ADJACENT TO ALL PUBLIC UTILITY EASEMENTS THAT ARE DESIGNATED WITH AERIAL EASEMENTS (U.E. & AERIAL) SHOWN HEREON.

FURTHER, OWNERS DO HEREBY COVENANT AND AGREE THAT ALL OF THE PROPERTY WITHIN THE BOUNDARIES OF THIS PLAT SHALL BE RESTRICTED TO PREVENT THE DRAINAGE OF ANY SEPTIC TANKS INTO ANY PUBLIC OR PRIVATE STREET, ROAD OR ALLEY OR ANY DRAINAGE DITCH, EITHER DIRECTLY OR INDIRECTLY.

FURTHER, OWNERS DO HEREBY DEDICATE TO THE PUBLIC A STRIP OF LAND FIFTEEN (15) FEET WIDE ON EACH SIDE OF THE CENTER LINE OF ANY AND ALL BAYOUS, CREEKS, GULLIES, RAVINES, DRAWS, SLOUGHS, OR OTHER NATURAL DRAINAGE COURSES LOCATED IN SAID PLAT, AS EASEMENTS FOR DRAINAGE PURPOSES, GIVING THE CITY OF HOUSTON, HARRIS COUNTY OR ANY OTHER GOVERNMENTAL AGENCY, THE RIGHT TO ENTER UPON SAID EASEMENT AT ANY AND ALL TIMES FOR THE PURPOSE OF CONSTRUCTION AND MAINTENANCE OF DRAINAGE FACILITIES AND STRUCTURES.

FURTHER, OWNERS DO HEREBY COVENANT AND AGREE THAT ALL OF THE PROPERTY WITHIN THE BOUNDARIES OF THIS PLAT AND ADJACENT TO ANY DRAINAGE EASEMENT, DITCH, GULLY, CREEK OR NATURAL DRAINAGE WAY SHALL HEREBY BE RESTRICTED TO KEEP SUCH DRAINAGE WAYS AND EASEMENTS CLEAR OF FENCES, BUILDINGS, PLANTING AND OTHER OBSTRUCTIONS TO THE OPERATIONS AND MAINTENANCE OF THE DRAINAGE FACILITY AND THAT SUCH ABUTTING PROPERTY SHALL NOT BE PERMITTED TO DRAIN DIRECTLY INTO THIS EASEMENT EXCEPT BY MEANS OF AN APPROVED DRAINAGE STRUCTURE.

FURTHER, OWNERS CERTIFY AND COVENANT THAT THEY HAVE COMPLIED WITH OR WILL COMPLY WITH THE EXISTING HARRIS COUNTY ROAD LAW, SECTION 31-C AS AMENDED BY CHAPTER 614, ACTS OF 1973, 63RD LEGISLATURE AND ALL OTHER REGULATIONS HERETOFORE ON FILE WITH THE HARRIS COUNTY ENGINEER AND ADOPTED BY THE COMMISSIONERS' COURT OF HARRIS COUNTY.

IN TESTIMONY WHEREOF, FRIENDSWOOD DEVELOPMENT COMPANY, ACTING HEREIN FOR ITSELF AND AS AGENT AND ATTORNEY-IN-FACT FOR KING RANCH, INC. HAS CAUSED THESE PRESENTS TO BE SIGNED BY RANDALL PARISH, ITS VICE PRESIDENT, THEREUNTO AUTHORIZED, ATTESTED BY ITS SECRETARY, B. P. PIERCE, AND ITS CORPORATE SEAL HERETO AFFIXED THIS 9th DAY OF March, 1989.

FRIENDSWOOD DEVELOPMENT COMPANY,
ACTING HEREIN FOR ITSELF AND AS
AGENT AND ATTORNEY-IN-FACT FOR
KING RANCH, INC.

ATTEST: B. P. Pierce
B. P. PIERCE, SECRETARY

BY: Randall Parish
RANDALL PARISH, VICE PRESIDENT

STATE OF TEXAS
COUNTY OF HARRIS

BEFORE ME, THE UNDERSIGNED AUTHORITY, ON THIS DAY PERSONALLY APPEARED RANDALL PARISH, VICE PRESIDENT AND B. P. PIERCE, SECRETARY OF FRIENDSWOOD DEVELOPMENT COMPANY, KNOWN TO ME TO BE THE PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AND ACKNOWLEDGED TO ME THAT THEY EXECUTED THE SAME FOR THE PURPOSES AND CONSIDERATIONS THEREIN EXPRESSED, AND IN THE CAPACITY THEREIN AND HEREIN SET OUT, AND AS THE ACT AND DEED SAID CORPORATION ACTING FOR ITSELF AND AS AGENT AND ATTORNEY-IN-FACT FOR KING RANCH, INC.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, THIS 9th DAY OF March, 1989.

Barbara A. Parker
NOTARY PUBLIC IN AND FOR THE
STATE OF TEXAS
MY COMMISSION EXPIRES: _____

I, JOHN D. SPATES, AM AUTHORIZED UNDER THE LAWS OF THE STATE OF TEXAS TO PRACTICE THE PROFESSION OF SURVEYING AND HEREBY CERTIFY THAT THE ABOVE SUBDIVISION IS TRUE AND CORRECT; WAS PREPARED FROM AN ACTUAL SURVEY OF THE PROPERTY MADE UNDER MY SUPERVISION ON THE GROUND; THAT ALL BOUNDARY CORNERS, ANGLE POINTS, POINTS OF CURVATURE AND OTHER POINTS OF REFERENCE HAVE BEEN MARKED WITH IRON RODS, BEING NOT LESS THAN 5/8 INCH DIAMETER IRON RODS, HAVING A LENGTH OF NOT LESS THAN THREE FEET (3'), AND THAT THE PLAT BOUNDARY CORNERS HAVE BEEN TIED TO THE NEAREST SURVEY CORNER AND HAVE NOT BEEN TIED INTO THE OFFICIAL CITY OF HOUSTON SURVEY SYSTEM IN COMPLIANCE WITH ORDINANCE NO. 69-1978, BECAUSE A CITY SURVEY MARKER HAS NOT BEEN ESTABLISHED WITHIN 2,000 FEET OF THIS PROPERTY.

John D. Spates
JOHN D. SPATES
REGISTERED PUBLIC SURVEYOR
TEXAS REGISTRATION NO. 4182

THIS IS TO CERTIFY THAT THE CITY PLANNING COMMISSION OF THE CITY OF HOUSTON, TEXAS HAS APPROVED THIS PLAT AND SUBDIVISION OF KINGS POINT MIDDLE SCHOOL SITE IN CONFORMANCE WITH THE LAWS OF THE STATE OF TEXAS AND THE ORDINANCES OF THE CITY OF HOUSTON AS SHOWN HEREON AND AUTHORIZED THE RECORDING OF THIS PLAT THIS 23 DAY OF March, 1989.

BY: Michael S. Marcotte
MICHAEL S. MARCOTTE, P.E., ACTING SECRETARY

BY: M. Marvin Katz
M. MARVIN KATZ, VICE CHAIRMAN

I, J. R. ADAMS, COUNTY ENGINEER OF HARRIS COUNTY, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH ALL OF THE EXISTING RULES AND REGULATIONS OF THIS OFFICE AS ADOPTED BY THE HARRIS COUNTY COMMISSIONERS' COURT; AND FURTHER, THAT IT COMPLIES OR WILL COMPLY WITH ALL OF THE LAWS INCLUDED IN THE HARRIS COUNT ROAD LAW, ALSO INCLUDING SECTION 31-C AS AMENDED BY CHAPTER 614, ACTS OF 1973, 63RD LEGISLATURE.

J. R. ADAMS, P.E., COUNTY ENGINEER

I, JAMES B. GREEN, DIRECTOR OF HARRIS COUNTY FLOOD CONTROL DISTRICT, HARRIS COUNTY, TEXAS, DO HEREBY CERTIFY THAT THE PLAT OF THIS SUBDIVISION COMPLIES WITH REQUIREMENTS FOR INTERNAL SUBDIVISION DRAINAGE AS ADOPTED BY COMMISSIONERS' COURT; HOWEVER, NO CERTIFICATION IS HEREBY GIVEN AS TO THE EFFECT OF DRAINAGE FROM THIS SUBDIVISION ON THE INTERCEPTING DRAINAGE ARTERY OR PARENT STREAM OR ON ANY OTHER AREA OR SUBDIVISION WITHIN THE WATERSHED.

James B. Green
JAMES B. GREEN, P.E., DIRECTOR

APPROVED BY THE COMMISSIONERS' COURT OF HARRIS COUNTY, TEXAS, THIS 11th DAY OF April, 1989.

EL FRANCO LEE
COMMISSIONER, PRECINCT 1

JOE FONTENO
COMMISSIONER, PRECINCT 2

JON S. LINDSAY
COUNTY JUDGE

STEVE RADACK
COMMISSIONER, PRECINCT 3

E. A. LYONS, JR.
COMMISSIONER, PRECINCT 4

I, ANITA RODEHEAVER, CLERK OF THE COUNTY COURT OF HARRIS, DO HEREBY CERTIFY THAT THE WITHIN INSTRUMENT WITH ITS CERTIFICATE OF AUTHENTICATION WAS FILED FOR REGISTRATION IN MY OFFICE ON THE 13th DAY OF April, 1989, AT 10:03 O'CLOCK A.M., AND DULY RECORDED ON THE 13th DAY OF April, 1989, AT 12:00 O'CLOCK P.M., AND IN VOLUME 341 PAGE 74 OF THE MAP RECORDS OF HARRIS, FOR SAID COUNTY.

WITNESS MY HAND AND SEAL OF OFFICE, AT HOUSTON, THE DAY AND DATE LAST ABOVE WRITTEN.

ANITA RODEHEAVER, CLERK OF THE COUNTY COURT
HARRIS COUNTY, TEXAS

DEPUTY

KINGS POINT
MIDDLE SCHOOL SITE

A SUBDIVSION OF 24.883 ACRES IN THE
AMASA TURNER SURVEY, A-757
HARRIS COUNTY, TEXAS

1 RESERVE 1 BLOCK
SCALE: 1" = 100' MARCH, 1989

OWNER:
FRIENDSWOOD DEVELOPMENT COMPANY
AND
KING RANCH, INC.

FRIENDSWOOD DEVELOPMENT COMPANY
RANDALL PARISH, VICE PRESIDENT
B.P. PIERCE, SECRETARY

ACTING FOR ITSELF AND AS AGENT AND ATTORNEY IN-FACT
FOR KING RANCH, INC.

TURNER COLLIE & BRADEN INC.
ENGINEERS/PLANNERS

WILLIAMS & CRAWFORD, INC.
CITY PLANNING CONSULTANTS
HOUSTON

JOB NO. 5039-010

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

Kimley»Horn
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01/17/2025
STATE OF TEXAS
RASHARD D. HARRIS
142467
LICENSED
PROFESSIONAL ENGINEER

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PLAT

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Date: 01/17/2025	

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KIMLEY HORN GENERAL NOTES

OVERALL:

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE PLANS, CITY (OR TOWN) STANDARD DETAILS AND SPECIFICATIONS, THE FINAL GEOTECHNICAL REPORT AND ALL ISSUED ADDENDA, AND COMMONLY ACCEPTED CONSTRUCTION STANDARDS. THE CITY SPECIFICATIONS SHALL GOVERN WHERE OTHER SPECIFICATIONS DO NOT EXIST. IN CASE OF CONFLICTING SPECIFICATIONS OR DETAILS, THE MORE RESTRICTIVE SPECIFICATION AND DETAIL SHALL BE FOLLOWED.
2. THE CONTRACTOR SHALL COMPLY WITH CITY (OR TOWN) 'GENERAL NOTES' FOR CONSTRUCTION, IF EXISTING AND REQUIRED BY THE CITY. FOR INSTANCES WHERE THEY CONFLICT WITH THESE KIMLEY HORN GENERAL NOTES, THEN THE MORE RESTRICTIVE SHALL APPLY.
3. THE CONTRACTOR SHALL FURNISH ALL MATERIAL AND LABOR TO CONSTRUCT THE FACILITY AS SHOWN AND DESCRIBED IN THE CONSTRUCTION DOCUMENTS IN ACCORDANCE WITH THE APPROPRIATE AUTHORITIES' SPECIFICATIONS AND REQUIREMENTS.
4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING TO DETERMINE EXISTING CONDITIONS.
5. THE EXISTING CONDITIONS THESE PLANS WERE PROVIDED BY THE TOPOGRAPHIC SURVEY PREPARED BY THE PROJECT SURVEYOR, AND ARE BASED ON THE BENCHMARKS SHOWN. THE CONTRACTOR SHALL REFERENCE THE SAME BENCHMARKS.
6. THE CONTRACTOR SHALL REVIEW AND VERIFY THE EXISTING TOPOGRAPHIC SURVEY SHOWN ON THE PLANS REPRESENTS EXISTING FIELD CONDITIONS PRIOR TO CONSTRUCTION, AND SHALL REPORT ANY DISCREPANCIES FOUND TO THE OWNER AND ENGINEER IMMEDIATELY
7. IF THE CONTRACTOR DOES NOT ACCEPT THE EXISTING TOPOGRAPHIC SURVEY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SURVEY AT THEIR OWN EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL LAND SURVEYOR TO THE OWNER AND ENGINEER FOR REVIEW.
8. CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SURVEYING AND STAKING.
9. CONTRACTOR SHALL VERIFY HORIZONTAL AND VERTICAL CONTROL, INCLUDING BENCHMARKS PRIOR TO COMMENCING CONSTRUCTION OR STAKING OF IMPROVEMENTS. PROPERTY LINES AND CORNERS SHALL BE HELD AS THE HORIZONTAL CONTROL.
10. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS, ELEVATIONS, AND FIELD CONDITIONS THAT MAY AFFECT CONSTRUCTION. ANY DISCREPANCIES ON THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER BEFORE COMMENCING WORK. NO FIELD CHANGES OR DEVIATIONS FROM DESIGN ARE TO BE MADE WITHOUT PRIOR APPROVAL OF THE ARCHITECT, ENGINEER, AND IF APPLICABLE THE CITY AND OWNER. NO CONSIDERATION WILL BE GIVEN TO CHANGE ORDERS FOR WHICH THE CITY, ENGINEER, AND OWNER WERE NOT CONTACTED PRIOR TO CONSTRUCTION OF THE AFFECTED ITEM.
11. CONTRACTOR SHALL THOROUGHLY CHECK COORDINATION OF CIVIL, LANDSCAPE, MEP, ARCHITECTURAL, AND OTHER PLANS PRIOR TO COMMENCING CONSTRUCTION. OWNER/ENGINEER SHALL BE NOTIFIED OF ANY DISCREPANCY PRIOR TO COMMENCING WITH CONSTRUCTION.
12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES WHICH MAY HAVE BURIED OR AERIAL UTILITIES WITHIN OR NEAR THE CONSTRUCTION AREA BEFORE COMMENCING WORK TO HAVE THEM LOCATE THEIR EXISTING UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE MINIMUM NOTICE TO ALL UTILITY COMPANIES PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL INCLUDE CONTINGENCY BUDGET FOR ALL UTILITY RELOCATIONS.
13. CONTRACTOR SHALL CALL TEXAS 811 AN ADEQUATE AMOUNT OF TIME PRIOR TO COMMENCING CONSTRUCTION OR ANY EXCAVATION.
14. CONTRACTOR SHALL USE EXTREME CAUTION AS THE SITE CONTAINS VARIOUS KNOWN AND UNKNOWN PUBLIC AND PRIVATE UTILITIES.
15. THE LOCATIONS, ELEVATIONS, DEPTH, AND DIMENSIONS OF EXISTING UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM AVAILABLE UTILITY COMPANY MAPS AND PLANS, AND ARE CONSIDERED APPROXIMATE AND INCOMPLETE. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO VERIFY THE PRESENCE, LOCATION, ELEVATION, DEPTH, AND DIMENSION OF EXISTING UTILITIES SUFFICIENTLY IN ADVANCE OF CONSTRUCTION SO THAT ADJUSTMENTS CAN BE MADE TO PROVIDE ADEQUATE CLEARANCES. THE ENGINEER SHALL BE NOTIFIED WHEN A PROPOSED IMPROVEMENT CONFLICTS WITH AN EXISTING UTILITY.
16. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING ANY ADJUSTMENTS AND RELOCATIONS OF EXISTING UTILITIES THAT CONFLICT WITH THE PROPOSED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, ADJUSTING EXISTING MANHOLES TO MATCH PROPOSED GRADE, RELOCATING EXISTING POLES AND GUY WIRES THAT ARE LOCATED IN PROPOSED DRIVEWAYS, ADJUSTING THE HORIZONTAL OR VERTICAL ALIGNMENT OF EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE PROPOSED GRADE OR CROSSING WITH A PROPOSED UTILITY, AND ANY OTHERS THAT MAY BE ENCOUNTERED THAT ARE UNKNOWN AT THIS TIME AND NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL INCLUDE CONTINGENCY BUDGET FOR ALL UTILITY RELOCATIONS.
17. CONTRACTOR SHALL ARRANGE FOR OR PROVIDE, AT ITS EXPENSE, ALL GAS, TELECOMMUNICATIONS, CABLE, OVERHEAD AND UNDERGROUND POWER LINE, AND UTILITY SERVICE ADJUSTMENTS NECESSARY.
18. CONTRACTOR IS RESPONSIBLE FOR COORDINATING INSTALLATION OF FRANCHISE UTILITIES THAT ARE NECESSARY FOR ON-SITE AND OFF-SITE CONSTRUCTION, AND SERVICE TO THE PROPOSED DEVELOPMENT. CONTRACTOR SHALL INCLUDE CONTINGENCY BUDGET FOR ALL UTILITY RELOCATIONS.
19. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ALL DAMAGES DUE TO THE CONTRACTORS' FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UTILITIES. THE OWNER OR ENGINEER WILL ASSUME NO LIABILITY FOR ANY DAMAGES SUSTAINED OR COST INCURRED BECAUSE OF THE OPERATIONS IN THE VICINITY OF EXISTING UTILITIES OR STRUCTURES. IF IT IS NECESSARY TO SHORE, BRACE, SWING OR RELOCATE A UTILITY, THE UTILITY COMPANY OR DEPARTMENT AFFECTED SHALL BE CONTACTED BY THE CONTRACTOR AND THEIR PERMISSION OBTAINED REGARDING THE METHOD TO USE FOR SUCH WORK.
20. BRACING OF UTILITY POLES MAY BE REQUIRED BY THE UTILITY COMPANIES WHEN TRENCHING OR EXCAVATING IN CLOSE PROXIMITY TO THE POLES. THE COST OF BRACING POLES WILL BE BORNE BY THE CONTRACTOR, WITH NO SEPARATE PAY ITEM FOR THIS WORK. THE COST IS INCIDENTAL TO THE PAY ITEM.
21. CONTRACTOR SHALL USE ALL NECESSARY SAFETY PRECAUTIONS TO AVOID CONTACT WITH OVERHEAD AND UNDERGROUND POWER LINES. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE, FEDERAL AND UTILITY OWNER REGULATIONS PERTAINING TO WORK SETBACKS FROM POWER LINES.
22. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN ALL REQUIRED CONSTRUCTION PERMITS, APPROVALS, AND BONDS PRIOR TO CONSTRUCTION.
23. THE CONTRACTOR SHALL HAVE AVAILABLE AT THE JOB SITE AT ALL TIMES A COPY OF THE CONTRACT DOCUMENTS INCLUDING PLANS, GEOTECHNICAL REPORT AND ADDENDA, PROJECT AND CITY SPECIFICATIONS, AND SPECIAL CONDITIONS, COPIES OF ANY REQUIRED CONSTRUCTION PERMITS, EROSION CONTROL PLANS, SWPPP AND INSPECTION REPORTS.
24. ALL SHOP DRAWINGS AND OTHER DOCUMENTS THAT REQUIRE ENGINEER REVIEW SHALL BE SUBMITTED BY THE CONTRACTOR SUFFICIENTLY IN ADVANCE OF CONSTRUCTION OF THAT ITEM, SO THAT NO LESS THAN 14 BUSINESS DAYS FOR REVIEW AND RESPONSE IS AVAILABLE
25. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES, JURISDICTIONAL AGENCIES, AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO USE OF THE FACILITY AND THE FINAL CONNECTION OF SERVICES.
26. CONTRACTOR SHALL ARRANGE FOR REQUIRED CITY AND THIRD PARTY INSPECTIONS.
27. CONTRACTOR'S BID PRICE SHALL INCLUDE ALL INSPECTION FEES.
28. ALL SYMBOLS SHOWN ON THESE PLANS (E.G. FIRE HYDRANT, METERS, VALVES, INLETS, ETC…) ARE FOR PRESENTATION PURPOSES ONLY AND ARE NOT TO SCALE. CONTRACTOR SHALL COORDINATE FINAL SIZES AND LOCATIONS WITH APPROPRIATE CITY INSPECTOR.
29. THE SCOPE OF WORK FOR THE CIVIL IMPROVEMENTS SHOWN ON THESE PLANS TERMINATES 5-FEET FROM THE BUILDING. REFERENCE THE BUILDING PLANS (E.G. ARCHITECTURAL, STRUCTURAL, MEP) FOR AREAS WITHIN 5-FEET OF THE BUILDING AND WITHIN THE BUILDING FOOTPRINT.
30. REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL FINAL BUILDING DIMENSIONS.
31. THE PROPOSED BUILDING FOOTPRINT(S) SHOWN IN THESE PLANS WAS PROVIDED TO KIMLEY-HORN AND ASSOCIATES, INC. (KHA) BY THE PROJECT ARCHITECT AT THE TIME THESE PLANS WERE PREPARED. IT MAY NOT BE THE FINAL CORRECT VERSION BECAUSE THE BUILDING DESIGN WAS ONGOING. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING THE FINAL CORRECT VERSION OF THE BUILDING FOOTPRINT WITH THE ARCHITECT AND STRUCTURAL ENGINEER PRIOR TO LAYOUT. DIMENSIONS AND/OR COORDINATES SHOWN ON THESE PLANS WERE BASED ON THE ABOVE STATED ARCHITECTURAL FOOTPRINT, AND ARE THEREFORE A PRELIMINARY LOCATION OF THE BUILDING. THE CONTRACTOR IS SOLELY RESPONSIBLE TO VERIFY WHAT PART OF THE BUILDING THE ARCHITECT'S FOOTPRINT REPRESENTS (E.G. SLAB, OUTSIDE WALL, MASONRY LEDGE, ETC.….) AND TO CONFIRM ITS FINAL POSITION ON THE SITE BASED ON THESE FINAL ARCHITECTURAL FOOTPRINT, CIVIL DIMENSION CONTROL PLAN, SURVEY BOUNDARY AND/OR PLAT. ANY DIFFERENCES FOUND SHALL BE REPORTED TO KHA IMMEDIATELY.
32. ALL CONSTRUCTION SHALL COMPLY WITH THE PROJECT'S FINAL GEOTECHNICAL REPORT (OR LATEST EDITION), INCLUDING SUBSEQUENT ADDENDA.
33. CONTRACTOR IS RESPONSIBLE FOR ALL MATERIALS TESTING AND CERTIFICATION, UNLESS SPECIFIED OTHERWISE BY OWNER. ALL MATERIALS TESTING SHALL BE COORDINATED WITH THE APPROPRIATE CITY INSPECTOR AND COMPLY WITH CITY STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT. TESTING SHALL BE PERFORMED BY AN APPROVED INDEPENDENT AGENCY FOR TESTING MATERIALS. OWNER SHALL SELECT AND PAY FOR THIRD PARTY MATERIAL TESTING.
34. ALL COPIES OF MATERIALS TEST RESULTS SHALL BE SENT TO THE OWNER, ENGINEER AND ARCHITECT DIRECTLY FROM THE TESTING AGENCY.
35. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SHOW, BY THE STANDARD TESTING PROCEDURES OF THE MATERIALS, THAT THE WORK CONSTRUCTED MEETS THE PROJECT REQUIREMENTS AND CITY SPECIFICATIONS.
36. DUE TO THE POTENTIAL FOR DIFFERENTIAL SOIL MOVEMENT ADJACENT TO THE BUILDING, THE CONTRACTOR SHALL ADHERE TO GEOTECHNICAL REPORT'S RECOMMENDATION FOR SUBGRADE PREPARATION SPECIFIC TO FLATWORK ADJACENT TO THE PROPOSED BUILDING. THE OWNER AND CONTRACTOR ARE ADVISED TO OBTAIN A GEOTECHNICAL ENGINEER RECOMMENDATION SPECIFIC TO FLATWORK ADJACENT TO THE BUILDING, IF NONE IS CURRENTLY EXISTING.
37. ALL CONTRACTORS MUST CONFINE THEIR ACTIVITIES TO THE WORK AREA. NO ENCROACHMENTS OUTSIDE OF THE WORK AREA WILL BE ALLOWED. ANY DAMAGE RESULTING THEREFROM SHALL BE CONTRACTOR'S SOLE RESPONSIBILITY TO REPAIR.
38. THE CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, UTILITIES, MANHOLES, POLES, GUY WIRES, VALVE COVERS, VAULT LIDS, FIRE HYDRANTS, COMMUNICATION BOXES/PEDESTALS, AND OTHER FACILITIES TO REMAIN AND SHALL REPAIR ANY DAMAGES AT NO COST TO THE OWNER.
39. THE CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY PHYSICAL DAMAGE TO PRIVATE PROPERTY OR PUBLIC IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO, FENCES, WALLS, SIGNS, PAVEMENT, CURBS, UTILITIES, SIDEWALKS, GRASS, TREES, LANDSCAPING, AND IRRIGATION SYSTEMS, ETC.… TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
40. ALL AREAS IN EXISTING RIGHT-OF-WAY DISTURBED BY SITE CONSTRUCTION SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER, INCLUDING AS NECESSARY GRADING, LANDSCAPING, CULVERTS, AND PAVEMENT TO ORIGINAL CONDITION OR BETTER AT NO COST TO THE OWNER.
41. THE CONTRACTOR SHALL SALVAGE ALL EXISTING POWER POLES, SIGNS, WATER VALVES, FIRE HYDRANTS, METERS, ETC… THAT ARE TO BE RELOCATED DURING CONSTRUCTION.
42. CONTRACTOR SHALL MAINTAIN ADEQUATE SITE DRAINAGE DURING ALL PHASES OF CONSTRUCTION, INCLUDING MAINTAINING EXISTING DITCHES OR CULVERTS FREE OF OBSTRUCTIONS AT ALL TIMES.
43. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND SUBMITTING A TRENCH SAFETY PLAN, PREPARED BY A PROFESSIONAL ENGINEER IN THE STATE OF TEXAS, TO THE CITY PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TRENCH SAFETY REQUIREMENTS IN ACCORDANCE WITH CITY, STATE, AND FEDERAL REQUIREMENTS, INCLUDING OSHA FOR ALL TRENCHES. NO OPEN TRENCHES SHALL BE ALLOWED OVERNIGHT WITHOUT PRIOR WRITTEN APPROVAL OF THE CITY.
44. THE CONTRACTOR SHALL KEEP TRENCHES FREE FROM WATER.
45. SITE SAFETY IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR.
46. THESE PLANS DO NOT EXTEND TO OR INCLUDE DESIGNS OR SYSTEMS PERTAINING TO THE SAFETY OF THE CONTRACTOR OR ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE ENGINEER'S SEAL HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTATION OF ALL REQUIRED SAFETY PROCEDURES AND PROGRAMS.
47. SIGNS RELATED TO SITE OPERATION OR SAFETY ARE NOT INCLUDED IN THESE PLANS.
48. CONTRACTOR OFFICE AND STAGING AREA SHALL BE AGREED ON BY THE OWNER AND CONTRACTOR PRIOR TO BEGINNING OF CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ALL PERMITTING REQUIREMENTS FOR THE CONSTRUCTION OFFICE, TRAILER, STORAGE, AND STAGING OPERATIONS AND LOCATIONS.
49. LIGHT POLES, SIGNS, AND OTHER OBSTRUCTIONS SHALL NOT BE PLACED IN ACCESSIBLE ROUTES.
50. ALL SIGNS, PAVEMENT MARKINGS, AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
51. TOP RIM ELEVATIONS OF ALL EXISTING AND PROPOSED MANHOLES SHALL BE COORDINATED WITH TOP OF PAVEMENT OR FINISHED GRADE AND SHALL BE ADJUSTED TO BE FLUSH WITH THE ACTUAL FINISHED GRADE AT THE TIME OF PAVING.
52. CONTRACTOR SHALL ADJUST ALL EXISTING AND PROPOSED VALVES, FIRE HYDRANTS, AND OTHER UTILITY APPURTENANCES TO MATCH ACTUAL FINISHED GRADES AT THE TIME OF PAVING.
53. THE CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION SEQUENCING AND PHASING, AND SHALL CONTACT THE APPROPRIATE CITY OFFICIALS, INCLUDING BUILDING OFFICIAL, ENGINEERING INSPECTOR, AND FIRE MARSHALL TO LEARN OF ANY REQUIREMENTS.
54. CONTRACTOR IS RESPONSIBLE FOR PREPARATION, SUBMITTAL, AND APPROVAL BY THE CITY OF A TRAFFIC CONTROL PLAN PRIOR TO THE START OF CONSTRUCTION, AND THEN THE IMPLEMENTATION OF THE PLAN.
55. CONTRACTOR SHALL KEEP A NEAT AND ACCURATE RECORD OF CONSTRUCTION, INCLUDING ANY DEVIATIONS OR VARIANCES FROM THE PLANS.
56. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AS-BUILT PLANS TO THE ENGINEER AND CITY IDENTIFYING ALL DEVIATIONS AND VARIATIONS FROM THESE PLANS MADE DURING CONSTRUCTION.
57. CONTRACTOR SHALL KEEP THE CONSTRUCTION SITE SECURE FROM TRESPASSERS AT ALL TIMES.

EROSION CONTROL:

1. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL EROSION CONTROL AND WATER QUALITY REQUIREMENTS, LAWS, AND ORDINANCES THAT APPLY TO THE CONSTRUCTION SITE LAND DISTURBANCE.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE "TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM" TXR150000.
3. EROSION CONTROL DEVICES SHOWN ON THE EROSION CONTROL PLAN FOR THE PROJECT SHALL BE INSTALLED PRIOR TO THE START OF LAND DISTURBANCE.
4. ALL EROSION CONTROL DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS FOR THE PROJECT.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR INSTALLATION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL EROSION CONTROL DEVICES, BEST MANAGEMENT PRACTICES (BMPS), AND FOR UPDATING THE EROSION CONTROL PLAN DURING CONSTRUCTION AS FIELD CONDITIONS CHANGE.
6. CONTRACTOR SHALL DOCUMENT THE DATES OF INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL FOR EACH BMP EMPLOYED IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE.
7. AS STORM SEWER INLETS ARE INSTALLED ON-SITE, TEMPORARY EROSION CONTROL DEVICES SHALL BE INSTALLED AT EACH INLET PER APPROVED DETAILS.
8. THE EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL THE AREA IT PROTECTS HAS BEEN PERMANENTLY STABILIZED.
9. CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL DEVICES NEEDED DUE TO PROJECT PHASING.
10. CONTRACTOR SHALL OBSERVE THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES AND MAKE FIELD ADJUSTMENTS AND MODIFICATIONS AS NEEDED TO PREVENT SEDIMENT FROM LEAVING THE SITE. IF THE EROSION CONTROL DEVICES DO NOT EFFECTIVELY CONTROL EROSION AND PREVENT SEDIMENTATION FROM WASHING OFF THE SITE, THEN THE CONTRACTOR SHALL NOTIFY THE ENGINEER.
11. OFF-SITE SOIL BORROW, SPOIL, AND STORAGE AREAS (IF APPLICABLE) ARE CONSIDERED AS PART OF THE PROJECT SITE AND MUST ALSO COMPLY WITH THE EROSION CONTROL REQUIREMENTS FOR THIS PROJECT. THIS INCLUDES THE INSTALLATION OF BMP'S TO CONTROL EROSION AND SEDIMENTATION AND THE ESTABLISHMENT OF PERMANENT GROUND COVER ON DISTURBED AREAS PRIOR TO FINAL APPROVAL OF THE PROJECT. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP AND EROSION CONTROL PLAN TO INCLUDE BMPS FOR ANY OFF-SITE THAT ARE NOT ANTICIPATED OR SHOWN ON THE EROSION CONTROL PLAN.
12. ALL STAGING, STOCKPILES, SPOIL, AND STORAGE SHALL BE LOCATED SUCH THAT THEY WILL NOT ADVERSELY AFFECT STORM WATER QUALITY. PROTECTIVE MEASURES SHALL BE PROVIDED IF NEEDED TO ACCOMPLISH THIS REQUIREMENT, SUCH AS COVERING OR ENCIRCLING THE AREA WITH AN APPROPRIATE BARRIER.
13. CONTRACTORS SHALL INSPECT ALL EROSION CONTROL DEVICES, BMPS, DISTURBED AREAS, AND VEHICLE ENTRY AND EXIT AREAS WEEKLY AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS OF 0.5 INCHES OR GREATER, AND KEEP A RECORD OF THIS INSPECTION IN THE SWPPP BOOKLET IF APPLICABLE, TO VERIFY THAT THE DEVICES ARE EROSION CONTROL PLAN ARE FUNCTIONING PROPERLY.
14. CONTRACTOR SHALL CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE AT ALL PRIMARY POINTS OF ACCESS IN ACCORDANCE WITH CITY SPECIFICATIONS. CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC USES THE STABILIZED ENTRANCE AT ALL TIMES FOR ALL INGRESS/EGRESS.
15. SITE ENTRY AND EXITS SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT THE TRACKING AND FLOWING OF SEDIMENT AND DIRT ONTO OFF-SITE ROADWAYS. ALL SEDIMENT AND DIRT FROM THE SITE THAT IS DEPOSITED ONTO AN OFF-SITE ROADWAY SHALL BE REMOVED IMMEDIATELY.
16. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL SILT AND DEBRIS FROM THE AFFECTED OFF-SITE ROADWAYS THAT ARE A RESULT OF THE CONSTRUCTION, AS REQUESTED BY OWNER AND CITY. AT A MINIMUM, THIS SHOULD OCCUR ONCE PER DAY FOR THE OFF-SITE ROADWAYS.
17. WHEN WASHING OF VEHICLES IS REQUIRED TO REMOVE SEDIMENT PRIOR TO EXITING THE SITE, IT SHALL BE DONE IN AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP BMP.
18. CONTRACTOR SHALL INSTALL A TEMPORARY SEDIMENT BASIN FOR ANY ON-SITE DRAINAGE AREAS THAT ARE GREATER THAN 10 ACRES, PER TCEQ AND CITY STANDARDS. IF NO ENGINEERING DESIGN HAS BEEN PROVIDED FOR A SEDIMENTATION BASIN ON THESE PLANS, THEN THE CONTRACTOR SHALL ARRANGE FOR AN APPROPRIATE DESIGN TO BE PROVIDED.
19. ALL FINES IMPOSED FOR SEDIMENT OR DIRT DISCHARGED FROM THE SITE SHALL BE PAID BY THE RESPONSIBLE CONTRACTOR.
20. WHEN SEDIMENT OR DIRT HAS COLLECTED IN AREAS SUCH AS CURB INLET SUMPS, SPACES BETWEEN STONES OR DIRT IS BEING TRACKED ONTO A ROADWAY, THE AGGREGATE PAD MUST BE WASHED DOWN OR REPLACED. RUNOFF FROM THE WASH-DOWN OPERATION SHALL NOT BE ALLOWED TO DRAIN DIRECTLY OFF SITE WITHOUT FIRST FLOWING THROUGH ANOTHER BMP TO CONTROL SEDIMENTATION. PERIODIC RE-GRADING OF THE NEW STONE MAY BE REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE CONSTRUCTION ENTRANCE.
21. TEMPORARY SEEDING OR OTHER APPROVED STABILIZATION SHALL BE INITIATED WITHIN 14 DAYS OF THE LAST DISTURBANCE OF ANY AREA, UNLESS ADDITIONAL CONSTRUCTION IN THE AREA IS EXPECTED WITHIN 21 DAYS OF THE LAST DISTURBANCE.
22. CONTRACTOR SHALL IMPLEMENT GOOD HOUSEKEEPING PRACTICES DURING CONSTRUCTION, ALWAYS CLEANING UP DIRT, LOOSE MATERIAL, AND TRASH AS CONSTRUCTION PROGRESSES.
23. UPON COMPLETION OF FINE GRADING, ALL SURFACES OF DISTURBED AREAS SHALL BE PERMANENTLY STABILIZED. STABILIZATION IS ACHIEVED WHEN THE AREA IS EITHER COVERED BY PERMANENT IMPERVIOUS STRUCTURES, SUCH AS BUILDINGS, SIDEWALK, PAVEMENT, OR A UNIFORM PERENNIAL VEGETATIVE COVER.
24. AT THE CONCLUSION OF THE PROJECT, ALL INLETS, DRAIN PIPE, CHANNELS, DRAINAGEWAYS AND BORROW DITCHES AFFECTED BY THE CONSTRUCTION SHALL BE DREDGED, AND THE SEDIMENT GENERATED BY THE PROJECT SHALL BE REMOVED AND DISPOSED IN ACCORDANCE WITH APPLICABLE REGULATIONS.

STORM WATER DISCHARGE AUTHORIZATION:

1. CONTRACTOR SHALL COMPLY WITH ALL TCEQ AND EPA STORM WATER POLLUTION PREVENTION REQUIREMENTS.
2. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE TCEQ GENERAL PERMIT TO DISCHARGE UNDER THE TEXAS POLLUTANT DISCHARGE ELIMINATION SYSTEM TXR150000.
3. THE CONTRACTOR SHALL ENSURE THAT ALL PRIMARY OPERATORS SUBMIT A NOI TO TCEQ AT LEAST SEVEN DAYS PRIOR TO COMMENCING CONSTRUCTION (IF APPLICABLE), OR IF UTILIZING ELECTRONIC SUBMITTAL, PRIOR TO COMMENCING CONSTRUCTION. ALL PRIMARY OPERATORS SHALL PROVIDE A COPY OF THE SIGNED NOI TO THE OPERATOR OF ANY MS4 (TYPICALLY THE CITY) RECEIVING DISCHARGE FROM THE SITE.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IF APPLICABLE, INCLUDING POSTING SITE NOTICE, INSPECTIONS, DOCUMENTATION, AND SUBMISSION OF ANY INFORMATION REQUIRED BY THE TCEQ AND EPA (E.G. NOI).
5. ALL CONTRACTORS AND SUBCONTRACTORS PROVIDING SERVICES RELATED TO THE SWPPP SHALL SIGN THE REQUIRED CONTRACTOR CERTIFICATION STATEMENT ACKNOWLEDGING THEIR RESPONSIBILITIES AS SPECIFIED IN THE SWPPP.
6. A COPY OF THE SWPPP, NOTICE OF INTENT, CONTRACTOR CERTIFICATIONS, AND ANY REVISIONS, SHALL BE SUBMITTED TO THE CITY BY THE CONTRACTOR AND SHALL BE RETAINED ON-SITE DURING CONSTRUCTION.
7. A NOTICE OF TERMINATION (NOT) SHALL BE SUBMITTED TO TCEQ BY ANY PRIMARY OPERATOR WITHIN 30 DAYS AFTER ALL SOIL DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND A UNIFORM VEGETATIVE COVER HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY STRUCTURES, A TRANSFER OF OPERATIONAL CONTROL HAS OCCURRED, OR THE OPERATOR HAS OBTAINED ALTERNATIVE AUTHORIZATION UNDER A DIFFERENT PERMIT. A COPY OF THE NOT SHALL BE PROVIDED TO THE OPERATOR OF ANY MS4 RECEIVING DISCHARGE FROM THE SITE.

DEMOLITION:

1. KHA IS NOT RESPONSIBLE FOR THE MEANS AND METHODS EMPLOYED BY THE CONTRACTOR TO IMPLEMENT THIS DEMOLITION PLAN. THIS PRELIMINARY DEMOLITION PLAN SIMPLY INDICATES THE KNOWN OBJECTS ON THE SUBJECT TRACT THAT ARE TO BE DEMOLISHED AND REMOVED FROM THE SITE.
2. KHA DOES NOT WARRANT OR REPRESENT THAT THE PLAN, WHICH WAS PREPARED BASED ON SURVEY AND UTILITY INFORMATION PROVIDED BY OTHERS, SHOWS ALL IMPROVEMENTS AND UTILITIES, THAT THE IMPROVEMENTS AND UTILITIES ARE SHOWN ACCURATELY, OR THAT THE UTILITIES SHOWN CAN BE REMOVED. THE CONTRACTOR IS RESPONSIBLE FOR PERFORMING ITS OWN SITE RECONNAISSANCE OF THE SITE AND SHALL WORK TO CONFIRM WITH THE OWNERS OF IMPROVEMENTS AND UTILITIES THE ABILITY AND PROCESS FOR THE REMOVAL OF THEIR FACILITIES.
3. THIS PLAN IS INTENDED TO GIVE A GENERAL GUIDE TO THE CONTRACTOR, NOTHING MORE. THE GOAL OF THE DEMOLITION IS TO LEAVE THE SITE IN A STATE SUITABLE FOR THE CONSTRUCTION OF THE PROPOSED DEVELOPMENT. REMOVAL OR PRESERVATION OF IMPROVEMENTS, UTILITIES, ETC. TO ACCOMPLISH THIS GOAL ARE THE RESPONSIBILITY OF THE CONTRACTOR.
4. CONTRACTOR IS STRONGLY CAUTIONED TO REVIEW THE FOLLOWING REPORTS DESCRIBING SITE CONDITIONS PRIOR TO BIDDING AND IMPLEMENTING THE DEMOLITION PLAN:
   a. ENVIRONMENTAL SITE ASSESSMENT PROVIDED BY THE OWNER, (IF REQUIRED)
   b. ASBESTOS BUILDING INSPECTION REPORT(S) PROVIDED BY THE OWNER,
   c. GEOTECHNICAL REPORT PROVIDED BY THE OWNER.
   d. OTHER REPORTS THAT ARE APPLICABLE AND AVAILABLE.
5. CONTRACTOR SHALL CONTACT THE OWNER TO VERIFY WHETHER ADDITIONAL REPORTS OR AMENDMENTS TO THE ABOVE CITED REPORTS HAVE BEEN PREPARED AND TO OBTAIN/REVIEW/AND COMPLY WITH THE RECOMMENDATION OF SUCH STUDIES PRIOR TO STARTING ANY WORK ON THE SITE.
6. CONTRACTOR SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS REGARDING THE DEMOLITION OF OBJECTS ON THE SITE AND THE DISPOSAL OF THE DEMOLISHED MATERIALS OFF-SITE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO REVIEW THE SITE, DETERMINE THE APPLICABLE REGULATIONS, ACQUIRE THE REQUIRED PERMITS AND AUTHORIZATIONS, AND COMPLY.
7. KHA DOES NOT REPRESENT THAT THE REPORTS AND SURVEYS REFERENCED ABOVE ARE ACCURATE, COMPLETE, OR COMPREHENSIVE SHOWING ALL ITEMS THAT WILL NEED TO BE DEMOLISHED AND REMOVED.
8. SURFACE PAVEMENT INDICATED MAY OVERLAY OTHER HIDDEN STRUCTURES, SUCH AS ADDITIONAL LAYERS OF PAVEMENT, FOUNDATIONS OR WALLS, THAT ARE ALSO TO BE REMOVED.

GRADING:

1. THE CONTRACTOR AND GRADING SUBCONTRACTOR SHALL VERIFY THE SU

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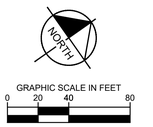

LEGEND	
	PROPERTY LINE
	EXISTING PAVEMENT, CURB, SIDEWALK AND INTERIOR LANDSCAPE ISLANDS TO BE REMOVED. CONTRACTOR TO REMOVE FULL DEPTH OF PAVEMENT.
	SAWCUT LINE

KEYED NOTES	
1	CONTRACTOR TO SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO EXPOSE REINFORCING.
2	EXISTING TREE TO BE REMOVED AND REPLACED

GENERAL NOTES

1. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING ALL DEBRIS FROM THE SITE AND DISPOSING THE DEBRIS IN A LAWFUL MANNER. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION AND DISPOSAL.

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8. ALL DEMOLITION WORK OR CONSTRUCTION VEHICLE TRAFFIC WITHIN 10 FEET OF THE CANOPY OF ANY TREE TO BE SAVED SHALL BE CLOSELY COORDINATED WITH TREE PRESERVATION ACTIVITIES.

9. CONTRACTOR SHALL COMPLY TO THE FULLEST EXTENT WITH THE LATEST OSHA STANDARDS FOR EXCAVATION AND TRENCHING PROCEDURES. CONTRACTOR SHALL USE SUPPORT SYSTEMS, SLOPING, BENCHING, ETC. AS NECESSARY FOR THESE OPERATIONS, AND SHALL COMPLY WITH ALL OSHA PERFORMANCE CRITERIA.

10. CONTRACTOR TO REMOVE FULL DEPTH OF PAVEMENT (ASPHALT AND CONCRETE). REFERENCE SURVEY FOR LIMITS OF PAVEMENT.

11. CONTRACTOR TO EPOXY ALL EXPOSED REBAR.

12. CONTRACTOR IS RESPONSIBLE FOR MANAGING STORM WATER RUNOFF WITHIN THE PROJECT AREA DURING CONSTRUCTION, INCLUDING PROVIDING MEASURES FOR TEMPORARY CONVEYANCE OF FLOW WHICH MAY CONSIST OF DIVERSION SWALES OR PUMPING OF WATER TO EXISTING STORM OUTFALL LOCATIONS FROM PROJECT AREA TO MATCH EXISTING DRAINAGE PATTERNS PER THE EXISTING CONDITIONS DRAINAGE AREA MAP.

13. CONTRACTOR SHALL SUBMIT A SEQUENCING/PHASING PLAN FOR THE PROPOSED STORM SEWER MODIFICATIONS IN THE SCOPE OF THIS PROJECT TO KIMLEY-HORN FOR REVIEW PRIOR TO COMMENCING CONSTRUCTION. THE STORM SEWER SEQUENCING/PHASING PLAN SHALL INCLUDE THE PROPOSED MEASURES TO BE IMPLEMENTED BY CONTRACTOR FOR MANAGING STORM WATER RUNOFF WITHIN THE PROJECT AREA DURING CONSTRUCTION TO ENSURE RUNOFF IS ROUTED TO MATCH THE EXISTING DRAINAGE PATTERNS.

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FOR
HUMBLE I.S.D
HUMBLE, TX

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01/17/2025

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DEMOLITION PLAN (1 OF 2)

Job. No.	Sheet No.
1821-13-02	C2.0
Drawn By: CSH	
Date: 01/17/2025	

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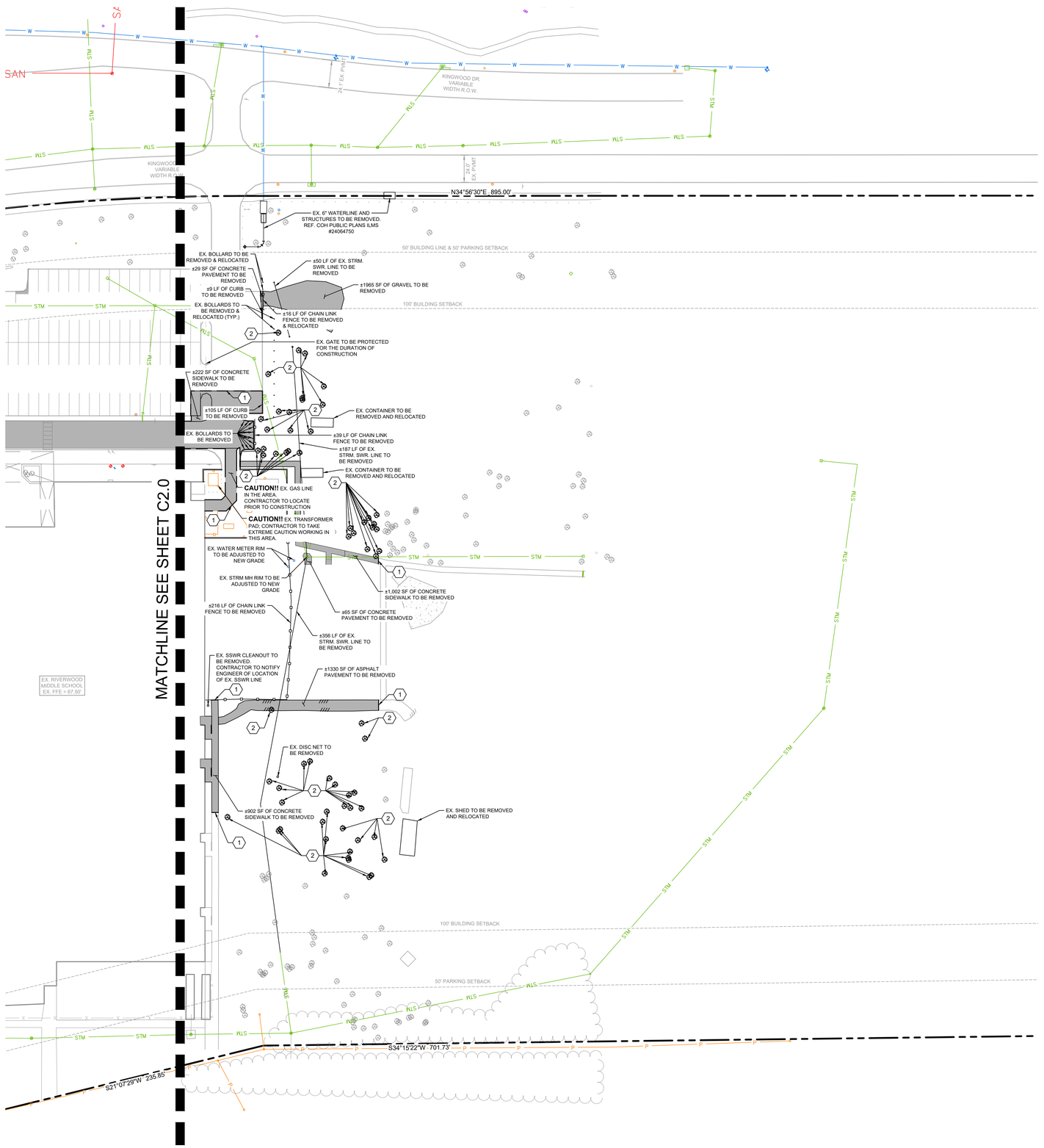

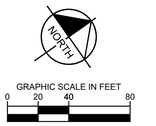

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FOR
HUMBLE I.S.D
HUMBLE, TX

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DEMOLITION PLAN (2 OF 2)

Job. No.	Sheet No.
1821-13-02	C2.1
Drawn By: CSH	
Date: 01/17/2025	

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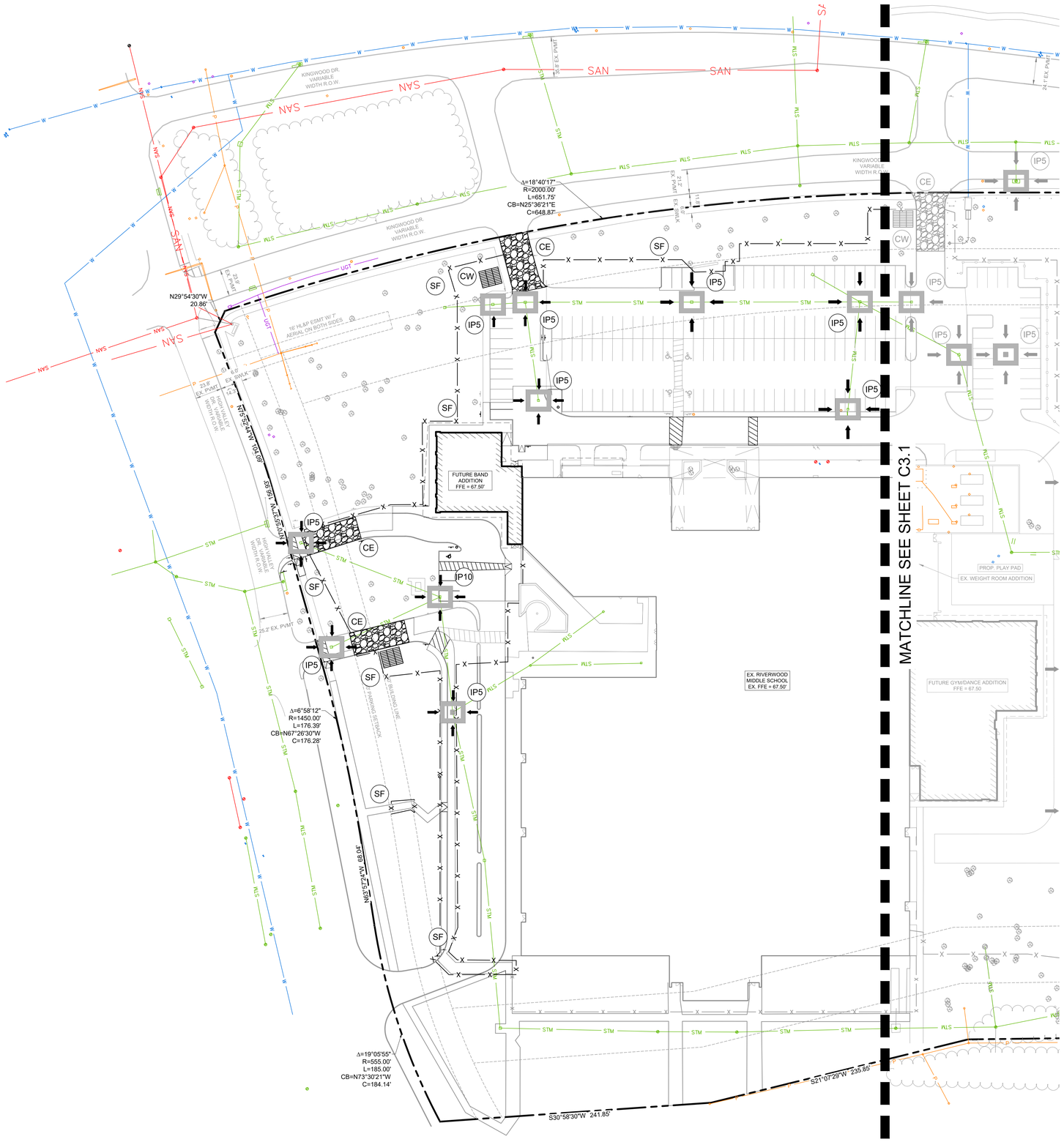

GRAPHIC SCALE IN FEET
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EROSION CONTROL NOTES

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS - CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.

2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THIS SITE MAP.

3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS.

4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING AND SITE PAVING.

5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.

6. SANITARY SEWER EFFLUENT IS DISPOSED OF VIA AN ONSITE SEWER SYSTEM CONNECTED TO A MUNICIPAL SEWER SYSTEM.

7. CONTRACTOR TO PROVIDE INLET PROTECTION IN PUBLIC ROW ONLY DURING EARTH MOVING ACTIVITIES. CONTRACTOR TO ENSURE PONDING DOES NOT OCCUR IN PUBLIC ROW OR ON ADJACENT PROPERTIES AT ANY TIME DURING CONSTRUCTION.

8. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, THE CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PARKING LOT CONSTRUCTION.

9. CONTRACTOR SHALL PROVIDE INLET PROTECTION FOR ANY AFFECTED INLETS DOWNSTREAM OF THE PROPOSED IMPROVEMENTS, IF NEEDED.

10. THE NATURE OF THIS SITE'S CONSTRUCTION CONSISTS OF CLEARING & SITE PREPARATION, EARTHWORK, PAVING AND LANDSCAPING.

11. SEDIMENTATION BASIN: NEITHER A TEMPORARY NOR PERMANENT SEDIMENTATION BASIN HAS BEEN PROVIDED ON THIS SITE BECAUSE THE SITE IS LESS THAN 10 ACRES IN AREA.

12. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING AND LANDSCAPING.

13. DISTURBED PORTIONS OF SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE OPDES PERMIT. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF STABILIZATION.

14. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP/SITE MAP TO INCLUDE BMP'S FOR ANY OFF-SITE MATERIAL WASTE, BORROW OR EQUIPMENT STORAGE AREAS.

15. CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF NOI, NOT, POSTING OF SITE NOTICES, AND ANY ADDITIONAL INFORMATION OR SUBMITTALS REQUIRED BY TCEQ, EPA, OR LOCAL JURISDICTION.

16. CONTRACTOR TO MAINTAIN NO MORE THAN 10 ACRES OF DRAINAGE TO ANY SINGLE OUTFALL LOCATION DURING CONSTRUCTION.

LEGEND	
	EXISTING CONTOUR ELEVATIONS
	PROPOSED CONTOUR ELEVATIONS
EROSION DETAILS	
IP5	FILTER SACK INLET PROTECTION (SEE DETAIL C3.2)
IP10	CURB INLET PROTECTION (SEE DETAIL C3.2)
SF	SILT FENCE (SEE DETAIL C3.2)
CE	CONSTRUCTION ENTRANCE (SEE DETAIL C3.2)
CW	CONCRETE WASHOUT (SEE DETAIL C3.2)
	PROJECTED FLOW DIRECTION

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EROSION CONTROL PLAN (1 OF 2)

Job. No. 1821-13-02	Sheet No. C3.0
Drawn By: CSH	
Date: 01/17/2025	

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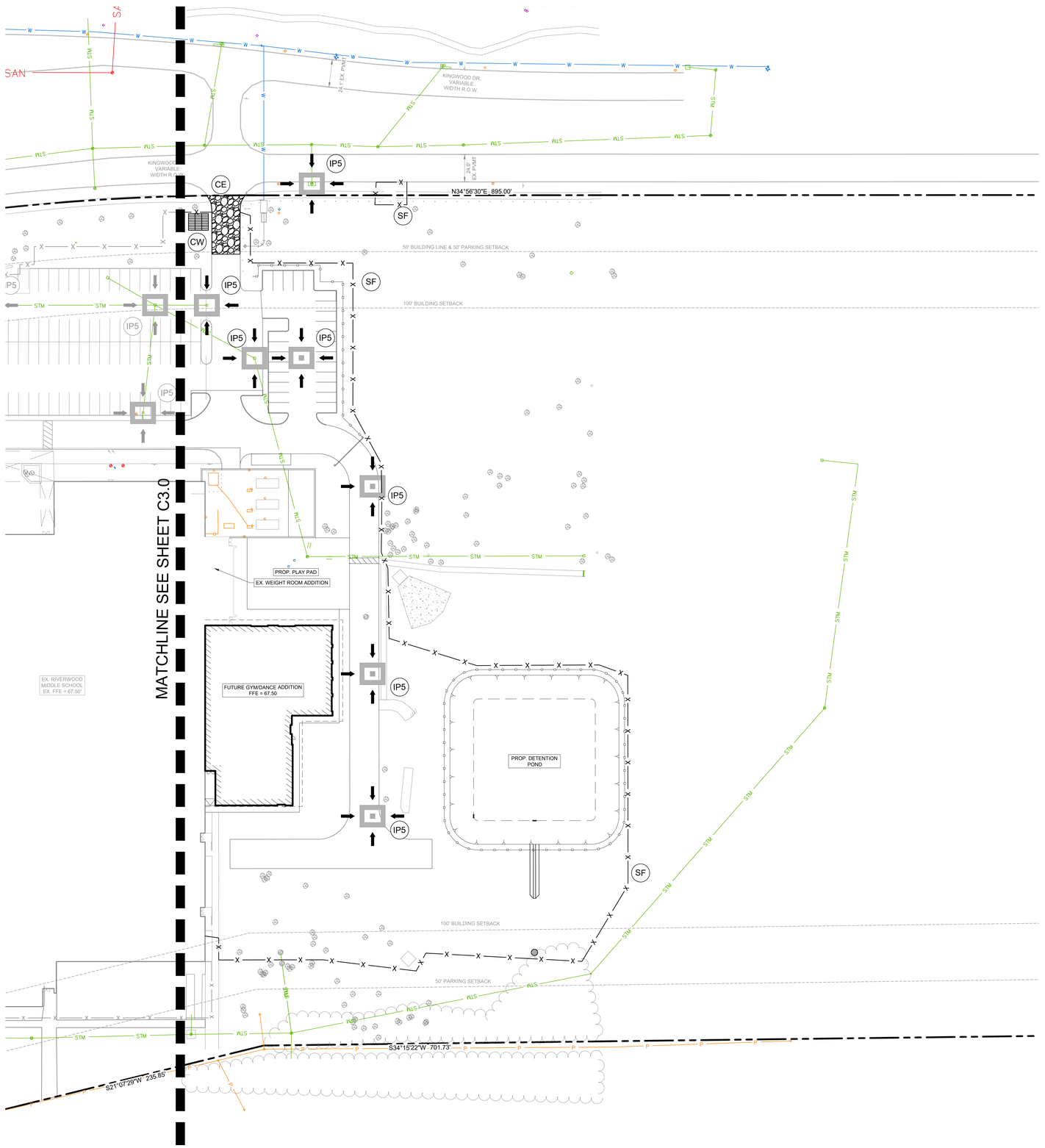



GRAPHIC SCALE IN FEET
0 20 40 80

EROSION CONTROL NOTES

1. CONTRACTOR IS SOLELY RESPONSIBLE FOR SELECTION, IMPLEMENTATION, MAINTENANCE, AND EFFECTIVENESS OF ALL SWPPP CONTROLS - CONTROLS SHOWN ON THIS SITE MAP ARE SUGGESTED CONTROLS ONLY.

2. CONTRACTOR SHALL RECORD INSTALLATION, MAINTENANCE OR MODIFICATION, AND REMOVAL DATES FOR EACH BMP EMPLOYED (WHETHER CALLED OUT ON ORIGINAL SWPPP OR NOT) DIRECTLY ON THIS SITE MAP.

3. DRAINAGE PATTERNS ARE SHOWN ON THIS PLAN BY PROPOSED AND EXISTING CONTOURS.

4. TEMPORARY AND PERMANENT STABILIZATION PRACTICES AND BMP'S SHALL BE INSTALLED AT THE EARLIEST POSSIBLE TIME DURING THE CONSTRUCTION SEQUENCE. AS AN EXAMPLE, PERIMETER SILT FENCE SHALL BE INSTALLED BEFORE COMMENCEMENT OF ANY GRADING ACTIVITIES. OTHER BMP'S SHALL BE INSTALLED AS SOON AS PRACTICABLE AND SHALL BE MAINTAINED UNTIL FINAL SITE STABILIZATION IS ATTAINED. CONTRACTOR SHALL ALSO REFERENCE CIVIL PLANS SINCE PERMANENT STABILIZATION IS PROVIDED BY LANDSCAPING AND SITE PAVING.

5. BMP'S HAVE BEEN LOCATED AS INDICATED ON THIS PLAN IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES IN ORDER TO MINIMIZE SEDIMENT TRANSFER. FOR EXAMPLE: SILT FENCES LOCATED AT TOE OF SLOPE AND INLET PROTECTION FOR INLETS RECEIVING SEDIMENT FROM SITE RUN-OFF.

6. SANITARY SEWER EFFLUENT IS DISPOSED OF VIA AN ONSITE SEWER SYSTEM CONNECTED TO A MUNICIPAL SEWER SYSTEM.

7. CONTRACTOR TO PROVIDE INLET PROTECTION IN PUBLIC ROW ONLY DURING EARTH MOVING ACTIVITIES. CONTRACTOR TO ENSURE PONDING DOES NOT OCCUR IN PUBLIC ROW OR ON ADJACENT PROPERTIES AT ANY TIME DURING CONSTRUCTION.

8. CONSTRUCTION ENTRANCE SHALL BE LOCATED SO AS TO PROVIDE THE LEAST AMOUNT OF DISTURBANCE TO THE FLOW OF TRAFFIC IN AND OUT OF THE SITE. ADDITIONALLY, THE CONSTRUCTION ENTRANCE SHALL BE LOCATED TO COINCIDE WITH THE PHASING OF THE PARKING LOT CONSTRUCTION.

9. CONTRACTOR SHALL PROVIDE INLET PROTECTION FOR ANY AFFECTED INLETS DOWNSTREAM OF THE PROPOSED IMPROVEMENTS, IF NEEDED.

10. THE NATURE OF THIS SITE'S CONSTRUCTION CONSISTS OF CLEARING & SITE PREPARATION, EARTHWORK, PAVING AND LANDSCAPING.

11. SEDIMENTATION BASIN: NEITHER A TEMPORARY NOR PERMANENT SEDIMENTATION BASIN HAS BEEN PROVIDED ON THIS SITE BECAUSE THE SITE IS LESS THAN 10 ACRES IN AREA.

12. POST CONSTRUCTION STORM WATER POLLUTION CONTROL MEASURES INCLUDE STABILIZATION BY PERMANENT PAVING AND LANDSCAPING.

13. DISTURBED PORTIONS OF SITE MUST BE STABILIZED. STABILIZATION PRACTICES MUST BE INITIATED WITHIN 14 DAYS IN PORTIONS OF THE SITE WHERE CONSTRUCTION HAS BEEN EITHER TEMPORARILY OR PERMANENTLY CEASED, UNLESS EXCEPTED WITHIN THE OPDES PERMIT. CONTRACTOR SHALL REMOVE TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF STABILIZATION.

14. CONTRACTOR IS RESPONSIBLE FOR MODIFYING THE SWPPP/SITE MAP TO INCLUDE BMP'S FOR ANY OFF-SITE MATERIAL WASTE, BORROW OR EQUIPMENT STORAGE AREAS.

15. CONTRACTOR IS RESPONSIBLE FOR SUBMITTAL OF NOI, NOT, POSTING OF SITE NOTICES, AND ANY ADDITIONAL INFORMATION OR SUBMITTALS REQUIRED BY TCEQ, EPA, OR LOCAL JURISDICTION.

16. CONTRACTOR TO MAINTAIN NO MORE THAN 10 ACRES OF DRAINAGE TO ANY SINGLE OUTFALL LOCATION DURING CONSTRUCTION.

LEGEND

	EXISTING CONTOUR ELEVATIONS
	PROPOSED CONTOUR ELEVATIONS
EROSION DETAILS	
IP5	FILTER SACK INLET PROTECTION (SEE DETAIL C3.2)
IP10	CURB INLET PROTECTION (SEE DETAIL C3.2)
SF	SILT FENCE (SEE DETAIL C3.2)
CE	CONSTRUCTION ENTRANCE (SEE DETAIL C3.2)
CW	CONCRETE WASHOUT (SEE DETAIL C3.2)
	PROJECTED FLOW DIRECTION

Know what's **below.**
Call before you dig.

CAUTION!!

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Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

Kimley»Horn
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01/17/2025
STATE OF TEXAS
RASHARD D. HARRIS
142467
LICENSED
PROFESSIONAL ENGINEER

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EROSION CONTROL PLAN (2 OF 2)

Job. No. 1821-13-02	Sheet No. C3.1
Drawn By: CSH	
Date: 01/17/2025	

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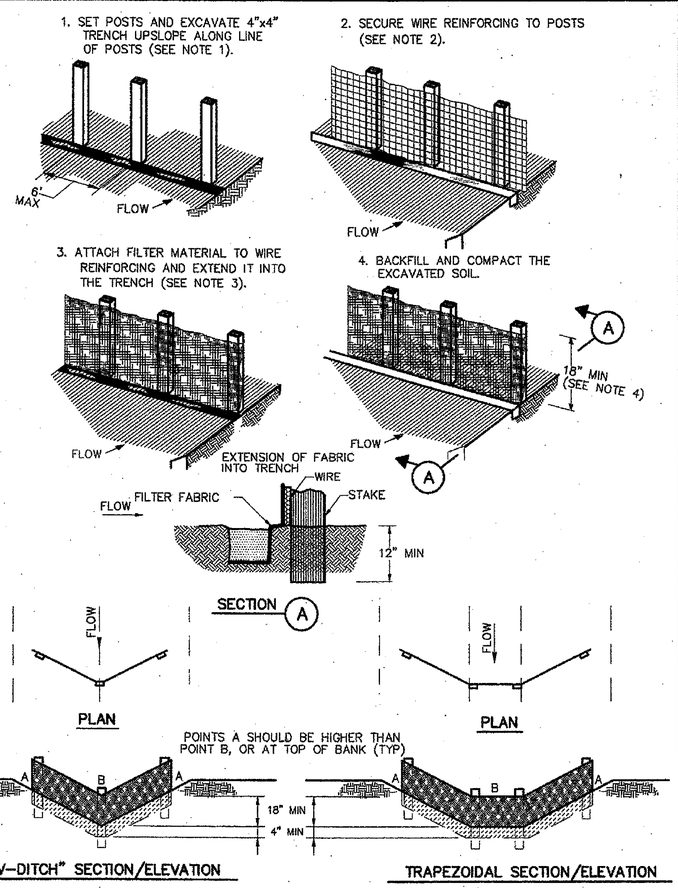
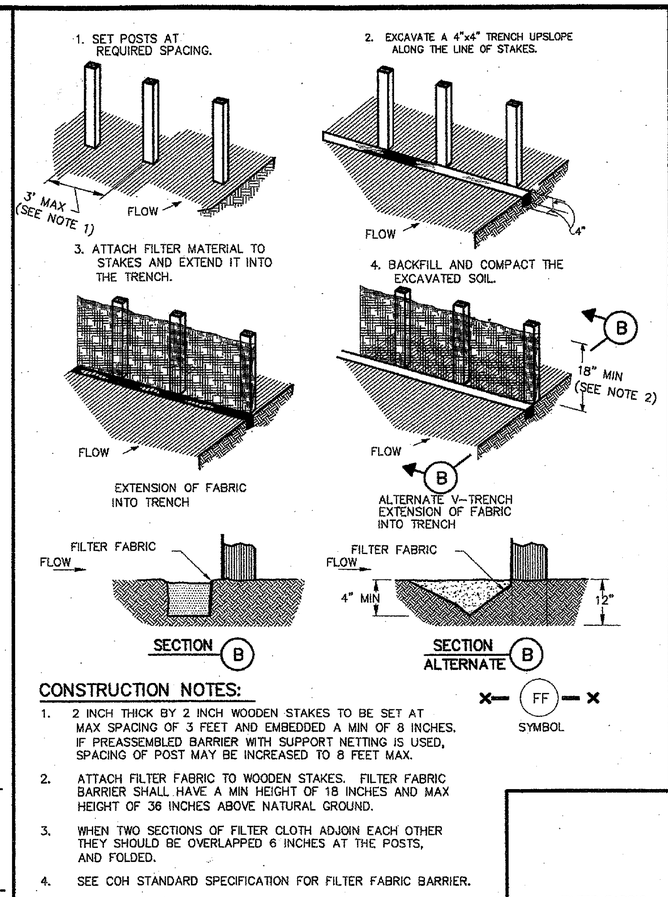


CONSTRUCTION NOTES:

1. SET 2 INCH BY 2 INCH WOODEN STAKES SPACED A MAX OF 6 FEET APART AND EMBEDDED A MIN OF 12 INCHES.
2. WOVEN WIRE REINFORCING TO BE FASTENED SECURELY TO BARRIER POSTS WITH STAPLES.
3. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE REINFORCING, WITH TIES SPACED EVERY 24 INCHES AT TOP AND MIDSECTION.
4. MINIMUM HEIGHT OF FILTER SHOULD BE 18 INCHES AND A MAXIMUM OF 36 INCHES ABOVE NATURAL GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
6. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

RFB
SYMBOL

REINFORCED FILTER FABRIC BARRIER

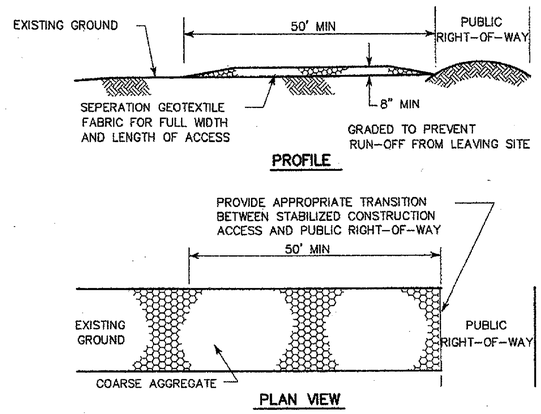


CONSTRUCTION NOTES:

1. 2 INCH THICK BY 2 INCH WOODEN STAKES TO BE SET AT MAX SPACING OF 3 FEET AND EMBEDDED A MIN OF 8 INCHES. IF PREASSEMBLED BARRIER WITH SUPPORT NETTING IS USED, SPACING OF POST MAY BE INCREASED TO 8 FEET MAX.
2. ATTACH FILTER FABRIC TO WOODEN STAKES. FILTER FABRIC BARRIER SHALL HAVE A MIN HEIGHT OF 18 INCHES AND MAX HEIGHT OF 36 INCHES ABOVE NATURAL GROUND.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHOULD BE OVERLAPPED 6 INCHES AT THE POSTS, AND FOLDED.
4. SEE COH STANDARD SPECIFICATION FOR FILTER FABRIC BARRIER.

FF
SYMBOL

FILTER FABRIC BARRIER

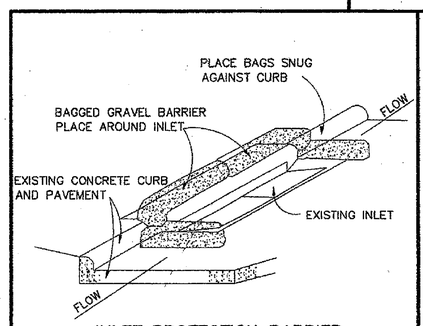


CONSTRUCTION NOTES:

1. LENGTH SHALL BE AS SHOWN ON THE CONSTRUCTION DRAWINGS, BUT NOT LESS THAN 50 FEET.
2. THICKNESS SHALL BE NOT LESS THAN 8 INCHES.
3. WIDTH SHALL BE NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
4. STABILIZATION FOR OTHER AREAS SHALL HAVE THE SAME AGGREGATE THICKNESS AND WIDTH REQUIREMENTS AS THE STABILIZED CONSTRUCTION ACCESS, UNLESS OTHERWISE SHOWN ON THE CONSTRUCTION DRAWINGS.
5. STABILIZED AREA MAY BE WIDENED OR LENGTHENED TO ACCOMODATE A WASHING AREA. AN OUTLET SEDIMENT TRAP MUST BE PROVIDED FOR THE WASHING AREA.
6. COH STANDARD SPECIFICATION FOR STABILIZED CONSTRUCTION ACCESS.
7. STABILIZED CONSTRUCTION ACCESS SHALL BE MAINTAINED FREE OF SEDIMENT FOR THE DURATION OF THE PROJECT.

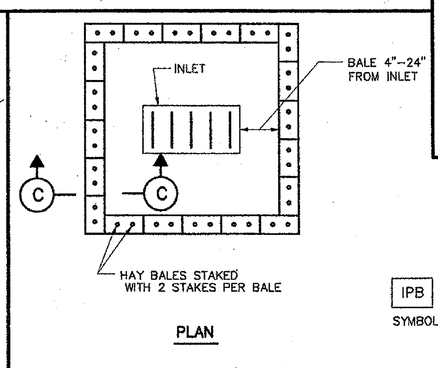
SC
SYMBOL

STABILIZED CONSTRUCTION ACCESS

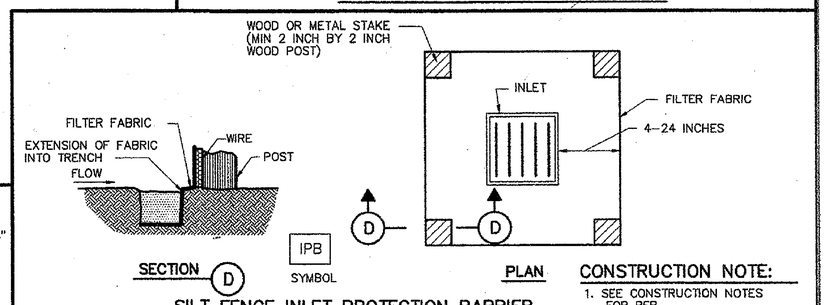


INLET PROTECTION BARRIER

(FOR STAGE II INLETS)
BAGGED GRAVEL BARRIER



HAY BALE INLET PROTECTION BARRIER



CONSTRUCTION NOTE:

1. SEE CONSTRUCTION NOTES FOR RFB.

SILT FENCE INLET PROTECTION BARRIER

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STORM WATER POLLUTION PREVENTION PLAN DETAILS

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER
APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JULY-01-2010
DWG NO: 01571-01

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

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EROSION CONTROL DETAILS

Job. No.	Sheet No.
1821-13-02	C3.2
Drawn By: CSH	
Date: 01/17/2025	

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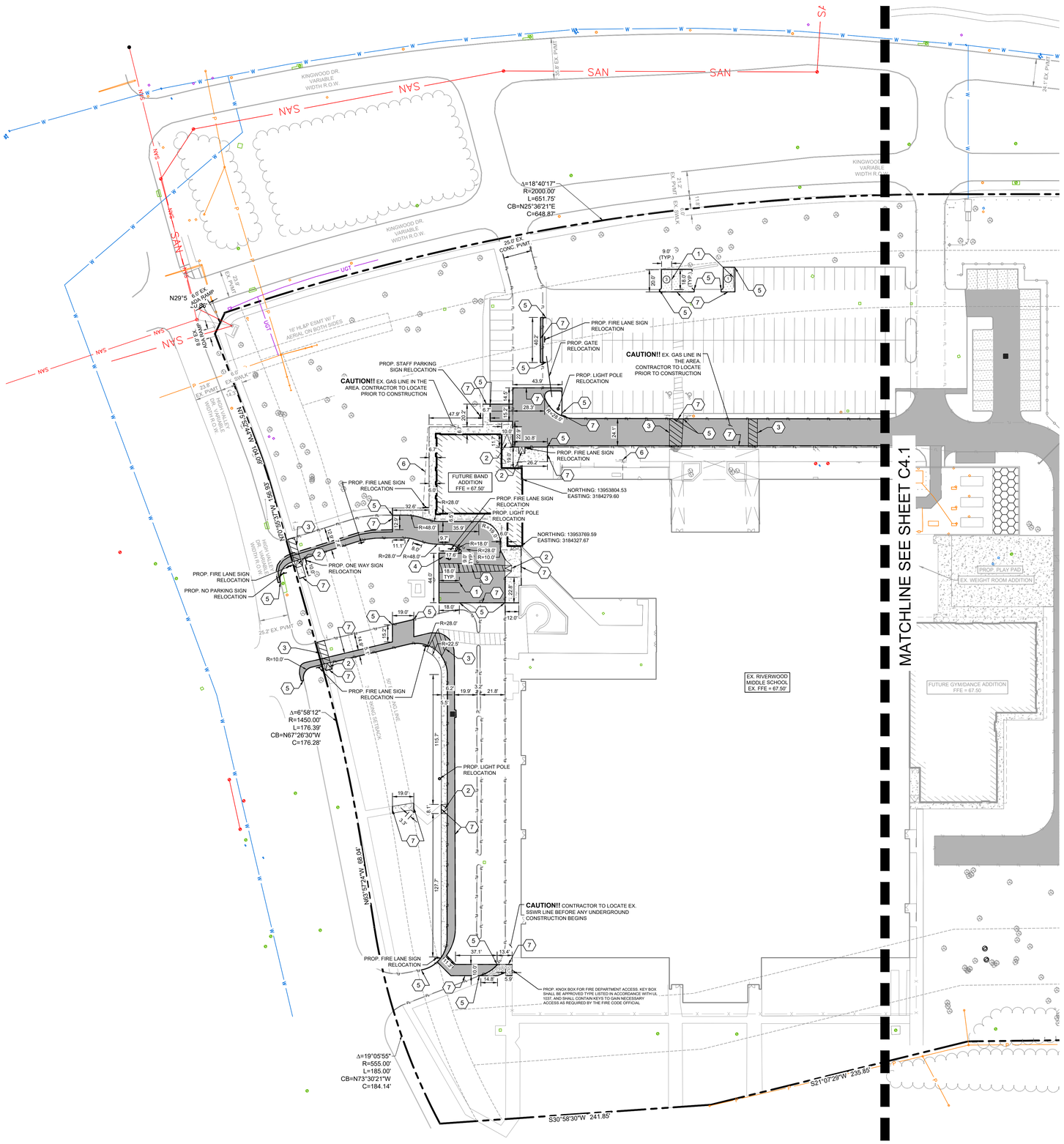

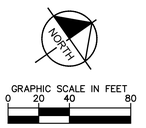

LEGEND	
	PROPERTY LINE
FL	FIRE LANE STRIPING
	SAWCUT LINE
4	PARKING COUNT
	CURB RAMP NOT IN PUBLIC ROW
	ACCESSIBILITY SPACE
PAVING MATERIAL LEGEND	
	SIDEWALK CONCRETE (15,328 SQ. FT.)
	5" CONCRETE PAVEMENT (4,831 SQ. FT.)
	7" CONCRETE PAVEMENT (41,988 SQ. FT.)
	CONTRACTOR TO MATCH EX. CONCRETE PAVEMENT THICKNESS (1,368 SQ. FT.)

KEYED NOTES	
1	PARKING LOT STRIPING; 4" SOLID STRIPE (TO MATCH EXISTING)
2	ACCESSIBLE RAMP
3	4" SOLID SOLID STRIPE (TO MATCH EXISTING), 2'-0" O.C. @ 45°
4	PROPOSED ACCESSIBLE HC PARKING STALL WITH ACCESSIBLE PARKING SYMBOL AND SIGN
5	PROPOSED 6" CURB. TIE INTO EXISTING CURB.
6	PROPOSED BUILDING CANOPY. REF. ARCH FOR DETAIL
7	PROPOSED SAWCUT/MATCH EXISTING PAVEMENT LINE

GENERAL NOTES

1. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

2. ALL RADII 2' UNLESS OTHERWISE NOTED.

3. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING POLES AND FIXTURES AND ELECTRICAL PLAN PRIOR TO PLACING PAVEMENT.

4. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

5. SIDEWALKS TO HAVE A 5% MAXIMUM RUNNING SLOPE AND A 2% MAXIMUM CROSS SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.

6. FIELD VERIFY ADA GRADES PRIOR TO PLACING PAVEMENT. CONTRACTOR SHALL CONSTRUCT ALL ACCESSIBLE ROUTES IN ACCORDANCE WITH ADA STANDARDS AND TAS.

7. REF. IRRIGATION PLANS PRIOR TO PLACING PAVEMENT.

8. CONTRACTOR SHALL BUDGET FOR ACCESSIBLE STALL STRIPING, FIRE LANE STRIPING, DIRECTIONAL ARROWS, ETC.

9. SITE LIGHTING IS BY OTHERS. REF. SITE LIGHTING PLANS FOR LOCATIONS AND DETAILS PRIOR TO PLACING PAVEMENT.

10. REF. BUILDING PLANS FOR ALL EXTERIOR STAIR DETAILS.

11. CONTRACTOR TO ADJUST EXISTING SANITARY SEWER MANHOLES, STORM SEWER MANHOLES, ELECTRICAL MANHOLES, FIRE HYDRANTS, VALVE BOXES, WATER METERS, ETC. TO MATCH PROPOSED FINISHED GRADES IF NECESSARY.

811 Know what's below. Call before you dig.

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FOR
HUMBLE I.S.D
HUMBLE, TX

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DIMENSION CONTROL AND PAVING PLAN (1 OF 2)

Job. No.	Sheet No.
1821-13-02	C4.0
Drawn By: CSH	
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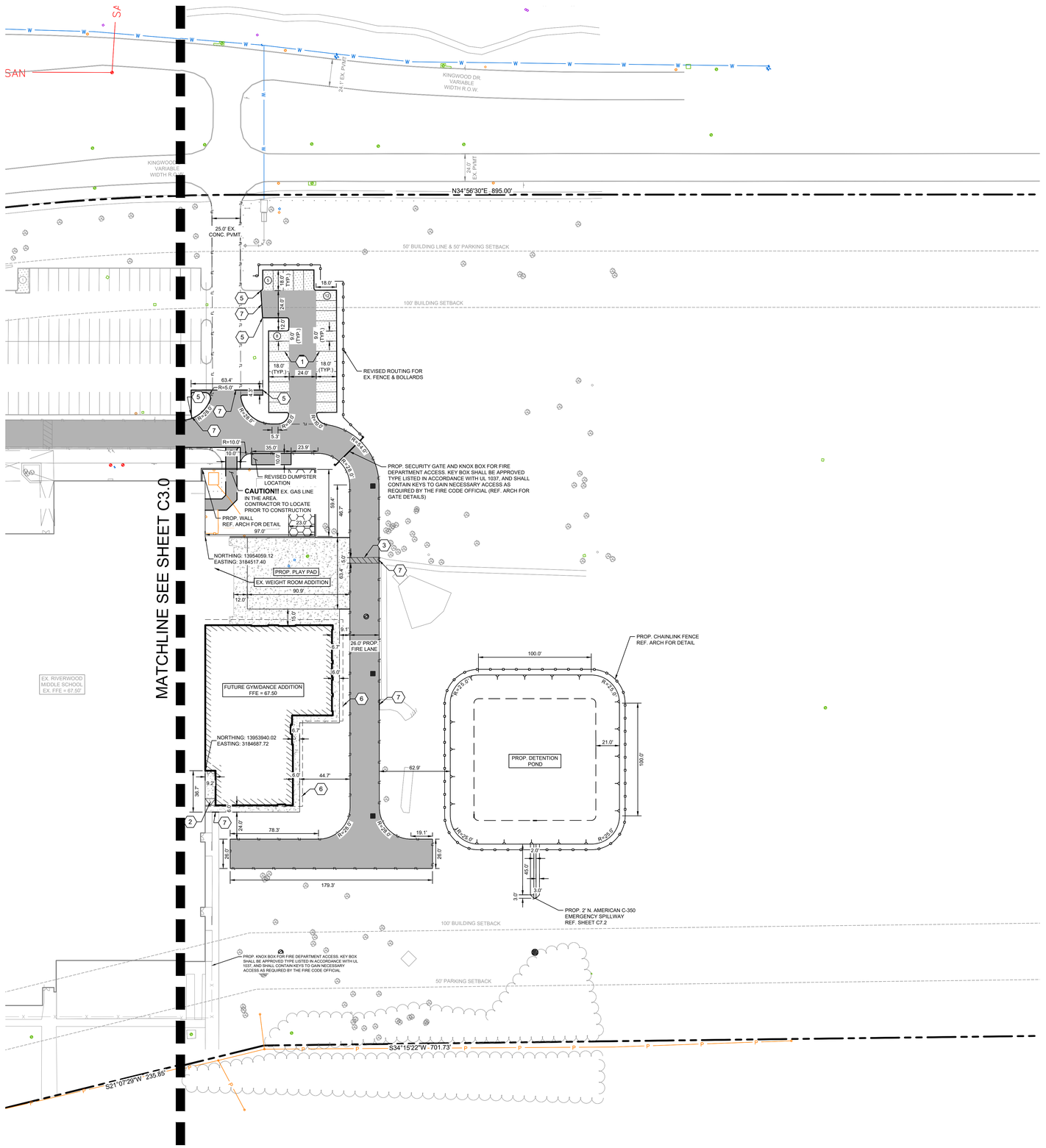

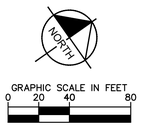

LEGEND	
	PROPERTY LINE
FL	FIRE LANE STRIPING
	SAWCUT LINE
4	PARKING COUNT
	CURB RAMP NOT IN PUBLIC ROW
	ACCESSIBILITY SPACE
PAVING MATERIAL LEGEND	
	SIDEWALK CONCRETE (15,328 SQ. FT.)
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	7" CONCRETE PAVEMENT (41,988 SQ. FT.)
	CONTRACTOR TO MATCH EX. CONCRETE PAVEMENT THICKNESS (1,368 SQ. FT.)

KEYED NOTES	
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2	ACCESSIBLE RAMP
3	4" SOLID SOLID STRIPE (TO MATCH EXISTING), 2'-0" O.C. @ 45°
4	PROPOSED ACCESSIBLE HC PARKING STALL WITH ACCESSIBLE PARKING SYMBOL AND SIGN
5	PROPOSED 6" CURB. TIE INTO EXISTING CURB.
6	PROPOSED BUILDING CANOPY. REF. ARCH FOR DETAIL
7	PROPOSED SAWCUT/MATCH EXISTING PAVEMENT LINE

GENERAL NOTES

1. DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

2. ALL RADII 2' UNLESS OTHERWISE NOTED.

3. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING POLES AND FIXTURES AND ELECTRICAL PLAN PRIOR TO PLACING PAVEMENT.

4. REFER TO ARCHITECTURAL PLANS FOR EXACT BUILDING DIMENSIONS.

5. SIDEWALKS TO HAVE A 5% MAXIMUM RUNNING SLOPE AND A 2% MAXIMUM CROSS SLOPE IN ACCORDANCE WITH ADA REQUIREMENTS.

6. FIELD VERIFY ADA GRADES PRIOR TO PLACING PAVEMENT. CONTRACTOR SHALL CONSTRUCT ALL ACCESSIBLE ROUTES IN ACCORDANCE WITH ADA STANDARDS AND TAS.

7. REF. IRRIGATION PLANS PRIOR TO PLACING PAVEMENT.

8. CONTRACTOR SHALL BUDGET FOR ACCESSIBLE STALL STRIPING, FIRE LANE STRIPING, DIRECTIONAL ARROWS, ETC.

9. SITE LIGHTING IS BY OTHERS. REF. SITE LIGHTING PLANS FOR LOCATIONS AND DETAILS PRIOR TO PLACING PAVEMENT.

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DIMENSION CONTROL AND PAVING PLAN (2 OF 2)

Job. No. 162413-02	Sheet No. C4.1
Drawn By: CSH	
Date: 01/17/2025	

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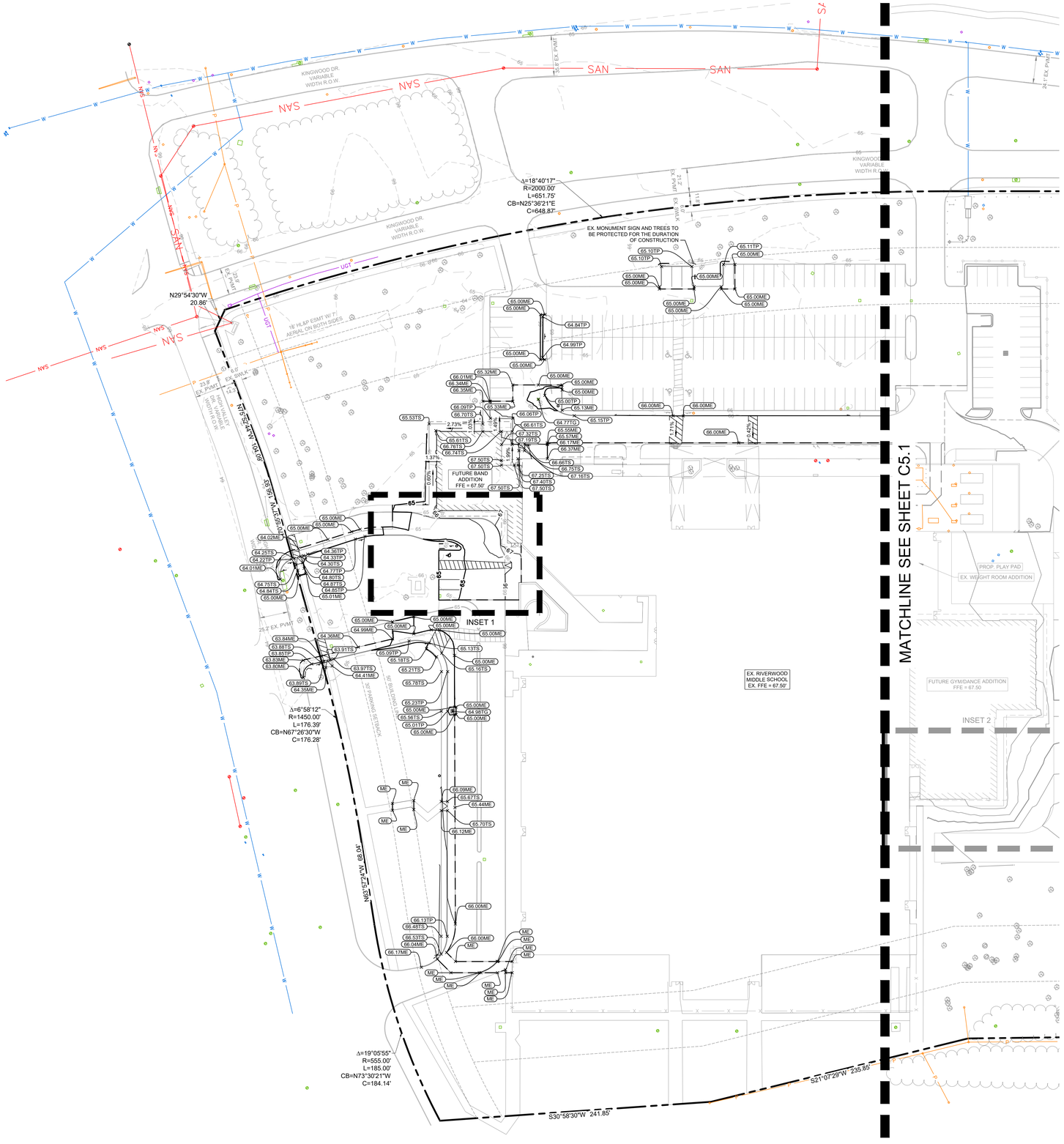

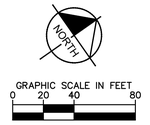

LEGEND	
130	PROPOSED CONTOURS
130	EXISTING CONTOURS
129.75	PROPOSED SPOT ELEVATION
129.33ME	MATCH EXISTING GRADE
129.55TG	TOP OF GRATE INLET
129.55TW	TOP OF WALL
129.55BW	BOTTOM OF WALL
129.55TC	TOP OF CURB
129.55TS	TOP OF SIDEWALK
	HIGH POINT
	PROPOSED STORM INLET
	PROPOSED SWALE
	PROPOSED CURB INLET

GENERAL NOTES

1. ALL SPOT ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

2. ALL SIDEWALKS AND ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSWALKS SHALL CONFORM TO ALL APPLICABLE AMERICANS WITH DISABILITIES ACT STANDARDS AND THE TEXAS ACCESSIBILITY STANDARDS; IF ANY DISCREPANCY IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO POURING ANY PAVEMENT.

3. ALL SIDEWALKS AND ACCESSIBLE ROUTS, INCLUDING DRIVEWAY CROSSWALKS, SHALL NOT EXCEED A RUNNING SLOPE OF 5% (1:20) WITHOUT A RAMP, AND SHALL NOT EXCEED A 2% CROSS SLOPE (1:50).

4. THE ACCESSIBLE PARKING AND PASSENGER LOADING AREAS SHALL NOT EXCEED A SLOPE OF 2% (1:50) IN ANY DIRECTION.

5. ALL EXISTING APPURTENANCES ONSITE SHALL BE ADJUSTED TO PROPOSED GRADE AS APPLICABLE.

6. CONTRACTOR SHALL REFERENCE GEOTECHNICAL REPORT FOR BUILDING PAD LIMITS AND PREPARATION REQUIREMENTS.

7. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING IN ALL AREAS. CONTRACTOR SHALL NOTIFY THE ENGINEER IN THE EVENT OF ANY DISCREPANCY PRIOR TO COMMENCEMENT OF CONSTRUCTION.

8. CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN.

REFER TO BUILDING PLANS FOR DETAILS OF RETAINING WALLS, STAIRS, RAMPS AND EXPOSED FOUNDATIONS INCLUDING VEHICULAR AND PEDESTRIAN BARRIER/RAILING.

AS PART OF THE BASE BID FOR THIS PROJECT, CONTRACTOR SHALL ADHERE TO THE PROJECT GEOTECHNICAL REPORT FOR ALL RECOMMENDATIONS FOR BOTH MATERIALS AND PRACTICE OF INSTALLATION GIVEN IN THE PROJECT GEOTECHNICAL REPORT FOR EARTHWORK, SITE SUBGRADE PREPARATION, BUILDING PAD SUBGRADE PREPARATION, PAVING, AND WET/SOFT SOILS CONDITIONS ALONG WITH ANY OTHER SECTIONS PROVIDED IN THE REPORT.

TITLE: HUMBLE ISD RIVERWOOD MIDDLE SCHOOL ADDITIONS
BY: TERRACON
DATED: JULY 20, 2023

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

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01/17/2025
STATE OF TEXAS
RASHARD D. HARRIS
142467
LICENSED
PROFESSIONAL ENGINEER

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GRADING PLAN
(1 OF 2)

Job. No.	Sheet No.
1821-13-02	C5.0
Drawn By: CSH	
Date: 01/17/2025	

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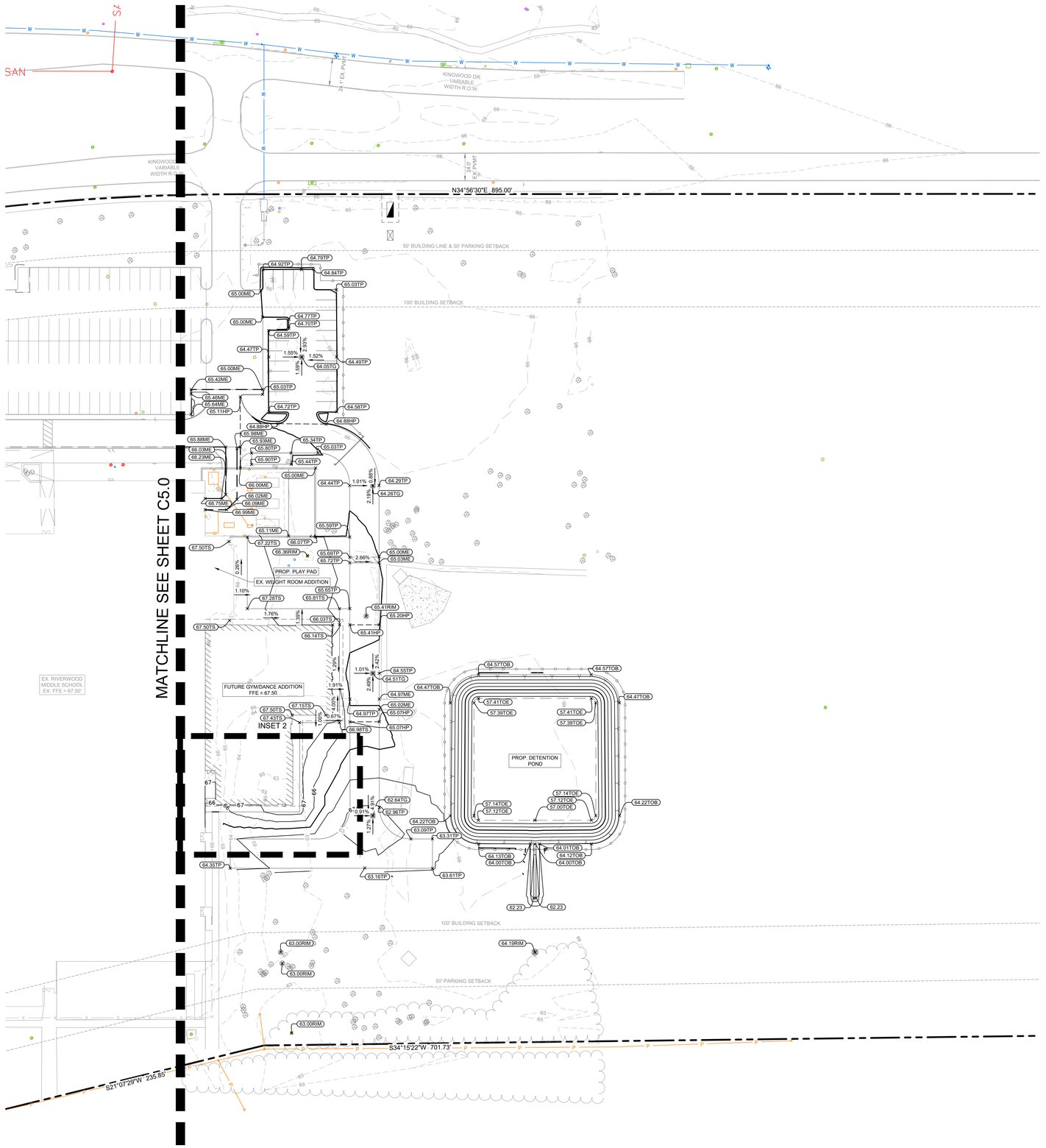

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND	
130	PROPOSED CONTOURS
130	EXISTING CONTOURS
129.75	PROPOSED SPOT ELEVATION
129.33ME	MATCH EXISTING GRADE
129.55TG	TOP OF GRATE INLET
129.55TW	TOP OF WALL
129.55BW	BOTTOM OF WALL
129.55TC	TOP OF CURB
129.55TS	TOP OF SIDEWALK
	HIGH POINT
	PROPOSED STORM INLET
	PROPOSED SWALE
	PROPOSED CURB INLET

GENERAL NOTES

1. ALL SPOT ELEVATIONS ARE TO TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

2. ALL SIDEWALKS AND ACCESSIBLE ROUTES, INCLUDING DRIVEWAY CROSSWALKS SHALL CONFORM TO ALL APPLICABLE AMERICANS WITH DISABILITIES ACT STANDARDS AND THE TEXAS ACCESSIBILITY STANDARDS. IF ANY DISCREPANCY IS DISCOVERED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO POURING ANY PAVEMENT.

3. ALL SIDEWALKS AND ACCESSIBLE ROUTS, INCLUDING DRIVEWAY CROSSWALKS, SHALL NOT EXCEED A RUNNING SLOPE OF 5% (1:20) WITHOUT A RAMP, AND SHALL NOT EXCEED A 2% CROSS SLOPE (1:50).

4. THE ACCESSIBLE PARKING AND PASSENGER LOADING AREAS SHALL NOT EXCEED A SLOPE OF 2% (1:50) IN ANY DIRECTION.

5. ALL EXISTING APPURTENANCES ONSITE SHALL BE ADJUSTED TO PROPOSED GRADE AS APPLICABLE.

6. CONTRACTOR SHALL REFERENCE GEOTECHNICAL REPORT FOR BUILDING PAD LIMITS AND PREPARATION REQUIREMENTS.

7. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE AWAY FROM BUILDING IN ALL AREAS. CONTRACTOR SHALL NOTIFY THE ENGINEER IN THE EVENT OF ANY DISCREPANCY PRIOR TO COMMENCEMENT OF CONSTRUCTION.

8. CONTRACTOR SHALL PROTECT ALL TREES TO REMAIN.

REFER TO BUILDING PLANS FOR DETAILS OF RETAINING WALLS, STAIRS, RAMPS AND EXPOSED FOUNDATIONS INCLUDING VEHICULAR AND PEDESTRIAN BARRIER/RAILING.

AS PART OF THE BASE BID FOR THIS PROJECT, CONTRACTOR SHALL ADHERE TO THE PROJECT GEOTECHNICAL REPORT FOR ALL RECOMMENDATIONS FOR BOTH MATERIALS AND PRACTICE OF INSTALLATION GIVEN IN THE PROJECT GEOTECHNICAL REPORT FOR EARTHWORK, SITE SUBGRADE PREPARATION, BUILDING PAD SUBGRADE PREPARATION, PAVING, AND WET/SOFT SOILS CONDITIONS ALONG WITH ANY OTHER SECTIONS PROVIDED IN THE REPORT.

TITLE: HUMBLE ISD RIVERWOOD MIDDLE SCHOOL ADDITIONS
BY: TERRACON
DATED: JULY 20, 2023

INCLUDING ALL REVISIONS AND ADDENDA TO THIS REPORT THAT MAY HAVE BEEN RELEASED AFTER THE NOTED DATE.

Know what's below. Call before you dig.

CAUTION!!

EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

Kimley»Horn
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GRADING PLAN
(2 OF 2)

Job. No.	Sheet No.
1821-13-02	C5.1
Drawn By: CSH	
Date: 01/17/2025	

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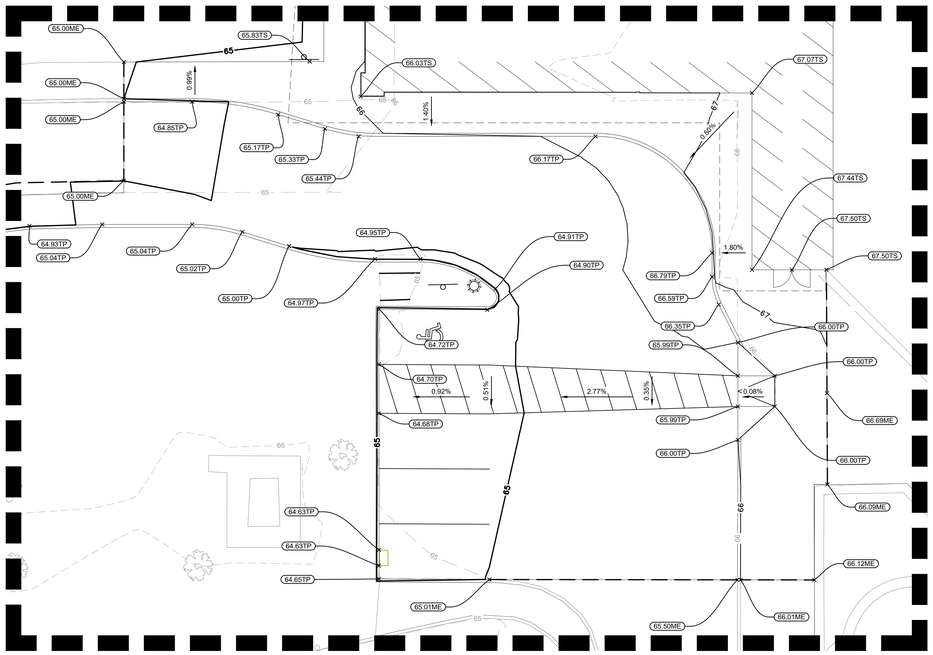
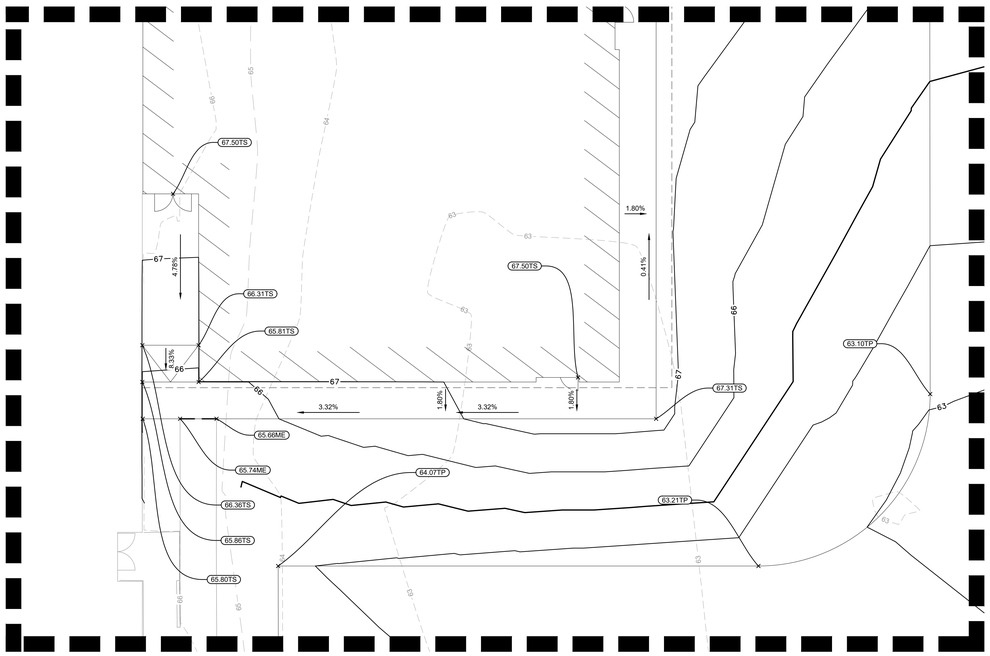


NORTH

INSET 1

SCALE 1" = 10'



NORTH

INSET 2

SCALE 1" = 10'

NORTH

GRAPHIC SCALE IN FEET

0 ## ## ##

LEGEND	
130	PROPOSED CONTOURS
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129.75	PROPOSED SPOT ELEVATION
129.33ME	MATCH EXISTING GRADE
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FOR
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HUMBLE, TX

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GRADING INSETS

Job. No.	Sheet No.
1821-13-02	C5.2
Drawn By: CSH	
Date: 01/17/2025	

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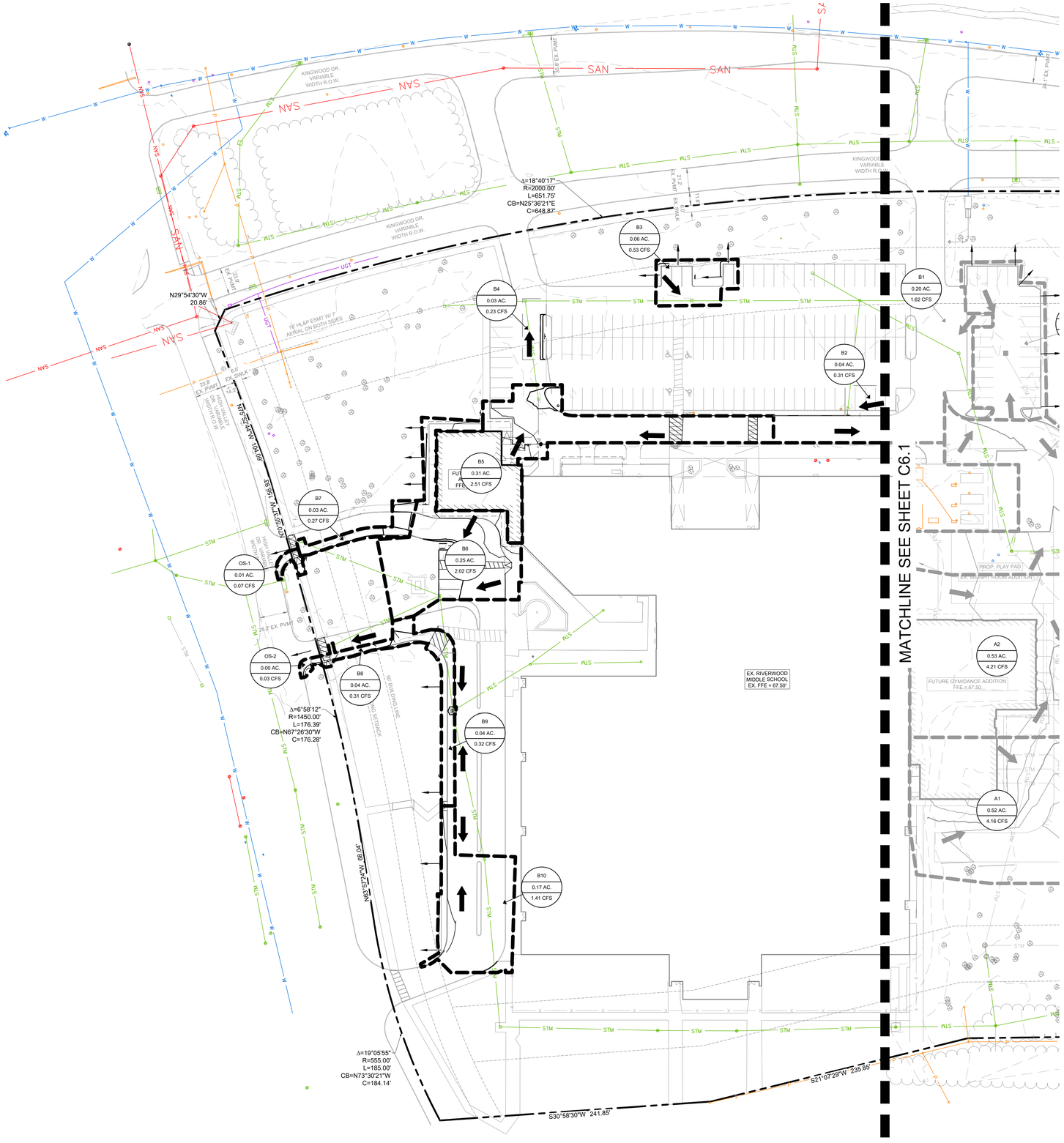

LEGEND

- A-1 / 1.62 / 15.25 — DRAINAGE AREA NUMBER / DRAINAGE AREA (ACRES) / FLOW (CFS) 100-YR
- 170 — EXISTING CONTOUR ELEVATIONS
- 170 — PROPOSED CONTOUR ELEVATIONS
- DRAINAGE AREA
- OFF-SITE DRAINAGE
- 100-YR EXTREME EVENT FLOW PATH

DRAINAGE AREA TABLE

DRAINAGE AREA	RUNOFF COEFFICIENT "C"	T_c (min.)	RAINFALL INTENSITY I_2 (in/hr)	RAINFALL INTENSITY I_{100} (in/hr)	AREA (ac)	TOTAL FLOW Q_{25} (cfs)	TOTAL FLOW Q_{100} (cfs)
A1	0.800	23.914	3.740	7.99	0.52	1.56	4.16
A2	0.800	23.933	3.739	7.99	0.53	1.58	4.21
A3	0.800	23.230	3.901	8.85	0.33	1.03	2.93
A4	0.800	22.529	3.859	8.23	0.20	0.62	1.64
B1	0.800	22.513	3.861	8.23	0.20	0.61	1.62
B2	0.800	20.561	4.044	8.60	0.04	0.12	0.31
B3	0.800	21.145	3.987	8.48	0.06	0.20	0.53
B4	0.800	20.279	4.073	8.66	0.03	0.09	0.23
B5	0.800	23.133	3.806	8.12	0.31	0.94	2.51
B6	0.800	22.815	3.834	8.18	0.25	0.76	2.02
B7	0.800	20.428	4.058	8.63	0.03	0.10	0.27
B8	0.800	20.578	4.043	8.60	0.04	0.12	0.31
B9	0.800	20.616	4.039	8.59	0.04	0.12	0.32
B10	0.800	22.326	3.877	8.26	0.17	0.53	1.41
OS-1	0.800	19.269	4.178	8.87	0.01	0.03	0.07
OS-2	0.800	18.665	4.244	9.01	0.00	0.01	0.03
POND	0.800	24.797	3.669	7.85	0.89	2.61	6.98

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FOR
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HUMBLE, TX

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PROPOSED DRAINAGE AREA MAP (1 OF 2)

Job. No.	Sheet No.
1821-13-02	C6.0
Drawn By: CSH	
Date: 01/17/2025	

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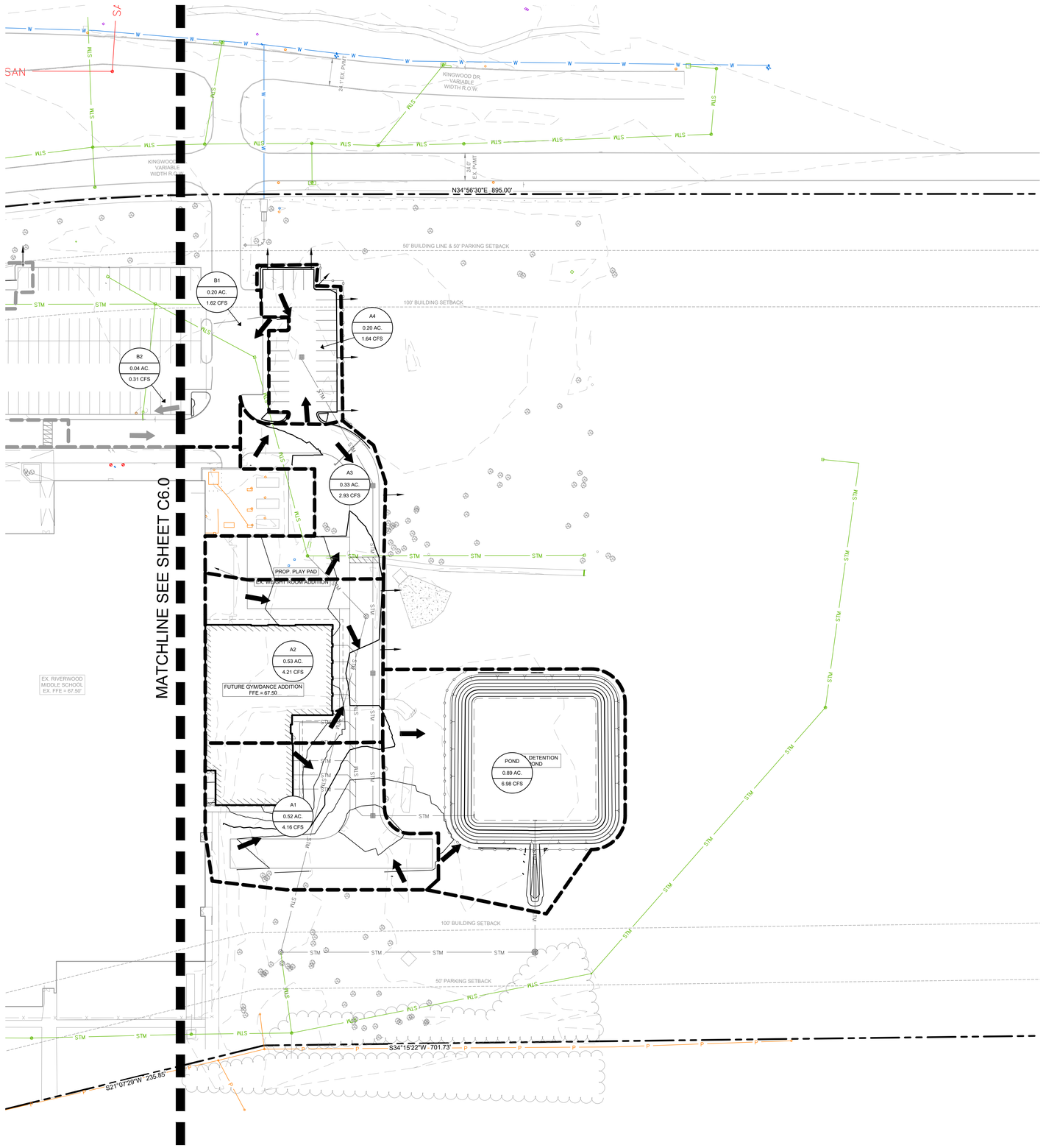

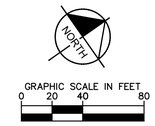

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PROPOSED DRAINAGE AREA MAP (2 OF 2)

Job. No.	Sheet No.
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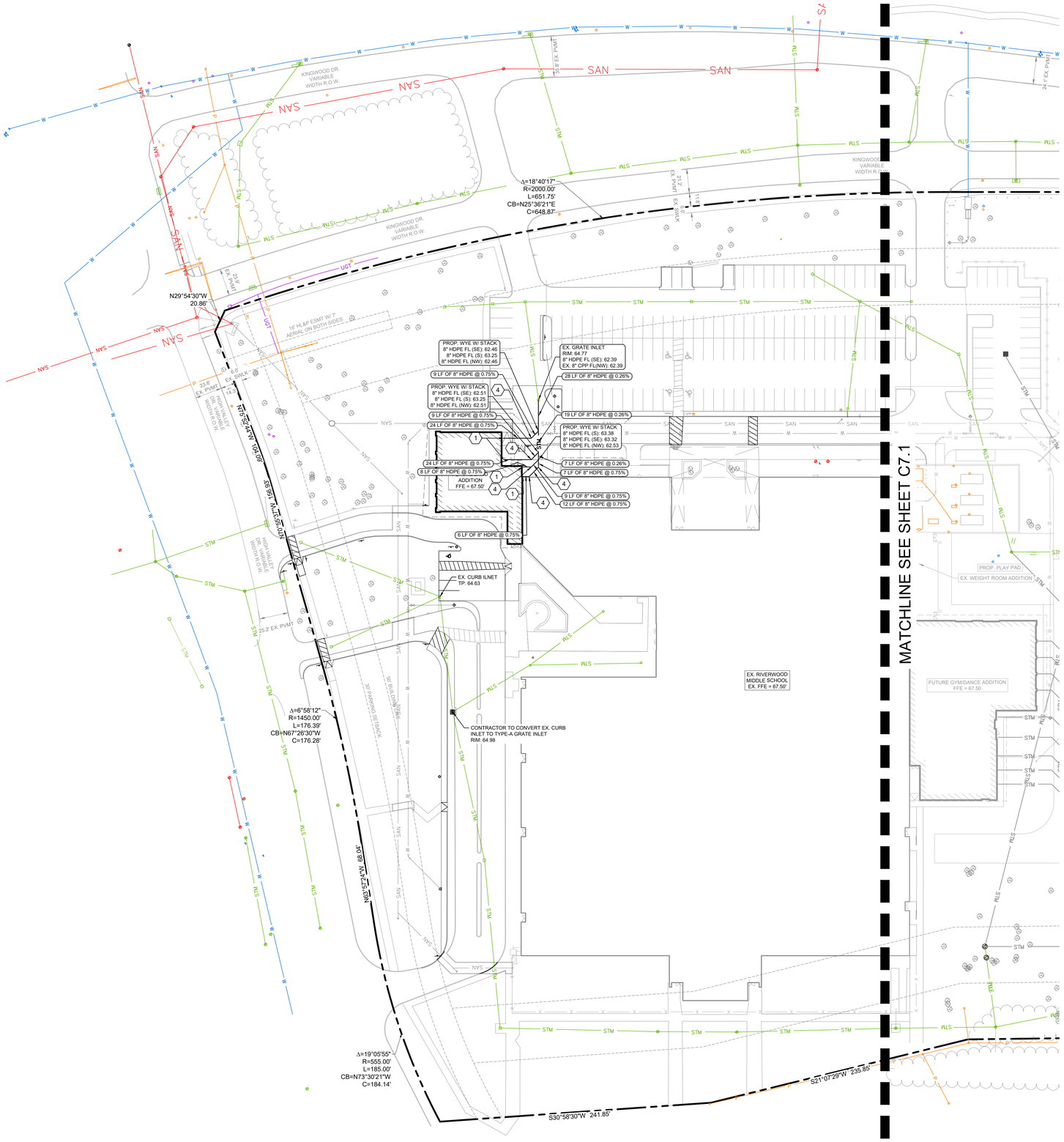

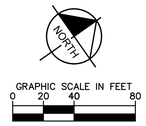

LEGEND	
	PROPERTY LINE
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT
STM	PROPOSED STORM LINE
	PROPOSED STORM MANHOLE
	PROPOSED GRATE INLET
	PROPOSED CURB INLET
W	PROPOSED WATER LINE
SAN	PROPOSED SSWR LINE
	PROPOSED SSWR MANHOLE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER VALVE
UGE	PROPOSED UNDERGROUND ELECTRIC
GAS	PROPOSED GAS LINE
COMM	PROPOSED COMMUNICATIONS LINE
OHE	PROPOSED OVERHEAD ELECTRIC
TEL	PROPOSED TELEPHONE LINE
FIB	PROPOSED FIBER OPTIC LINE
SAN	EXISTING SSWR LINE
W	EXISTING WATERLINE
STM	EXISTING STORM SEWER LINE

STORM SEWER NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

2. CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES IN FIELD PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

3. PUBLIC STORM LINES AS WELL AS CONNECTIONS TO EXISTING PUBLIC LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL MUNICIPALITIES STANDARD SPECIFICATIONS AND DETAILS WITH ALL ADDENDA AND AMENDMENTS THERETO.

4. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:

A) RCP = ASTM C-76 CLASS III - REQUIRED IN PUBLIC RIGHT OF WAY AND CONNECTION POINTS TO PUBLIC STORM SEWER.

B) HDPE = N-12 DUAL WALL PIPE WITH BEDDING AND BACKFILL PER MANUFACTURER RECOMMENDATIONS.

C) PVC = ASTM D 3034 SDR35.

5. ALL EXISTING AND PROPOSED PIPES AND STRUCTURES ARE TO BE CLEANED OUT AT THE COMPLETION OF CONSTRUCTION TO REMOVE ALL SILT AND DEBRIS.

6. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.

7. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. LIDS SHALL BE LABELED "STORM SEWER".

8. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, OR TO BE 2'-4" ABOVE THE PROPOSED GRADE ELEVATIONS IN LANDSCAPE AREAS.

9. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.

KEYNOTES	
1	PROP. ROOF DRAIN (REF. MEP FOR CONTINUATION)
2	PROP. 12"x45° BEND
3	PROP. 12"x12" WYE
4	PROP. 8"x8" BEND

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STORM SEWER PLAN (1 OF 2)

Job. No. 1821-13-02	Sheet No. C7.0
Drawn By: CSH	
Date: 01/17/2025	

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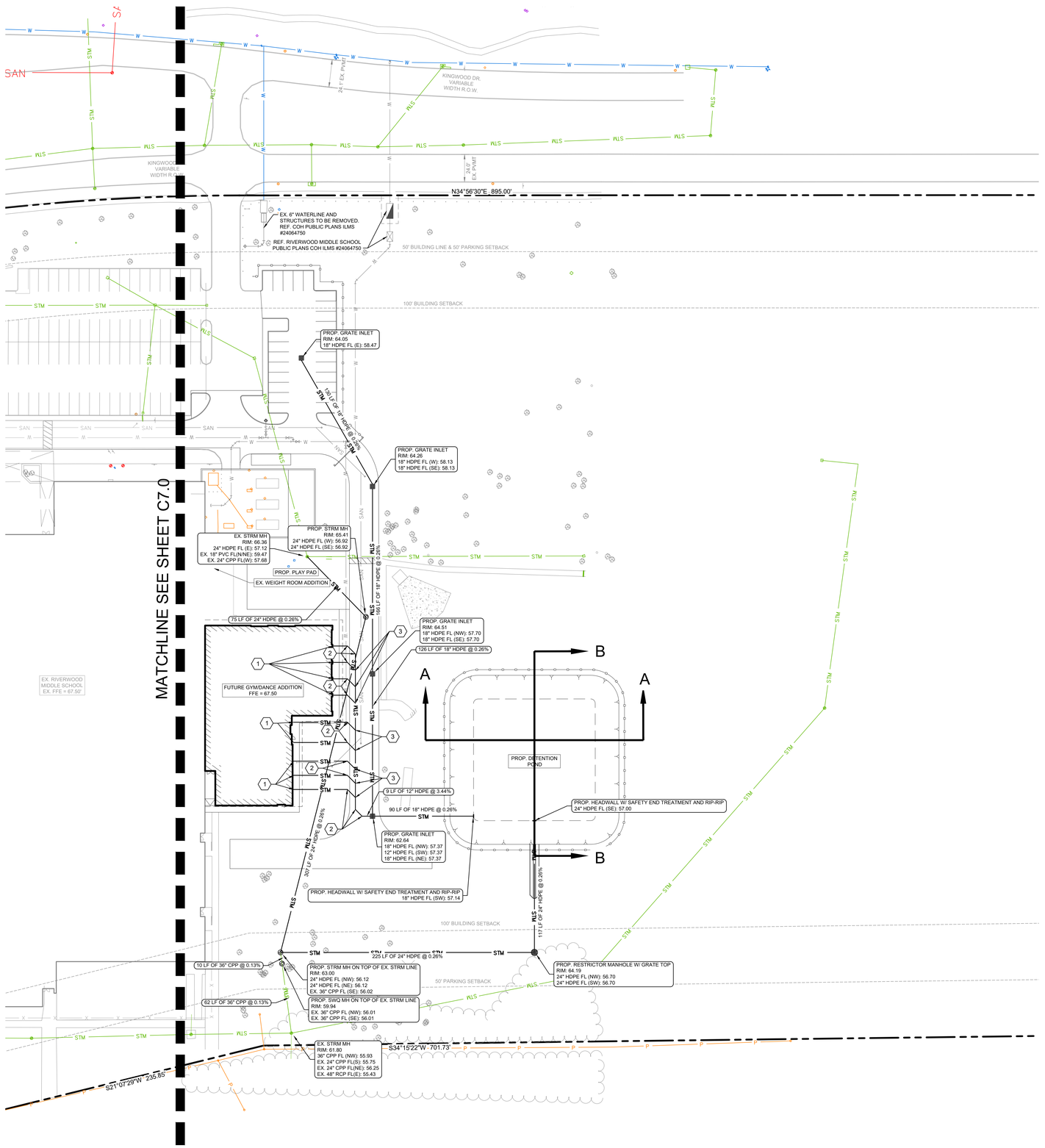

GRAPHIC SCALE IN FEET
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LEGEND	
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	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT
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B) HDPE = N-12 DUAL WALL PIPE WITH BEDDING AND BACKFILL PER MANUFACTURER RECOMMENDATIONS.

C) PVC = ASTM D 3034 SDR35.

5. ALL EXISTING AND PROPOSED PIPES AND STRUCTURES ARE TO BE CLEANED OUT AT THE COMPLETION OF CONSTRUCTION TO REMOVE ALL SILT AND DEBRIS.

6. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATER TIGHT.

7. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. LIDS SHALL BE LABELED "STORM SEWER".

8. TOPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED PAVEMENT ELEVATIONS, OR TO BE 2"-4" ABOVE THE PROPOSED GRADE ELEVATIONS IN LANDSCAPE AREAS.

9. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR FROM INVERT IN TO INVERT OUT.

811 Know what's below. Call before you dig.

CAUTION!!

EXISTING UNDERGROUND UTILITIES IN THE AREA CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES PRIOR TO CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REPAIRS TO EXISTING UTILITIES DUE TO DAMAGE INCURRED DURING CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES ON THE PLANS.

Date
Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

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01/17/2025
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STORM SEWER PLAN (2 OF 2)

Job. No.	Sheet No.
1821-13-02	C7.1
Drawn By: CSH	
Date: 01/17/2025	

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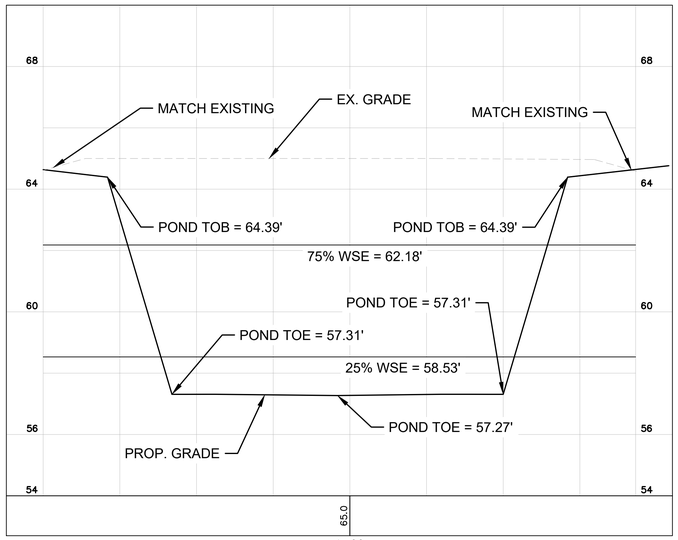
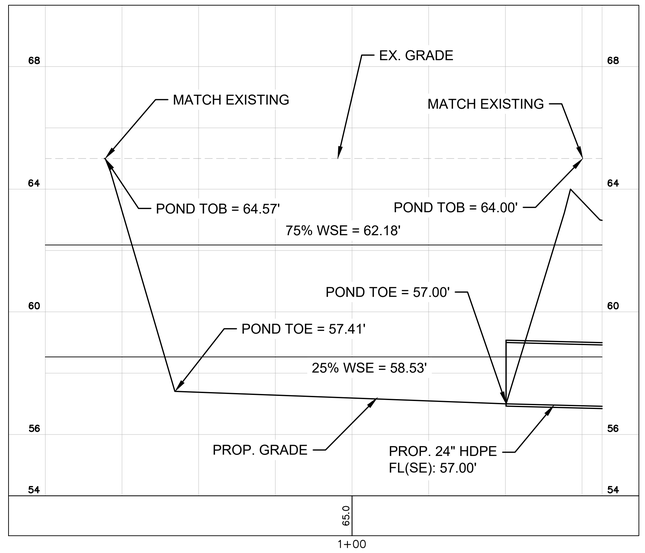


CROSS SECTION A-A

H: 1" = 20' ; V: 1" = 2'



CROSS SECTION B-B

H: 1" = 20' ; V: 1" = 2'

Low Level Restrictor

25% Full Water Elevation:		58.53	ft
$Q_{(ALLOWABLE\ RELEASE\ RATE\ AT\ 0.5\ cfs/ac.)}$	=	12.44	cfs
$H_{(25\%\ WATER\ SURFACE\ TO\ MID\text{-}RESTRICTOR)}$	=	1.58	ft.
$A_{(ORIFICE\ AREA)}$		2.06	ft^2
(Q-ALLOWABLE / [0.6 * (64.4 x H)$^{0.5}$])			
Max Diameter of Orifice:			
[D = 12*((4*A)/3.1415)$^{0.5}$]	=	19.43	in.
Proposed Restrictor Diameter:		***6.00***	in.
$A_{(ACTUAL\ RESTRICTOR\ ORIFICE\ AREA)}$		0.20	ft^2
(A=3.1415*R^2)			
$Q_{(25\%\ ACTUAL\ RELEASE\ RATE)}$	=	1.58	cfs

High Level Restrictor Calculations

Combined Allowable Release Rate (2 cfs/acre):		49.77	cfs
Low Flow Release Rate at Max. Water Elevation			
$A_{(ACTUAL\ RESTRICTOR\ ORIFICE\ AREA)}$		0.20	ft^2
$H_{(MAX\ 100\text{-}YR\ WTR\ SURFACE\ TO\ MID\text{-}RESTRICTOR)}$	=	7.05	ft.
$Q_{(100\text{-}YEAR\ ACTUAL\ OUTFLOW\ DISCHARGE)}$	=	2.51	cfs
High Flow Restrictor			
$Q_{(ALLOWABLE\ HIGH\ FLOW\ RELEASE\ RATE)}$	=	47.26	cfs
Elevation of High Flow Restrictor	=	62.18	
$H_{(MAX\ 100\text{-}YR\ WTR\ SURFACE\ TO\ MID\text{-}RESTRICTOR)}$	=	1.20	ft.
$A_{(ORIFICE\ AREA)}$	=	8.96	ft^2
(Q-ALLOWABLE / [0.6 * (64.4 x H)$^{0.5}$])			
Proposed Rectangular Restrictor Dimensions		***1.5' L x 0.25' H***	
$A_{(ACTUAL\ RESTRICTOR\ ORIFICE\ AREA)}$		0.38	ft^2
$Q_{(100\text{-}YEAR\ ACTUAL\ OUTFLOW\ DISCHARGE)}$	=	2.64	cfs
$Q_{(100\text{-}YEAR\ ACTUAL\ COMBINED\ RELEASE\ RATE)}$	=	5.15	cfs

STORMWATER DETENTION REQUIREMENTS	
TOTAL SERVICE AREA	2.99 AC
TOTAL IMPERVIOUS AREA	1.97 AC (65% IMPERVIOUS)
DETENTION RATE REQUIREMENT:	0.83 AC-FT/AC OF IMPERVIOUS AREA (PER CITY OF HOUSTON STORM DETENTION REQUIREMENTS)
DETENTION VOLUME REQUIRED:	(0.83*1.971AC*43,560) = 71,260 CF
DETENTION VOLUME PROVIDED:	**97,578 CF**

STORMWATER RELEASE REQUIREMENTS	
OUTFALL RATE ALLOWED (LOW FLOW)	0.5 CFS/AC * 24.88 AC = 12.44 CFS
OUTFALL RATE PROVIDED (LOW FLOW)	1.58 CFS
OUTFLOW RATE ALLOWED (HIGH FLOW)	2.0 CFS/AC * 24.88 AC = 49.77 CFS
OUTFLOW RATE PROVIDED (HIGH FLOW)	5.15 CFS
PRIMARY RESTRICTOR SIZE	6" DIAMETER
SECONDARY RESTRICTOR SIZE	1.5L"x0.25'H

STAGE STORAGE TABLE

ELEV	AREA (sq. ft.)	DEPTH (ft)	AVG END INC. VOL. (cu. ft.)	AVG END TOTAL VOL. (cu. ft.)	CONIC INC. VOL. (cu. ft.)	CONIC TOTAL VOL. (cu. ft.)
57.500	11,966.23	N/A	N/A	0.00	N/A	0.00
58.000	12,610.07	0.500	6144.07	6144.07	6143.37	6143.37
58.500	13,267.64	0.500	6469.43	12613.50	6466.73	12612.10
59.000	13,938.94	0.500	6801.64	19415.14	6800.95	19413.05
59.500	14,623.96	0.500	7140.72	26555.87	7140.04	26553.09
60.000	15,322.72	0.500	7486.67	34042.54	7485.99	34039.08
60.500	16,035.20	0.500	7839.48	41882.02	7838.80	41877.89
61.000	16,761.41	0.500	8199.15	50081.17	8198.48	50076.37
61.500	17,501.35	0.500	8565.69	58646.86	8565.03	58641.40
62.000	18,255.02	0.500	8939.09	67585.96	8938.43	67579.83
62.500	19,022.42	0.500	9319.36	76905.32	9318.70	76898.54
63.000	19,803.55	0.500	9706.49	86611.81	9705.84	86604.37
63.500	20,603.31	0.500	10101.72	96713.53	10101.06	96705.43
63.500	1.64	0.000	0.00	96713.53	0.00	96705.43
64.000	0.36	0.500	0.50	96714.03	0.46	96705.89
64.000	7.20	0.000	0.00	96714.03	0.00	96705.89
64.000	19,209.66	0.000	0.00	96714.03	0.00	96705.89
64.000	0.82	0.000	0.00	96714.03	0.00	96705.89
64.000	1.21	0.000	0.00	96714.03	0.00	96705.89
64.000	3.07	0.000	0.00	96714.03	0.00	96705.89
64.500	0.00	0.500	0.77	96714.80	0.51	96706.40
64.500	0.00	0.000	0.00	96714.80	0.00	96706.40
64.500	0.00	0.000	0.00	96714.80	0.00	96706.40
64.500	13.51	0.000	0.00	96714.80	0.00	96706.40
64.500	0.00	0.000	0.00	96714.80	0.00	96706.40

EXTREME EVENT OVERFLOW WEIR DESIGN:

$Q_{100} = CLH^{3/2}$

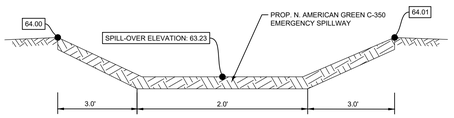
$H_{100} = 0.77'$

$C = 3.0$

$L_{WEIR} = 1.78'$

$L_{WEIROV} = 2.0'$

$Q_{100} = 3.60$ CFS



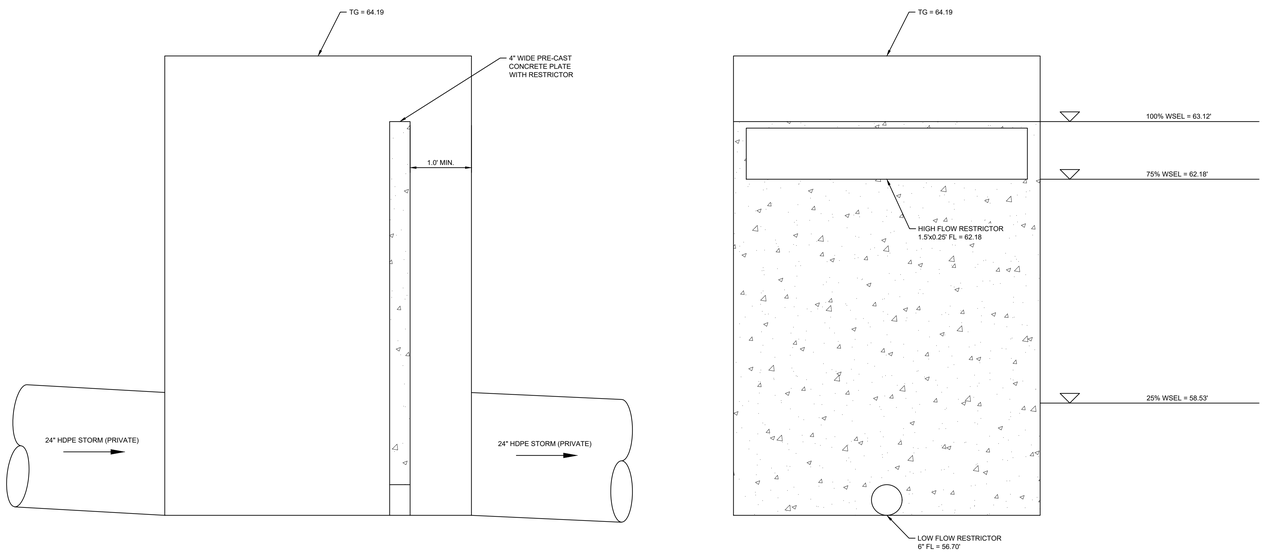
EXTREME EVENT OVERFLOW WEIR

CROSS-SECTION A-A

NOT TO SCALE

2-YEAR STORM CALCS

100-YEAR STORM CALCS



RESTRICTOR DETAIL

N.T.S.

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STORM AND POND CALCULATIONS

Job. No. 1821-13-02	Sheet No. C7.2
Drawn By: CSH	
Date: 01/17/2025	

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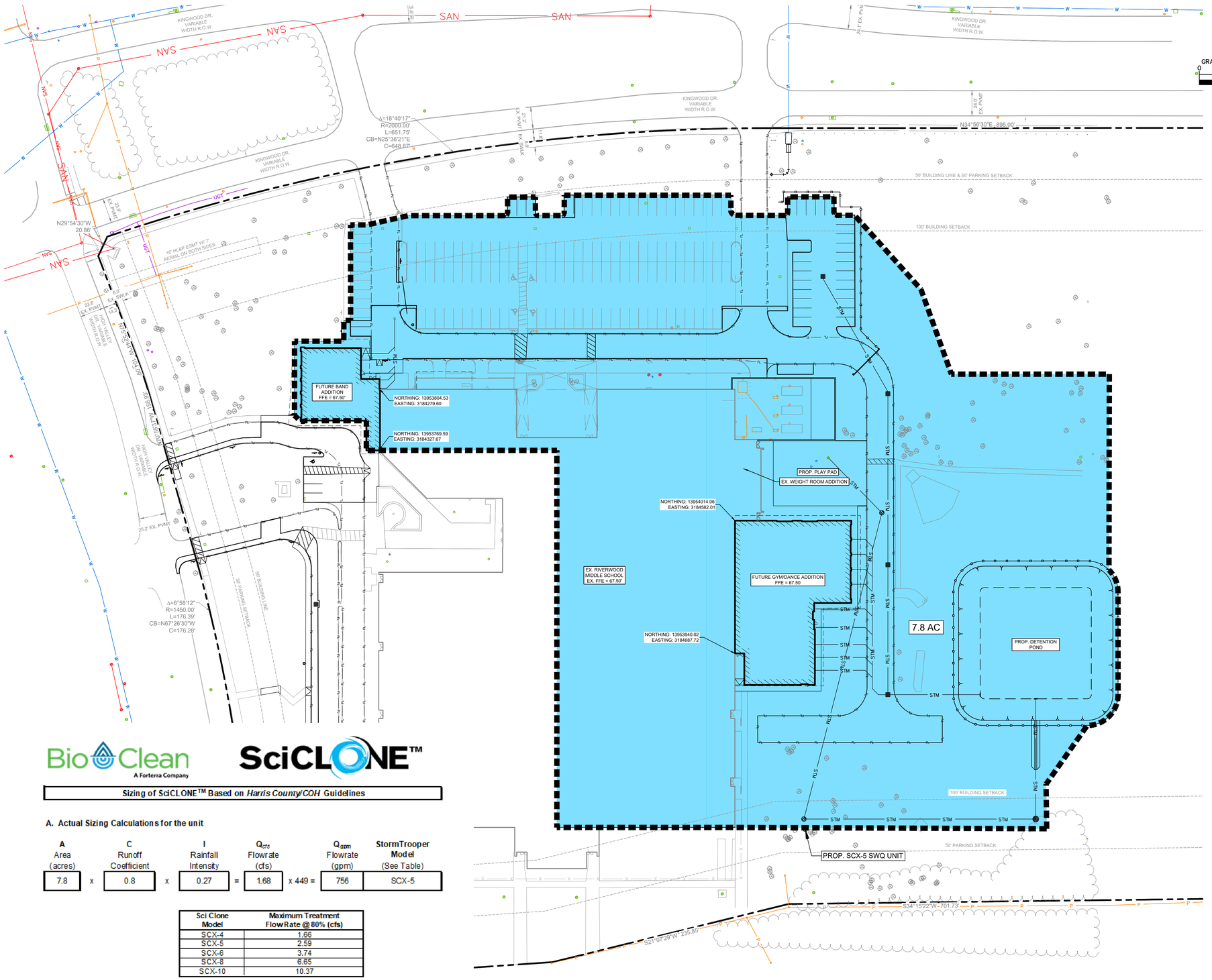

Bio Clean — A Forterra Company

SciCLONE™

Sizing of SciCLONE™ Based on *Harris County/COH* Guidelines

A. Actual Sizing Calculations for the unit

A Area (acres)		C Runoff Coefficient		I Rainfall Intensity		Q_{cfs} Flowrate (cfs)		Q_{gpm} Flowrate (gpm)	StormTrooper Model (See Table)
7.8	x	0.8	x	0.27	=	1.68	x 449 =	756	SCX-5

Sci Clone Model	Maximum Treatment Flow Rate @ 80% (cfs)
SCX-4	1.66
SCX-5	2.59
SCX-6	3.74
SCX-8	6.65
SCX-10	10.37

Know what's below. Call before you dig. 811

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SWQ SERVICE AREA MAP

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1821-13-02	C7.3
Drawn By: CSH	
Date: 01/17/2025	

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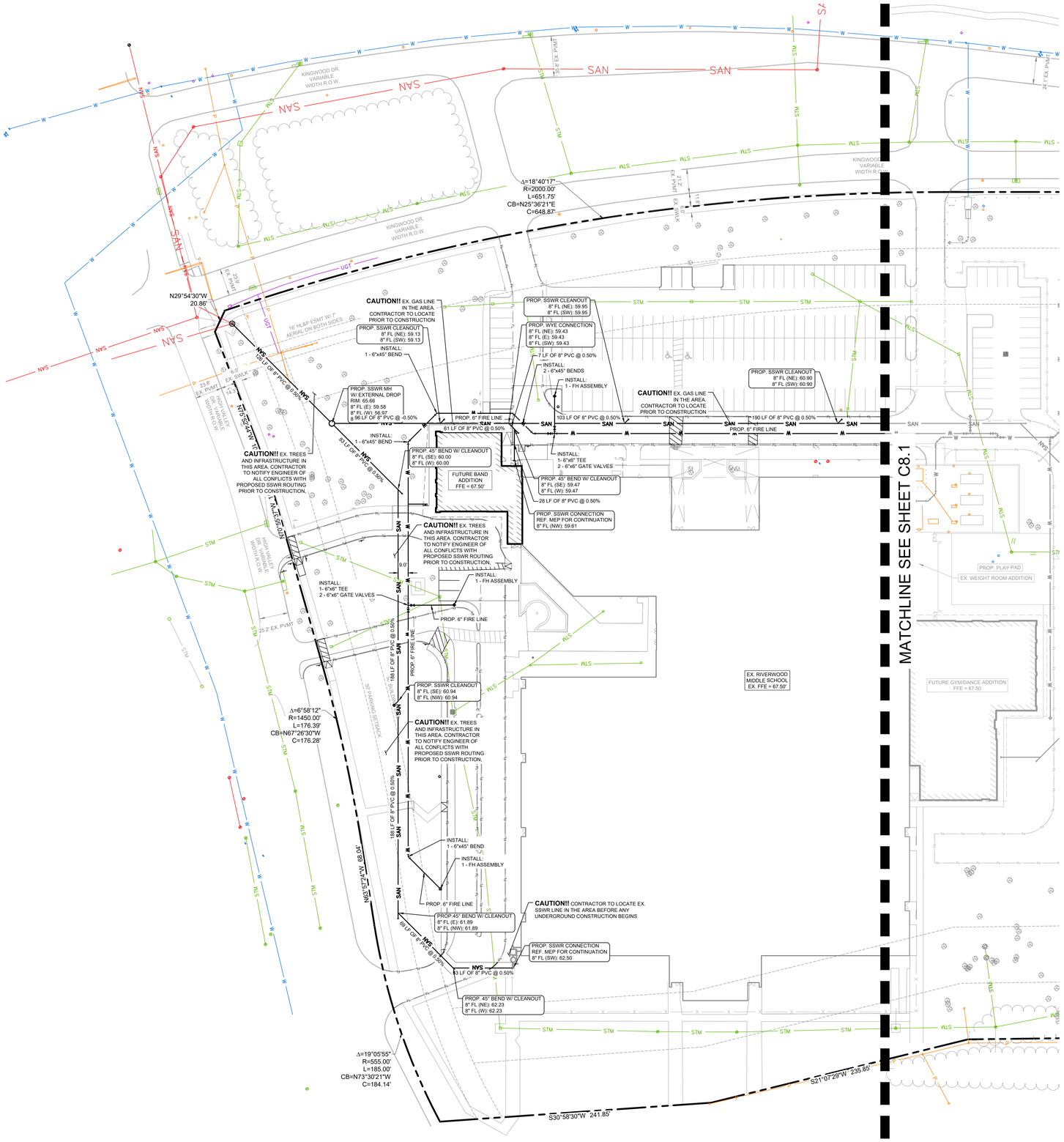

GRAPHIC SCALE IN FEET
0 20 40 80

LEGEND	
	PROPERTY LINE
	PROPOSED UTILITY EASEMENT
	EXISTING UTILITY EASEMENT
STM	PROPOSED STORM LINE
	PROPOSED STORM MANHOLE
	PROPOSED GRATE INLET
	PROPOSED CURB INLET
W	PROPOSED WATER LINE
SAN	PROPOSED SSWR LINE
	PROPOSED SSWR MANHOLE
	PROPOSED FIRE HYDRANT
	PROPOSED WATER VALVE
UGE	PROPOSED UNDERGROUND ELECTRIC
GAS	PROPOSED GAS LINE
COMM	PROPOSED COMMUNICATIONS LINE
OHE	PROPOSED OVERHEAD ELECTRIC
TEL	PROPOSED TELEPHONE LINE
FIB	PROPOSED FIBER OPTIC LINE
SAN	EXISTING SSWR LINE
W	EXISTING WATERLINE
STM	EXISTING STORM SEWER LINE

UTILITY NOTES

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS ARE BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES.

2. CONTRACTOR SHALL FIELD VERIFY THE EXACT HORIZONTAL AND VERTICAL LOCATIONS OF ALL EXISTING UTILITIES IN FIELD PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

3. ALL WATER AND SEWER LINES AS WELL AS TAPS/CONNECTIONS TO EXISTING PUBLIC WATER LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LOCAL MUNICIPALITIES STANDARD SPECIFICATIONS AND DETAILS WITH ALL ADDENDA AND AMENDMENTS THERETO.

4. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITY 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.

5. WATER LINES SHALL BE AS FOLLOWS:

A) 3" AND SMALLER = SCHEDULE 40 PVC

B) 4" - 12" = PVC CLASS 150 DR 18, WITH BEDDING AND BACKFILL PER MANUFACTURER RECOMMENDATIONS.

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8. WATER LINES CROSSING AND RUNNING PARALLEL TO GRAVITY SEWER LINES AND FORCE MAINS SHALL CONFORM TO THE SEPARATION AND CROSSING REQUIREMENTS OF TEXAS ADMINISTRATIVE CODE § 290.44 PARAGRAPH (E).

9. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.

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13. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING ELECTRICAL PLAN.

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16. THE SCOPE OF UTILITIES STUBBED TO THE PROPOSED BUILDING(S) IN THIS PLAN SET SHALL TERMINATE 5' OUTSIDE OF THE BUILDING.

Know what's **below.** **Call** before you dig.

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UTILITY PLAN (1 OF 2)

Job. No.	Sheet No.
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Drawn By: CSH	
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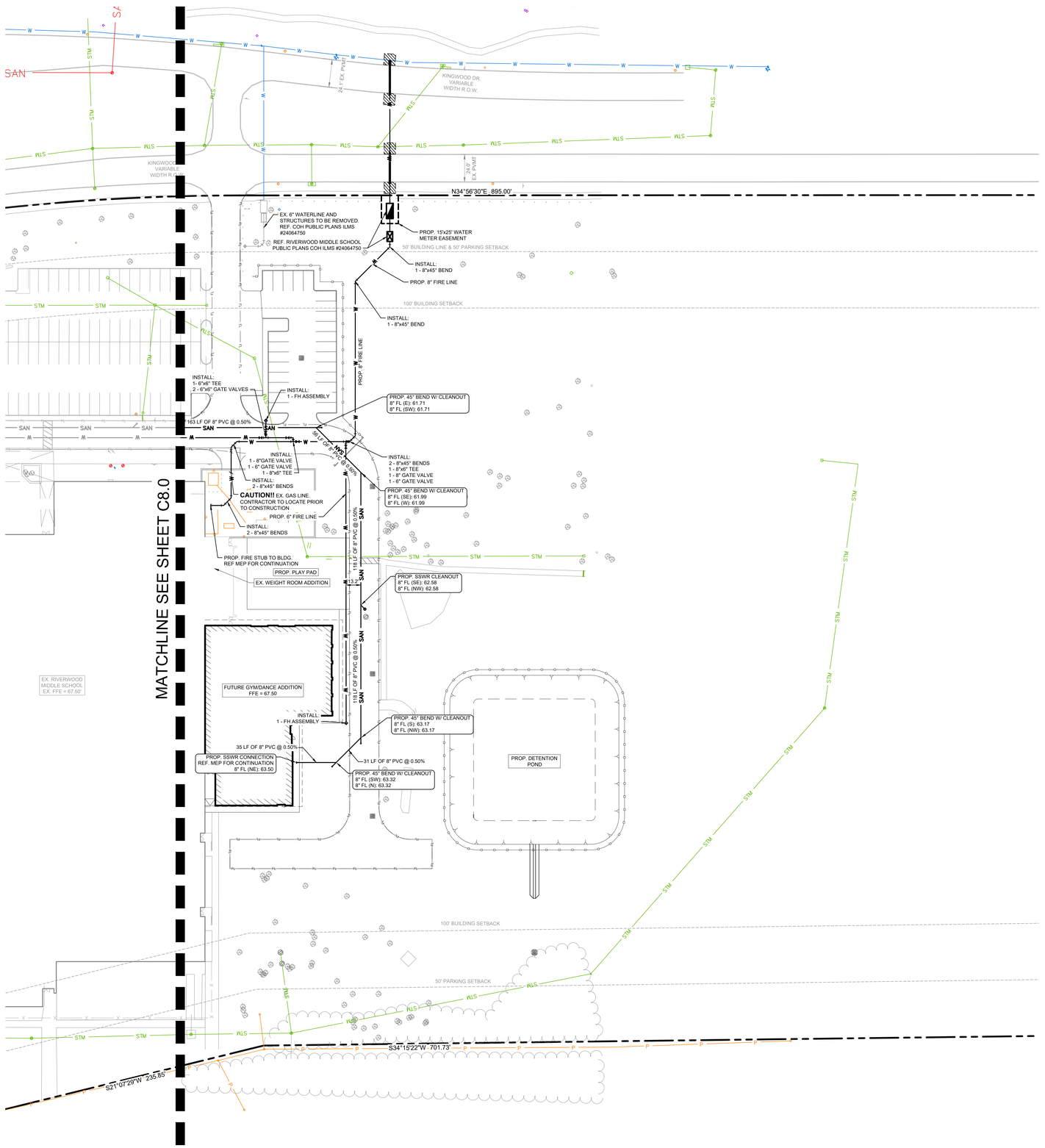

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UTILITY PLAN
(2 OF 2)

Job. No.	Sheet No.
1821-13-02	C8.1
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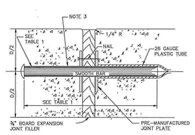
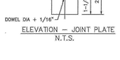


SECTION
DOWEL TYPE EXPANSION JOINT
N.T.S



PLAN — JOINT PLATE
N.T.S.



ELEVATION — JOINT PLATE
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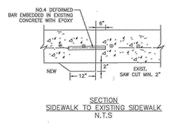
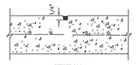


SECTION
SIDEWALK TO EXISTING SIDEWALK
N.T.S



SECTION
SIDEWALK TO EXISTING DRIVEWAY
N.T.S.



SECTION
CONTROL JOINT
N.T.S.

NOTES:

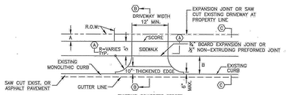
1. STEEL TO MEET ASTM STANDARD SPECIFICATIONS FOR CONCRETE REINFORCING BARS.
2. EXPANSION JOINT TO BE PLACED AT THE END OF EACH CURB RADIUS AND SPACED AT A MAXIMUM DISTANCE OF 3 FEET MAXIMUM SPACING FOR CONTROL JOINTS SHALL BE 5 FEET.
3. CENTER DOWEL HORIZONTALLY ON JOINT.
4. CENTER DOWEL VERTICALLY IN CONCRETE AS NEEDED TO MAINTAIN A 2 INCH MINIMUM COVER.

TABLE 1

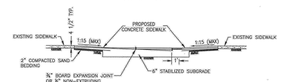
PAVEMENT THICKNESS (IN)	DOWEL SIZES AND SPACINGS			
	DIAMETER (IN)	LENGTH (IN)	SPACING (IN)	
4 1/2	1/2	18	12	
5	1/2	18	12	
6	3/4	18	12	
7	1	18	12	

SIDEWALK EXPANSION AND CONSTRUCTION JOINT DETAILS
NTS

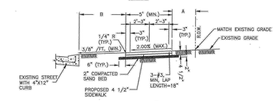
02754–01A



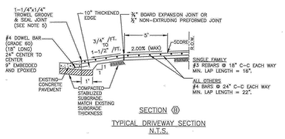
PLAN VIEW — DRIVEWAY
NTS



SECTION Ⓐ
PROPOSED SIDEWALK THROUGH DRIVEWAY
WITH EXCESSIVE GRADES
N.T.S.



SECTION Ⓑ
TYPICAL SIDEWALKS SECTION
N.T.S.



SECTION Ⓒ
TYPICAL DRIVEWAY SECTION
N.T.S.

NOTES:

1. IF AVAILABLE ROW IS NOT SUFFICIENT TO ACCOMMODATE SIDEWALK WIDTH (SW) ACCORDING TO SW REQUIREMENT, ENGINEER SHALL OBTAIN A VARIANCE FROM THE CITY ENGINEER.
2. DRIVEWAYS SHALL BE 6" THICK FOR SINGLE FAMILY.
3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
4. THE OUTER DOWEL BARS ARE TO BE LOCATED 12" FROM END OF PROPOSED EDGE OF DRIVEWAY RETURN. EXTEND DOWEL 3" INCHES INTO PROPOSED DRIVEWAY AND BEND REMAINING BAR TO EXTEND TO RADIUS RETURN BOTH SIDES.
5. TROWEL GROOVE SEALANT SHALL BE LOW MODULUS SILICONE OR POLYURETHANE SEALANT.
6. EXPANSION & CONSTRUCTION JOINTS ALONG SIDEWALK SHALL BE ACCORDING TO DRAWING No. 02752–02.
7. REFER CHAPTER 17 DESIGN REQUIREMENTS FOR A AND B.
8. CEMENT STABILIZED SAND 1.5 SACKS OF CEMENT PER TON OF DRY SAND.
9. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
10. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

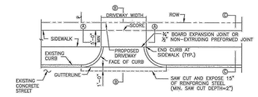
STREET PAVING AND SIDEWALK
02752–02 THROUGH 02754–01A

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
FOR CITY OF HOUSTON USE ONLY

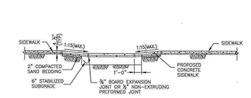
SHEET NO.

DRIVEWAY / LOCAL RESIDENTIAL STREETS
NTS

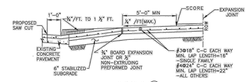
02754–01B



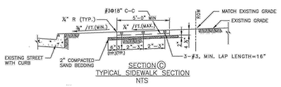
PLAN VIEW — DRIVEWAY
NTS



SECTION Ⓐ
PROPOSED SIDEWALK THROUGH DRIVEWAY
WITH EXCESSIVE ELEVATION DIFFERENCE
WITH EXISTING SIDEWALK
NTS



SECTION Ⓑ
TYPICAL DRIVEWAY SECTION
NTS



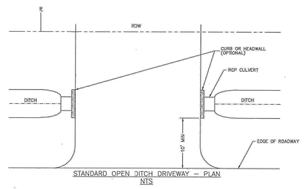
SECTION Ⓒ
TYPICAL SIDEWALK SECTION
NTS

NOTES

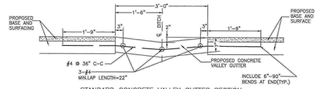
1. ALL JOINTS SHALL CONFORM TO CITY OF HOUSTON D2752 STANDARD SPECIFICATIONS.
2. DRIVEWAYS SHALL BE MINIMUM 6" THICK FOR SINGLE FAMILY USE AND MINIMUM 7" THICK FOR ALL OTHERS (I.E. COMMERCIAL, INDUSTRIAL, ETC.)
3. DRIVEWAYS AND SIDEWALKS SHALL BE CONSTRUCTED WITH PORTLAND CEMENT CONCRETE AND INCLUDE 5 SACKS OF CEMENT PER CUBIC YARD OF CONCRETE.
4. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
5. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.

DRIVEWAY DETAIL WITH 6" CURBED STREETS
NTS

02754–02



STANDARD OPEN DITCH DRIVEWAY — PLAN
NTS



STANDARD CONCRETE VALLEY GUTTER SECTION
NTS

NOTES:

1. REINFORCED CONCRETE PIPE (RCP) CULVERTS AND CONCRETE VALLEY GUTTER GRADES SHALL BE SET BY CITY ENGINEER. PROFILE SHOWING THE PROPOSED AND EXISTING DITCH FLOWLINE WILL BE REQUIRED WHERE CONCRETE VALLEY GUTTERS ARE TO BE CONSTRUCTED IN LIEU OF CULVERTS.
2. CULVERT SIZE WILL BE APPROVED BY CITY ENGINEER WITH 24" DIAMETER MINIMUM.
3. SPACING OF TYPE "D" OR "D–1" INLETS SHALL BE DETERMINED BY CITY ENGINEER. SEE DRAWING NO. 02632–07 FOR TYPE "D" OR DRAWING NO. 02632–08 FOR TYPE "D–1".
4. DRIVEWAY MAY BE CONCRETE, ASPHALT OR ANY OTHER MATERIAL WHICH WILL NOT PERMIT WIND OR WATERBORNE EROSION.
5. A 3–FOOT CONCRETE VALLEY GUTTER SECTION SHALL BE CONSTRUCTED THROUGH THE PROPOSED DRIVEWAY WHERE THE CITY ENGINEER DETERMINES THE INSTALLATION OF DITCH CULVERTS TO BE IMPRACTICAL DUE TO INSUFFICIENT DEPTH. THE VALLEY GUTTER SECTION WILL BE CONSTRUCTED OF 5–1/2 SACK CEMENT PER CUBIC YARD OF CONCRETE.

DRIVEWAYS WITH CULVERTS OR VALLEY GUTTERS
ON OPEN DITCH TYPE STREETS
NTS

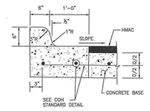
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02754–01B THROUGH 02754–02

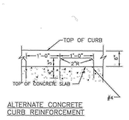
APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

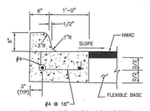
02771–01



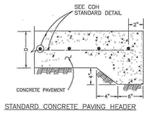
ESPLANADE CURB CONNECTED
TO CONCRETE BASE



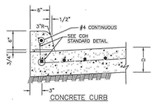
ALTERNATE CONCRETE
CURB REINFORCEMENT



ESPLANADE CURB CONNECTED
TO FLEXIBLE BASE

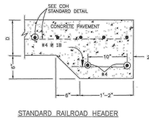


STANDARD CONCRETE PAVING HEADER

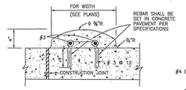


CONCRETE CURB

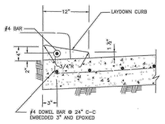
WHEN CONCRETE CURB IS TO BE PLACED EXISTING CONCRETE USE BASE #4 @ 18x10" LONG, DOWELED AND SET IN EPOXY GROUT, SET #4 DOWELS, 20" LONG AT 10" C–C WHEN PAVEMENT SECTION POURED.



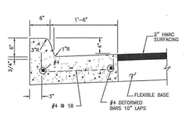
STANDARD RAILROAD HEADER



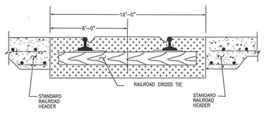
MOUNTABLE CURB



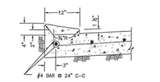
4–INCH x 12–INCH TRANSITION CURB



MONOLITHIC CURB AND GUTTER



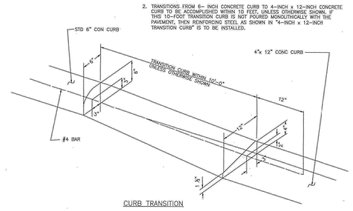
STANDARD RAILROAD CROSSING — SINGLE TRACK



4–INCH x 12–INCH MONOLITHIC CURB

4"x12" MONOLITHIC AND TRANSITION CURB NOTES:

1. 6–INCH CONCRETE CURB TO BE CONSTRUCTED ON ALL ESPLANADES, ISLANDS NON–RESIDENTIAL STREETS, AND RESIDENTIAL STREETS.
2. TRANSITIONS FROM 6– INCH CONCRETE CURB TO 4–INCH x 12–INCH CONCRETE CURB TO BE ACCOMPLISHED WITHIN 10 FEET, UNLESS OTHERWISE SHOWN. IF THIS 10–FOOT TRANSITION CURB IS NOT POURED MONOLITHICALLY WITH THE PAVEMENT, THEN REINFORCING STEEL AS SHOWN IN "4–INCH x 12–INCH TRANSITION CURB" IS TO BE INSTALLED.



CURB TRANSITION

CURB, CURB AND GUTTER AND HEADER DETAILS
NTS

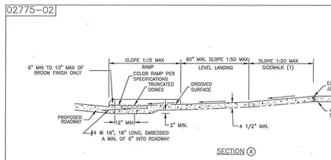
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02771–01

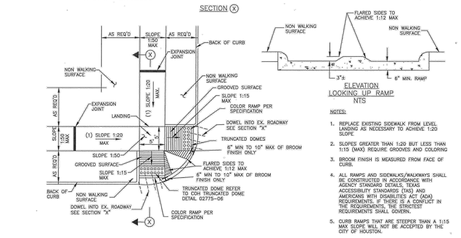
APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

02775–02



SECTION Ⓐ

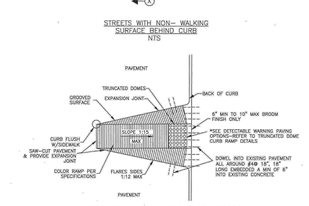


STREETS WITH NON– WALKING
SURFACE BEHIND CURB
NTS

ELEVATION
LOOKING UP RAMP
NTS

NOTES:

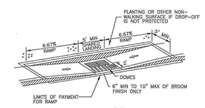
1. REPLACE EXISTING SIDEWALK FROM LEVEL LANDING AS NECESSARY TO ACHIEVE 1:20 SLOPE
2. SLOPES GREATER THAN 1:20 BUT LESS THAN 1:15 (MAX) REQUIRE GROOVES AND COLORING
3. BROOM FINISH IS MEASURED FROM FACE OF CURB.
4. ALL RAMPS AND SIDEWALKS/WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH AGENCY STANDARD DETAILS, TEXAS ACCESSIBILITY STANDARDS (TAS) AND AMERICANS WITH DISABILITIES ACT (ADA) REQUIREMENTS. IF THERE IS A CONFLICT IN THE REQUIREMENTS, THE STRICTEST REQUIREMENTS SHALL GOVERN.
5. CURB RAMPS THAT ARE STEEPER THAN A 1:15 MAX SLOPE WILL NOT BE ACCEPTED BY THE CITY OF HOUSTON.



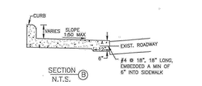
RAMP CONSTRUCTION FOR EXISTING PAVEMENT

WHEEL CHAIR RAMP DETAILS
NTS

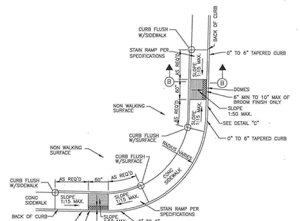
02775–03



DETAIL "C"



SECTION Ⓑ
N.T.S.



SIDEWALK ON BACK OF CURB
N.T.S.

PARALLEL CURB RAMP
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02775–02 THROUGH 02775–03

APPROVED BY: CITY ENGINEER
APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR OF HOUSTON PUBLIC WORKS
EFFECTIVE DATE: JUL–01–2020
FOR CITY OF HOUSTON USE ONLY

SHEET NO.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

Kimley»Horn
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TBPE / FIRM REGISTRATION # F–928

01/17/2025

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CONSTRUCTION DETAILS (1 OF 5)

Job. No. 1821-13-02	Sheet No. C9.0
Drawn By: CSH	
Date: 01/17/2025	

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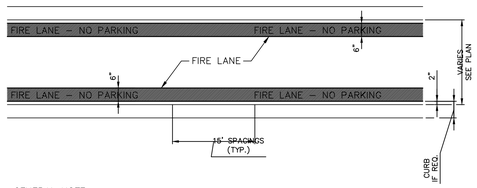
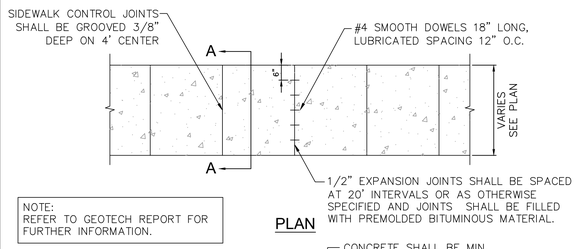


GENERAL NOTE:
1. STRIPING TO BE DONE IN ACCORDANCE WITH CITY STANDARDS.

STRIPING DETAIL NOTES:
1. PAINT:
 1.1. STRIPE SHALL BE FIVE (5) INCHES WIDE PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT.
  A. COLOR SHALL BE "TRAFFIC RED" GLIDDEN NO. 63251 OR EQUAL.
 1.1. LETTERS SHALL BE FOUR (4) INCHES HIGH PAINTED WITH AN EXTERIOR ACRYLIC LATEX PAINT.
  B. COLOR SHALL BE "TRAFFIC WHITE" GLIDDEN NO. 563245 OR EQUAL.
2. APPLICATION:
 2.1. STRIPE MAY BE BRUSHED OR SPRAYED, ONE COAT TO FINISH.
 2.2. LETTERS SHALL BE STENCIL FORMED, BRUSH APPLIED AND SPACED AS DETAILED ON THIS SHEET.

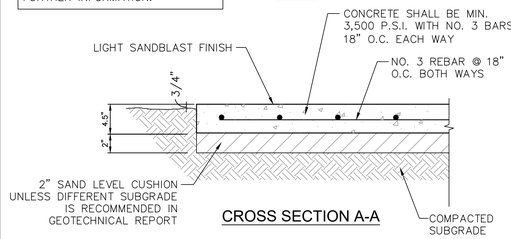
FIRE LANE STRIPING DETAIL

N.T.S.



NOTE:
REFER TO GEOTECH REPORT FOR FURTHER INFORMATION.

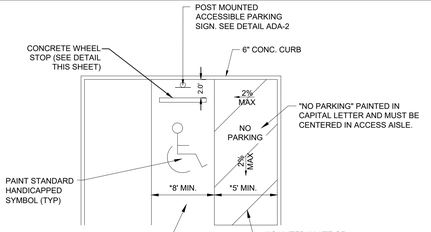
PLAN



CROSS SECTION A-A

CONCRETE SIDEWALK DETAIL

N.T.S.

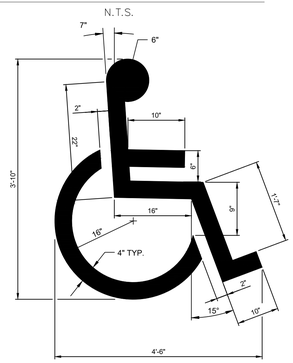


* DIMENSIONS MAY VARY REFER TO DIMENSION CONTROL PLAN

NOTES:
1. MAXIMUM SLOPE FOR ALL PATHS 5%, MAX CROSS FALL IS 2%; FOR THE FIRST FIVE FEET FROM THE DOOR A 2% SLOPE (MAX) MUST BE MAINTAINED.
2. SIGNAGE AND MARKINGS TO BE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS.

ACCESSIBLE PARKING DETAIL

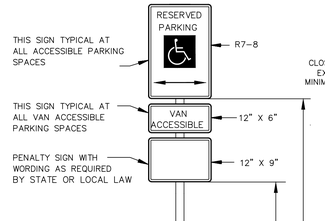
N.T.S.



NOTE:
1. ALL TRAFFIC MARKINGS TO BE THERMOPLASTIC AS PER DIMENSIONS SHOWN.

ACCESSIBLE PARKING SYMBOL DETAIL

N.T.S.



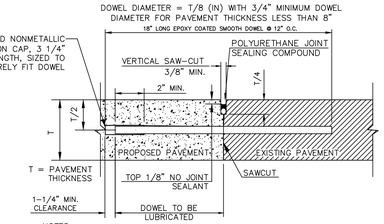
ACCESSIBLE PARKING SIGN

LETTERS, BORDER, AND SYMBOL PAINTED BLUE

SIGN BACKGROUND PAINTED WHITE

NOTES:

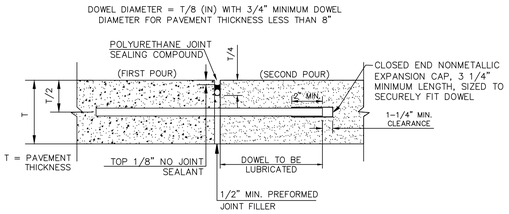
1. PROVIDE IN ACCORDANCE WITH THE TEXAS ACCESSIBILITY STANDARDS (TAS)
2. INSTALL WHERE HANDICAP STALLS ARE INDICATED ON PLAN
3. VAN ACCESSIBLE SIGNAGE ON VAN SPACES ONLY – SEE PLAN FOR LOCATION



NOTES:
1. DOWEL BARS SHALL BE DRILLED 9" DEEP, 12" ON CENTER INTO VERTICAL FACE OF EXISTING PAVEMENT BY USE OF A MECHANICAL RIG; CLEAN HOLES THOROUGHLY.
2. **DRILLING BY HAND OR PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.**
3. COMPLETELY FILL HOLE WITH EPOXY GROUT AND INSERT DOWEL WITH EXPANSION CAPS SHOWN IN DETAIL; INSTALL EXPANSION CAPS ON THE FREE END OF THE DOWELS.
4. DOWELS SHALL BE ALIGNED PERPENDICULAR TO THE JOINT.
5. DRILLING, CLEANING, AND GROUTING SHALL BE PERFORMED PER THE EPOXY MANUFACTURER'S REQUIREMENTS FOR THIS SPECIFIC APPLICATION.
6. FOR EPOXY GROUT, THE HOLE DIAMETER SHALL BE NOT MORE THAN 1/8" LARGER THAN THE DOWEL DIAMETER OR AS DIRECTED BY THE EPOXY MANUFACTURER.
6. FOR CEMENT-BASED GROUT, THE HOLE DIAMETER SHALL BE AT LEAST 1/4" LARGER AND NOT MORE THAN 3/8" LARGER THAN THE DOWEL DIAMETER OR AS DIRECTED BY THE EPOXY MANUFACTURER.

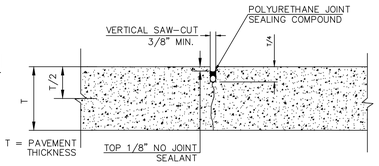
BUTT JOINT

SMOOTH DOWELS AT EXPANSION/CONSTRUCTION JOINTS	
PAVEMENT	LENGTH AND EMBEDMENT
5" PAVEMENT	12" LONG WITH 5" EMBEDMENT @ 12" O.C.
6" PAVEMENT	14" LONG WITH 6" EMBEDMENT @ 12" O.C.
7" PAVEMENT	14" LONG WITH 6" EMBEDMENT @ 12" O.C.



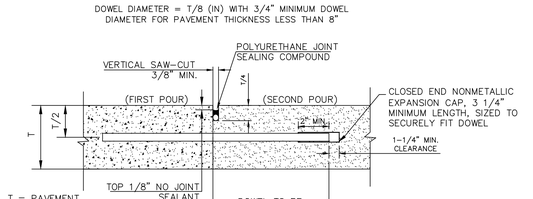
NOTES:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE, DRILLING BY HAND OR PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.
2. TO BE PLACED WHERE PAVEMENT ABUTS ANY STRUCTURE.

TRANSVERSE EXPANSION JOINT



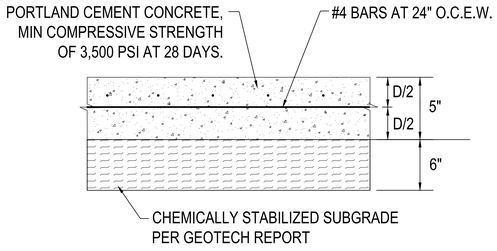
NOTE:
1. TO BE PLACED IN A GRID PATTERN WITH MAX. OF 12.5' O.C.E.W FOR 5" PAVING AND 15' O.C.E.W. FOR 6" AND 7" PAVING.
2. SAW CUT CONTROL JOINTS SHOULD BE CUT WITHIN 4 TO 12 HOURS OF CONCRETE PLACEMENT.

CONTRACTION JOINT



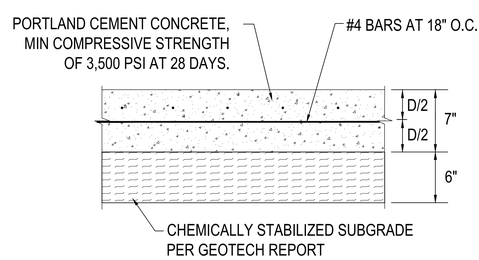
NOTE:
1. DOWELS SHALL BE SUPPORTED BY AN APPROVED DEVICE, DRILLING BY HAND OR PUSHING DOWEL BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.

CONSTRUCTION JOINT



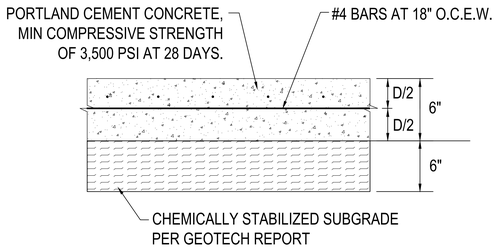
5" PAVEMENT SECTION

NOT TO SCALE



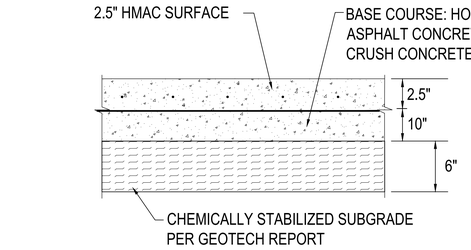
7" PAVEMENT SECTION

NOT TO SCALE



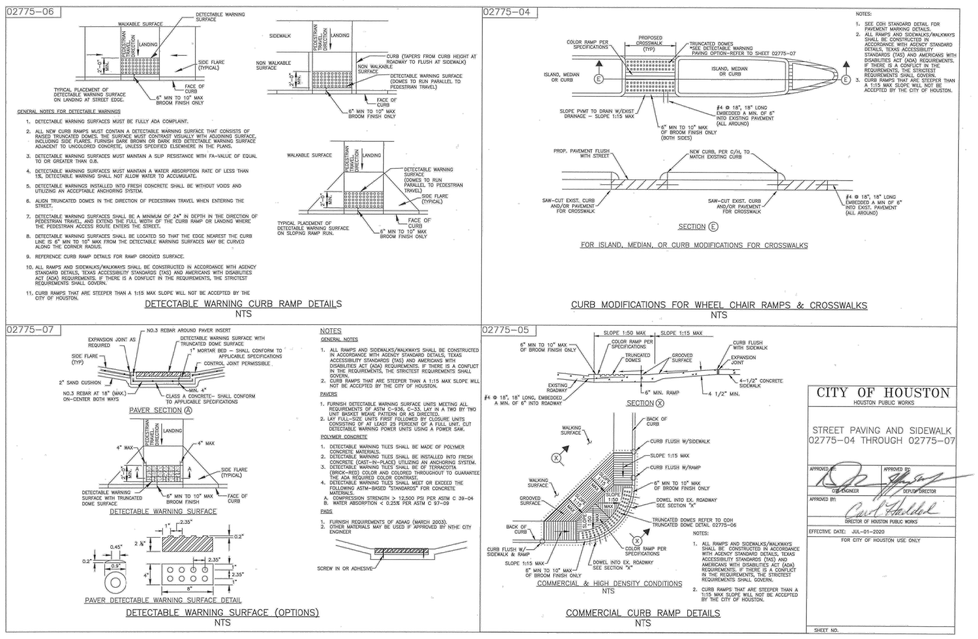
6" PAVEMENT SECTION

NOT TO SCALE

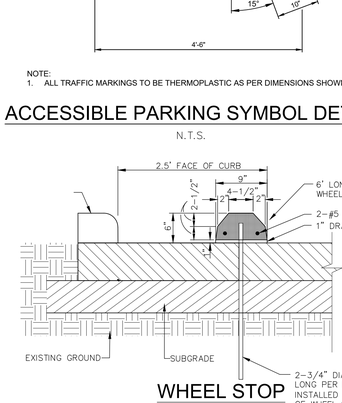


ASHPALT PAVEMENT SECTION

NOT TO SCALE



WHEEL STOP



Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

Kimley»Horn
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01/17/2025
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CONSTRUCTION DETAILS (2 OF 5)

Job. No.	Sheet No.
1821-13-02	C9.1
Drawn By: CSH	
Date: 01/17/2025	

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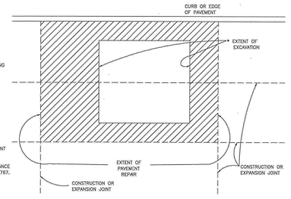
02951–01

CONCRETE PAVEMENT RESTORATION AGE OF PAVEMENT LESS THAN OR EQUAL TO 5 YEARS

NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. REPLACE ENTIRE PANEL WIDTH AND LENGTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL WITHIN EXISTING PAVEMENT. PROVIDE HORIZONTAL DOWELS PER SPECIFICATION SECTION 02952–013 IF EXISTING REINFORCING IS BROKEN OFF.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
6. SPECIALTY PAVEMENTS (IE: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
7. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767.
8. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902–01.



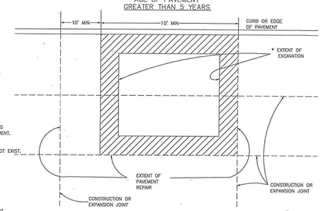
STREET CUT PAVEMENT REPLACEMENT – CONCRETE PAVEMENT LESS THAN 5 YEARS IN AGE
NTS

02951–02

CONCRETE PAVEMENT RESTORATION AGE OF PAVEMENT GREATER THAN 5 YEARS

NOTES:

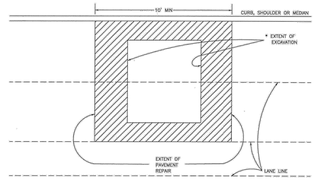
1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. WIDTH:
   REPLACE PANEL WIDTH TO NEAREST CONSTRUCTION OR EXPANSION JOINT BEYOND EDGE OF EXCAVATION.
3. LENGTH:
   a. MINIMUM LENGTH OF PAVEMENT REPAIR ALONG TRAVEL WAY IS 10' FROM THE NEAREST JOINT.
   b. IF EDGE OF EXCAVATION IS LESS THAN 10' FROM EXISTING CONSTRUCTION OR EXPANSION JOINT, REPLACE PAVEMENT TO EXISTING JOINT.
4. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF PANEL REPLACEMENT. PROVIDE HORIZONTAL DOWELS (PER SPECIFICATION SECTION 02952–013) IF REINFORCING IS BROKEN OFF OR DOES NOT EXIST.
5. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
6. MAINTAIN EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
7. SPECIALTY PAVEMENTS (IE: BRICK PAVERS) TO BE REPLACED WITH MATCHING PAVEMENT IN ALL CASES.
8. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATIONS 02764 AND 02767
9. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902–01.



STREET CUT PAVEMENT REPLACEMENT – CONCRETE PAVEMENT OVER THAN 5 YEARS IN AGE
NTS

02951–03

ASPHALT PAVEMENT RESTORATION PAVEMENT OF ALL AGES



NOTES:

1. EXTENT OF PAVEMENT REPAIR SHALL BE PERPENDICULAR AND PARALLEL TO TRAVEL WAY.
2. FLEXIBLE BASE:
   REPLACE BASE TO SAME THICKNESS PLUS TWO INCHES (2") FOR EXTENT OF EXCAVATION. USE APPROVED BASE MATERIAL TYPE.*
3. SURFACE COURSE:
   A. WIDTH:
      SURFACE MILL AND OVERLAY FULL WIDTH OF LANE(S) TO NEAREST LANE DIVIDER BEYOND EDGE OF EXCAVATION.
   B. LENGTH:
      MINIMUM LENGTH OF SURFACE MILL ALONG TRAVEL WAY IS 10'.
   C. REPLACE PAVEMENT MARKINGS IN ACCORDANCE WITH CITY SPECIFICATION 02764 & 02767.
4. (*) EXTENT OF EXCAVATION INCLUDES 18" OVERCUT AS SHOWN ON STANDARD DETAIL 02902–01.

ADDITIONAL REQUIREMENTS FOR ASPHALT OVERLAY ON CONCRETE PAVEMENT:

1. REPLACE CONCRETE FOR EXTENT OF EXCAVATION. REPLACE TO SAME THICKNESS PLUS TWO INCHES (2").
2. WIDTH:
   IF EXCAVATION EXTENDS MORE THAN HALF OF A LANE, REPLACE ENTIRE LANE OF CONCRETE. OTHERWISE USE STANDARD DETAIL 02902–01.
3. SAW CUT AND EXPOSE 15" OF REINFORCING STEEL AROUND EDGE OF CONCRETE REPLACEMENT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS PER SPECIFICATIONS SECTION 02952.
4. REPLACE CURB WHEN ADJACENT LANE IS REPLACED.
5. MAINTAIN CONCRETE EXPANSION JOINTS AT EXISTING LOCATIONS UNLESS OTHERWISE APPROVED BY CITY ENGINEER.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

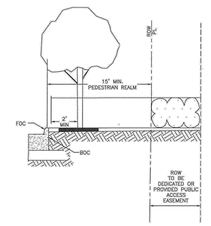
STREET PAVING AND SIDEWALK
02951–01 THROUGH 02951–03

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY:	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFFECTIVE DATE: JUL–01–2020	
FOR CITY OF HOUSTON USE ONLY	

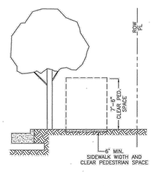
SHEET NO.

STREET CUT PAVEMENT REPLACEMENT – ASPHALT PAVEMENT FOR PAVEMENT OF ALL AGES
NTS

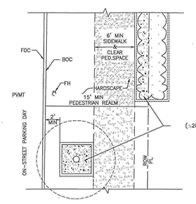
02775–08



ELEVATION

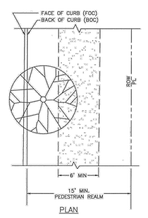


ELEVATION



PLAN

PEDESTRIAN REALM PERFORMANCE STANDARD



PLAN

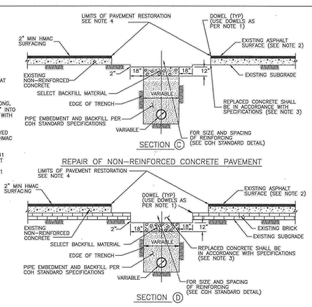
SIDEWALK & CLEAR PEDESTRIAN ZONE MANDATORY MINIMUM REQUIREMENT

NOTES

1. REFER TO CHAPTER 42 OF THE CODE OF ORDINANCES, ARTICLE IV – TRANSIT CORRIDOR DEVELOPMENT.

SIDEWALKS AND CLEAR ZONE TRANSIT CORRIDOR STREET
NTS

02902–02



NOTE:

1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, 24" C.C. DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROC" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED REPLACE WITH SAME THICKNESS OF HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02951–01 FOR REINFORCING STEEL REQUIREMENT
4. REFER TO STANDARD DETAIL 02951–01 FOR PAVEMENT RESTORATION LIMITS.

SECTION (C)

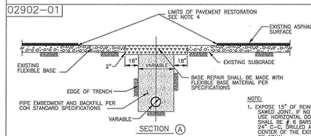
REPAIR OF NON–REINFORCED CONCRETE PAVEMENT

SECTION (B)

REPAIR OF NON–REINFORCED CONCRETE PAVEMENT WITH BRICK

PAVEMENT REPAIR DETAILS FOR STREET CUTS – NON REINFORCED CONCRETE AND BRICK PAVEMENT
NTS

02902–01

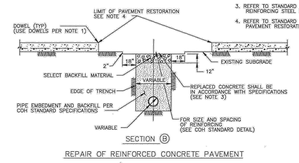


SECTION (A)

REPAIR OF FLEXIBLE BASE PAVEMENT

NOTE:

1. EXPOSE 15" OF REINFORCING STEEL AT PROPOSED SAWED JOINT. IF NO REINFORCING STEEL EXISTS, USE HORIZONTAL DOWELS. HORIZONTAL DOWELS SHALL BE # 6 BARS, 24" LONG, DRILLED AND EMBEDDED 8" INTO THE CENTER OF THE EXISTING SLAB. WITH "PO ROC" OR EQUAL.
2. IF REINFORCED CONCRETE IS OVERLAYED WITH ASPHALT, REPLACE WITH 2" MIN HMAC SURFACING.
3. REFER TO STANDARD DETAIL 02751–01 FOR REINFORCING STEEL REQUIREMENTS
4. REFER TO STANDARD DETAIL 02951–01 FOR PAVEMENT RESTORATION LIMITS.



SECTION (B)

REPAIR OF REINFORCED CONCRETE PAVEMENT

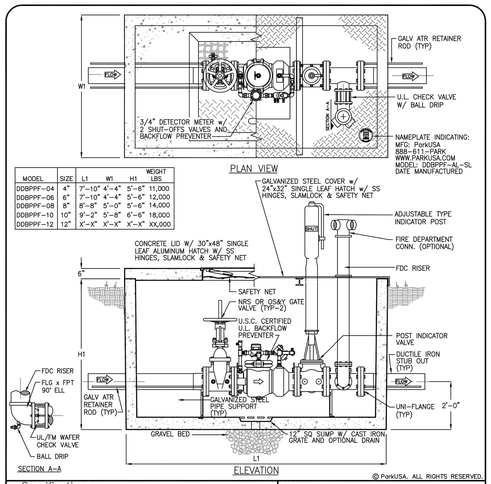
PAVEMENT REPAIR DETAILS FOR STREET CUTS
NTS

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STREET PAVING AND SIDEWALK
02775–08 THROUGH 02902–02

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DEPUTY DIRECTOR
APPROVED BY:	
DIRECTOR OF HOUSTON PUBLIC WORKS	
EFFECTIVE DATE: JUL–01–2020	
FOR CITY OF HOUSTON USE ONLY	

SHEET NO.



MODEL	SIZE	L1	W1	H1	WEIGHT LBS
DDBPPF–04	4"	7'–10"	4'–4"	5'–6"	11,000
DDBPPF–06	6"	7'–10"	4'–4"	5'–6"	12,000
DDBPPF–08	8"	8'–8"	5'–0"	5'–6"	14,000
DDBPPF–10	10"	9'–2"	5'–8"	6'–6"	18,000
DDBPPF–12	12"	X'–X"	X'–X"	X'–X"	XX,000

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Specifications

CONCRETE: Class I/II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

ACCESS COVER: 1/4" steel skid–resistant floor plate welded to 3" angle frame with (2) 3"x2–3/8" I–beam supports. Hatch to be furnished with 316 stainless steel bolts and hinges

HATCHWAY: 1/4" Aluminum diamond plate cover with extruded aluminum frame. Hatch to be furnished with 316 stainless steel slam lock & hinges.

Engineering Data

The backflow assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

FM AWWA UL USC IAPMO CERTIFIED

PROJECT:	
CUSTOMER:	
ENGINEER:	
ARCHITECT:	
ORDER #:	
DATE:	PM:

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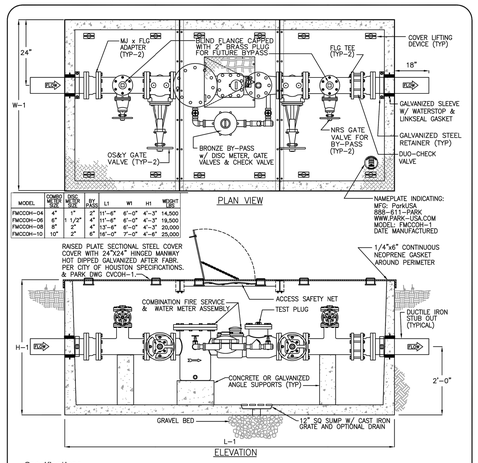
PARK USA DESIGN FOR WATER

DETECTOR CHECK BACKFLOW PREVENTER ASSEMBLY w/ PIV & FDC
MODEL DDBPPF – 4" THRU 10"

PM	DRN	ENG	DWG. NO.	REV.
DATE 2018			DDBPPF–AL–SL	A



MODEL	CANOPY SIZE	BODY SIZE	BY PASS	L1	W1	H1	WEIGHT LBS
FMCCOH–04	4"	11"	2"	3'–11"–6"	6'–0"	4'–3"	14,500
FMCCOH–06	6"	1'–1/2"	4"	11'–6"	6'–0"	4'–3"	19,500
FMCCOH–08	8"	2"	4"	13'–6"	6'–0"	4'–3"	20,000
FMCCOH–10	10"	2"	6"	16'–0"	7'–0"	4'–3"	25,000

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Specifications

CONCRETE: Class I/II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction at floor and first stage of wall with sectional riser to required depth.

REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

ACCESS COVER: All steel fabrication shall be in accordance to AWA D1.1. Steel shall ASTM A36 carbon steel, and hot dipped galvanized after fabrication in accordance to ASTM A123. Standard cover is rated for 50 PSF.

Engineering Data

The meter assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

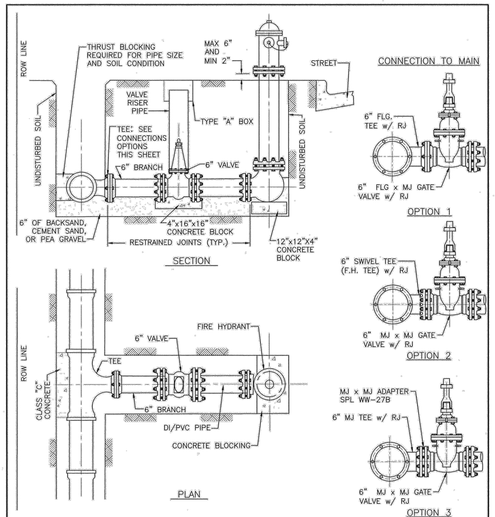
FM AWWA UL USC IAPMO CERTIFIED

PROJECT:	
CUSTOMER:	
ENGINEER:	
ORDER #:	PROJ #:
DATE:	LOCATION:

888.611.PARK
www.ParkUSA.com
PARK USA

FIRE/DOMESTIC COMBINATION METER ASSEMBLY
MODEL FMCCOH – 4" THRU 10"

REVISION	PM	PC	DRN	ENG	DWG. NO.	REV.
	DATE 07/2018				FMCCOH–1	A



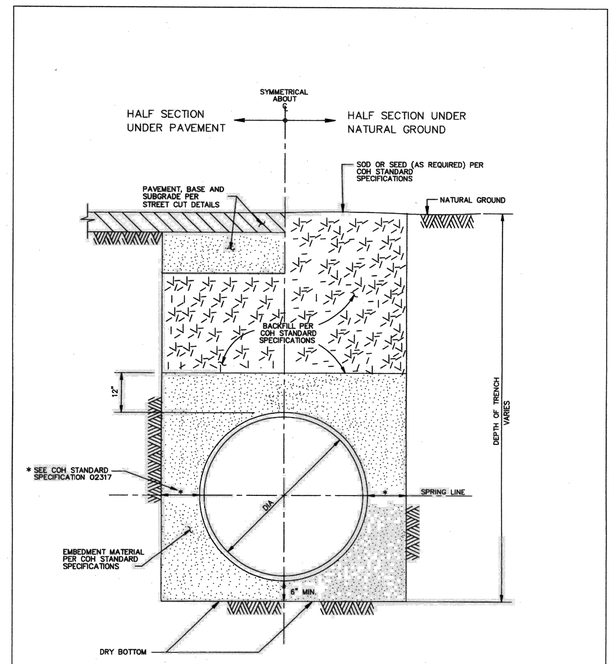
NOTES:

1. LOCATE FIRE HYDRANTS AT POINT OF CURVATURE (PC) OR POINT OF TANGENCY (PT) OF THE INTERSECTION CURB RADIUS, 3 FEET BEHIND CURB OR PROJECTED FUTURE CURB.
2. ON OPEN–DITCH ROADWAYS, SET THE FIRE HYDRANTS WITH IN 5 FEET OF RIGHT–OF–WAY LINES.
3. FIRE HYDRANT STEAMER NOZZLE SHALL FACE THE STREET.
4. LOCATE HYDRANT VALVE IMMEDIATELY ADJACENT TO WATER LINE.
5. ALL PIPING TO BE RESTRAINED JOINTS.

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STANDARD FIRE HYDRANT DETAIL
(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF HOUSTON PUBLIC WORKS
EFF DATE: JUL–01–2021	DWG NO: 02520–01



CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

WATER DISTRIBUTION MAIN BEDDING AND BACKFILL FOR OPEN CUT TRENCHES
(NOT TO SCALE)

APPROVED BY:	APPROVED BY:
CITY ENGINEER	DIRECTOR OF PUBLIC WORKS AND ENGINEERING
EFF DATE: JUL–01–2010	DWG NO: 02317–04

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITION FOR HUMBLE I.S.D HUMBLE, TX

Kimley»Horn
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PHONE: (713) 893–7700
WWW.KIMLEY–HORN.COM
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01/17/2025

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CONSTRUCTION DETAILS (3 OF 5)

Job. No. 1821–13–02	Sheet No. C9.2
Drawn By: CSH	
Date: 01/17/2025	

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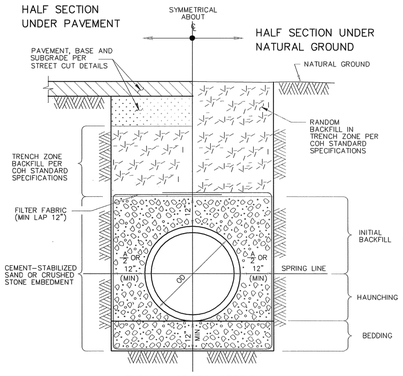
HALF SECTION UNDER PAVEMENT

HALF SECTION UNDER NATURAL GROUND



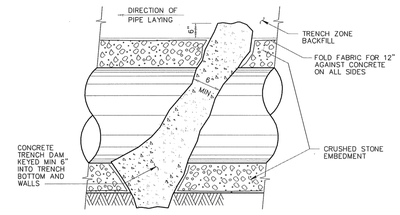
TYPICAL CROSS-SECTION

NOTES:

1. MIN TRENCH WIDTH SHALL BE PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
18" TO 30"	24"
OVER 30"	36"

2. MAX TRENCH WIDTH SHALL BE NOT GREATER THAN MIN TRENCH WIDTH PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
3. TRENCH DAM MAY BE FORMED OR UNFORMED.ACTUAL SHAPE OF CONCRETE TRENCH DAM CROSS SECTION MAY BE DETERMINED BY CONTRACTOR IN FIELD, MEETING MINIMUM THICKNESS AND KEY DEPTH REQUIREMENTS.
4. TRENCH DAM SHALL BE PLACED AT LEAST 5 FT AWAY FROM ANY PIPELINE STRUCTURE.SEE SPECIFICATIONS FOR OTHER REQUIREMENTS.
5. PLACE TRENCH DAMS IN CLASS I EMBEDMENTS AT THE MIDPOINT OF LINE SEGMENTS LONGER THAN 100 FEET BETWEEN MANHOLES.
6. CEMENT-STABILIZED SAND IS PREFERRED FOR EMBEDMENT, BUT CRUSHED STONE MAY BE USED ONLY WHEN SPECIFIED ON THE PLANS.



LONGITUDINAL SECTION ALONG PIPE ℄ AT EMBEDMENT TRENCH DAM

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER EMBEDMENT AND TRENCH ZONE BACKFILL FOR DRY OR WET STABLE TRENCH

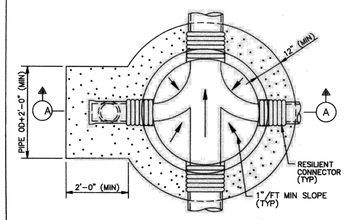
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

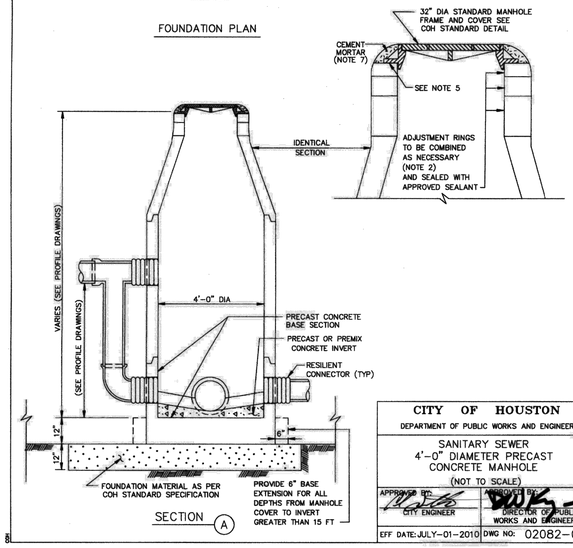
EFF DATE: JUL-01-2016 DWG NO: 02317-01

NOTES:

1. DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED.
2. PRECAST CONCRETE RINGS SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
3. MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS. MIN THICKNESS 5".
4. MANHOLE DROP AND INTERSECTING PIPES SHALL BE INSTALLED ONLY WHEN CALLED FOR IN PLAN AND PROFILE DRAWING.
5. SEAT MANHOLE FRAME IN SEALANT PER COH STANDARD SPECIFICATION.
6. ECCENTRIC PRECAST CONCRETE MANHOLE MAY BE USED.
7. OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
8. MIN REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8 EW.



FOUNDATION PLAN



SECTION

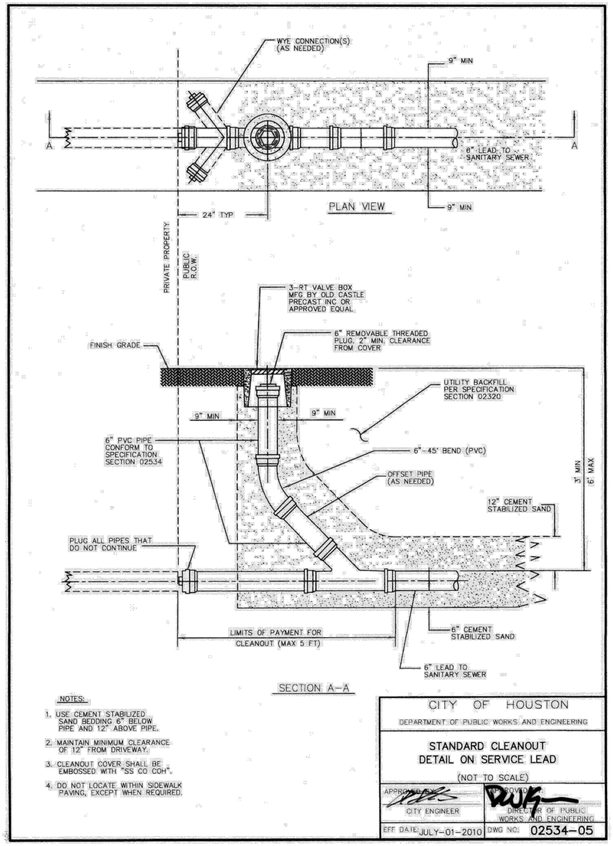
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER 4'-0" DIAMETER PRECAST CONCRETE MANHOLE

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 02082-02



NOTES:

1. USE CEMENT STABILIZED SAND BEDDING 6" BELOW PIPE AND 12" ABOVE PIPE.
2. MAINTAIN MINIMUM CLEARANCE OF 12" FROM DRIVEWAY.
3. CLEANOUT COVER SHALL BE EMBOSSED WITH "SS CO COH".
4. DO NOT LOCATE WITHIN SIDEWALK PAVING, EXCEPT WHEN REQUIRED.

CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

STANDARD CLEANOUT DETAIL ON SERVICE LEAD

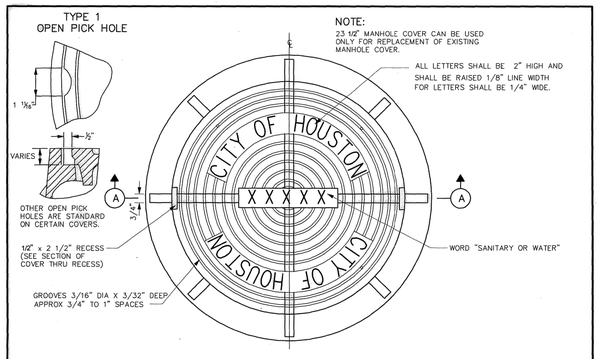
(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

EFF DATE: JULY-01-2010 DWG NO: 02534-05

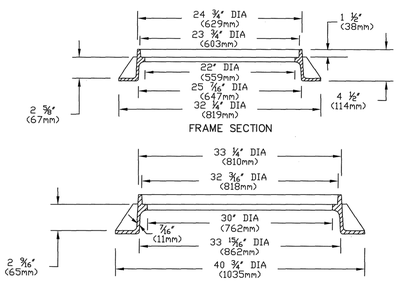
TYPE 1
OPEN PICK HOLE

NOTE:
23 1/2" MANHOLE COVER CAN BE USED ONLY FOR REPLACEMENT OF EXISTING MANHOLE COVER.



PLAN

23 1/2" MANHOLE COVER WITH FRAME



FRAME SECTION

SECTION A

32" MANHOLE COVER WITH FRAME

1) NOTE: APPROXIMATE WEIGHTS.
FRAME- 170 LBS 77 kg
COVER- 270 LBS 123 kg
UNIT- 440 LBS 200 kg
2) MATERIAL- GRAY IRON ASTM A48 CL35B
3) CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4) MODEL V-14240 ASY OR APPROVED EQUAL

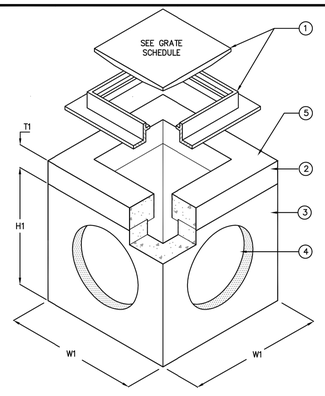
CITY OF HOUSTON
DEPARTMENT OF PUBLIC WORKS AND ENGINEERING

SANITARY SEWER AND WATER MANHOLE FRAME AND COVER

(NOT TO SCALE)

APPROVED BY: CITY ENGINEER — APPROVED BY: DIRECTOR OF PUBLIC WORKS AND ENGINEERING

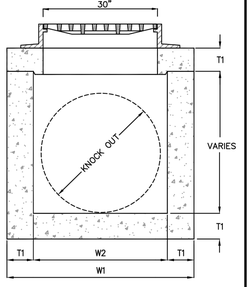
EFF DATE: JUL-01-2016 DWG NO: 02090-01



ISOMETRIC VIEW

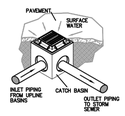
GRATE SCHEDULE

GRATE = 200 lbs OPEN AREA = 489 in²	MODEL No. V4880-1
GRATE = 240 lbs OPEN AREA = 434 in²	MODEL No. V4880-3
GRATE = 270 lbs OPEN AREA = 387 in²	MODEL No. V4880-4



SECTION VIEW

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	CAST IRON FRAME & GRATE
2	1	TOP SECTION
3	1	PRECAST CONCRETE BASIN SECTION
4	4	THIN WALL KNOCKOUT ON ALL 4 SIDES, SEE KO DIMENSION FOR MAXIMUM PIPE O.D.
5	1	NAMEPLATE MFG: ParkUSA 888-611-PARK WWW.PARKUSA.COM MODEL: CB4880



NOTE:
RISER SECTION AVAILABLE IN 6" TO 12" DEPTHS.

MODEL	W1	W2	H1	H2	T1	T2	KO	GRATE SIZE	OPEN AREA	WEIGHT LBS
CB-30	42"	30"	42"	36"	6"	6"	30"	32"x32"x2"	490	3,675
CB-36	48"	36"	42"	36"	6"	6"	32"	38"x38"x2"	693	4,585
CB-48	60"	48"	54"	48"	6"	6"	48"	38"x38"x2"	693	7,250
CB-60	72"	60"	66"	60"	6"	6"	60"	38"x38"x2"	693	10,500
CB-72	84"	72"	78"	72"	6"	6"	72"	38"x38"x2"	693	15,350
CB-84	96"	84"	78"	72"	6"	6"	72"	38"x38"x2"	693	19,500

SPECIFICATIONS

CONCRETE : CLASS I/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH. RATED FOR H-20 LOADING.

REINFORCEMENT: GRADE 60 REINFORCED WITH STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30.

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PROJECT: .			
CUSTOMER: .			
ENGINEER: .			
ORDER #: .		PROJ #: .	
DATE: .		LOCATION: .	

PARK USA
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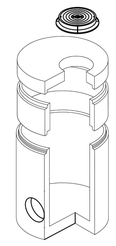
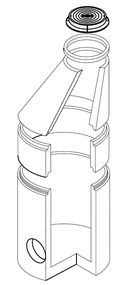
TYPE-A GRATE INLET
MODEL CB4880 30" THRU 84"

PM	PC	DRN	ENG	DWG. NO.	REV.
-	-	-	-	CB4880-1	-
DATE 01/2019					



SHOWN w/ FLAT TOP



SHOWN w/ ECCENTRIC CONE

OPTIONS

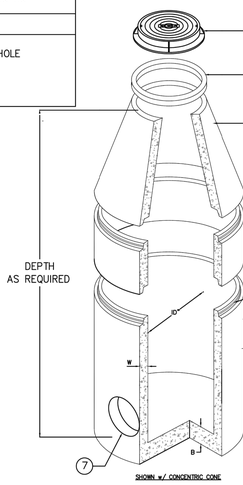
- STEPS
- EXTENDED LIP BASE
- COATINGS
- BOTTOM

KEYED NOTES		
MARK	QTY	DESCRIPTION
1	1	CAST IRON MANHOLE FRAME & COVER
2	1	3" THICK ADJUSTMENT RINGS AS REQUIRED. FLAT TOPS ARE ARE AVAILABLE.
3	1	CONCENTRIC CONE
4	1	RISER SECTIONS AVAILABLE IN VARYING HEIGHTS.
5	1	48" USES O'RING, OTHER SIZES USE RAMNEK JOINT SEALANT
6	1	BASE SECTION, KNOCKOUTS AS REQUIRED.
7	1	HOLES AS REQUIRED
8	1	NAMEPLATE INDICATING: PRECAST CONCRETE MANHOLE MFG: ParkUSA 888-611-PARK WWW.PARKUSA.COM MODEL PCMHST

DIMENSIONS AND WEIGHTS			
I.D. SIZE (in)	W (in)	B* (in)	RISER W/A/F (lb)
48"	5"	6"	868
60"	6"	6"	1300
72"	6"	6"	1811
84"	6"	6"	2350
96"	6"	6"	3090
120"	8"	6"	3500
120"	8"	6"	3500

*MIN. THICKNESS BELOW INVERT

1. LIFTING INSERTS AS REQUIRED.
2. ALL JOINTS SHALL BE SEALED w/ RAM-NEK JOINT SEALANT
3. STRUCTURE TO BE PLACED ON MIN. 6" STABILIZED BASE.



SHOWN w/ CONCENTRIC CONE

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SPECIFICATIONS

CONCRETE : CLASS I/II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. RATED FOR H-20 LOADING.

REINFORCEMENT: STRUCTURAL REINFORCEMENT CONFORMING TO ASTM-C-478.

C.I. CASTINGS: CAST IRON FRAMES AND GRATES ARE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30.

PROJECT: .			
CUSTOMER: .			
ENGINEER: .			
ORDER #: .		PROJ #: .	
DATE: .		LOCATION: .	

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PRECAST CONCRETE MANHOLE
STORM SEWER-MODEL PC MHST - 48" THRU 120"

PM	PC	DRN	ENG	DWG. NO.	REV.
-	-	-	-	PC MHST-1	-
DATE 01/2019					

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

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CONSTRUCTION DETAILS (4 OF 5)

Job. No.	Sheet No.
1821-13-02	C9.3
Drawn By: CSH	
Date: 01/17/2025	

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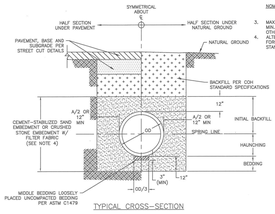
02317-03

NOTES:
1. THIS DETAIL MAY BE USED ONLY FOR DRY STABLE TRENCH CONDITIONS PER COH STANDARD. SEE COH STANDARD SPECIFICATION FOR DEFINITION OF DRY STABLE TRENCH CONDITIONS.
2. MIN. TRENCH WIDTH SHALL BE: PIPE OD PLUS AN ALLOWANCE "A" FOR THE NOMINAL PIPE SIZE:

NOMINAL PIPE SIZE	"A"
12" TO 30"	24"
OVER 30"	36"

3. MAX. TRENCH WIDTH SHALL BE NOT GREATER THAN PIPE OD PLUS 24 INCHES, UNLESS OTHERWISE NOTED.
4. ALTERNATIVE EMBEDMENT BACKFILL MATERIALS FOR CRUSHED STONE ARE ALLOWED. SEE COH STANDARD SPECIFICATIONS.

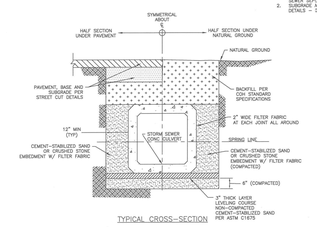


TYPICAL CROSS-SECTION

SANITARY OR STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317-05

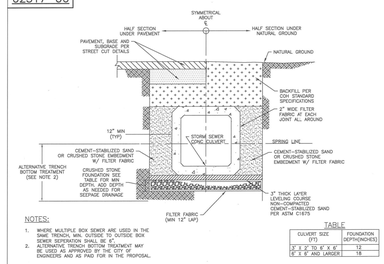
NOTES:
1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEPARATION SHALL BE 4".
2. SUBGRADE AND PAVEMENT FOR STREET CUT DETAILS = 02851.



TYPICAL CROSS-SECTION

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL FOR DRY STABLE TRENCH
NTS

02317-06



NOTES:
1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEPARATION SHALL BE 4".
2. ALTERNATIVE TRENCH BOTTOM TREATMENT MAY BE USED AS APPROVED BY THE CITY OF ENGINEERS AND AS PAID FOR IN THE PROPOSAL.

CULVERT SIZE (T1)	FOUNDATION (DEPTH=D1)
3' x 2' TO 6' x 6'	12
6' x 6' AND LARGER	18

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL WITH SEAL SLAB
NTS

02317-07

NOTES:
1. WHERE MULTIPLE BOX SEWER ARE USED IN THE SAME TRENCH, MIN OUTSIDE TO OUTSIDE BOX SEPARATION SHALL BE 4".
2. REINFORCED CONCRETE SLAB PIPE BEDDING TO BE PLACED IN DRY TRENCH ONLY.
3. CONCRETE SLAB SHALL HAVE A MIN COMPRESSIVE STRENGTH OF 5000 PSI BASED ON MAX DESIGN BEFORE PIPE IS LAID.
4. PRECAST SEAL SLAB MAYBE USED AS APPROVED BY CITY ENGINEER.

PRECAST CONCRETE BOX STORM SEWER BEDDING AND BACKFILL WITH SEAL SLAB
NTS

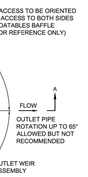
FIRM INFORMATION | ENGINEER'S SEAL

CITY OF HOUSTON
HOUSTON PUBLIC WORKS

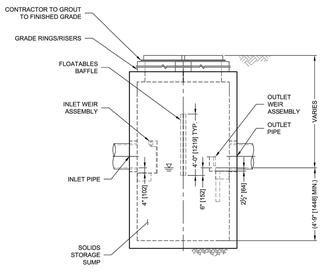
STORM SEWER
02317-03 THROUGH 07

APPROVED BY: CITY ENGINEER | APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL-01-2019
FOR CITY OF HOUSTON USE ONLY

SHEET NO.



PLAN VIEW
TOP SLAB NOT SHOWN



SECTION A-A

SciCloneX™
FOR POST TREATMENT, GO TO www.ContechES.com/SCX

SCICLONEX DESIGN NOTES

THE STANDARD SCI> 05 CONFIGURATION IS SHOWN.



FRAME AND COVER
(MAY VARY)
NOT TO SCALE

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID				
WATER QUALITY FLOW RATE (cfs [L/s])				
PEAK FLOW RATE (cfs [L/s])				
RETURN PERIOD OF PEAK FLOW (yrs)				
RIM ELEVATION				
PIPE DATA:	INVERT	MATERIAL	DIAMETER	
INLET PIPE 1				
INLET PIPE 2				
OUTLET PIPE				
NOTES / SPECIAL REQUIREMENTS:				

GENERAL NOTES
1. CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
2. FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
3. SCICLONEX WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
4. SCICLONEX STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306 AND BE CAST WITH THE CONTECH LOGO.
5. SCICLONEX STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
6. ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES
A. ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
B. CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE SCICLONEX MANHOLE STRUCTURE.
C. CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
D. CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
E. CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
9100 Centre Pointe Dr., Suite 400, West Chester, OH 45069
800-338-1122 513-645-7000 513-645-7993 FAX

SCX-05
SCICLONEX
STANDARD DETAIL

02084-02

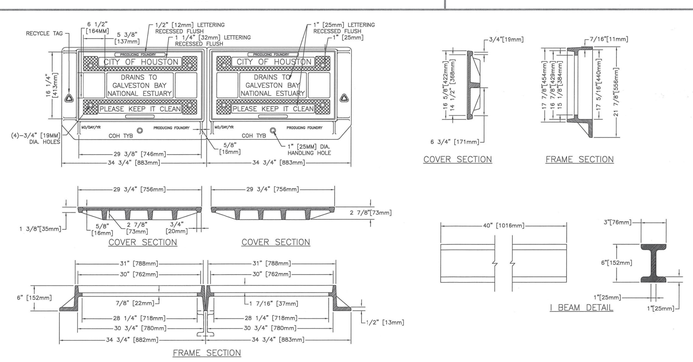
NOTES:
1. APPROXIMATE WEIGHTS:
   FRAME = 170 LBS (77KGS)
   COVER = 270 LBS (123KGS)
   UNIT = 440 LBS (200KGS)
2. MATERIALS = GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V-1420 ASY OR APPROVED EQUAL

STORM SEWER MANHOLE FRAME AND COVER
NTS

02084-03

STORM SEWER TYPE "B" INLET ASSEMBLY
NTS

02084-04



NOTES:
1. APPROXIMATE WEIGHTS:
   FRAME = 125 LBS (57KGS)
   COVER = 120 LBS (55KGS)
   I BEAM = 107 LBS (49KGS)
   UNIT = 597 LBS (271KGS)
2. MATERIALS = GRAY IRON ASTM A48 CL35B
3. CASTING TO MEET M306 PROOF LOAD SPECIFICATION
4. EJIW V-4243 ASY OR APPROVED EQUAL

STORM SEWER TYPE "BB" INLET DOUBLE ASSEMBLY
NTS

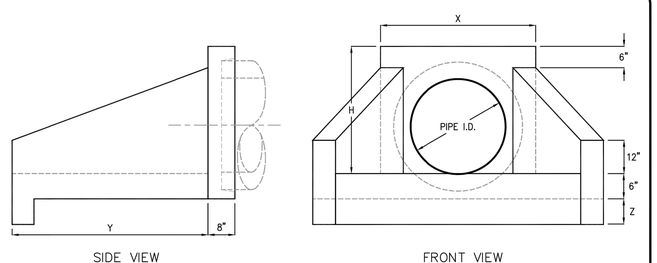
FIRM INFORMATION | ENGINEER'S SEAL

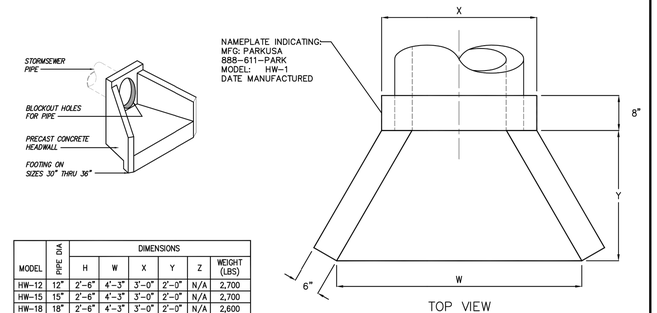
CITY OF HOUSTON
HOUSTON PUBLIC WORKS

STORM SEWER
02084-02 THROUGH 04

APPROVED BY: CITY ENGINEER | APPROVED BY: DEPUTY DIRECTOR
APPROVED BY: DIRECTOR
EFFECTIVE DATE: JUL-01-2019
FOR CITY OF HOUSTON USE ONLY

SHEET NO.





MODEL	PIPE DIA	DIMENSIONS H	W	X	Y	Z	WEIGHT (LBS)
HW-12	12"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-15	15"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,700
HW-18	18"	2'-6"	4'-3"	3'-0"	2'-0"	N/A	2,600
HW-21	21"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,300
HW-24	24"	3'-0"	5'-10"	3'-2"	3'-0"	N/A	4,200
HW-30	30"	3'-6"	7'-6"	4'-1"	4'-0"	9"	6,200
HW-36	36"	4'-1"	9'-3"	4'-8"	5'-0"	9"	8,100
HW-42	42"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000
HW-48	48"	4'-11"	12'-6"	5'-10"	6'-0"	12"	11,000

SPECIFICATIONS

CONCRETE: CLASS II CONCRETE WITH OF DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT IS OF MONOLITHIC CONSTRUCTION INCLUDING WALLS AND FLOOR.

REINFORCEMENT: GRADE 60 REINFORCED. NO. 4 STEEL REBAR TO CONFORM TO ASTM A615 ON REQUIRED CENTERS OR EQUAL. BAR BENDING AND PLACEMENT SHALL WITH THE LATEST ACI STANDARDS.

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PROJECT: .
CUSTOMER: .
ENGINEER: .
ORDER #: . PROJ #: .
DATE: . LOCATION: .

PARK USA
www.parkusa.com 888-611-PARK

HEADWALL FOR STORMWATER PIPING
MODEL HW 12" THRU 48"

PM	PC	DRN	ENG	DWG. NO.	REV.
.	.	.	.	HW-1	

DATE 01/2019

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION
FOR
HUMBLE I.S.D
HUMBLE, TX

Kimley»Horn
© 2024 KIMLEY-HORN AND ASSOCIATES, INC.
11700 KATY FREEWAY, SUITE 800, HOUSTON, TX 77079
PHONE: (281) 558-8700 WWW.KIMLEY-HORN.COM
TBPE / PE REGISTRATION F-928

01/17/2025
STATE OF TEXAS
RASHARD D. HARRIS
142467
LICENSED
PROFESSIONAL ENGINEER

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CONSTRUCTION DETAILS (5 OF 5)

Job. No.	Sheet No.
1821-13-02	C9.4
Drawn By: CSH	
Date: 01/17/2025	

I:\COMMON\CAD\TREATMENT\214 SCICLONE\04 STANDARD DRAWINGS\01 PROCESS\SCX-04-DTL.DWG 4/25/2025 12:03 PM

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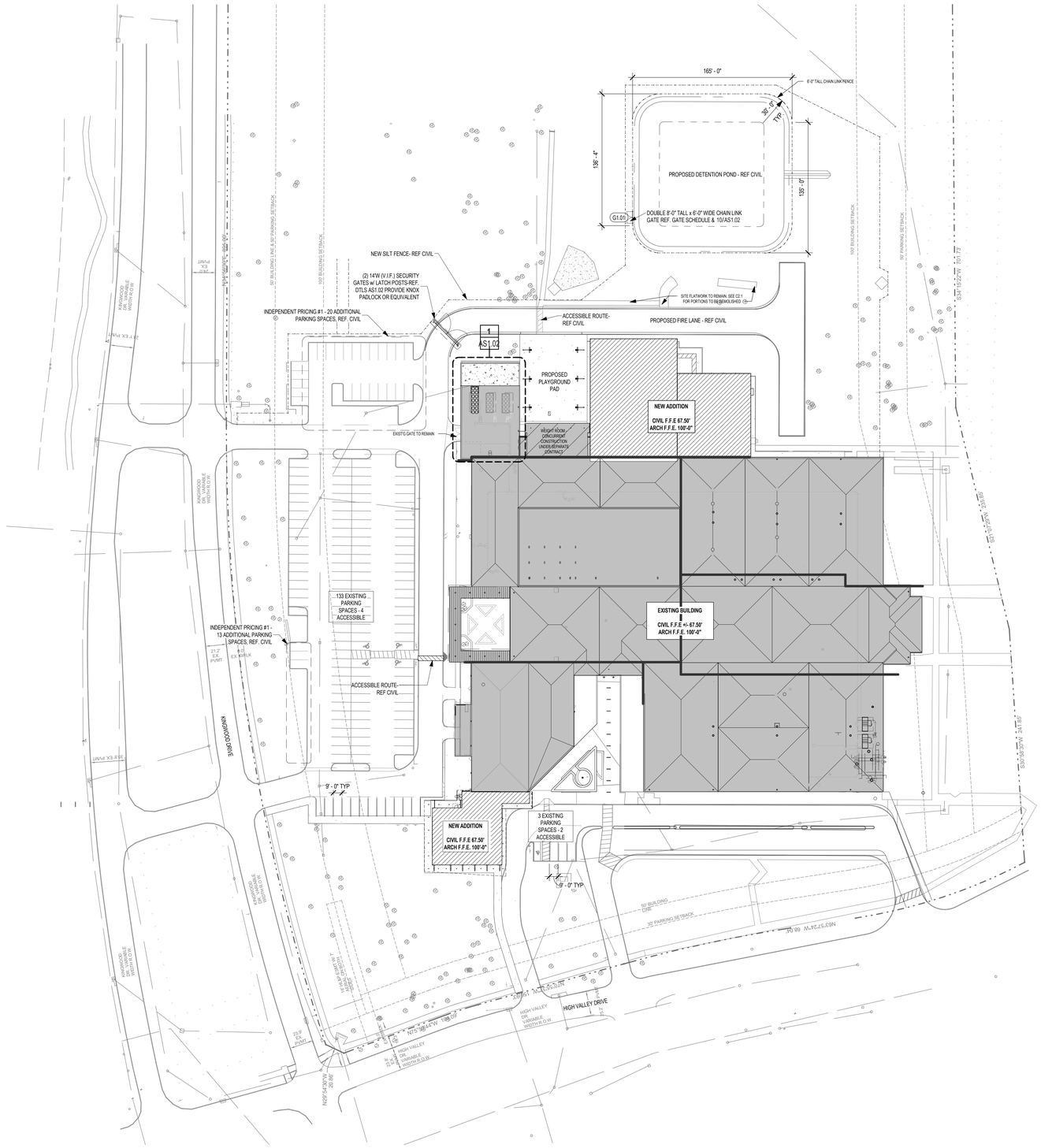


1 ARCHITECTURAL SITE PLAN
1" = 50'-0"

1) ALL SITE INFORMATION INCLUDING, BUT NOT LIMITED TO, PROPERTY LINES, METES & BOUNDS, CONTOURS, EXISTING BUILDINGS, EASEMENTS, TREES, WALKS, DRIVES, FENCES, ETC., TAKEN FROM SURVEY BY:

GLS
455 RICE ROAD, STE 107
TYLER, TX 75703
PHONE (903) 581-3805

2) HUCKABEE AND ASSOCIATES, INC. ALONG WITH THEIR CONSULTANTS HAVE LOCATED, SHOWN , AND NOTED EXISTING SITE FEATURES INCLUDING BUT NOT LIMITED TO PROPERTY LINES, METES AND BOUNDS, GRADE CONTOURS, EXISTING STRUCTURES, EASEMENTS, TREES, FENCES, ROADWAYS, OVERHEAD AND UNDERGROUND UTILITIES, AND OTHER EXISTING FEATURES TO THE BEST OF OUR ABILITY BASED UPON OWNER PROVIDED SURVEYS, EXISTING CONSTRUCTION DOCUMENTS AND OTHER EXISTING DATA COLLECTION IN REGARDS TO THE SPECIFIED SITE. HUCKABEE AND ASSOCIATES, INC. NOR THEIR CONSULTANTS SHALL ASSUME ANY RESPONSIBILITY OR LIABILITIES IN REGARD TO THE ACCURACY OF THE ABOVE MENTIONED OWNER PROVIDED DATA.

3) IF THE CONTRACTOR FINDS ANY DISCREPANCY BETWEEN EXISTING CONDITIONS AND THOSE WHICH ARE SHOWN ON THE PLANS, HE SHALL IMMEDIATELY CONTACT THE ARCHITECT.

4) THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH ALL UTILITY ENTITIES TO LOCATE AND MARK ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION.

5) THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL EXISTING CONDITIONS.

6) REF. SHEET AS2.01 FOR DETAILS AND OTHER SITE IMPROVEMENT DETAILS.

7) FINISH GRADE AT PERIMETER OF THE BUILDING SHALL BE AS SHOWN ON SITE GRADING PLAN. REF. CIVIL DRAWINGS. SITE GRADES SHALL SLOPE UNIFORMLY AWAY FROM THE BUILDING AND INTERSECT WITH ELEVATIONS SHOWN.

8) REF. CIVIL DRAWINGS FOR ALL SITE DIMENSIONS

9) MAKE ALL SLOPES OF WALKS AND DRIVES COMPLY WITH FINISH ELEVATION SHOWN ON CIVIL DRAWINGS. THE LINE OF SLOPE SHALL FORM STRAIGHT LINES BETWEEN FINISH ELEVATIONS WHEN POSSIBLE AND GRADING CONTOURS WHEN STRAIGHT LINES ARE NOT POSSIBLE. VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECT ON JOB. REF. CIVIL.

10) ALL WALKS AND PLAZAS SHALL BE REINFORCED CONCRETE - REF. CIVIL FOR DETAILS. PROVIDE 1/2" EXPANSION JOINT AS SHOWN BY CIVIL OR AT 25'-0" O.C. MAX. AND AT ALL INSIDE CORNERS. PROVIDE TOOLED CONTROL JOINTS AT 5'-0" O.C.B.W. MAX OR AS SHOWN. SEE CIVIL FOR TYPICAL WALK AND JOINT DETAILS.

11) PROVIDE 1/2" EXPANSION JOINT ALONG BUILDING FOUNDATION OR BRICK WHERE CONCRETE WALK IS PRESENT. REF. CIVIL DRAWINGS FOR TYPICAL DETAIL.

12) PROVIDE 1/2" EXPANSION JOINT ALONG BACK OF CONCRETE CURB WHERE WALK IS PRESENT. REF. CIVIL DRAWINGS FOR CURB DETAILS

13) CONTRACTOR SHALL REMOVE ALL EXISTING OBSTRUCTIONS TO NEW CONSTRUCTION, PAVING, WALKS, AND ALL OTHER SITE IMPROVEMENTS INCLUDING BUT NOT LIMITED TO EXISTING TREES, FENCES, CONCRETE, ROCKS, DEBRIS, POSTS, VEGETATION, UTILITIES (AS NOTED), AND OTHER ITEMS AS NOTED FOR CONSTRUCTION.

14) REF. ELECTRICAL DRAWINGS FOR OUTDOOR LIGHTING REQUIREMENTS.

15) REF. CIVIL DRAWINGS FOR SITE GRADING PLAN, SITE UTILITY PLAN (INCLUDING FIRE HYDRANT LOCATIONS), EROSION CONTROL PLANS, AND CURB AND PAVING REQUIREMENTS AND DETAILS.

16) REF. CIVIL SHEETS FOR SITE GRADING CONTOURS. CONTRACTOR SHALL MAKE ALL CUTS AND FILLS REQUIRED TO ACCOMPLISH ALL WORK SHOWN. GRADE SITE TO TOLERANCES SPECIFIED.

17) REF. CIVIL DRAWINGS FOR THICKNESS AND LOCATIONS OF ALL TYPES OF PAVING.

18) FIRE LANE STRIPING SHALL COMPLY WITH CITY OF HOUSTON REQUIREMENTS AND NFPA.

19) PROVIDE DEDICATED STRUCTURAL CONCRETE FOUNDATION PAD FOR ALL ON-SITE ELECTRICAL TRANSFORMERS PER THE ELECTRICAL SERVICE PROVIDER REQUIREMENTS AND/OR SPECIFICATIONS.

20) PROVIDE DEDICATED STRUCTURAL CONCRETE FOUNDATION PAD FOR ALL ON-SITE GENERATORS AND ANY ASSOCIATED GENERATOR ENCLOSURES.

21) PROVIDE TREE PROTECTION FOR ALL EXISTING TREES LIKELY TO BE IMPACTED DURING CONSTRUCTION.

GENERAL SITE NOTES

PROPERTY DESCRIPTION

1) OWNER INFORMATION
   A. NAME : HUMBLE ISD
   B. ADDRESS: 10203 BIRCHRIDGE DRIVE, HUMBLE, TX 77338

2) PROPERTY INFORMATION
   A. NAME: RIVERWOOD MIDDLE SCHOOL
   B: ADDRESS: 2910 HIGH VALLEY DRIVE, HUMBLE, TX 77345

3) LEGAL DESCRIPTION
   EXISTING MIDDLE SCHOOL

PARKING REQUIREMENTS

AS OBTAINED FROM CITY ORDINANCE, CHAPTER 26, ARTICLE VIII, SECTION 26-492. THE REQUIRED NUMBER OF OFF STREET PARKING SPACES IS DETERMINED AS FOLLOWS:

C.2. JUNIOR HIGH SCHOOL - 1.0 PARKING SPACE PER EVERY 7 OCCUPANTS

PROPOSED ADDITIONS WILL NOT ADD ANY ADDITIONAL OCCUPANTS TO THIS CAMPUS. BAND HALL, GYMNASIUM, AND DANCE STUDIO ARE NOT CONTINUOUSLY OCCUPIED LEARNING SPACES, BUT WILL BE USED BY STUDENTS LEAVING CURRENT CLASSROOMS.

1. EXISTING SPACES
   138 SPACES
   6 ACCESSIBLE SPACES
   142 TOTAL EXISTING SPACES

2. NEW SPACES
   33 SPACES ADDED
   0 ACCESSIBLE SPACES ADDED
   33 TOTAL SPACES ADDED

3. TOTAL SPACES
   169 SPACES
   6 ACCESSIBLE SPACES
   175 TOTAL SPACES

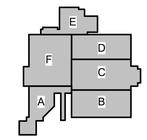
4. REQUIRED SPACES
   187 SPACES
   6 ACCESSIBLE SPACES
   193 TOTAL SPACES

PROPERTY & PARKING NOTES

AS - GATE SCHEDULE

OPENING NUMBER	OPENING HARDWARE SET	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR PANIC HARDWARE	NOTES
G1.01		12' - 0"	6' - 0"	CL GATE (PR)		CHAIN LINK - OWNER TO PROVIDE PADLOCK

PLAN NORTH
TRUE NORTH



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WIGLEY
TX 24614
STATE OF TEXAS
10/24/2025

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ARCHITECTURAL SITE PLAN

PACKAGE | VOLUME

Job No. 1821-13-02
Drawn By: MK
Date: 01.22.2025
Sheet No. 100% QC AS1.01

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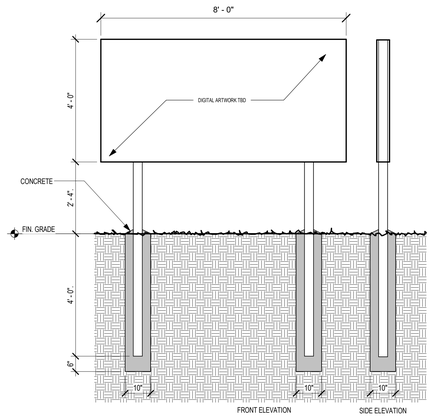
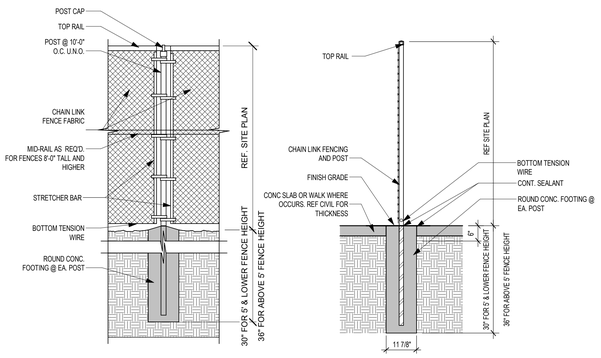
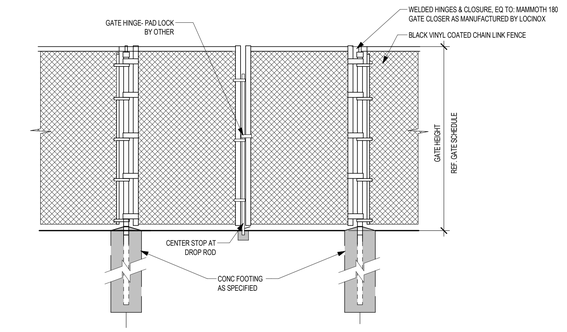
NOTE:
1) CONTRACTOR TO INSTALL ONE SIGN AS LOCATED BY ARCHITECT
2) REFER TO SEC. 01 2100 FOR SIGN ALLOWANCE



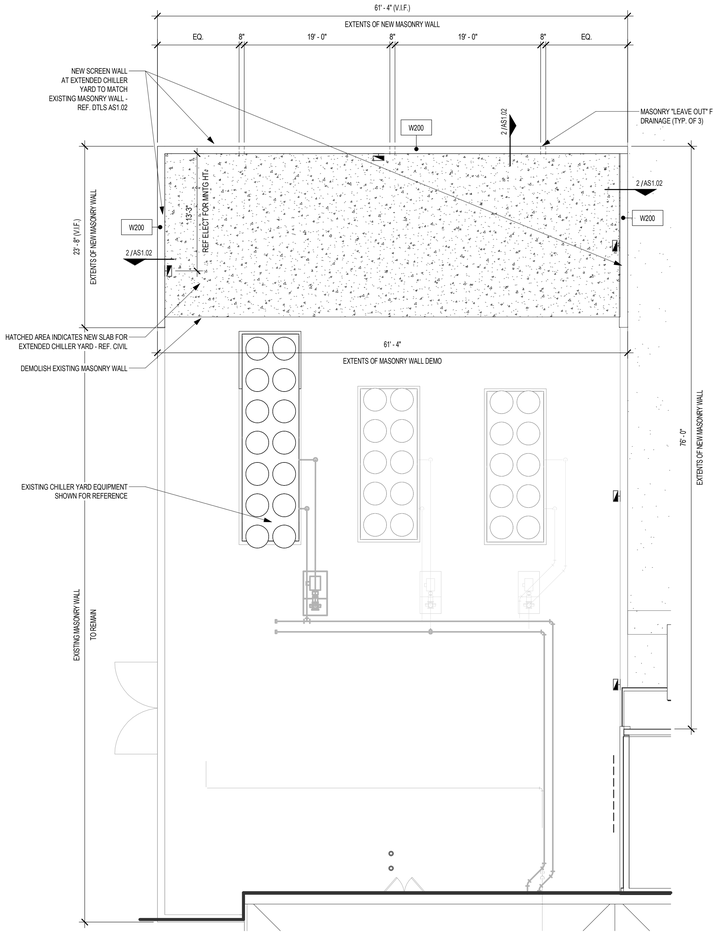
9 PROJECT SIGN
1/2" = 1'-0"



8 TYPICAL CHAIN LINK FENCE DETAILS
1/2" = 1'-0"

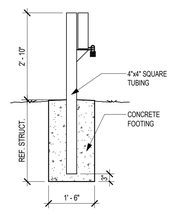


10 CHAIN LINK FENCE DETAIL - ACCESSIBLE EGRESS GATE
1/2" = 1'-0"

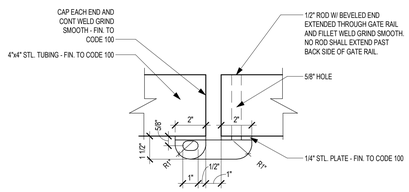


1 ENLARGED PLAN - CHILLER YARD
1/8" = 1'-0" BACK REF: AS1.01

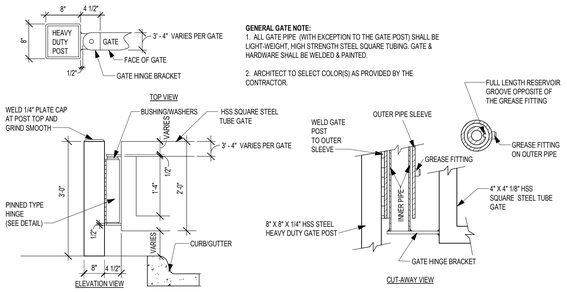
7 LATCH POST DETAIL
1 1/2" = 1'-0"



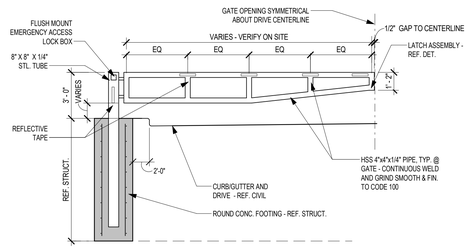
6 SECURITY GATE - LATCH POST
1/2" = 1'-0"



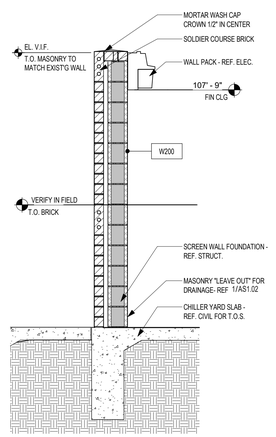
5 LATCH ASSEMBLY PLAN DETAIL
3" = 1'-0"



4 GATE HINGE DETAIL
1/2" = 1'-0"



3 SECURITY GATE ELEVATION
1/4" = 1'-0"



2 CHILLER YARD - SCREEN WALL SECTION
1/2" = 1'-0"

Date
Revision /

Project:
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2910 HIGH VALLEY DR, HUMBLE, TX 77345
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ARCHITECTURAL SITE DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% CC AS1.02
Drawn By: Author	
Date: 01.22.2025	

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Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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PRE-MANUF CANOPY DETAILS

PACKAGE	VOLUME
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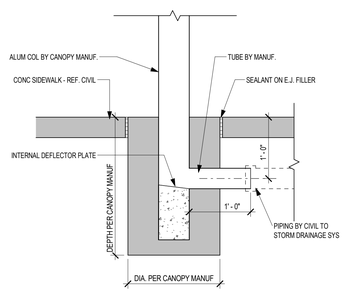
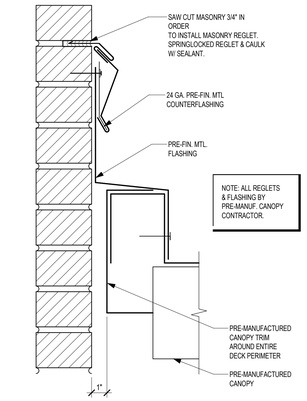
Drawn By: Author	100% QC
Date: 01.22.2025	



3 DETAIL - CANOPY DRAIN BELOW GRADE
N.T.S.



2 FLASHING DETAIL
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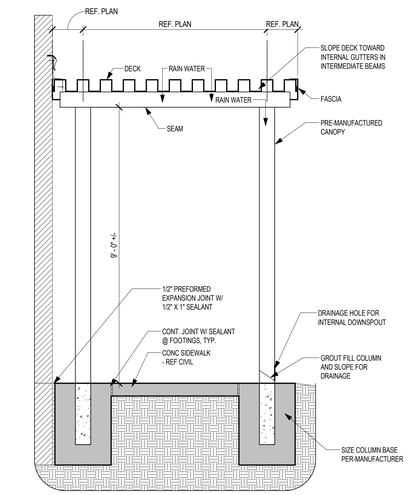

1 PRE-MANUFACTURED CANOPY SECTION
N.T.S.

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GENERAL

1. ALL WORK SHALL CONFORM TO THE MINIMUM STANDARDS OF THE FOLLOWING CODES. THE CODES LISTED SHALL INCLUDE ALL AMENDMENTS AND ADDENDA IN FORCE AT THE DATE OF THE CONTRACT DOCUMENTS.

   2015 EDITION OF THE INTERNATIONAL BUILDING CODE WITH LATEST CITY OF HOUSTON AMMENDMENTS.

2. WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL AND ARCHITECTURAL CONTRACT DOCUMENTS THE STRICTEST REQUIREMENTS SHALL GOVERN.

3. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS AT THE JOB SITE AND REPORT ANY DISCREPANCIES OR INCONSISTENCIES FROM ASSUMED CONDITIONS TO THE ARCHITECT PRIOR TO FABRICATION AND CONSTRUCTION.

4. DETAILS LABELED "TYPICAL DETAILS" ON THE DRAWINGS SHALL APPLY TO ALL SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS APPLY WHETHER OR NOT THEY ARE CUT AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF TYPICAL DETAILS SHALL BE DETERMINED BY THE ENGINEER.

5. DO NOT SCALE THE DRAWINGS.

6. THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.

7. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.

8. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, BRACING AND SHORING FOR LOADS DUE TO HYDROSTATIC, EARTH, WIND OR SEISMIC FORCES, AND CONSTRUCTION EQUIPMENT. OBSERVATION VISITS TO THE SITE BY THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

9. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, PROCEDURES, TECHNIQUES, AND SEQUENCE.

10. PERIODIC SITE OBSERVATION BY THE ENGINEER IS SOLELY FOR THE PURPOSE OF DETERMINING IF THE WORK OF THE CONTRACTOR IS PROCEEDING IN GENERAL ACCORDANCE WITH THE STRUCTURAL CONTRACT DOCUMENTS. THIS LIMITED SITE OBSERVATION SHOULD NOT BE CONSTRUED AS EXHAUSTIVE OR CONTINUOUS TO CHECK THE QUALITY OF THE WORK, BUT RATHER PERIODIC IN AN EFFORT TO GUARD THE OWNER AGAINST DEFECTS OR DEFICIENCIES IN THE WORK OF THE CONTRACTOR.

11. NOTIFY THE STRUCTURAL ENGINEER WHEN DRAWINGS BY OTHERS SHOW OPENINGS, POCKETS, ETC., NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT WHICH ARE LOCATED IN THE STRUCTURAL MEMBERS.

12. DO NOT PENETRATE ANY STRUCTURAL ELEMENTS (BEAMS, COLUMNS, WALLS, SLABS, ETC.) WITHOUT PRIOR WRITTEN APPROVAL OF STRUCTURAL ENGINEER.

13. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS. WHERE NO SPECIFIC DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT.

14. SEE THE ARCHITECTURAL DRAWINGS FOR THE FOLLOWING:

    SIZE AND LOCATION OF DOOR AND WINDOW OPENINGS,
    SIZE AND LOCATION OF INTERIOR AND EXTERIOR NON-LOAD BEARING PARTITIONS, SIZE AND LOCATION OF CONCRETE CURBS, FLOOR DRAINS, SLOPES, DEPRESSED AREAS, CHAMFERS, GROOVES, INSERTS, ETC., SIZE AND LOCATION OF FLOOR AND ROOF OPENINGS, FLOOR AND ROOF FINISHES,
    STAIR FRAMING AND DETAILS, DIMENSIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS, CEILING AND EXTERIOR WALL ASSEMBLIES.

15. SEE THE MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR THE FOLLOWING:

    PIPES, SLEEVES, HANGERS, TRENCHES, WALL, FLOOR AND ROOF OPENINGS, DUCT PENETRATIONS, ETC., EXCEPT AS SHOWN OR NOTED OTHERWISE ELECTRICAL CONDUIT RUNS, BOXES, OUTLETS IN WALLS AND SLABS, CONCRETE INSERTS FOR ELECTRICAL, MECHANICAL, OR PLUMBING FIXTURES, SIZE AND LOCATION OF MACHINE OR EQUIPMENT BASES AND ANCHOR BOLTS FOR MOUNTS.

DESIGN CRITERIA

1. DEAD LOAD MATERIALS ASSUMED IN THE DESIGN ARE SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS.

2. AN ALLOWANCE OF 15 PSF HAS BEEN MADE FOR PARTITIONS AS A UNIFORMLY DISTRIBUTED LIVE LOAD, WHEREVER PARTITIONS ARE USED AND LOCATION SUBJECT TO CHANGE EXCLUDING PUBLIC LOBBIES, CORRIDORS, RESTROOMS, AND PLACES OF PUBLIC ASSEMBLY.

3. LIVE LOADS:

LOCATION	UNIFORM LOAD	CONCENTRATED LOAD
ROOF	20 PSF REDUCIBLE	300 LBS
STAIRS AND EXITS	100 PSF REDUCIBLE	300 LBS
MECHANICAL ROOMS	150 PSF NON-REDUCIBLE	EQUIP. WEIGHT
GROUND FLR, COMMON AREAS	100 PSF REDUCIBLE	
HANDRAILS AND GUARDRAILS	50 PLF OR 200 LBS APPLIED AT TOP RAIL IN ANY DIRECTION. 50 LBS IN ANY DIRECTION APPLIED AT INTERMEDIATE RAILS.	
GRAB BARS		250 LBS ANY DIRECTION

4. WIND LOADS

ULTIMATE WIND SPEED	141 MPH (3-SEC GUST)
NOMINAL WIND SPEED	110 MPH (3-SEC GUST)
RISK CATEGORY	III
EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFF.	+/- 0.18
COMPONENTS & CLADDING	SEE DIAGRAM

5. SEISMIC LOADS

RISK CATEGORY	III
SITE CLASS	D
IMPORTANCE FACTOR	1.25
MAPPED ACCELERATION PARAMETERS	
SS	0.071
S1	0.042
SPECTRAL RESPONSE COEFFICIENTS	
SDS	0.076
SD1	0.066
SEISMIC DESIGN CATEGORY	A
SEISMIC ANALYSIS NOT REQUIRED PER SECTION 11.7 OF ASCE 7-10	

6. SNOW LOADS

GROUND SNOW LOAD	5.0 PSF
EXPOSURE FACTOR	1.0
IMPORTANCE FACTOR	1.10
THERMAL FACTORS	1.0

7. HANDRAILS, GUARDRAILS AND GRAB BARS (INCLUDING ATTACHMENT TO STRUCTURE) SHALL BE DESIGNED BY THE FABRICATOR FOR THE LOADS INDICATED IN THE REFERENCED BUILDING CODE. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF WHERE THE PROJECT IS LOCATED, REPRESENTING THE FABRICATOR.

8. STAIRS SHALL BE DESIGNED BY THE STEEL FABRICATOR FOR CODE REQUIRED LOADS. SHOP DRAWINGS SHALL BE SEALED BY A PROFESSIONAL ENGINEER IN THE STATE OF WHERE THE PROJECT IS LOCATED, REPRESENTING THE FABRICATOR.

FOUNDATION

1. THE FOUNDATION DESIGN IS BASED ON THE FOLLOWING GEOTECHNICAL REPORT (AND ANY ADDENDA) PREPARED BY THE FOLLOWING COMPANY:

   COMPANY TERRACON CONSULTANTS, INC.
   REPORT NO. 92235207
   DATED JULY 20, 2023

   ALL RECOMMENDATIONS THEREIN THAT RELATE TO THE WORK SHOWN ON THESE DRAWINGS SHALL BE FOLLOWED.

2. THE FOUNDATION SYSTEM IS DESIGNED BASED ON THE FOLLOWING

   ALLOWABLE BEARING PRESSURE
   SUSTAINED LOADS 3300PSF
   TOTAL LOADS 5000PSF

3. THE GENERAL CONTRACTOR SHALL NOTIFY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR FOR REVIEW OF FOUNDATION BEARING SURFACE, INSPECTION OF FOUNDATION INSTALLATION, AND PLACEMENT OF REINFORCING STEEL. THE CONTRACTOR SHALL NOT PLACE CONCRETE WITHOUT INSPECTOR'S APPROVAL.

4. THE CONTRACTOR SHALL NOTIFY THE AUTHORIZED INSPECTOR 48 HOURS IN ADVANCE OF ANY MAJOR FOUNDATION POUR.

5. FORM EXPOSED FACES OF GRADE BEAMS.

6. GRADE BEAM BOTTOM STEEL SHALL BE CHAIRED AT 5 FOOT MAXIMUM CENTERS USING BEAM BOLSTERS PROVIDING 3 INCH BOTTOM COVER TO REINFORCING STEEL. BEAM BOLSTERS USED SHALL BE INTENDED FOR SUPPORT ON SOIL.

7. BOTTOM BARS OF GRADE BEAM SHALL BE SPLICED (WHERE REQUIRED) AT THE PIERS ONLY. TOP BARS SHALL BE SPLICED (WHERE REQUIRED) AT THE MIDSPAN OF THE GRADE BEAMS. LAP LENGTH SHALL BE 44 TIMES BAR DIAMETER UNLESS SPECIFIED OTHERWISE. PROVIDE CORNER BARS TO MATCH TOP AND BOTTOM STEEL.

8. ALL REINFORCING STEEL FOR SLABS SHALL BE CHAIRED WITH SLAB BOLSTERS FOR SUPPORT ON SOIL AT 4'-0" MAXIMUM CENTERS EACH WAY FOR REINFORCING FOR SLABS. DEPTH OF CHAIRS SHALL PROVIDE COVER TO REINFORCING AS NOTED ON PLANS/DETAILS.

9. SLAB ON GRADE CONSTRUCTION SHALL FOLLOW THE RECOMMENDATIONS OF GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION ACI 302.1R. PROVIDE (3) #3 X 4'-0" TOP AND BOTTOM AT ALL SLAB ON GRADE RE-ENTRANT CORNERS.

10. SUBGRADE PREPARATION SHALL CONFORM TO THE SOILS REPORT NOTED ABOVE. IF REPORT DOES NOT SPECIFY THE AMOUNT OF SELECT FILL, PROVIDE FILL AS REQUIRED ABOVE TO REDUCE PVR TO 1 INCH.

11. VAPOR RETARDER SHALL HAVE NO MORE THAN 0.01 PERMS AS TESTED BEFORE AND AFTER MANDATORY CONDITIONING (ASTM E 1745 SECTION 7.1 AND SUB-PARAGRAPHS 7.1.2-5), MEET OR EXCEED THE REQUIREMENTS OF ASTM E 1745 CLASS A AND BE NO LESS THAN 15 MILS THICK.

12. ALL VAPOR RETARDER SEAMS SHALL BE OVERLAPPED A MINIMUM OF 6 INCHES AND TAPED WITH MANUFACTURER'S TAPE. ALL PENETRATIONS, BLOCK-OUTS, AND OPENINGS SHALL BE SEALED USING A COMBINATION OF THE VAPOR RETARDER, MASTIC AND MANUFACTURER'S TAPE. DO NOT PENETRATE VAPOR RETARDER WITH FORMWORK STAKES. USE STEGO BEAST FORM STAKES OR EQUIVALENT WHERE REQUIRED.

13. REMOVE ALL VEGETATION, TREE ROOTS, ORGANIC SOIL, EXISTING FOUNDATIONS, PAVED AREAS, AND ANY UNDESIRABLE MATERIALS FROM THE CONSTRUCTION AREA.

14. SCARIFY THE SUBGRADE, ADD MOISTURE, OR DRY AS NECESSARY AND RECOMPACT TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698 (STANDARD PROCTOR TEST).

15. THE SUBGRADE AREAS SHALL THEN BE PROOF-ROLLED WITH HEAVY EQUIPMENT. ANY SOILS DEFLECTING EXCESSIVELY UNDER MOVING LOADS SHALL BE UNDERCUT TO FIRM SOILS AND RECOMPACTED. THE SUBGRADE SHALL BE MOISTURE ADJUSTED AND COMPACTED TO AT LEAST 95% OF STANDARD EFFORT (ASTM D 698) MAXIMUM DRY DENSITY.

16. STRUCTURAL FILL BENEATH THE BUILDING AREA SHALL CONSIST OF SANDY CLAYS WITH A A PLASTICITY INDEX BETWEEN 10 AND 20. STRUCTURAL FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING EIGHT INCHES IN THICKNESS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D698. THE MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN –2% TO +2% OF THE OPTIMUM VALUE.

17. PROVIDE MINIMUM 18 TO 54 INCHES OF SELECT FILL UNDER BUILDING SLAB TO SEPARATE BUILDING SLAB FROM THE EXISTING GRADE TO REACH THE FINAL GRADE ELEVATION. REMOVE EXISTING GRADE AS REQUIRED. CONTRACTOR SHALL RETAIN A TESTING LABORATORY FOR THE DETERMINATION OF SOIL COMPACTION AND CONCRETE TESTING. SUBMIT RESULTS TO ARCHITECT.

18. THE CONTRACTOR SHALL ENSURE THE SELECT FILL MATERIAL IS PROPERLY MIXED TO THE SATISFACTION OF THE GEOTECHNICAL ENGINEER AND/OR TESTING LAB AND SHALL MAKE PROVISIONS FOR SOIL PULVERIZATION OR OTHER MIXING METHODS AS REQUIRED.

19. THE BEARING STRATUM OF EACH DRILLED PIER SHALL BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER OR OTHER AUTHORIZED INSPECTOR PRIOR TO POURING OF CONCRETE.

20. THE BOTTOM ELEVATION OF PIERS IS SHOWN ON THE DRAWINGS FOR BID PURPOSES. THE ACTUAL REQUIRED BEARING ELEVATION MAY VARY AS REQUIRED TO PROVIDE PROPER CAPACITY AS DETERMINED BY THE GEOTECHNICAL ENGINEER. FOOTINGS SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.

21. PROVIDE AND INSTALL 1/8 INCH STEEL TEMPLATES TO ACCURATELY SET VERTICAL PIER REINFORCING STEEL, AND ANCHOR BOLTS FOR STEEL COLUMNS.

22. THE PRESENCE OF SAND SEAMS AND SLICKENSIDES IN THE LAYERS MAY CAUSE SLOUGHING DURING PIER EXCAVATION. THIS MAY REQUIRE THE USE OF TEMPORARY STEEL CASING.

23. REDUCING THE POTENTIAL FOR CAVING OF THE BELL CAN BE ACHIEVED BY LIMITING THE BELL TO SHAFT DIAMETER RATIO TO 2:1 OR TO INSTALL STRAIGHT SHAFT FOOTINGS.

24. THE GROUNDWATER LEVELS MAY FLUCTUATE SEASONALLY AND WITH CLIMATIC CHANGES. SEEPAGE OF GROUNDWATER INTO THE EXCAVATIONS IS POSSIBLE AND SEEPAGE FROM "PERCHED" WATER TRAPPED IN THE SOILS MAY ALSO OCCUR. THE CONTRACTOR SHALL MAKE PROVISIONS FOR DEWATERING THE FOOTING EXCAVATION IF GROUNDWATER IS ENCOUNTERED.

25. CONCRETE SHALL BE PLACED AS SOON AS POSSIBLE AFTER THE FOOTING EXCAVATIONS ARE COMPLETED TO REDUCE THE POTENTIAL FOR WATER SEEPAGE AND TO MINIMIZE THE DISTURBANCE TO THE BEARING AREA. IN NO CASE, SHOULD AN EXCAVATION BE LEFT OPEN OVERNIGHT.

CONCRETE

1. ALL ASPECTS OF WORK RELATING TO THE CONCRETE CONSTRUCTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   CURRENT EDITION OF ACI 301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
   CRSI MANUAL OF STANDARD PRACTICE

2. STRUCTURAL CONCRETE 28-DAY COMPRESSIVE STRENGTHS AND TYPES ARE AS FOLLOWS:

LOCATION	STRENGTH	TYPE	AGGREGATE SIZE
FOUNDATIONS	3000 PSI	NORMAL WT	1 1/2"
SLAB-ON-GRADE	3000 PSI	NORMAL WT	1 1/2"
METAL DECK SLAB	3000 PSI	NORMAL WT	1"

3. THERE SHALL BE NO HORIZONTAL COLD JOINT IN ANY CONCRETE POUR.

4. ADMIXTURES USED SHALL BE COMPATIBLE WITH FLOOR TREATMENTS. FINISH APPLICATOR SHALL APPROVE ADMIXTURES AND CURING COMPOUNDS PRIOR TO USE.

5. CONCRETE FOR SLAB-ON-GRADE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.45. ALL OTHER CONCRETE SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.50. ADJUST CONCRETE STRENGTH BEYOND MINIMUM SPECIFIED ABOVE TO MAINTAIN MAXIMUM WATER-CEMENT RATIO.

6. FLY ASH CONFORMING TO ASTM C618, MAY BE USED UNLESS NOTED OTHERWISE. THE MAXIMUM AMOUNT OF FLY ASH SHALL BE 25% OF THE TOTAL CEMENTITIOUS MATERIAL BY WEIGHT.

7. AT POLISHED OR STAINED CONCRETE, THE FLY ASH ALLOWANCE IN NOTE 6 DOES NOT APPLY. NO FLY ASH IS PERMITTED IN THESE MIXES. ADDITIONALLY, NO AIR ENTRAINMENT IS ALLOWED EITHER. MAX WATER CEMENT RATIO SHALL BE 0.45. WET CURING IS REQUIRED AT POLISHED CONCRETE. USE ONE SOURCE FOR CEMENT, AGGREGATES, AND POZZOLANS THROUGHOUT THE PROJECT. DO NOT USE CALCIUM CHLORIDE-BASED ADMIXTURES. NON-CHLORIDE ADMIXTURES MAY BE USED. GENERAL CONTRACTOR SHALL PROTECT AREAS TO RECEIVE CONCRETE FINISH AT ALL TIMES DURING CONSTRUCTION TO PREVENT OILS, DIRT, METAL, EXCESSIVE WATER, AND OTHER POTENTIALLY DAMAGING MATERIALS FROM AFFECTING THE FINISHED CONCRETE SURFACE.

8. SUBMIT SHOP DRAWINGS TO ARCHITECT AND ENGINEER INDICATING LOCATIONS OF CONCRETE JOINTS TO REVIEW PRIOR TO PLACING CONCRETE. PLACE JOINTS AT LOCATIONS TO MINIMIZE THE EFFECTS OF SHRINKAGE AS WELL AS BEING PLACED AT POINTS OF LOW STRESS.

9. ROUGHEN CONCRETE SURFACES TO 1/4 INCH AMPLITUDE WHERE MASONRY WALLS INTERSECT CONCRETE OR WHERE NEW CONCRETE INTERFACES WITH EXISTING CONCRETE.

10. MECHANICAL PIPES AND ELECTRICAL CONDUITS WHICH PASS THROUGH SLAB-ON-GRADE, CONCRETE JOINTS TO REVIEW PRIOR TO PLACING CONCRETE. PLACE JOINTS AT LOCATIONS TO MINIMIZE THE EFFECTS OF SHRINKAGE AS WELL AS BEING PLACED AT POINTS OF LOW STRESS.

9. ROUGHEN CONCRETE SURFACES TO 1/4 INCH AMPLITUDE WHERE MASONRY WALLS INTERSECT CONCRETE OR WHERE NEW CONCRETE INTERFACES WITH EXISTING CONCRETE.

10. MECHANICAL PIPES AND ELECTRICAL CONDUITS WHICH PASS THROUGH SLAB-ON-GRADE, CONCRETE JOINTS TO REVIEW PRIOR TO PLACING CONCRETE. PLACE JOINTS AT LOCATIONS TO MINIMIZE THE EFFECTS OF SHRINKAGE AS WELL AS BEING PLACED AT POINTS OF LOW STRESS. SLEEVES UNLESS NOTED OTHERWISE ON THE PROJECT SPECIFICATIONS, MECHANICAL OR ELECTRICAL DRAWINGS. IF SLEEVES ARE REQUIRED, INSTALL SLEEVES BEFORE PLACING CONCRETE. DO NOT CUT ANY REINFORCING WHICH MAY INTERFERE WITH SLEEVE PLACEMENT. CORING OPENINGS IN CONCRETE IS NOT PERMITTED. NOTIFY THE ARCHITECT AND ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. NO PIPES OR ELECTRICAL CONDUITS SHALL PASS THROUGH CONCRETE BEAMS OR COLUMNS UNLESS SPECIFICALLY DETAILED.

11. WITH THE EXCEPTION OF SLABS ON GRADE AND CONCRETE ON METAL DECK, THE OUTSIDE DIAMETER OF MECHANICAL PIPES AND/OR ELECTRICAL CONDUITS (OTHER THAN THOSE PASSING THROUGH) SHALL NOT EXCEED 1/3 OF THE SLAB THICKNESS AND SHALL BE CENTERED BETWEEN THE TOP AND BOTTOM REINFORCING UNLESS SPECIFICALLY DETAILED OTHERWISE. CONCENTRATIONS OF MECHANICAL PIPES AND/OR ELECTRICAL CONDUITS SHALL BE AVOIDED EXCEPT WHERE DETAILED OPENINGS ARE PROVIDED. CONDUIT AND PIPE SHALL BE SPACED AT 3" OR 3 DIAMETERS ON CENTER, WHICHEVER IS GREATER.

12. FOR SLABS ON GRADE AND METAL DECK SLABS NO PIPES OR CONDUITS SHALL BE PLACED WITHIN THE INDICATED SLAB THICKNESS AND SHALL BE LOCATED BELOW THE SLAB UNLESS SPECIFICALLY DETAILED OTHERWISE.

REINFORCING STEEL

1. ALL ASPECTS OF WORK RELATING TO THE REINFORCING STEEL SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   CRSI MANUAL OF STANDARD PRACTICE

2. DEFORMED BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.

3. WELDED WIRE FABRIC SHALL CONFORM TO THE REQUIREMENTS OF ASTM A185, YIELD STRENGTH 65,000 PSI. WELDED DEFORMED WIRE FABRIC FOR ASTM A497, YIELD STRENGTH 70,000 PSI. ALL WELDED WIRE FABRIC SHALL BE FURNISHED IN FLAT SHEETS ONLY. WHEREVER WELDED WIRE FABRIC IS SPECIFIED AS REINFORCEMENT, IT SHALL BE CONTINUOUS ACROSS THE ENTIRE CONCRETE SURFACE AND NOT INTERRUPTED BY BEAMS OR GIRDERS AND PROPERLY LAPPED ONE CROSS WIRE SPACING PLUS 2 INCHES.

4. MINIMUM LAP OF WELDED WIRE FABRIC SHALL BE 6 INCHES OR ONE FULL MESH AND ONE HALF, WHICHEVER IS GREATER.

5. WELDING OF REINFORCING IS PERMITTED ONLY WHERE SHOWN ON THE DRAWINGS OR WHEN APPROVED BY THE ENGINEER OF RECORD. WELDING OF REINFORCING BARS SHALL BE WITH LOW HYDROGEN ELECTRODES IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF AWS D1.4.

6. ALL REINFORCING BAR BENDS SHALL BE MADE COLD.

7. REINFORCING DOWELS BETWEEN FOOTINGS AND WALLS OR COLUMNS SHALL BE THE SAME NUMBER, SIZE, SPACING, AND GRADE AS THE SPECIFIED VERTICAL REINFORCING, UNO.

8. IN ADDITION TO ALL OF THE REINFORCING STEEL INDICATED ON THE DRAWINGS, THE CONTRACTOR SHALL PROVIDE FOR AN ALLOWANCE OF A NET TWO TONS OF REINFORCING BARS TO BE FURNISHED, FABRICATED, AND PLACED DURING THE PROGRESSION OF WORK AS MAY BE DIRECTED BY THE ENGINEER OF RECORD.

9. CLEAR COVERAGE OF CONCRETE OVER REINFORCING BARS SHALL BE AS FOLLOWS:

LOCATION OF CONCRETE	MINIMUM COVER
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
CONCRETE EXPOSED TO EARTH OR WEATHER	
#6 THROUGH #18 BAR	2"
#5 BAR AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND	
SLABS, WALLS, JOISTS	3/4"
BEAMS, COLUMNS (INCLUDING TIES)	1 1/2"
SLAB ON GRADE	SEE DETAILS

NON-SHRINK GROUT FOR BASE PLATES AND BEARING PLATES

1. GROUT FOR BASE PLATES AND BEARING PLATES SHALL BE A NON-METALLIC, SHRINKAGE RESISTANT, PREMIXED, NON-CORROSIVE, NON-STAINING PRODUCT CONTAINING PORTLAND CEMENT, SILICA SANDS, SHRINKAGE COMPENSATING AGENTS, AND FLUIDITY IMPROVING COMPOUNDS.

2. GROUT SHALL CONFORM TO CORPS OF ENGINEERS SPECIFICATION FOR NON-SHRINK GROUT, CE-CRD-C621. TWENTY-EIGHT DAY COMPRESSIVE STRENGTH AS DETERMINED BY GROUT CUBE TESTS, SHALL BE 5,000 PSI. MINIMUM THICKNESS OF GROUT UNDER ALL BASE PLATES AND BEARING PLATES SHALL BE 1 INCH, UNLESS SPECIFIED OTHERWISE ON THE DRAWINGS.

3. GROUT SHALL BE PLACED IN A FLUID FLOWABLE STATE UNDER BASE PLATES THAT HAVE A FORM BUILT AROUND THEM FOR GROUT CONFINEMENT. GROUT SHOULD BE CURED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

STRUCTURAL STEEL

1. ALL ASPECTS OF WORK RELATING TO THE DESIGN, FABRICATION, DETAILING, AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF THE AISC STEEL CONSTRUCTION MANUAL LATEST EDITION OF THE ANSI/AWS D1.1

2. STRUCTURAL STEEL MATERIALS SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:

WIDE FLANGE	ASTM A992
ANGLES, PLATES, BARS, CHANNELS	ASTM A36 U.N.O.
PIPES	ASTM A53 GR B
HSS (RECTANGULAR OR SQUARE)	ASTM A500 GR B (Fy = 46 KSI) OR GR C (Fy = 50 KSI)
HSS (ROUND)	ASTM A500 GR B (Fy = 42 KSI) OR GR C (Fy = 46 KSI)
ANCHOR RODS	ASTM F1554-36 U.N.O
HIGH STRENGTH BOLTS	ASTM F3125 GR A325 OR GR F1852 U.N.O.
HEADED STUD ANCHORS (HSA)	ASTM A108
DEFORMED BAR ANCHORS (DBA)	ASTM A496

3. THE DESIGN OF ALL STEEL CONNECTIONS SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED, EMPLOYED BY THE FABRICATOR. CALCULATIONS SEALED BY THE FABRICATOR'S PROFESSIONAL ENGINEER MUST BE SUBMITTED IF REQUESTED.

4. SURFACES WHICH ARE TO BE FIREPROOFED WITH SPRAY-ON FIREPROOFING OR EMBEDDED IN CONCRETE SHALL NOT BE SHOP PAINTED. DO NOT PAINT TOP FLANGES OF COMPOSITE BEAMS NOR SURFACES OF MEMBERS WHERE WELDING OR HIGH STRENGTH FRICTION BOLTING WILL OCCUR. COORDINATE ALL SHOP PAINTING OF STRUCTURAL STEEL WITH ARCHITECT'S PAINTING REQUIREMENTS AS SPECIFIED ON THE ARCHITECTURAL DRAWINGS AND IN THE SPECIFICATIONS.

5. IT IS THE INTENTION OF THE PLANS AND SPECIFICATIONS THAT SHOP CONNECTIONS BE WELDED OR BOLTED AND THAT FIELD CONNECTIONS BE BOLTED, UNLESS DETAILED OTHERWISE ON THE DRAWINGS.

6. ALL TYPICAL BEAM SIMPLE CONNECTIONS SHALL BE STANDARD DOUBLE ANGLE OR SINGLE ANGLE FRAMED BEAM CONNECTIONS UNLESS NOTED OTHERWISE, SHEAR TAB CONNECTIONS MAY BE USED AT LOCATIONS WHERE DOUBLE ANGLE CONNECTIONS ARE NOT POSSIBLE. SEATED BEAM CONNECTIONS SHALL NOT BE USED UNLESS INDICATED ON THE DRAWINGS. PROVIDE FULL DEPTH SHEAR TAB IF BEAM FRAMES ON ONLY ONE SIDE OF A GIRDER.

7. DESIGN CONNECTIONS OF NON-COMPOSITE BEAMS TO SUPPORT A REACTION R (UNLESS SPECIFIED OTHERWISE) EQUAL TO ONE HALF THE TOTAL UNIFORM LOAD CAPACITY FROM THE TABLE OF UNIFORM LOAD CONSTANTS IN THE AISC MANUAL.

8. BEAM CONNECTIONS FOR COMPOSITE BEAMS SHALL BE DESIGNED FOR REACTIONS LISTED IN THE TABLE BELOW. ALL VALUES LISTED IN THE TABLE ARE LOAD RESISTANCE FACTOR DESIGN (LRFD).

BEAM SIZE	REACTION	BEAM SIZE	REACTION
W8	30 KIPS	W21	120 KIPS
W10	30 KIPS	W24	140 KIPS
W12	40 KIPS	W27	160 KIPS
W14	50 KIPS	W30	180 KIPS
W16	80 KIPS	W33	200 KIPS
W18	100 KIPS	W36	220 KIPS

9. BRACING CONNECTIONS SHALL DEVELOP FULL TENSILE FORCES AT EACH END OF THE BRACING MEMBER UNLESS BRACING FORCES ARE SPECIFIED ON THE DRAWINGS.

10. ALL WELDING SHALL COMPLY TO THE AMERICAN WELDING SOCIETY STANDARD (AWS D1.1). ALL WELDED JOINTS SHALL BE DETAILED AS INDICATED BY THE PREQUALIFIED JOINT DETAILS IN THE STRUCTURAL WELDING CODE. WELD LENGTHS CALLED FOR ON THE PLANS ARE THE NET EFFECTIVE LENGTH REQUIRED. WELD SIZE SHALL BE AISC MINIMUM UNLESS A LARGER SIZE IS NOTED. ALL WELDS SHALL USE MINIMUM E70XX ELECTRODES.

11. ALL WELDING SHALL BE PERFORMED BY A WELDER CERTIFIED IN ACCORDANCE WITH THE AWS STANDARDS.

12. MISCELLANEOUS STEEL CONNECTIONS SHALL BE WELDED ALL AROUND WITH AISC MINIMUM FILLET WELD UNLESS A LARGER WELD IS SPECIFIED. STEEL MEMBERS CONTINUOUSLY ATTACHED SHALL BE STITCH WELDED TOGETHER WITH ALL MINIMUM 2" LONG FILLET WELD AT 12" O.C. UNLESS A LARGER WELD OR DIFFERENT GAGE IS SPECIFIED.

13. ALL BOLTS SHALL BE DESIGNED AS BEARING BOLTS WITH THREADS INCLUDED IN THE SHEAR PLANE. ALL BOLTS SHALL BE NEW AND NOT RE-USED. BOLT HOLES IN STEEL SHALL BE 1/16 INCH LARGER THAN NOMINAL SIZE OF BOLT USED, EXCEPT ANCHOR ROD HOLES. MINIMUM BOLT DIAMETER SHALL BE 3/4 INCH. ALL BOLTS SHALL BE TIGHTENED TO A SNUG-TIGHT POSITION, EXCEPT AT BRACES. MOMENT CONNECTIONS AND CONNECTIONS MARKED AS SLIP CRITICAL (SC) SHALL BE TIGHTENED USING LOAD INDICATING WASHERS OR TENSION BOLTS.

14. SHEAR STUDS AND THEIR INSTALLATION SHALL MEET ALL REQUIREMENTS OF AWS D1.1. STUD DIAMETER AND LENGTH SHALL BE 3/4 INCH DIAMETER X 3 7/8" INCH LONG BEFORE WELDING. STUDS SHALL BE WELDED IN THE FIELD (NOT THE SHOP) USING AUTOMATICALLY TIMED STUD WELDING EQUIPMENT. THE TOP FLANGE OF THE BEAM MUST BE UNPAINTED AND FREE OF HEAVY RUST, MILL SCALE AND OTHER FOREIGN MATERIALS.

15. ALL STEEL EXPOSED TO WEATHER OR OUTSIDE THE BUILDING'S WATERPROOFING, SUCH AS BRICK SHELF ANGLES, SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION AS SPECIFIED BY THE STEEL STRUCTURES PAINTING COUNCIL (SSPC). THE ZINC COATING FOR STEEL SHAPES AND PLATES SHALL AVERAGE NOT LESS THAN 2.3 OZ. WITH NO INDIVIDUAL THICKNESS LESS THAN 2.0 OZ.

16. GALVANIZE ALL NUTS, BOLTS, AND WASHERS USED IN THE CONNECTION OF GALVANIZED STEEL.

17. GALVANI

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STEEL ROOF DECK (WITH RIGID INSULATION BOARD)

1. THE STEEL ROOF DECK SHALL BE OF THE TYPE AND GAUGE CALLED FOR ON THE DRAWINGS. STEEL DECK SHALL BE MANUFACTURED FROM STEEL CONFORMING TO ASTM A653 STRUCTURAL QUALITY GRADE 33 OR HIGHER. THE DESIGN, FABRICATION, AND ERECTION OF ALL ROOF DECK SHALL CONFORM TO THE SDI MANUAL FOR COMPOSITE DECKS, FORM DECKS, AND ROOF DECKS.
2. STEEL DECK SHALL BE GALVANIZED WITH A PROTECTIVE ZINC COATING CONFORMING TO ASTM A653-G90.
3. MINIMUM BEARING OF STEEL DECK ON SUPPORTS SHALL BE 2 INCHES. ALL 3 IN DEEP STEEL DECK SHALL HAVE A MINIMUM BEARING OF 3 INCHES. END LAPS OF SHEETS SHALL BE A MINIMUM OF 2 INCHES AND SHALL OCCUR OVER SUPPORTS. SHEETS SHALL BE ATTACHED TO SUPPORTING STEEL MEMBERS BY WELDING AS INDICATED ON THE DRAWINGS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. UPON COMPLETION OF ERECTION, ALL WELDS ON STEEL DECK SHALL BE DE-SLAGGED, CLEANED, AND TOUCHED UP WITH A ZINC RICH PRIMER.
4. PROVIDE ROOF DECK CONSTRUCTION WHICH IS LISTED AND CONFORMS TO THE UL FIRE RESISTANCE DIRECTORY AND BUILDING MATERIALS DIRECTORY. DECK ATTACHMENT SHALL BE INCREASED ABOVE THE MINIMUM SPECIFIED HEREIN AS REQUIRED TO ACHIEVE A CLASS 90 UPLIFT RATING.
5. DECK SUPPORTED ON COLD-FORMED STEEL FRAMING SHALL BE ATTACHED TO EACH SUPPORT MEMBER USING #12 TEK SCREWS AT ALL RIBS WHERE SIDES LAP AND EACH RIB IN BETWEEN.
6. PROVIDE MINIMUM 20 GAUGE RIDGE AND VALLEY PLATES, MINIMUM 20 GAUGE CANT STRIPS, MINIMUM 14 GAUGE SUMP PANS, MINIMUM 20 GAUGE INSIDE OR OUTSIDE CLOSURE CHANNELS, MINIMUM 20 GAUGE BUTT STRIPS AT CHANGE OF DECK DIRECTIONS, MINIMUM 20 GAUGE FILLER SHEETS, AND RUBBER CLOSURES AS REQUIRED TO PROVIDE A FINISHED SURFACE FOR THE APPLICATION OF INSULATION AND ROOFING.
7. DO NOT HANG LOADS FROM METAL DECK. PROVIDE ENGINEERED STRUCTURAL SYSTEM TO HANG ALL LOADS FROM STEEL JOISTS OR BEAMS. THIS INCLUDES BUT IS NOT LIMITED TO METAL STUD SOFFIT OR CEILING FRAMING, MECHANICAL OR PLUMBING EQUIPMENT, ETC.
8. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL, ETC., FOR SIZES AND LOCATIONS OF DECK OPENINGS AND FOR DECK OPENINGS SMALLER THAN 10 INCHES NOT SHOWN ON THE STRUCTURAL DRAWINGS. ROOF OPENINGS LESS THAN 6 INCHES SQUARE OR DIAMETER REQUIRE NO REINFORCEMENT. OPENINGS 6 INCHES TO 10 INCHES INCLUSIVE SHALL BE REINFORCED WITH A 20 GAUGE GALVANIZED PLATE WELDED TO THE DECK AT EACH CORNER AND 6 INCHES O.C. WITH 5/8 INCH DIAMETER PUDDLE WELDS OR SHEET METAL SCREWS. SEE TYPICAL DETAILS FOR FRAMING REQUIREMENTS AT OPENINGS LARGER THAN 10 INCHES. OPENINGS LARGER THAN 6 FEET SHALL BE REFERRED TO THE ENGINEER FOR FRAMING.
9. METAL DECK SPANS SHALL NOT EXCEED THE MAXIMUM CENTER TO CENTER SPANS AS REQUIRED BY SDI. WHERE POSSIBLE, ALL METAL DECK SHALL EXTEND OVER THREE OR MORE SUPPORTS. TWO SPAN DECK SHALL BE USED ONLY WHERE DECK LAYOUT DOES NOT PERMIT THE USE OF THREE SPANS. SINGLE SPAN DECK IS NOT PERMITTED.

COLD-FORMED STEEL

1. ALL ASPECTS OF WORK RELATING TO COLD-FORMED (LIGHT GAGE) STEEL CONSTRUCTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   CURRENT EDITION OF THE AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS, INCLUDING ANY SUPPLEMENTS.
2. COLD-FORMED STEEL MEMBERS SHALL BE OF THE SIZE, GAUGE, AND SPACING SHOWN ON THE DRAWINGS. FLANGE WIDTHS SHALL BE 1 5/8" WITH 1/2" RETURNS UNLESS SPECIFIED OTHERWISE.
3. ALL FRAMING MEMBERS SHALL BE MANUFACTURED FROM CORROSION RESISTANT STEEL CONFORMING TO ASTM A653 (G60). 25 GAUGE THROUGH 18 GAUGE MEMBERS SHALL BE FORMED FROM STEEL HAVING A MINIMUM 33 KSI YIELD POINT PER ASTM A653 GRADE 33. 16 GAUGE THROUGH 12 GAUGE MEMBERS SHALL BE FORMED FROM STEEL HAVING A MINIMUM 50 KSI YIELD POINT PER ASTM A446 GRADE 50.
4. SPLICES IN FRAMING COMPONENTS EXCEPT RUNNERS AND TRACKS SHALL NOT BE PERMITTED.
5. AT LOAD BEARING WALLS SUPPORTING FLOOR OR ROOF JOISTS, LOCATE STUDS DIRECTLY UNDER THE JOISTS OR PROVIDE LOAD DISTRIBUTING MEMBER BETWEEN STUDS TO SUPPORT JOISTS.
6. FASTENING OF COMPONENTS SHALL BE WITH SELF-DRILLING SCREWS OR WELDING. WELDING SHALL BE DONE USING FILLET, PLUG, BUTT OR SEAM WELDS WITH A MINIMUM 3/32 IN. AWS TYPE 6013 WELDING RODS. WELD AREAS SHOULD BE RE-TOUCHED WITH THE APPROPRIATE PAINT OR COLD-GALVANIZING TO RETAIN CORROSION RESISTANCE. ALL WORK SHALL BE COMPLETED BY QUALIFIED WELDERS IN ACCORDANCE WITH AWS D1.3 STANDARDS.
7. PROVIDE HORIZONTAL BRIDGING IN ALL STUD SYSTEMS AT 4'-0" O.C. VERTICALLY FOR AXIALLY LOADED STUDS AND AT 6'-0" O.C. FOR NON-LOAD BEARING STUDS. WELD AT EACH STUD INTERSECTION.
8. SCREWS SHALL BE SELF-DRILLING AND OF TYPE S-12, ASTM C-954, EXCEPT THAT TYPE S, ASTM C-1002 MAY BE USED FOR 20 GAUGE OR 22 GAUGE MATERIAL ONLY. SCREWS SHALL BE 3/8" TO 1/2" LONGER THAT TOTAL MATERIAL THICKNESS.
9. SHEATHING MATERIALS FOR SHEAR WALLS MUST EXTEND AND BE CONNECTED TO THE TOP AND BOTTOM TRACKS.
10. STEEL STRUCTURAL STUD TRACK OF THE SAME GAUGE AS THE STUDS SHALL BE USED AT THE TOP AND BOTTOM OF ALL STUD WALLS UNLESS NOTED OTHERWISE. STUDS SHALL SIT FLAT AGAINST THE WEB OF THE STUD TRACK AND BE ATTACHED WITH 1-#8 X 5/8" SCREW EACH SIDE OF EACH STUD.
11. WEB PUNCH-OUTS SHOULD BE COORDINATED WITH BRACING AND UTILITY REQUIREMENTS. WEB PUNCH-OUTS OR WEB OPENINGS SHALL BE LOCATED A MINIMUM OF 6" OR MEMBER DEPTH, WHICHEVER IS GREATER, FROM STUD OR JOIST BEARING POINTS.
12. ALL FRAMING COMPONENTS SHALL BE CUT SQUARELY FOR ATTACHMENT TO PERPENDICULAR MEMBERS, OR AS REQUIRED FOR AN ANGULAR FIT AGAINST ABUTTING MEMBERS.
13. FOR NON-LOAD BEARING STUDS, CONNECTIONS SHALL ACCOUNT FOR THE DEFLECTION OF THE STRUCTURAL MEMBERS TO WHICH THE STUDS ARE ATTACHED (1" MINIMUM). PROVIDE SLIDING CLIPS AND/OR SLIP TRACKS.
14. JACK STUDS OR CRIPPLES SHALL BE INSTALLED BELOW WINDOW SILLS, ABOVE WINDOW AND DOOR HEADS, AND ELSEWHERE TO FURNISH SUPPORT, AND SHALL BE SECURELY ATTACHED TO CONNECTING MEMBERS.
15. PRIOR TO FABRICATION, THE CONTRACTOR SHALL SUBMIT ERECTION DRAWINGS TO THE ARCHITECT AND ENGINEER OF RECORD FOR REVIEW AND APPROVAL.
16. TRACK SHALL BE SECURELY ANCHORED TO THE SUPPORTING STRUCTURE. ABUTTING PIECES OF TRACK SHALL BE SECURELY SPLICED TOGETHER.
17. THE DESIGN OF ALL COLD-FORMED STEEL SHALL BE PERFORMED BY THE COLD-FORMED METAL CONTRACTOR. THE DESIGN SHALL INCLUDE MEMBER SIZES AND CONNECTION. THE DESIGN SHALL CONSIDER MEMBER DIMENSIONS NOTED ON THE DRAWINGS. THE COLD-FORMED CONTRACTOR SHALL SUPPLY DRAWINGS SEALED BY AN ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED. THE OUT-OF-PLANE DEFLECTION OF STUDS SHALL BE LIMITED TO H/600 (H = UNSUPPORTED HEIGHT OF STUDS) IF USED FOR MASONRY OR STONE BACKUP, H/720 FOR ADHERED VENEER, FOR OTHER CONDITIONS THE DEFLECTION SHALL BE LIMITED TO H/360.
18. COLD-FORMED STEEL FRAMING SHALL HAVE A MINIMUM BASE METAL THICKNESS OF 0.43 (18 GA.) IF USED FOR MASONRY OR STONE BACKUP.
19. DO NOT HANG STUD FRAMING FROM METAL DECK ROOF. FRAMING SHALL BE SUPPORTED BETWEEN ROOF FRAMING MEMBERS.
20. FOR ANCHORED MASONRY VENEER, THE DISTANCE BETWEEN THE INSIDE FACE OF THE VENEER AND THE COLD-FORMED STEEL, MASONRY, WOOD, OR CONCRETE BACKUP SHALL BE AS SPECIFIED BY THE ARCHITECT, BUT NOT GREATER THAN 4 1/2". A MINIMUM 1 INCH AIR SPACE SHALL BE PROVIDED.
21. ANCHORED MASONRY VENEER NOT LAID IN A RUNNING BOND SHALL HAVE A JOINT REINFORCEMENT OF AT LEAST ONE WIRE, OF SIZE W1.7, SPACED AT A MAXIMUM OF 18 INCHES ON CENTER VERTICALLY.

CONCRETE MASONRY

1. ALL MASONRY MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE RECOMMENDATIONS OF THE NATIONAL CONCRETE MASONRY ASSOCIATION AND THE FOLLOWING CODES AND SPECIFICATIONS:

   ACI 530-11 BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES
2. ALL CONCRETE MASONRY UNITS (CMU) SHALL CONFORM TO ASTM C90. THE MINIMUM COMPRESSIVE STRENGTH OF MASONRY (F'M) SHALL BE 2000 PSI AS DETERMINED BY THE UNIT STRENGTH METHOD OR BY THE PRISM TEST METHOD.
3. UNLESS SPECIFIED OTHERWISE, ALL MORTARS AND THE MATERIALS THEREIN SHALL CONFORM TO THE STANDARD SPECIFICATIONS OF MASONRY UNITS, ASTM C270, TYPE S EXCEPT FOR MASONRY IN CONTACT WITH THE EARTH SHALL BE TYPE M.
4. ALL GROUT SHALL BE FINE GROUT CONTAINING SAND, PORTLAND CEMENT, AND LIME (OPTIONAL) FOR GROUT SPACES LESS THAN 2 INCHES IN ANY HORIZONTAL DIRECTION, UNLESS SPECIFIED OTHERWISE. GROUT SHALL ATTAIN A MINIMUM 28 DAYS COMPRESSIVE STRENGTH OF 2500 PSI TESTED ACCORDING TO ASTM C476.
5. CONTROL JOINTS SHALL BE LOCATED PER ARCHITECTURAL DRAWINGS AND SPECIFICATIONS OR AT A MAXIMUM SPACING OF 24 FEET ON CENTERS OR 3 TIMES THE WALL HEIGHT, WHICHEVER IS LESS. ALL MASONRY UNITS SHALL BE PLACED IN RUNNING BOND.
6. PROVIDE HORIZONTAL JOINT REINFORCING (TRUSS OR LADDER TYPE, 9 GAUGE) AT 16 INCHES ON CENTER FOR ALL CMU WALLS LAID IN A RUNNING BOND AND AT 8 INCHES ON CENTER FOR ALL CMU WALL NOT LAID IN A RUNNING BOND. HORIZONTAL JOINT REINFORCING SHALL BE LAPPED A MINIMUM OF 6". REINFORCEMENT SHALL CONFORM TO ASTM A951 AND SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153.
7. ALL HORIZONTAL REINFORCING STEEL IN BOND BEAMS AND LINTEL BLOCK UNITS SHALL BE CONTINUOUS AND UNITS SHALL BE SOLID GROUTED. PROVIDE 48 TIMES BAR DIAMETER LAP FOR HORIZONTAL REINFORCING IN BOND BEAMS. NO SPLICES SHALL BE PROVIDED FOR HORIZONTAL REINFORCING IN BLOCK LINTELS.
8. GROUT CELLS SOLID WHERE VERTICAL BARS ARE SHOWN ON THE DRAWINGS. VERTICAL BARS SHALL EXTEND FROM BOTTOM TO THE TOP OF THE WALL. AT EACH VERTICAL BAR, PROVIDE MATCHING BAR SIZE DOWEL INTO FOUNDATIONS. PROVIDE MINIMUM 48 TIMES BAR DIAMETER SPLICE FOR VERTICAL BARS WHERE REQUIRED AND/OR SHOWN ON THE DRAWINGS UNLESS NOTED OTHERWISE.
9. GROUT LIFTS SHALL TERMINATE TO FORM A GROUT KEY A MINIMUM OF 1 1\2" BELOW MORTAR JOINTS WHEN SUBSEQUENT GROUT LIFTS WILL HAPPEN AFTER PREVIOUS GROUT LIFTS HAVE SET. GROUT KEYS IN BOND BEAMS OR LINTELS SHALL NOT BE PERMITTED.
10. MAXIMUM GROUT POUR HEIGHT SHALL BE 5' - 4" (8 BLOCK COURSES).
11. PROVIDE A BOND BEAM AT THE TOP OF ALL CMU WALLS AND REINFORCE WITH (2) - #5 CONTINUOUS UNLESS NOTED OTHERWISE. UNLESS NOTED OTHERWISE, ALL EXTERIOR BOND BEAMS SHALL BE REINFORCED WITH (2) - #4 CONTINUOUS AND ALL INTERIOR BOND BEAMS SHALL BE REINFORCED WITH (2) - #4 CONTINUOUS. BOND BEAM REINFORCING SHALL NOT BE CONTINUED THROUGH CONTROL JOINT LOCATIONS.
12. PROVIDE BOND BEAMS AT A MAXIMUM OF 48 INCHES ON CENTER IN ALL EXTERIOR AND LOAD BEARING CMU WALLS NOT LAID IN A RUNNING BOND (E.G. STACK BOND) REINFORCED WITH (2) - #5 CONTINUOUS UNLESS NOTED OTHERWISE BOND BEAM REINFORCEMENT SHALL BE DISCONTINUED AT CONTROL JOINTS.
13. AT THE END OF EACH DAY AND DURING INCLEMENT WEATHER, ALL UNFINISHED MASONRY WORK SHALL BE COVERED AT THE TOP OF WALL AND EXTEND DOWN ALL SIDES A MINIMUM OF 24".
14. SEE TYPICAL DETAILS FOR INTERIOR WALL HEIGHT, BRACING AND REINFORCING REQUIREMENTS.
15. MECHANICAL PIPES AND ELECTRICAL CONDUITS WHICH PASS THROUGH MASONRY WALLS DO NOT REQUIRE SLEEVES, UNLESS NOTED OTHERWISE IN THE PROJECT SPECIFICATIONS, MECHANICAL OR ELECTRICAL DRAWINGS. IF SLEEVES ARE REQUIRED, INSTALL SLEEVES BEFORE GROUTING. DO NOT CUT ANY REINFORCING WHICH MAY INTERFERE WITH SLEEVE PLACEMENT. CORING OPENINGS IN GROUTED MASONRY IS NOT PERMITTED. NOTIFY THE STRUCTURAL ENGINEER IN ADVANCE OF CONDITIONS NOT SHOWN ON THE STRUCTURAL DRAWINGS. NO PIPES OR ELECTRICAL CONDUIT SHALL PASS THROUGH MASONRY LINTELS UNLESS SPECIFICALLY DETAILED.
16. ALL REINFORCED MASONRY WALL CORNERS AND INTERSECTIONS SHALL HAVE ONE VERTICAL BAR (MINIMUM) IN GROUTED CELL. REINFORCING SHALL MATCH TYPICAL WALL VERTICAL REINFORCEMENT.
17. FOR ANCHORED MASONRY VENEER, THE DISTANCE BETWEEN THE INSIDE FACE OF THE VENEER AND THE COLD-FORMED STEEL, MASONRY, WOOD, OR CONCRETE BACKUP SHALL BE AS SPECIFIED BY THE ARCHITECT, BUT NOT GREATER THAN 4 1/2". A MINIMUM 1 INCH AIR SPACE SHALL BE PROVIDED.
18. ANCHORED MASONRY VENEER NOT LAID IN A RUNNING BOND SHALL HAVE A JOINT REINFORCEMENT OF AT LEAST ONE WIRE, OF SIZE W1.7, SPACED AT A MAXIMUM OF 18 INCHES ON CENTER VERTICALLY.
19. ALL CONCRETE MASONRY AND MASONRY VENEER SHALL HAVE A MINIMUM BEARING WIDTH OF 2/3 THE WIDTH OF THE MASONRY UNIT.
20. SPECIAL INSPECTION, IN ACCORDANCE WITH THE BUILDING CODE REFERENCED ABOVE, SHALL BE PROVIDED FOR ALL CMU WALLS.

SUBMITTALS

1. THE GENERAL CONTRACTOR SHALL SUBMIT FOR ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:

   CONCRETE MIX DESIGNS AND ACCESSORIES
   REINFORCING STEEL
   STRUCTURAL STEEL (*,^)
   METAL DECK
   BAR JOISTS (^)
   MISCELLANEOUS STEEL
   STEEL STAIR (*,^)
   SKYLIGHT (#)
   CURTAIN WALL (*,#)
   LIGHT-GAGE FRAMING (*,^)
   CONCRETE MASONRY (MATERIAL AND REBAR PLACEMENT PLANS)
   SLAB CONTRACTION JOINT LAYOUT

   ITEMS MARKED (*) SHALL HAVE SHOP DRAWINGS SEALED BY A REGISTERED ENGINEER IN THE STATE WHERE THE PROJECT IS LOCATED. ITEMS MARKED (#) SHALL BE SUBMITTED TO ENGINEER FOR OWNER'S RECORD ONLY AND WILL NOT HAVE ENGINEER'S SHOP DRAWING STAMP. ITEMS MARKED (^) SHALL HAVE SEALED STRUCTURAL CALCULATIONS SUBMITTED TO ENGINEER FOR OWNER'S RECORD.
2. ALL SHOP DRAWINGS MUST BE REVIEWED AND SEALED BY THE GENERAL CONTRACTOR PRIOR TO SUBMITTAL.
3. CONTRACTOR SHALL SUBMIT ELECTRONIC COPIES (E.G. PDFS) OF ALL SHOP DRAWINGS SPECIFIED TO BE RETURNED BY THE ENGINEER.
4. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIAL REQUIRED BY THE CONTRACT DOCUMENTS TO BE FURNISHED SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, REGARDLESS OF WHETHER THE SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED.
5. SUBMIT TWO COPIES OF MANUFACTURER'S LITERATURE FOR ALL MATERIALS AND PRODUCTS USED IN CONSTRUCTION ON THE PROJECT.
6. THE USE OF REPRODUCTIONS OF THESE CONTRACT DOCUMENTS BY ANY CONTRACTOR, SUBCONTRACTOR, ERECTOR, FABRICATOR, OR MATERIAL SUPPLIER IN LIEU OF PREPARATION OF SHOP DRAWINGS SIGNIFIES HIS ACCEPTANCE OF ALL INFORMATION SHOWN HEREIN AS CORRECT, AND OBLIGATES HIMSELF TO ANY JOB EXPENSE, REAL OR IMPLIED, ARISING DUE TO ANY ERRORS THAT MAY OCCUR HEREIN.

THE G.C. SHALL SUBMIT BUILDING SHORING DRAWING THAT ARE SIGNED AND SEALED BY A LICENSED ENGINEER IN THE STATE OF TEXAS TO E.O.R./ ARCH. AND CITY OF HOUSTON. BUILDING SHORING PLANS SHALL BE REVIEWED AND APPROVED BY THE E.O.R./ARCH. PRIOR TO COMMENCEMENT OF BUILDING DEMO WORK.

SPECIAL INSPECTION

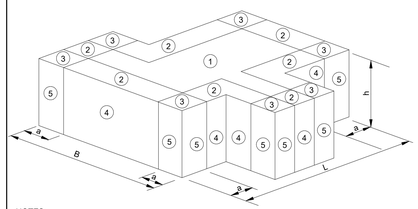
1. ALL ASPECTS OF WORK RELATING TO SPECIAL INSPECTION SHALL CONFORM TO THE FOLLOWING CODES AND SPECIFICATIONS:

   2015 INTERNATIONAL BUILDING CODE (CHAPTER 17).
2. THE OWNER'S SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. PRIOR TO THE BEGINNING OF CONSTRUCTION, THE ARCHITECT (OR ENGINEER) SHALL CALL A PRE-CONSTRUCTION MEETING WITH THE ARCHITECT, ENGINEER, BUILDING OFFICIAL, CONTRACTOR AND SPECIAL INSPECTORS TO REVIEW THE SPECIAL INSPECTION REQUIREMENTS.
4. DUTIES OF THE OWNER'S SPECIAL INSPECTOR INCLUDE (BUT ARE NOT LIMITED TO):
   A. ACKNOWLEDGE THE SPECIAL INSPECTION AND TESTING AGREEMENT PROVIDED BY THE LOCAL JURISDICTION.
   B. THE OWNER'S SPECIAL INSPECTOR SHALL OBSERVE THE WORK FOR CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED TO THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE AND TO THE BUILDING OFFICIAL.
   C. THE OWNER'S SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS FOR EACH INSPECTION TO THE BUILDING OFFICIAL, ARCHITECT, REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE, CONTRACTOR AND (OTHER DESIGNATED PARTIES), IN A TIMELY MANNER, AS ESTABLISHED AT THE PRE-CONSTRUCTION MEETING.
   D. THE OWNER'S SPECIAL INSPECTOR SHALL SUBMIT A FINAL REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE SPECIAL INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE.
5. DUTIES OF THE CONTRACTOR INCLUDE (BUT ARE NOT LIMITED TO):
   A. NOTIFY THE SPECIAL INSPECTOR THAT THE WORK IS READY FOR INSPECTION AT LEAST 24 HOURS BEFORE SUCH INSPECTION.
   B. ALL WORK REQUIRING SPECIAL INSPECTION SHALL REMAIN ACCESSIBLE AND EXPOSED UNTIL IT HAS BEEN OBSERVED AND INDICATED TO BE IN CONFORMANCE BY THE SPECIAL INSPECTOR AND APPROVED BY THE BUILDING OFFICIAL.
   C. PROVIDE THE SPECIAL INSPECTOR WITH ACCESS TO APPROVED CONSTRUCTION DOCUMENTS AT JOBSITE.
   D. MAINTAIN AT THE JOBSITE COPIES OF ALL REPORTS SUBMITTED BY THE SPECIAL INSPECTOR.
6. CONTINUOUS SPECIAL INSPECTION REFERS TO INSPECTIONS BY THE SPECIAL INSPECTOR WHO IS CONTINUOUSLY PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED.
7. PERIODIC SPECIAL INSPECTION REFERS TO INSPECTIONS BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED.
8. SPECIAL INSPECTIONS AND TESTING SHALL BE REQUIRED FOR THE FOLLOWING TYPES OF WORK LISTED BELOW. SPECIAL INSPECTIONS AND TESTING SHALL FOLLOW THE REQUIREMENTS OF THE BUILDING AND MATERIAL CODE REFERENCES AND TABLES. IN THE EVENT OF A CONFLICT BETWEEN REFERENCES, THE OWNER'S SPECIAL INSPECTOR SHALL FOLLOW THE MORE STRINGENT REQUIREMENT.

SOILS	IBC 1705.6 AND TABLE 1705.6, APPROVED GEOTECHNICAL REPORT AND CONSTRUCTION DOCUMENTS
CAST-IN-PLACE DEEP FOUNDATIONS	IBC 1705.8 AND TABLE 1705.8 APPROVED GEOTECHNICAL REPORT AND CONSTRUCTION DOCUMENTS
CONCRETE	IBC 1705.3 AND TABLE 1705.3
STEEL	IBC 1705.2 AND TABLE 1705.2.3 AND AISC 360 CHAPTER N AND SDI QA/QC DOCUMENT
SHOP FABRICATION	IBC 1704.2.5 (NOT REQUIRED IF FABRICATOR IS APPROVED IN ACCORDANCE WITH IBC 1704.2.5.1.
MASONRY	IBC 1705.4, TMS 402/ACI 530/ASCE 5 SECTION 3.1 AND TABLE 3.1.2, TMS 602/ACI 530.1/ASCE 6 SECTION 1.6 AND TABLE 4
SPRAYED FIRE-RESISTANT MATERIALS	IBC 1705.14 AND CONSTRUCTION DOCUMENTS
MASTIC AND INTUMESCENT FIRE-RESISTANT COATINGS	IBC 1705.15 AND AWCI 12-B AND CONSTRUCTION DOCUMENTS
EXTERIOR INSULATION AND FINISH SYSTEMS (EIFS)	IBC 1705.16
EXPANSION/EPOXY ANCHORS	MANUFACTURER'S ICC REPORT

ROOF PRESSURE (GROSS)					
ZONE	0-10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	>100 SQ. FT.	>500 SQ. FT.
1	+27,-43	+25,-42	+22,-40	+19,-39	+19,-39
2	+27,-75	+25,-69	+22,-61	+19,-55	+19,-55
3	+27,-111	+25,-104	+22,-94	+19,-87	+19,-87

WALL PRESSURE					
ZONE	0-10 SQ. FT.	20 SQ. FT.	50 SQ. FT.	>100 SQ. FT.	>500 SQ. FT.
4	+45,-49	+43,-47	+41,-44	+39,-42	+34,-38
5	+45,-60	+43,-56	+41,-51	+39,-47	+34,-38



NOTES:
1. (0-10 SQ. FT.) EXAMPLE DENOTES EFFECTIVE WIND AREA.
2. + AND - SIGNS SIGNIFY PRESSURES ACTING TOWARD OR AWAY FROM THE SURFACES, RESPECTIVELY. ALL VALUES SHOWN ARE IN PSF.
3. WIND PRESSURE FOR EFFECTIVE WIND AREAS BETWEEN THE SPECIFIED RANGES MAY BE DETERMINED BY INTERPOLATION, OTHERWISE, USE THE VALUE ASSOCIATED WITH THE LOWER EFFECTIVE AREA.
4. a = WIDTH OF EDGE STRIP EQUAL TO 10% OF THE LEAST HORIZONTAL DIMENSION (L or B) or 40% OF THE ROOF HEIGHT (h), WHICHEVER IS SMALLER, BUT NOT LESS THAN 4% OF THE LEAST HORIZONTAL DIMENSION or 3ft.
5. ELEMENTS WITH TRIBUTARY AREAS GREATER THAN 700 SQ. FEET MAY BE DESIGNED USING MWFRS PROVISIONS.
6. VALUES SHOWN ARE BASED ON IBC 2015 / ASCE 7-10 WIND CALCULATIONS FOR COMPONENTS AND CLADDING AND ARE ULTIMATE VALUES (LRFD). VALUES SHOWN ARE FOR USE IN ASCE 7-10 LOAD COMBINATIONS SHOWN IN SECTION 2.32 (1.0W).
7. THE BUILDING LAYOUT SHOWN IS INTENDED TO BE SCHEMATIC, APPLY WIND PRESSURE PROVIDED SIMILARLY TO THE BUILDING(S) AT THIS PROJECT.
8. UNLESS OTHERWISE SPECIFIED, ROOF DEAD LOAD TO BE USED FOR NET UPLIFT CALCULATIONS SHALL NOT EXCEED 10 PSF. NET UPLIFT PRESSURE SHALL NOT BE LESS THAN 16 PSF.

COMPONENTS & CLADDING PRESSURES

ABBREVIATIONS

ABBR.	ABBREVIATION
A.F.F.	ABOVE FINISH FLOOR
ADDN'L	ADDITIONAL
AHU	AIR HANDLING UNIT
ALT.	ALTERNATE
ANCH.	ANCHOR
A.B.	ANCHOR BOLT
A.R.	ANCHOR ROD
APPROX.	APPROXIMATELY
ARCH.	ARCHITECT(URAL)
BM.	BEAM
BRG.	BEARING
BTW	BETWEEN
BOT.	BOTTOM
B.F.B.	BOTTOM FLANGE BRACE
B.O.	BOTTOM OF
BRDG.	BRIDGING
BLDG	BUILDING
C	CAMBER
CANT.	CANTILEVER
C.I.P.	CAST IN PLACE
C/C	CENTER TO CENTER
CL	CENTERLINE
CH	CHANNEL
CLR.	CLEAR(ANCE)
CFMF	COLD FORMED METAL FRAMING
COL.	COLUMN
CJP	COMPLETE JOINT PENETRATION
CONC.	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONN.	CONNECTION
CONST.	CONSTRUCTION
C.J.	CONSTRUCTION / CONTRACTION JOINT
CONT.	CONTINUOUS
COORD.	COORDINATE
DL	DEAD LOAD
DBA	DEFORM BAR ANCHOR
D	DEPTH
DET.	DETAIL
DIA. or Ø	DIAMETER
DIM.	DIMENSION
DWL.	DOWEL
D.N.	DOWN
DWG.	DRAWING
EA.	EACH
E.F.	EACH FACE
E.W.	EACH WAY
EL.	ELEVATION
ELEV.	ELEVATOR
EMBED.	EMBEDMENT
ENGR.	ENGINEER
EOR	ENGINEER OF RECORD
EQ.	EQUAL
EQUIP.	EQUIPMENT
EQUIV.	EQUIVALENT
EXIST.	EXISTING
E.J.	EXPANSION JOINT
EXT.	EXTERIOR
f'c=	28 DAY CONCRETE STRENGTH
FAB.	FABRICATE
F.S.	FAR SIDE
FIN	FINISH/FINISHED
FLR	FLOOR
F.D.	FLOOR DRAIN
FTG.	FOOTING
Fy=	YIELD STRENGTH
GALV.	GALVANIZED
GA.	GAUGE
GEN	GENERAL
G.C.	GENERAL CONTRACTOR
GFRC	GLASS FIBER REINFORCED CONCRETE
GR.	GRADE/GRADING
HGR.	HANGER
HSA	HEADED STUD ANCHOR
HI	HIGH
HSS	HOLLOW STRUCTURAL SECTION
HORIZ. OR (H)	HORIZONTAL
H	HORIZONTAL REACTION
IN	INCH
INFO.	INFORMATION
ID	INSIDE DIAMETER
I.F.	INSIDE FACE
INT.	INTERIOR
JT.	JOINT
JST.	JOIST
K	KIPS (1000 LBS)
KSF	KIPS PER SQUARE FOOT
KSI	KIPS PER SQUARE INCH
L	ANGLE
Ld	DEVELOPMENT LENGTH
LWC	LIGHTWEIGHT CONCRETE
LL	LIVE LOAD
LLBB	LONG LEG BACK TO BACK
LLV	LONG LEG VERTICAL
LLH	LONG LGE HORIZONTAL
LSH	LONG SIDE HORIZONTAL
LSV	LONG SIDE VERTICAL
LONG	LONGITUDINAL
LO	LOW
LBS	POUNDS
MFR. / MNFR.	MANUFACTURER
MAS.	MASONRY
MAX.	MAXIMUM
MECH.	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MTL.	METAL
MIN.	MINIMUM
MISC.	MISCELLANEOUS
M	MOMENT
M.C.	MOMENT CONNECTION
N.S.	NEAR SIDE
NWC	NORMAL WEIGHT CONCRETE
N.I.C.	NOT IN CONTRACT
N.T.S.	NOT TO SCALE
NO.	NUMBER
O.C.	ON CENTER(S)
OPNG.	OPENING
OPP.	OPPOSITE
OPH.	OPPOSITE HAND
OD	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
OA	OVERALL
O.H.	OVERHEAD
OVS.	OVERSIZED HOLE
P	AXIAL LOAD
P.J.	PANEL JOINT
PAR.	PARALLEL
PRKG.	PARKING
PJP	PARTIAL JOINT PENETRATION
PVMT	PAVEMENT
PVG	PAVING
PERP.	PERPENDICULAR
PL.	PLATE
PLBG	PLUMBING
PT	POST-TENSION(ED)
PCF	POUNDS PER CUBIC FOOT/FEET
PLF	POUNDS PER LINEAR FOOT
PSF	POUNDS PER SQUARE FOOT/FEET
PSI	POUNDS PER SQUARE INCH
P/C	PRECAST CONCRETE
PRELIM.	PRELIMINARY
P.L.	PROPERTY LINE
QTY	QUANTITY
R	RADIUS, REACTION, REMAINDER

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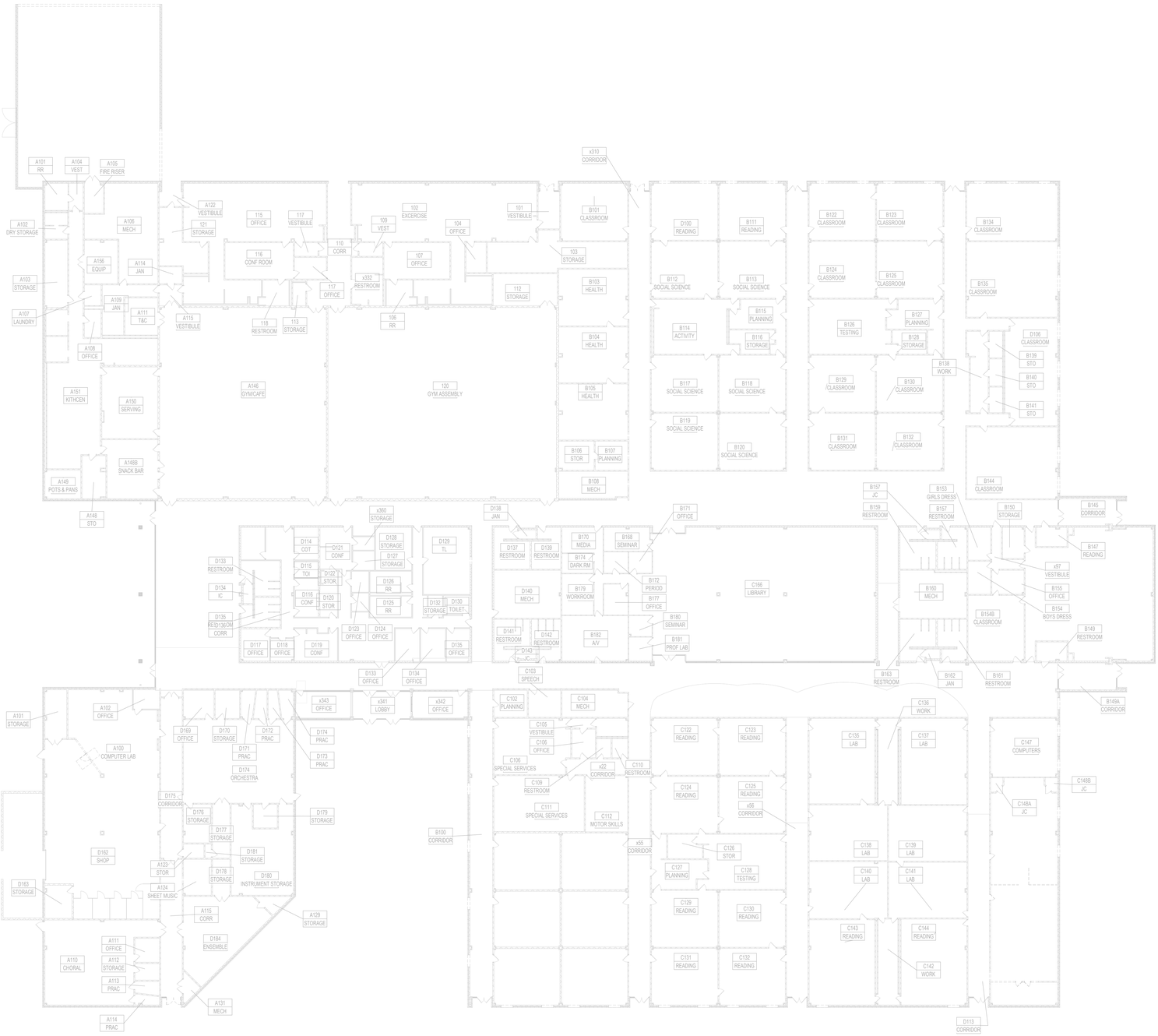
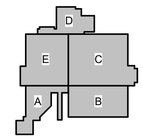


1 DEMOLITION MASTER PLAN - OVERALL
SCALE: 1" = 20'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
10/29/2025 Issue for Bid

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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DEMOLITION MASTER PLAN

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Job No. 1521-13-02	Sheet No. SD1.01
Drawn By: Author	
Date: 10-29-2025	

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DEMOLITION PLAN NOTES:

1. THIS PLAN IS TO SHOW PROBABLE TYPE OF DEMOLITION ASSOCIATED WITH THE PROJECT THAT MIGHT IN SOME WAYS ASSOCIATED WITH STRUCTURAL SCOPE OF WORK BUT EXCLUSIVELY DO NOT LIMIT THE EXPECTED EXTENT OF DEMOLITION REQUIRED. FOR THE TRUE EXTENT OF DEMOLITION REFER ARCHITECTURAL DRAWINGS. G.C. TO COORDINATE W/ ARCH DRAWINGS FOR EXACT LOCATION, FULL EXTENTS AND TYPE OF DEMOLITION NEEDED FOR THE PROJECT.
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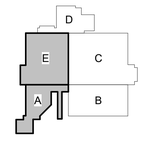
1 DEMOLITION MASTER PLAN - AREA A & E
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
10/29/2025 Issue for Bid

Project:
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FOR
HUMBLE ISD
HUMBLE, TX

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DEMOLITION PLAN - AREAS A AND E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. SD1.02
Drawn By: Author	
Date: 10-29-2025	

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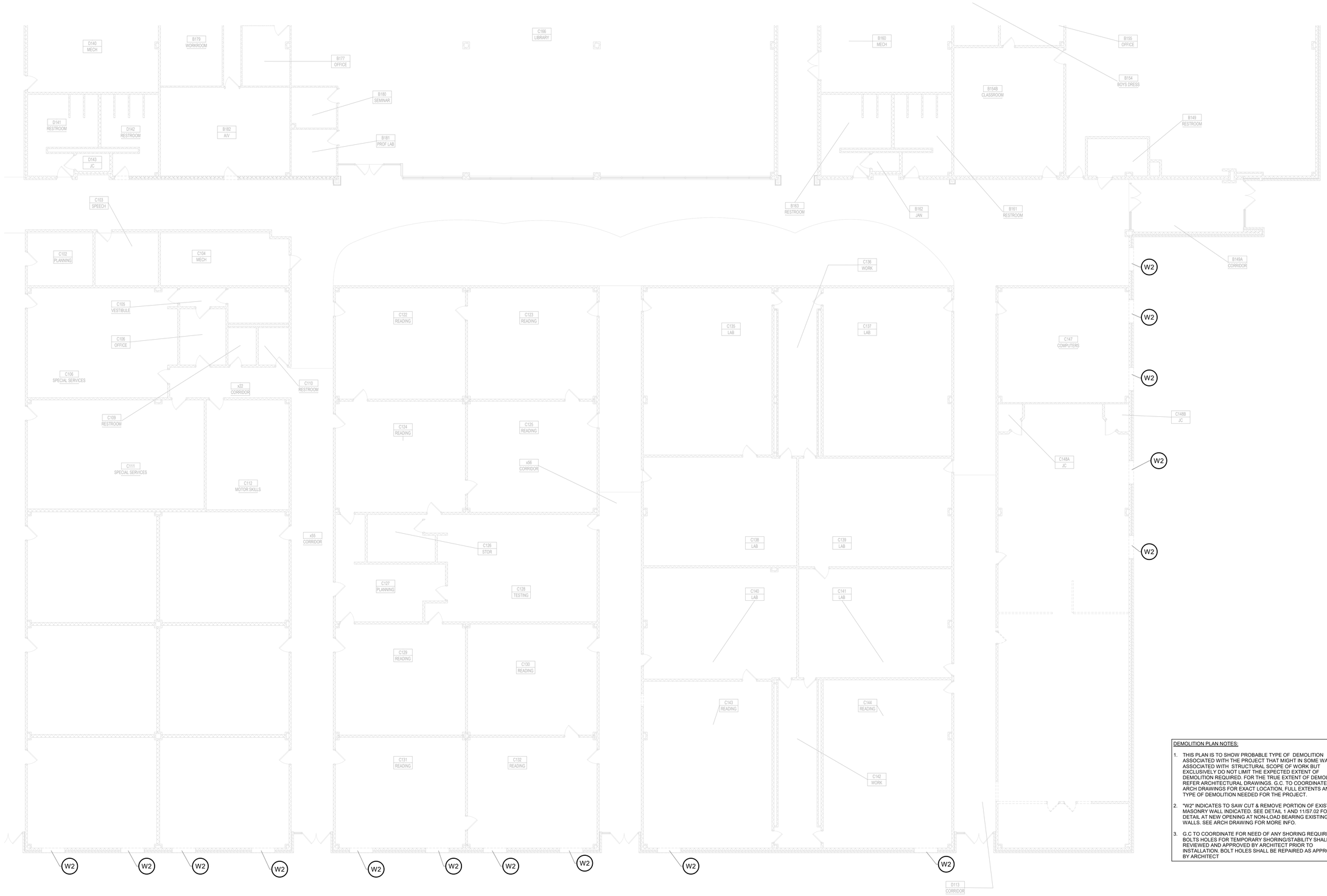

1 DEMOLITION MASTER PLAN - AREA B & C
SCALE: 1/8" = 1'-0"

DEMOLITION PLAN NOTES:

1. THIS PLAN IS TO SHOW PROBABLE TYPE OF DEMOLITION ASSOCIATED WITH THE PROJECT THAT MIGHT IN SOME WAYS ASSOCIATED WITH STRUCTURAL SCOPE OF WORK BUT EXCLUSIVELY DO NOT LIMIT THE EXPECTED EXTENT OF DEMOLITION REQUIRED. FOR THE TRUE EXTENT OF DEMOLITION REFER ARCHITECTURAL DRAWINGS. G.C. TO COORDINATE W/ ARCH DRAWINGS FOR EXACT LOCATION, FULL EXTENTS AND TYPE OF DEMOLITION NEEDED FOR THE PROJECT.
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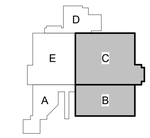
TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date
10/29/2025 Issue for Bid

Project:
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FOR
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HUMBLE, TX

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DEMOLITION PLAN - AREAS B AND C

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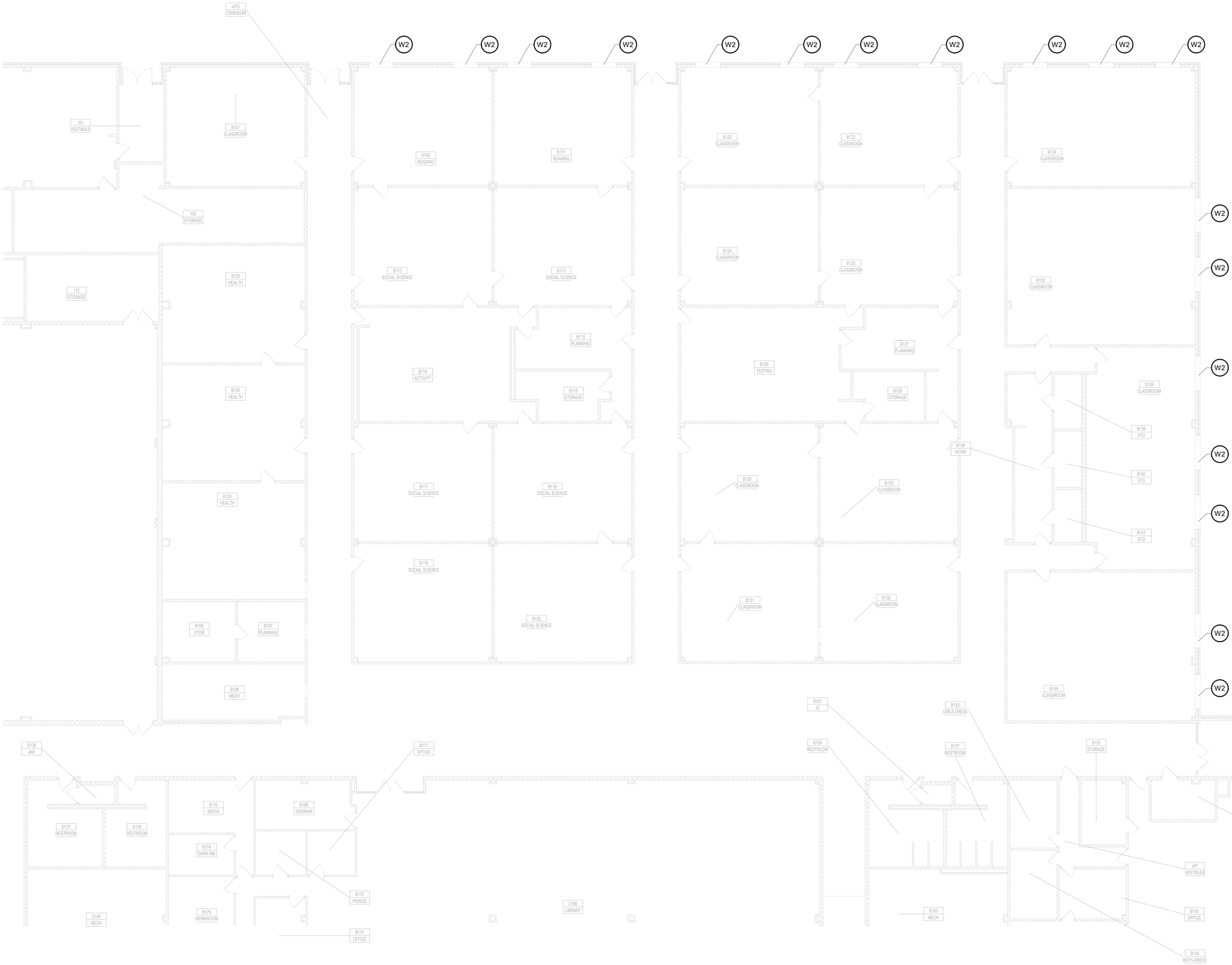
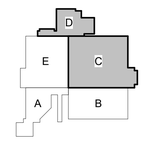


1 DEMOLITION MASTER PLAN - AREA C & D
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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DEMOLITION PLAN - AREAS C AND D

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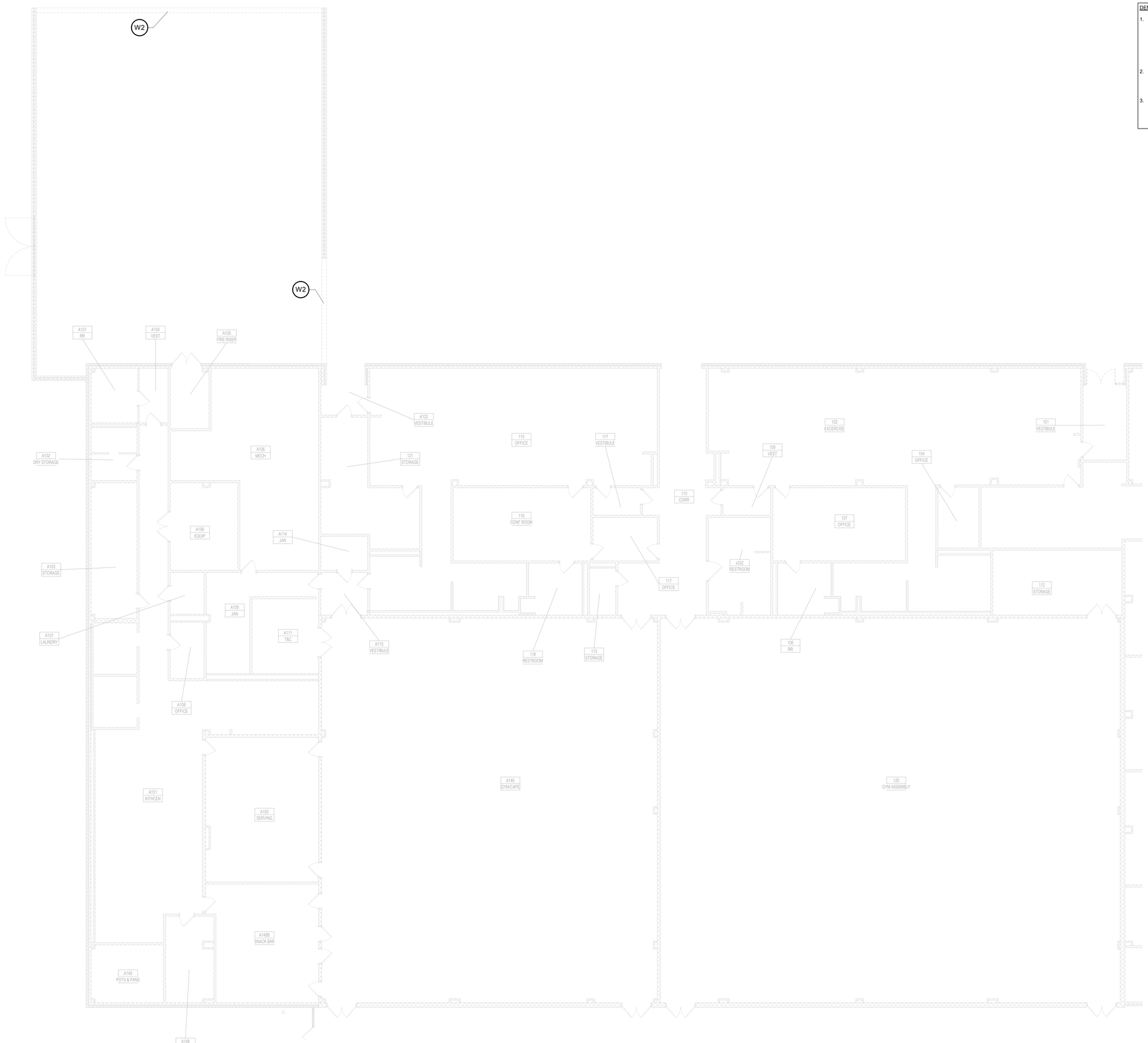
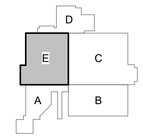


1 DEMOLITION MASTER PLAN - AREA E
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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10/29/2025 Issue for Bid

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Matrix Structural Engineers
TBPE Firm Registration No. F-2640

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DEMOLITION PLAN - AREA E

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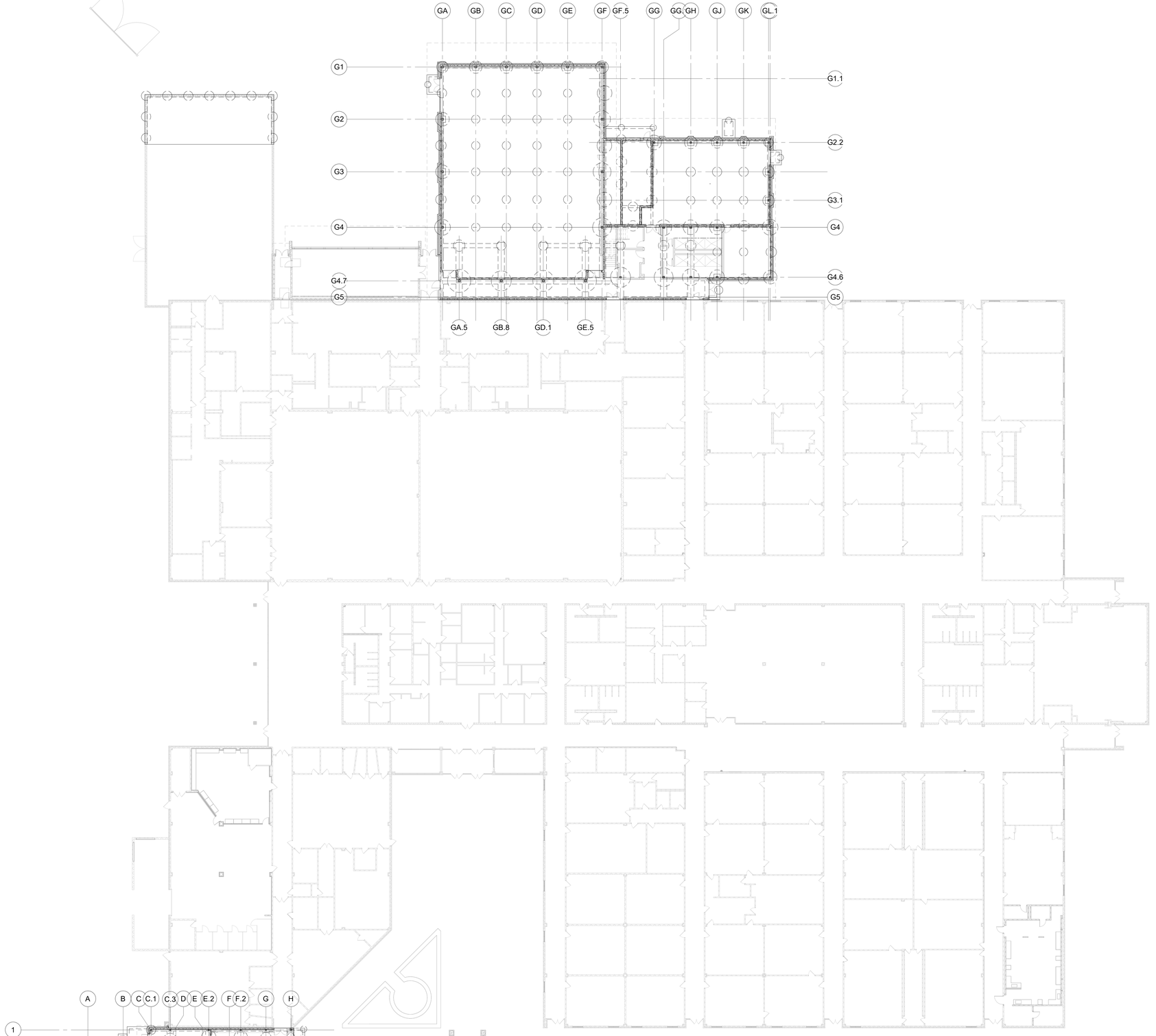
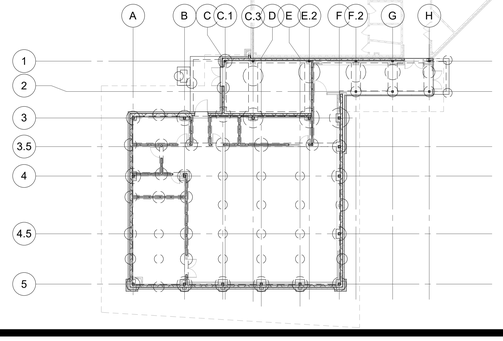
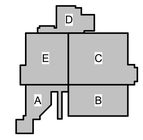




1 FOUNDATION PLAN - OVERALL
SCALE: 1" = 20'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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FOR
HUMBLE ISD
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FOUNDATION PLAN - OVERALL

PACKAGE	VOLUME
Job No. 1021-13-02	Sheet No. S2.00
Drawn By: Author	
Date: 10-29-2025	

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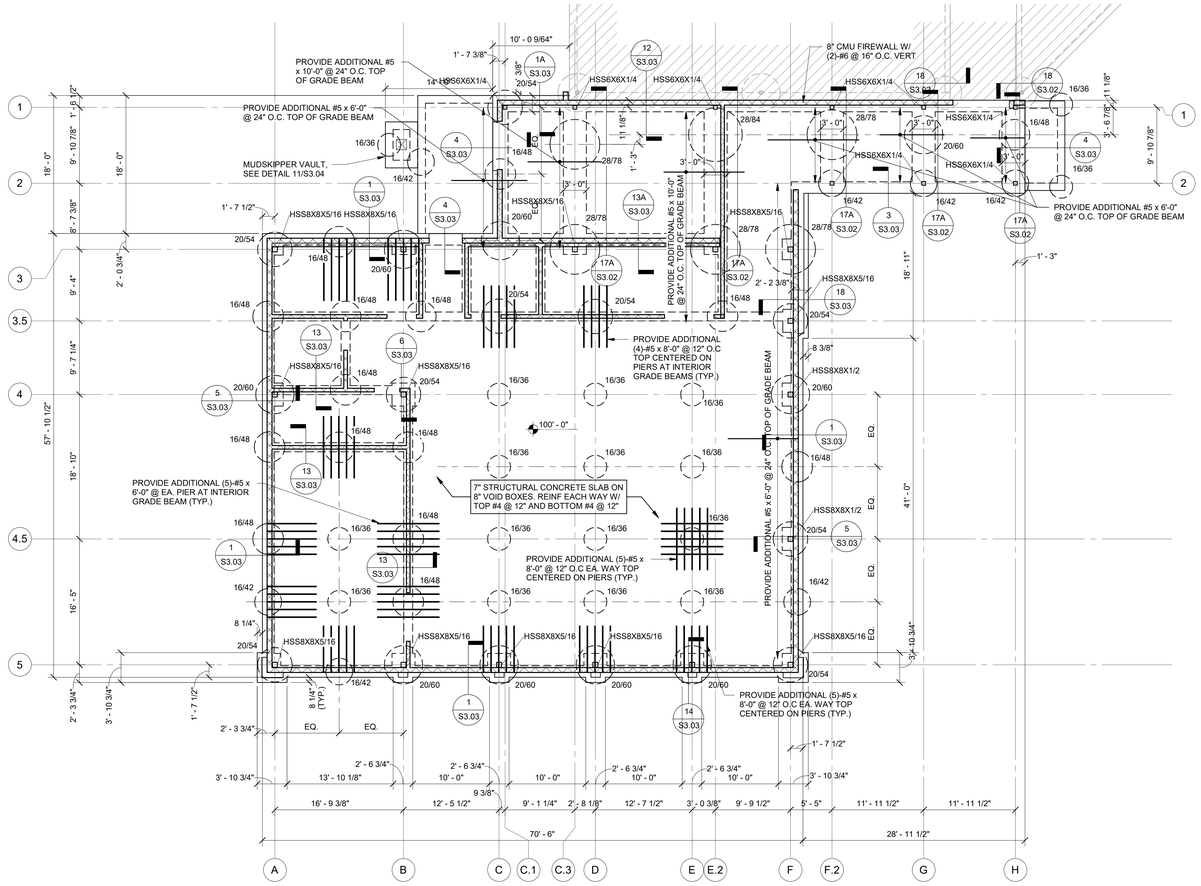
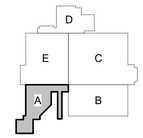
FOUNDATION PLAN NOTES:

1. ALL PIERS ARE CENTERED UNDER COLUMN CENTERLINES, U.N.O.
2. PIERS UNDER GRADE BEAMS (WITHOUT COLUMNS) SHALL BE CENTERED UNDER GRADE BEAMS, U.N.O.
3. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ALL FLOOR SLOPES, DEPRESSIONS, ETC.
4. COORDINATE ALL BRICK LEDGES AND DEPTH WITH ARCHITECTURAL DRAWINGS.
5. LOCATIONS NOTED THUS: INDICATES TOP OF SLAB ELEVATION.
6. REF. ELEVATION = 0' - 0" CORRESPONDING TO CIVIL ELEVATION _____. VERIFY WITH CIVIL.
7. SEE DETAIL 6/S3.02 FOR BASE PLATES.
8. SEE DETAILS 1, 8 & 5/S3.02 FOR ADDITIONAL REBAR AT OPENINGS, DISCONTINUOUS JOINTS, AND RE-ENTRANT CORNERS IN SLAB-ON-GRADE.
9. PROVIDE CONTRACTION JOINTS AND DISCONTINUOUS SLAB REINFORCING AS SHOWN IN DETAIL DETAIL 6/S3.01.
10. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
11. REINFORCE ALL EXTERIOR 8" CMU WALL W/ (2)-#5 VERT. @ 24" O.C.. GROUT CMU CELLS WITH REINFORCING ONLY. PROVIDE HORIZONTAL JOINT REINF. PER GENERAL NOTES. PROVIDE HORIZONTAL BOND BEAMS W/ (2)-#5 CONT. SPACED VERTICALLY AT 8'-0" O.C. AND AT TOP OF WALL, CONTINUE HORIZONTAL JOINT AND BOND BEAM REINF. THROUGH CONTROL JOINTS.
12. SEE 3/S7.01 FOR SCHEDULE ADDITIONAL REINFORCING AT EXTERNAL CMU WALL OPENING AND DETAIL 5/S5.01 FOR INTERIOR NON-LOAD BEARING CMU WALL OPENINGS.
13. SEE 12/S5.01 FOR VENEER SUPPORT OVER MASONRY OPENING AT CMU WALL BACKUP.
14. G.C. TO COORDINATE W/ ARCH FOR LOCATION OF ANY SLAB TRENCHING AND SLAB REPAIR ON EXISTING SLAB. SEE DETAILS 14 THRU 20 ON S3.03.



1 FOUNDATION PLAN - BAND HALL
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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FOR
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HUMBLE, TX

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FOUNDATION PLAN - BAND HALL

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No.
Drawn By: Author	S2.01
Date: 10-29-2025	

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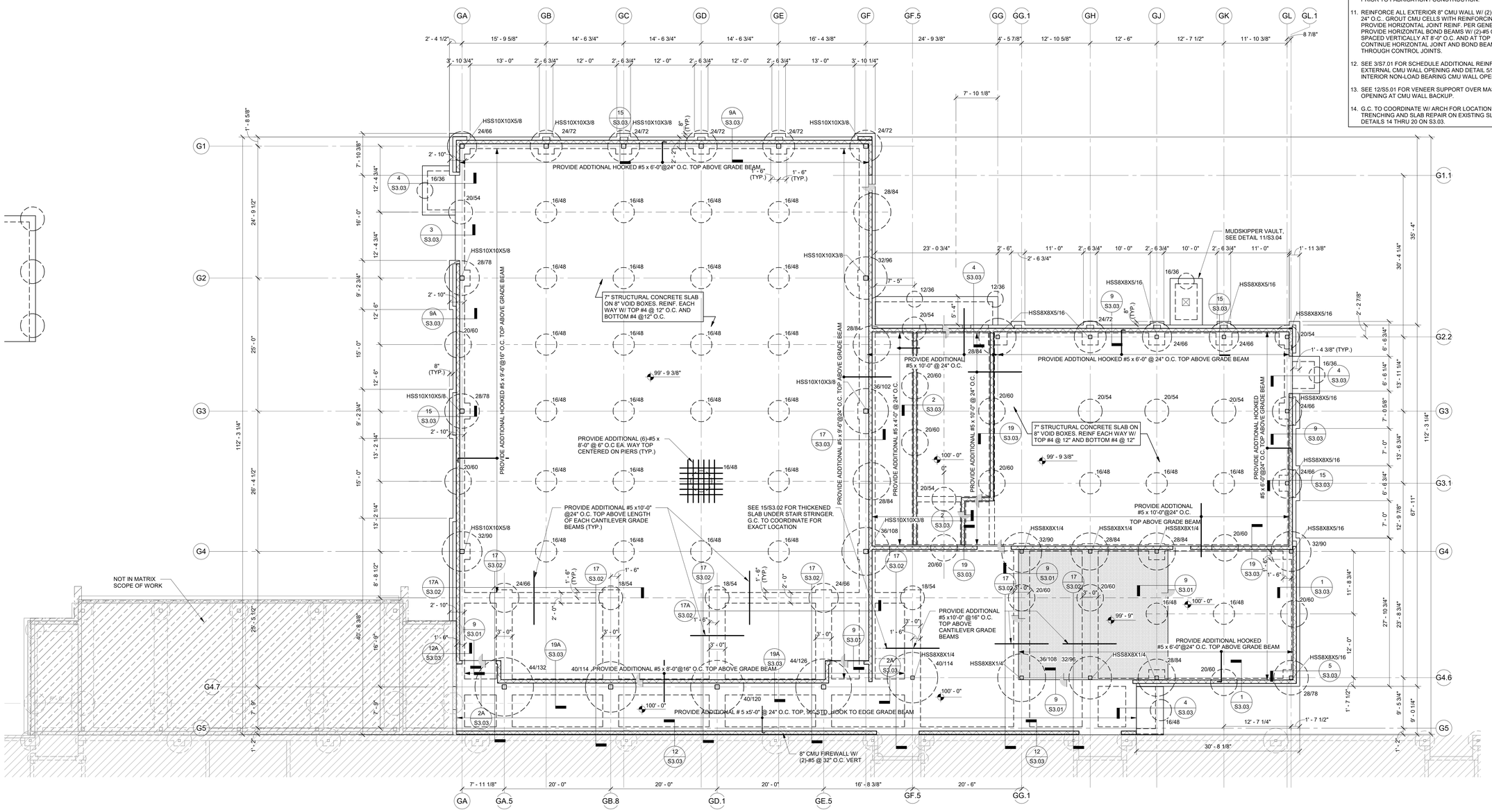
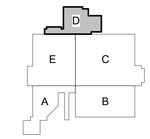


1 FOUNDATION PLAN - GYM-DANCE

SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
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FOUNDATION PLAN - GYM AND DANCE HALL

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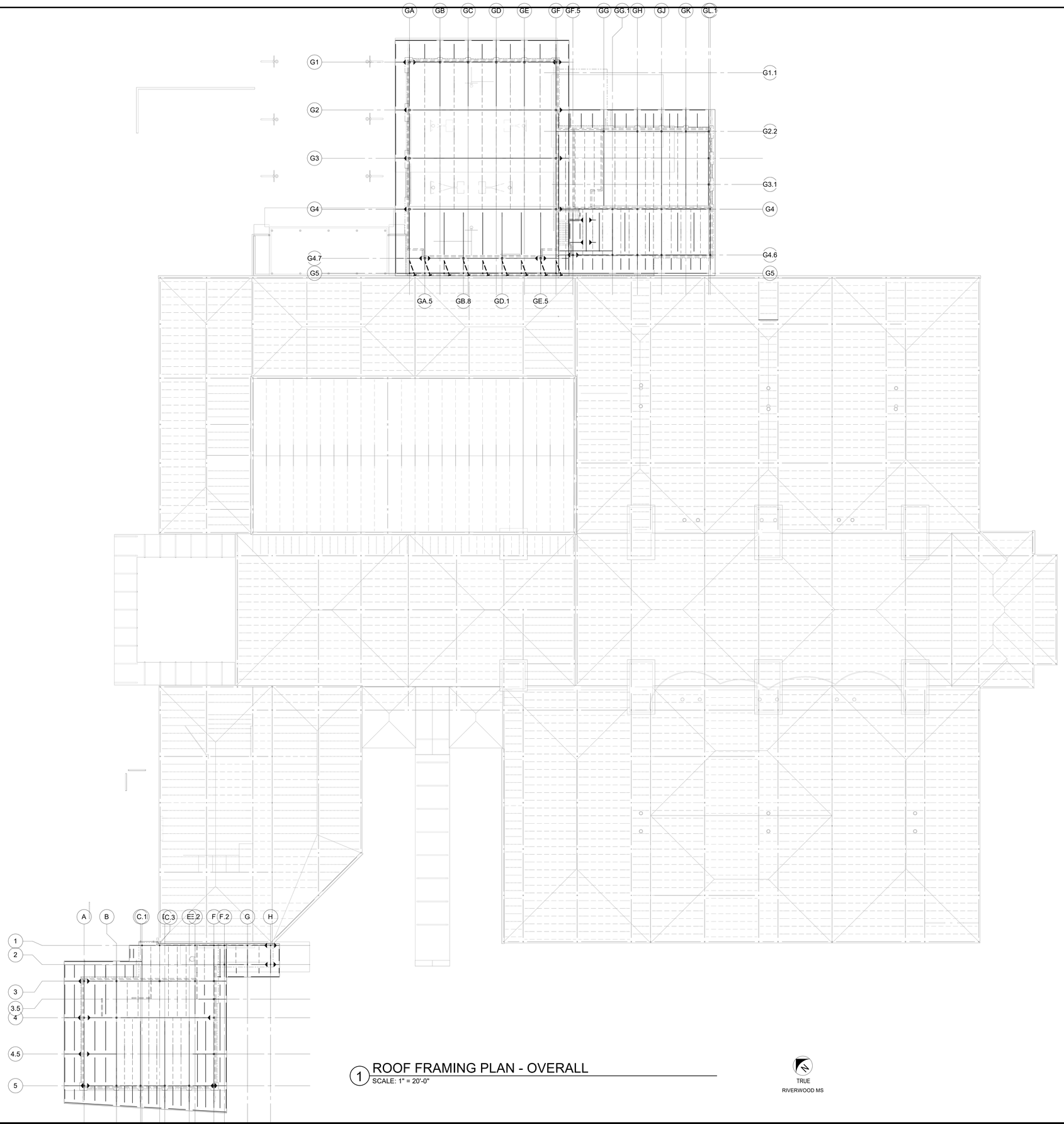
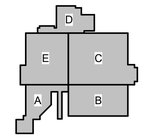


1 ROOF FRAMING PLAN - OVERALL
SCALE: 1" = 20'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
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ROOF FRAMING PLAN - OVERALL

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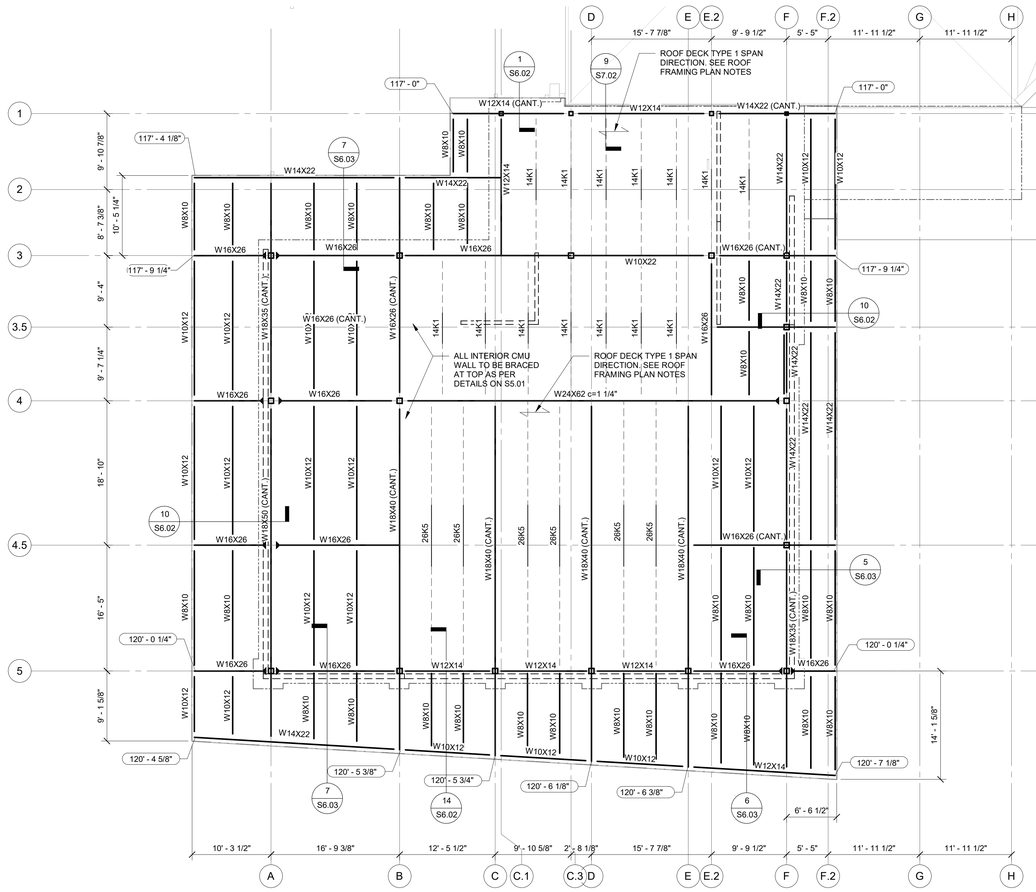
ROOF FRAMING PLAN NOTES:

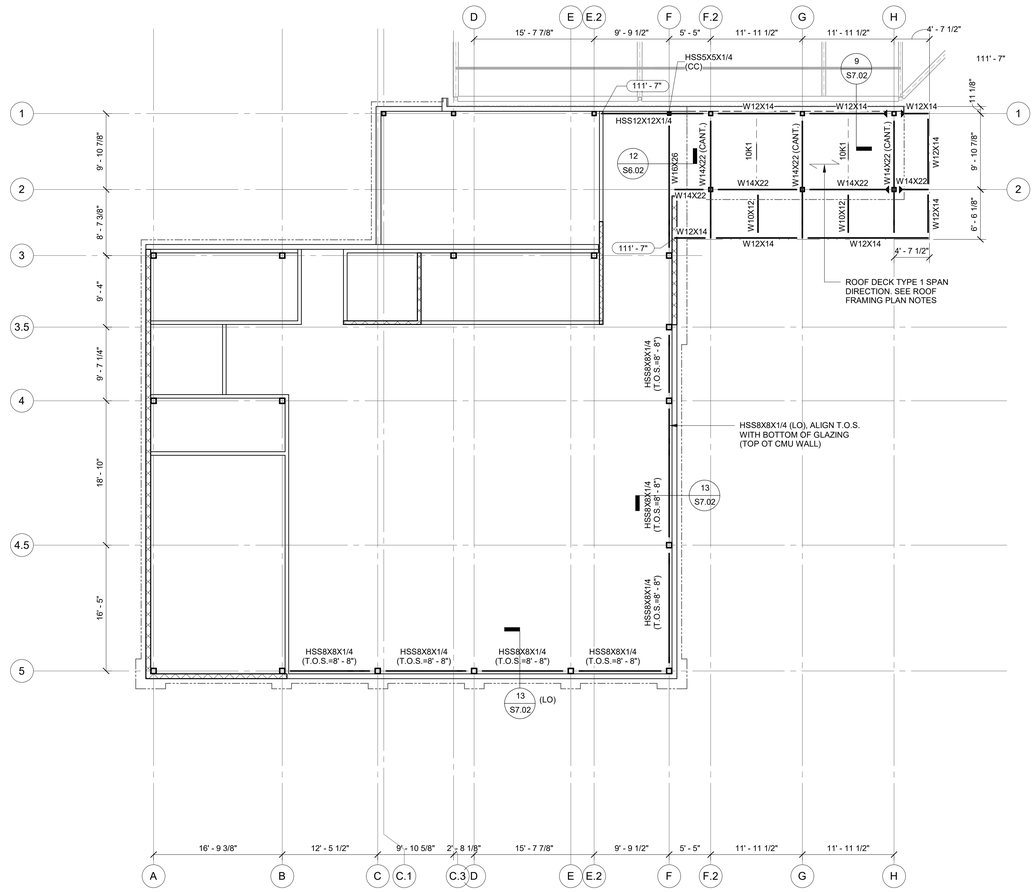
1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
3. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
4. ROOF DECK TYPE 1 SHALL BE 1.5B, 22GA DECK AS MANUFACTURED BY VULCRAFT OR EQUIVALENT. SEE ARCHITECTURAL DRAWINGS FOR INSULATION, ROOFING, ETC. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS.
   a. PERPENDICULAR BEARING: 36/7 PATTERN.
   b. PARALLEL BEARING AND EDGE: AT 6" O.C.
   c. SIDE SEAMS" #10 TEK SCREWS AT 12" O.C.
5. ROOF DECK TYPE 2 SHALL BE 3N, 20GA DECK AS MANUFACTURED BY VULCRAFT OR EQUIVALENT. SEE ARCHITECTURAL DRAWINGS FOR INSULATION, ROOFING, ETC. WELD DECK USING #12 TEK SCREWS:
   a. PERPENDICULAR BEARING: 24/4 PATTERN.
   b. PARALLEL BEARING AND EDGE: AT 6" O.C.
   c. SIDE SEAMS" #10 TEK SCREWS AT 12" O.C.
6. ▶— = MOMENT CONNECTION
   LSH = LONG SIDE HORIZONTAL
   LSV = LONG SIDE VERTICAL
   HI = HIGH
   LO = LOW
7. CC : INDICATES CARRIED COLUMN, SEE DETAIL 6/S4.01.
8. B.F.B. INDICATES BOTTOM FLANGE BRACE, SEE 1 & 5/S6.01 FOR DETAIL.



1 ROOF FRAMING PLAN - BAND HALL

SCALE: 1/8" = 1'-0"

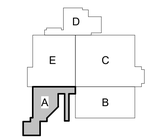
TRUE
RIVERWOOD MS



2 LOW ROOF FRAMING PLAN - BAND HALL

SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



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ROOF FRAMING PLANS - BAND HALL

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ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
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   b. PARALLEL BEARING AND EDGE: AT 6" O.C.
   c. SIDE SEAMS" #10 TEK SCREWS AT 12" O.C.
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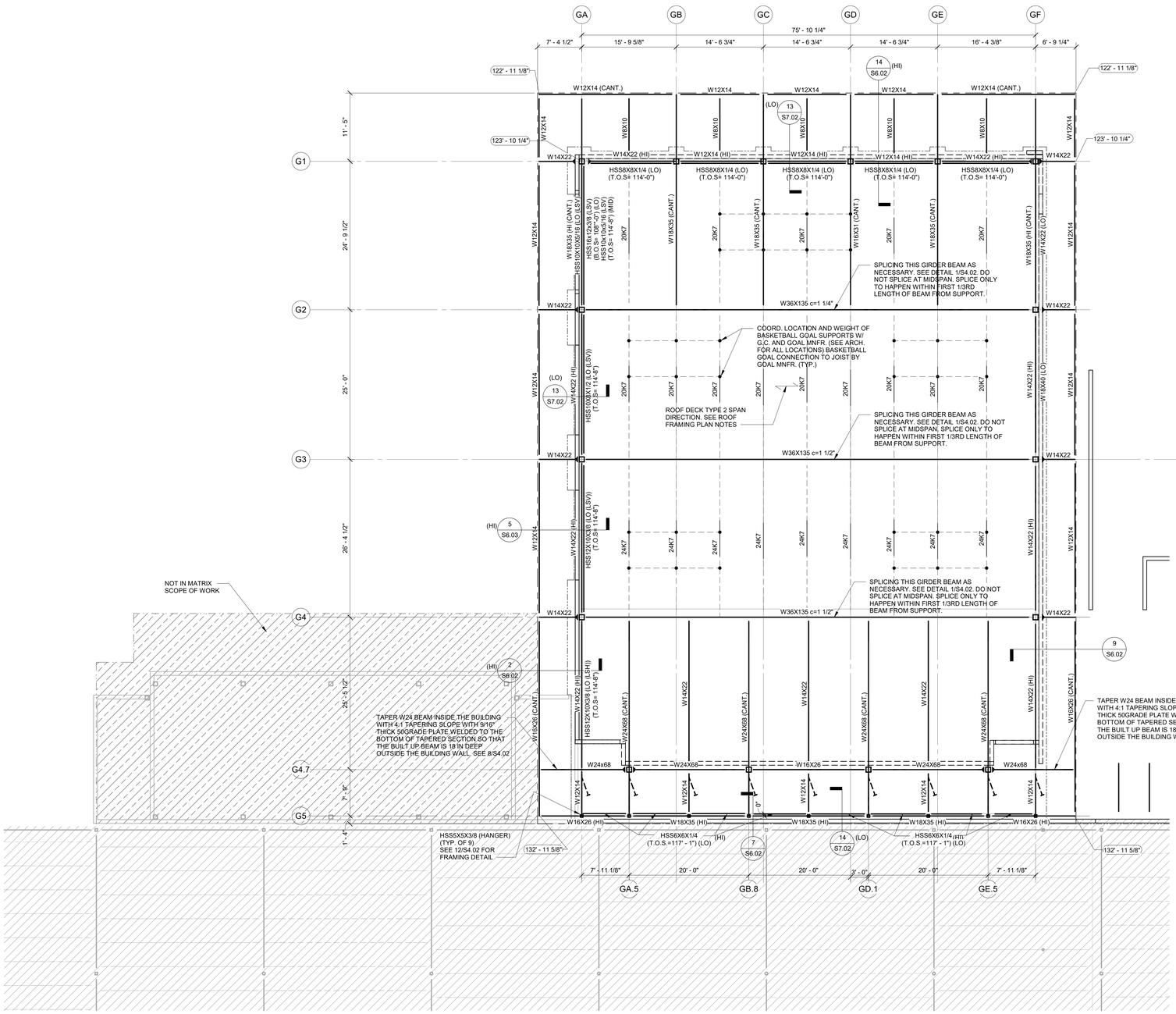
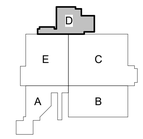
   a. PERPENDICULAR BEARING: 24/4 PATTERN.
   b. PARALLEL BEARING AND EDGE: AT 6" O.C.
   c. SIDE SEAMS" #10 TEK SCREWS AT 12" O.C.
6. ▶—— = MOMENT CONNECTION
   LSH = LONG SIDE HORIZONTAL
   LSV = LONG SIDE VERTICAL
   HI = HIGH
   LO = LOW
7. CC : INDICATES CARRIED COLUMN, SEE DETAIL 6/S4.01.
8. B.F.B. INDICATES BOTTOM FLANGE BRACE, SEE 1 & 5/S6.01 FOR DETAIL.



1 ROOF FRAMING PLAN - GYM

SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
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ROOF FRAMING PLAN - GYM

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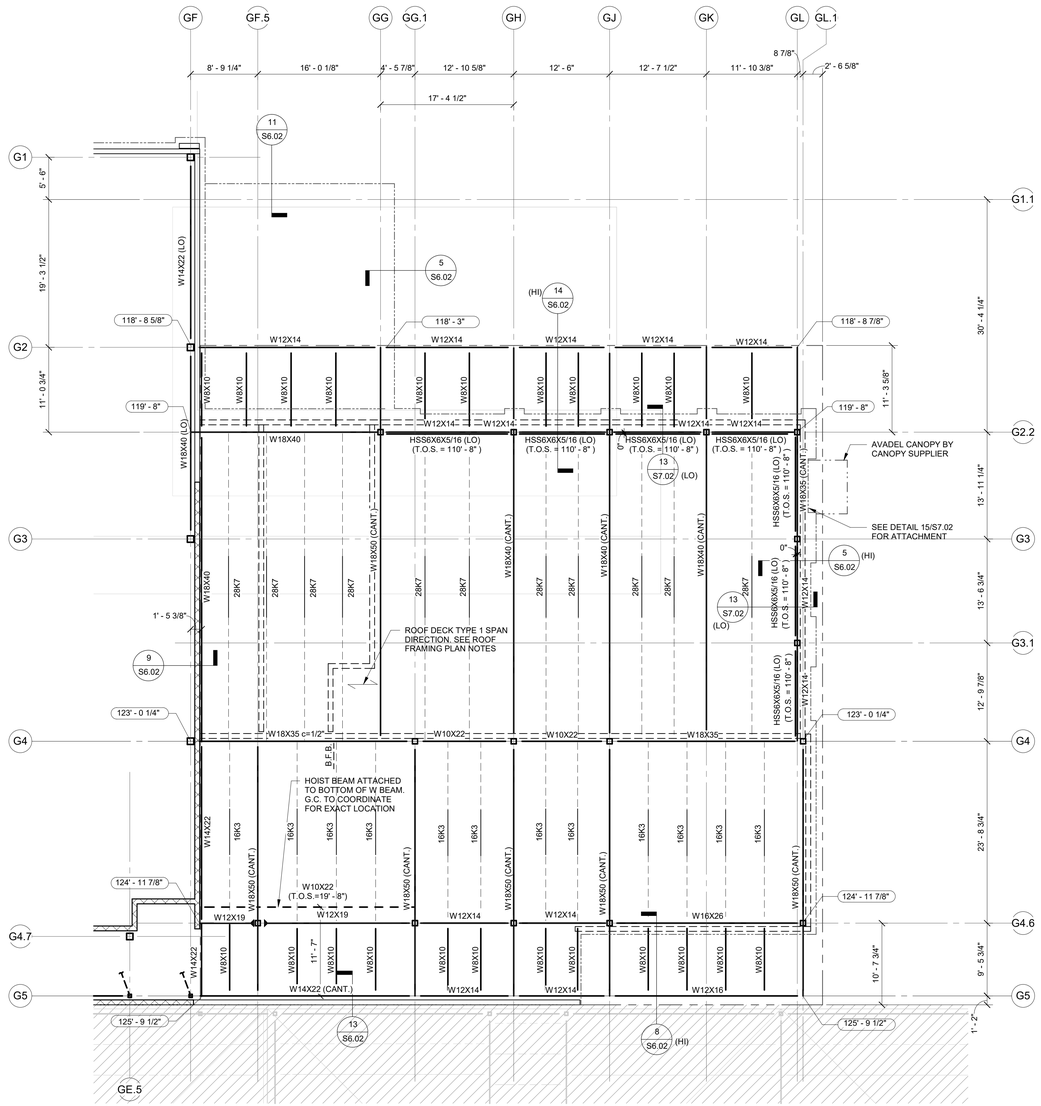

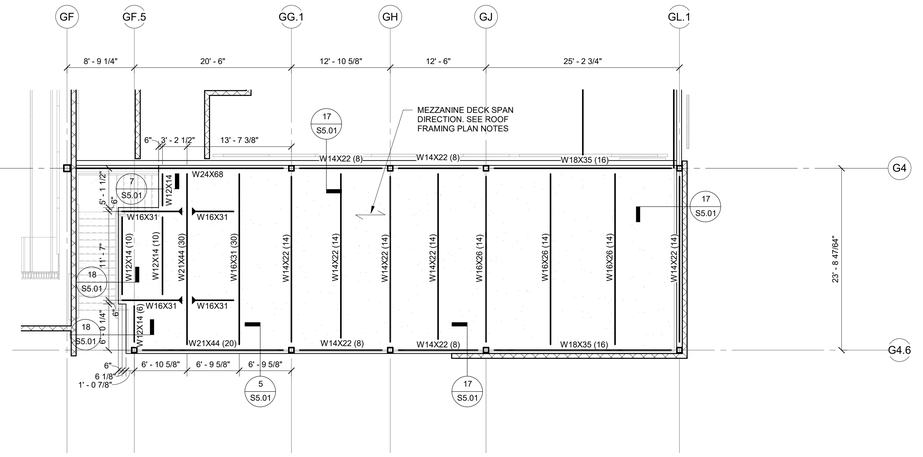

ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
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   b. PARALLEL BEARING AND EDGE: AT 6" O.C.
   c. SIDE SEAMS" #10 TEK SCREWS AT 12" O.C.
5. ROOF DECK TYPE 2 SHALL BE 3N, 20GA DECK AS MANUFACTURED BY VULCRAFT OR EQUIVALENT. SEE ARCHITECTURAL DRAWINGS FOR INSULATION, ROOFING, ETC. WELD DECK USING #12 TEK SCREWS:
   a. PERPENDICULAR BEARING: 24/4 PATTERN.
   b. PARALLEL BEARING AND EDGE: AT 6" O.C.
   c. SIDE SEAMS" #10 TEK SCREWS AT 12" O.C.
6. ⊢ = MOMENT CONNECTION
   LSH = LONG SIDE HORIZONTAL
   LSV = LONG SIDE VERTICAL
   HI = HIGH
   LO = LOW
7. CC : INDICATES CARRIED COLUMN, SEE DETAIL 6/S4.01.
8. B.F.B. INDICATES BOTTOM FLANGE BRACE, SEE 1 & 5/S6.01 FOR DETAIL.

MEZZANINE PLAN NOTES:

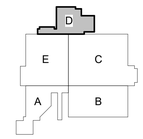
1. TOP OF CONCRETE ELEVATION = 111' - 8"
2. LOCATIONS SHOWN THUS: (12) C=3/4" INDICATES NUMBER OF SHEAR CONNECTORS AS 12 AND UPWARD CAMBER AT MID SPAN OF BEAM AS 3/4".
3. SPACE JOISTS EQUALLY U.N.O.
4. PROVIDE END PLATES AT ALL TUBE BEAMS.
5. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION CONSTRUCTION.
6. ⊢ = MOMENT CONNECTION
   LSH = LONG SIDE HORIZONTAL
   LSV = LONG SIDE VERTICAL
7. ALL LOWER TUBE BEAM ELEVATIONS TO BE VERIFIED WITH ARCHITECT DRAWINGS.
8. FLOOR SHALL BE 3 1/2" NORMAL WEIGHT CONCRETE OVER THE FLUTES OF 2" x 18 GA TYPE VLI STEEL DECK AS MANUFACTURED BY VULCRAFT OR APPROVED EQUIVALENT TO TOTAL THICKNESS = 5 1/2". REINFORCE CONCRETE WITH #3 AT 18" O.C. EACH WAY. PLACE REBAR PERPENDICULAR TO BEAMS (PARALLEL TO DECK) IN THE OUTSIDE LAYER. WELD DECK USING 5/8"Ø NET EFFECTIVE PUDDLE WELDS:
   a. PERPENDICULAR BEARING : 36/4 PATTERN.
   b. PARALLEL BEARING AND EDGE : AT 12" O.C.
   c. SIDE SEAMS : SEAM WELDS AT 12" O.C.
9. SEE 8/S5.01 FOR ADDITIONAL SLAB REINFORCING AT ALL BEAMS & GIRDERS.
10. SEE 9, 16, & 19/S5.01 FOR ADDITIONAL SLAB REINFORCING AT OPENINGS AND EDGES.
11. SEE 12/S5.01 FOR ADDITIONAL STEEL ANGLES AND REINFORCING AT STEEL COLUMNS.

2 ROOF FRAMING PLAN - DANCE
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS

1 MEZZANINE FRAMING PLAN
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
N.T.S

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MEZZANINE & ROOF FRAMING PLAN - DANCE HALL

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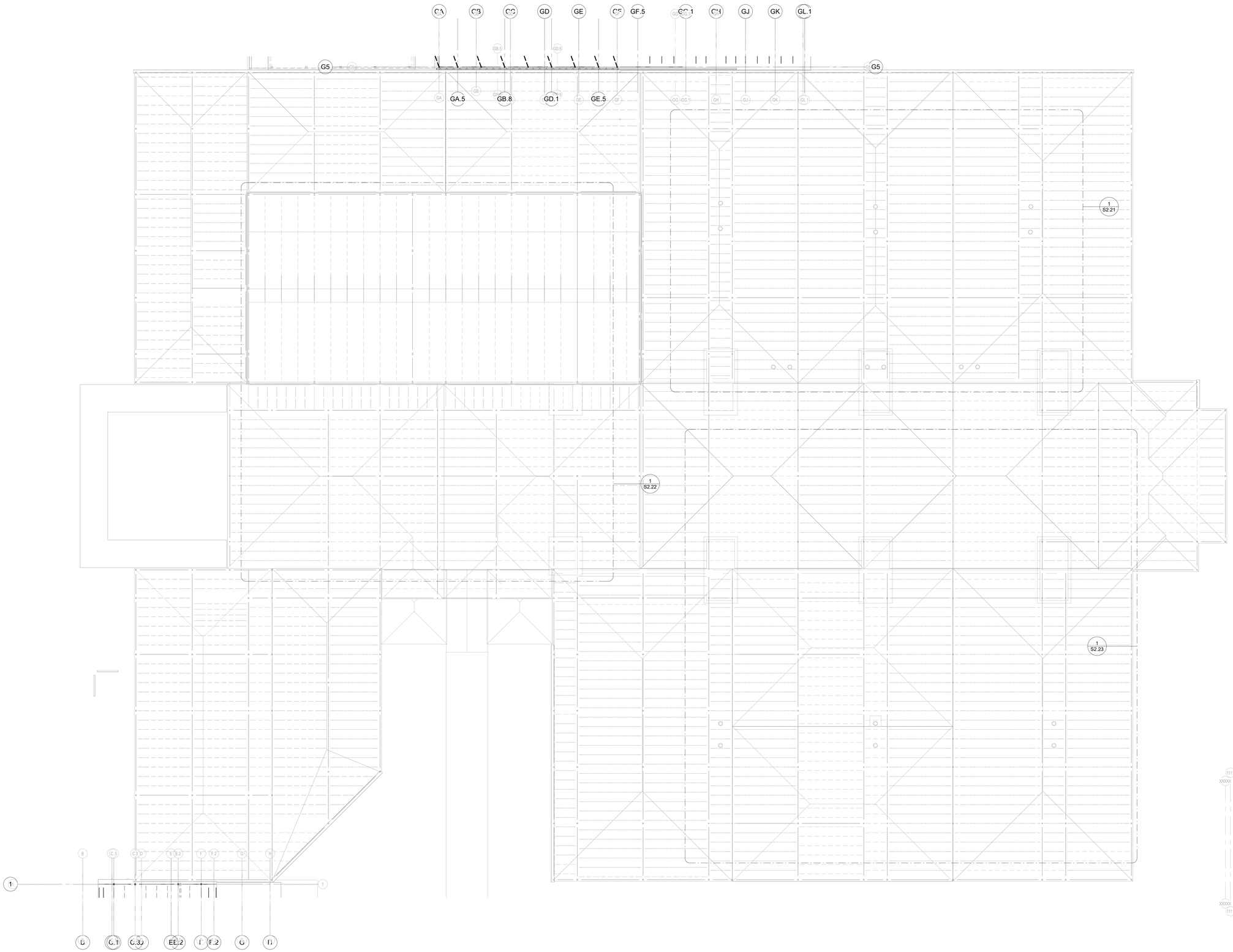
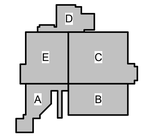


1 EXISTING ROOF FRAMING PLAN

SCALE: 1/16" = 1'-0"

TRUE
RIVERWOOD MS



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ROOF SKYLIGHTS FRAMING PLAN - OVERALL

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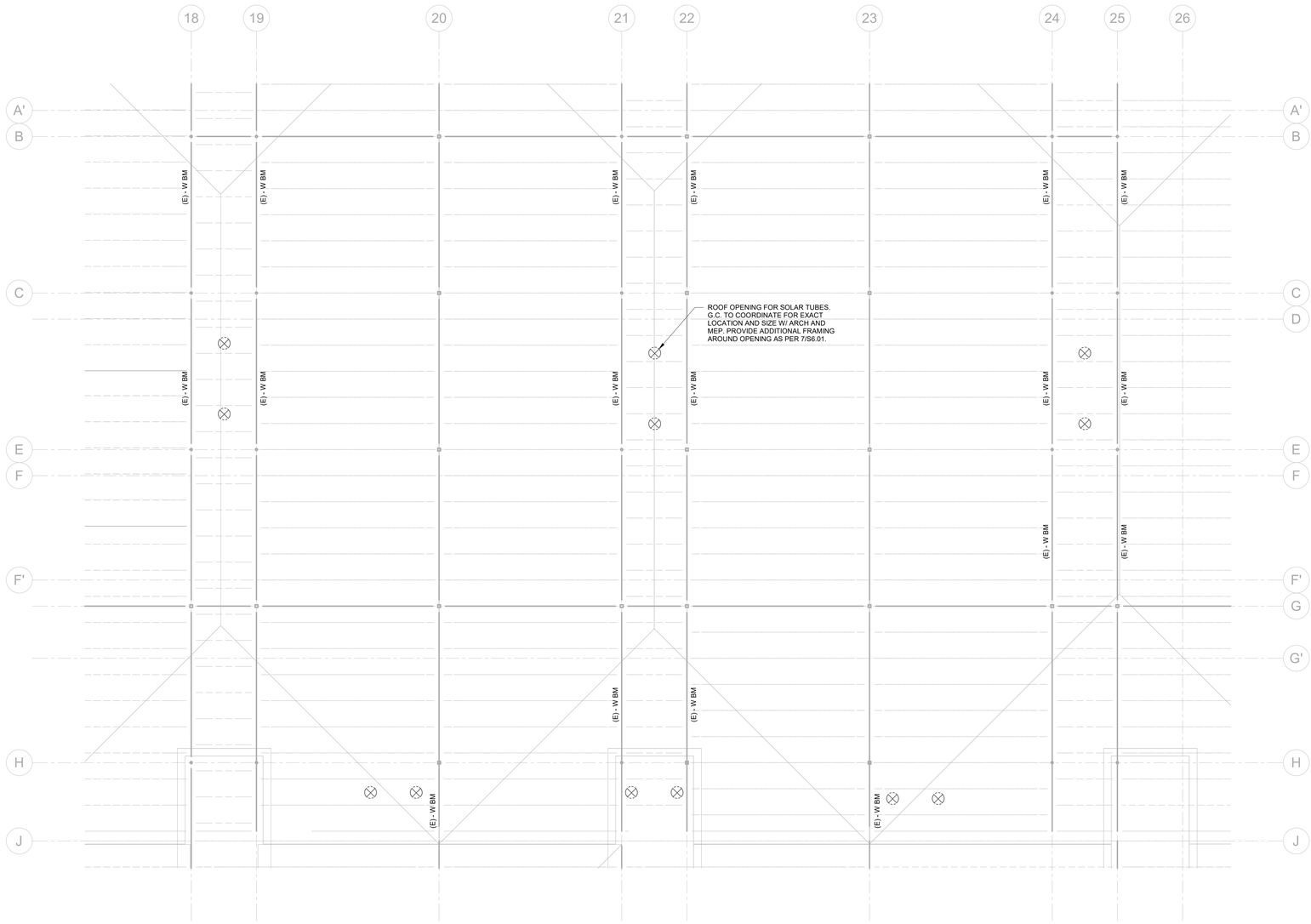
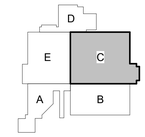
ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
3. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
4. G.C. TO COORDINATE FOR EXACT SOLAR TUBE LOCATION AND OPENING SIZE W/ ARCH AND MEP. PROVIDE ADDITIONAL FRAMING AROUND OPENING AS PER 7/S6.01. (TYP)



1 SKYLIGHTS FRAMING PARTIAL PLAN
SCALE: 1/8" = 1'-0"

TRUE
RIVERWOOD MS



KEY PLAN - 1ST FLOOR
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SKYLIGHT FRAMING PLAN - AREA C

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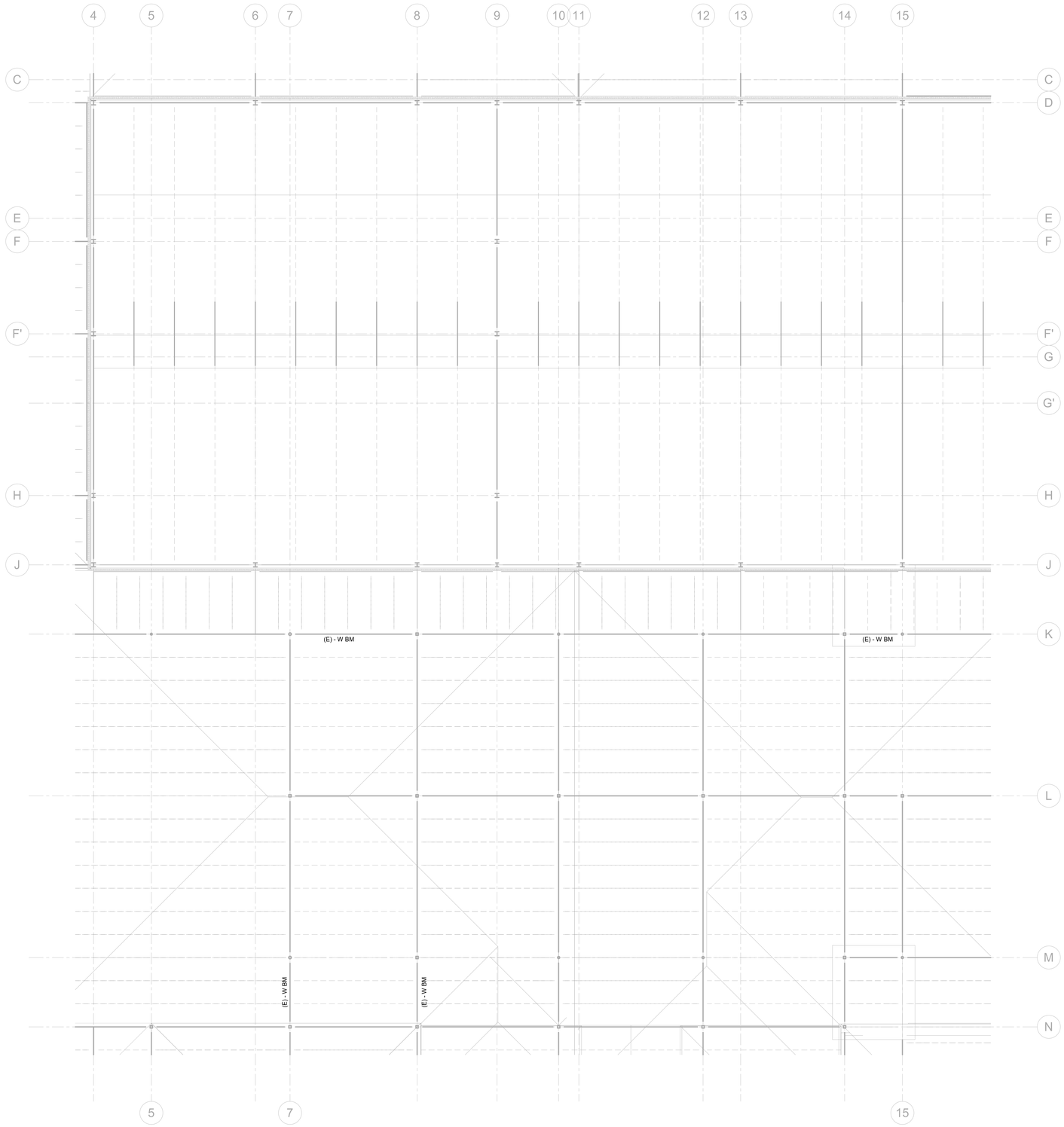

1 SKYLIGHTS FRAMING PARTIAL PLAN
SCALE: 1/8" = 1'-0"

ROOF FRAMING PLAN NOTES:

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4. G.C. TO COORDINATE FOR EXACT SOLAR TUBE LOCATION AND OPENING SIZE W/ ARCH AND MEP. PROVIDE ADDITIONAL FRAMING AROUND OPENING AS PER 7/S6.01. (TYP)

TRUE
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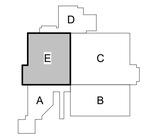

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TRAVIS KOEHRING
75354
LICENSED
PROFESSIONAL ENGINEER
10/29/2025

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SKYLIGHT FRAMING PLAN - AREA E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S2.22
Drawn By: Author	
Date: 10-29-2025	

10/29/2025 11:17:54 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/23030_RIVERWOOD MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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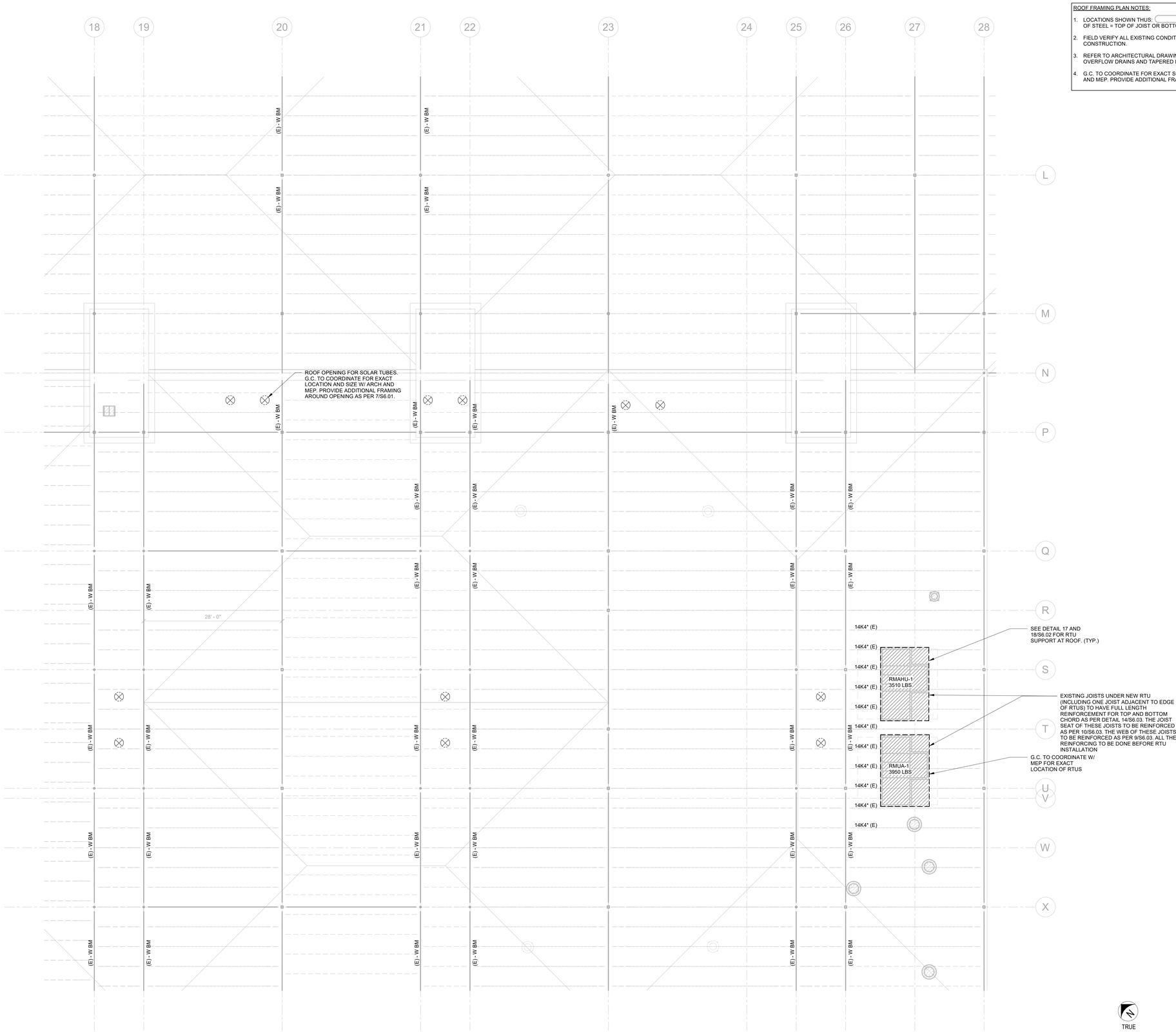
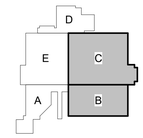
ROOF FRAMING PLAN NOTES:

1. LOCATIONS SHOWN THUS: ( ) INDICATES TOP OF STEEL (T.O.S.) ELEVATION (TOP OF STEEL = TOP OF JOIST OR BOTTOM OF DECK).
2. FIELD VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO FABRICATION / CONSTRUCTION.
3. REFER TO ARCHITECTURAL DRAWINGS / MEP FOR LOCATIONS OF ROOF DRAINS, OVERFLOW DRAINS AND TAPERED INSULATION.
4. G.C. TO COORDINATE FOR EXACT SOLAR TUBE LOCATION AND OPENING SIZE W/ ARCH AND MEP. PROVIDE ADDITIONAL FRAMING AROUND OPENING AS PER 7/S6.01. (TYP)



TRUE
RIVERWOOD MS

1 SKYLIGHTS FRAMING PARTIAL PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

Revision /	Date
Issue for Bid	10/29/2025

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
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MSE - 23031
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STATE OF TEXAS
TRAVIS KOEHRING
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PROFESSIONAL ENGINEER
10/29/2025

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SKYLIGHT FRAMING PLAN -AREA B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S2.23
Drawn By: Author	
Date: 10-29-2025	

10/29/2025 11:17:59 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/23030_RIVERWOOD MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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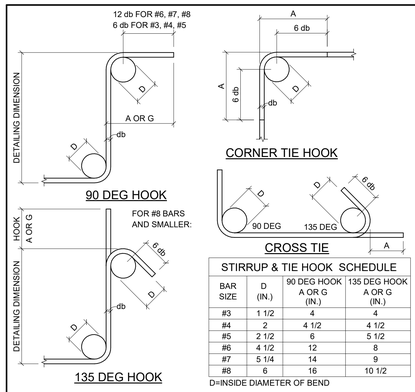
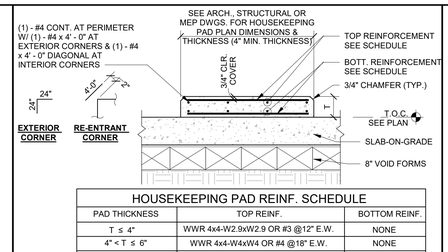


STIRRUP & TIE HOOK SCHEDULE			
BAR SIZE	D (IN.)	90 DEG HOOK A OR G (IN.)	135 DEG HOOK A OR G (IN.)
#3	1 1/2	4	4
#4	2	4 1/2	4 1/2
#5	2 1/2	6	5 1/2
#6	4 1/2	12	8
#7	5 1/4	14	9
#8	6	16	10 1/2

D=INSIDE DIAMETER OF BEND

20 STIRRUP AND TIE HOOK TYPES

SCALE: N.T.S.

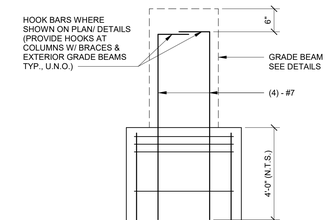


HOUSEKEEPING PAD REINF. SCHEDULE		
PAD THICKNESS	TOP REINF.	BOTTOM REINF.
T ≤ 4"	WWR 4x4-W2.9xW2.9 OR #3 @12" E.W.	NONE
4" < T ≤ 6"	WWR 4x4-W4xW4 OR #4 @18" E.W.	NONE
6" < T ≤ 8"	WWR 4x4-W6xW6 OR #4 @12" E.W.	NONE
8" < T ≤ 12"	#4 @ 18" E.W.	#4 @ 18" E.W.
12" < T ≤ 16"	#4 @ 12" E.W.	#4 @ 12" E.W.

NOTES:
1. GENERAL CONTRACTOR TO COORDINATE WITH MECHANICAL DRAWINGS AND SPECIFICATIONS TO DETERMINE REQUIREMENTS FOR HOUSEKEEPING PADS OVER SLAB-ON-GRADE AND PROVIDE WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. COORDINATE DIMENSIONS AND OTHER SPECIAL REQUIREMENTS WITH EQUIPMENT MANUFACTURERS AS REQUIRED
2. PAD SHALL NOT BE POURED UNTIL AFTER SLAB HAS REACHED ITS SPECIFIED 28 DAYS STRENGTH.
3. CONCRETE FOR HOUSEKEEPING PAD SHALL BE NORMAL WEIGHT CONCRETE WITH f'c = 3,000 PSI.

16 TYPICAL DETAIL CONCRETE ISLAND OR HOUSEKEEPING PAD SLAB-ON-GRADE

SCALE: N.T.S.



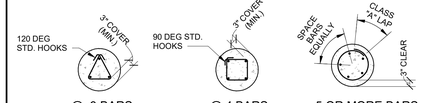
NOTES:
1. THIS DETAIL SHALL BE USED WHERE PIER REINFORCING STEEL CAN NOT BE ACCOMMODATED WITHIN WIDTH OF GRADE BEAMS.
2. SEE TYPICAL DRILLED PIER DETAIL FOR ADDITIONAL INFORMATION.

12 TYPICAL DETAIL SHAFT SIZE LARGER THAN GRADE BEAM WIDTH

SCALE: N.T.S.

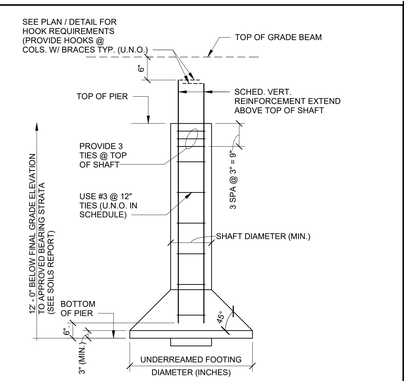
DRILLED PIER VERTICAL REINFORCEMENT SCHEDULE		
SHAFT DIAMETER (INCHES)	VERTICAL REINFORCEMENT	TIES (USE #3 @ 12" U.N.O.)
12	3 - #5	#3 @ 10"
14, 16	4 - #5	#3 @ 10"
18, 20	4 - #6	
22, 24, 26	5 - #7	
28, 30	5 - #8	
36	5 - #9	
42	7 - #9	
48	7 - #10	
54	9 - #10	
60	9 - #11	#4 @ 12"
66	11 - #11	#4 @ 12"
72	13 - #11	#4 @ 12"

*ALL PIER SIZES SHOWN MAY NOT BE USED ON THIS PROJECT.



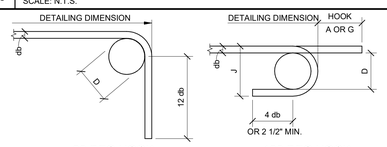
8 SHAFT BAR PLACEMENT PLANS

SCALE: N.T.S.



4 TYPICAL DETAIL DRILLED PIER

SCALE: N.T.S.

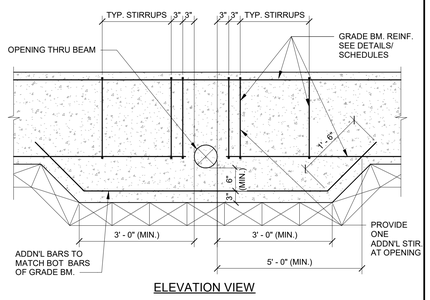


RECOMMENDED END HOOKS, ALL GRADES				
BAR SIZE	FINISHED BEND DIAMETER D, (IN.)	180 DEG HOOKS		90 DEG HOOKS
		A OR G, (IN.)	J, (IN.)	A OR G, (IN.)
#3	2 1/4	5	3	6
#4	3	6	4	8
#5	3 3/4	7	5	10
#6	4 1/2	8	6	12
#7	5 1/4	10	7	14
#8	6	11	8	16
#9	9 1/2	15	11 3/4	19
#10	10 3/4	17	13 1/4	22
#11	12	19	14 3/4	24
#14	18 1/4	27	21 3/4	31
#18	24	36	28 1/2	41

D = INSIDE DIAMETER OF BEND

19 END HOOK TYPES

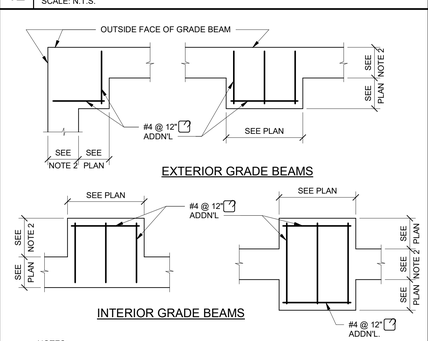
SCALE: N.T.S.



ELEVATION VIEW

15 TYPICAL DETAIL OPENING THRU GRADE BEAM THAT CONFLICTS WITH BOTTOM REINFORCEMENT (STRUCTURAL SLAB)

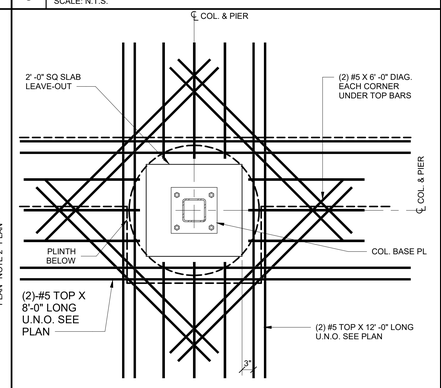
SCALE: N.T.S.



NOTES:
1. PLAN VIEWS FOR TYPICAL WIDENED GRADE BEAMS ARE SHOWN. FOR SIMILAR CONDITION NOT SHOWN, PROVIDE #4 @ 12" ADDN'L. @ 12" O.C. MAX. IN WIDENED SECTION.
2. SEE DETAIL SHEETS FOR GRADE BEAM WIDTH.

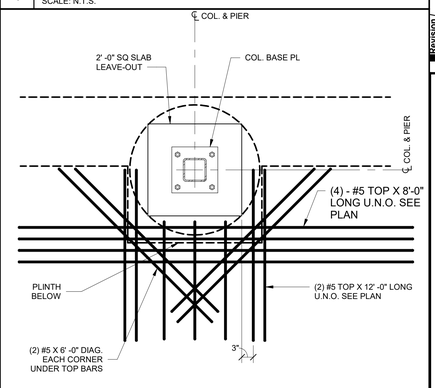
11 TYPICAL DETAIL ADDITIONAL BARS AT WIDENED GRADE BEAM (PLAN VIEW)

SCALE: N.T.S.



7 TYPICAL DETAIL EXTERIOR COLUMN LEAVOUT

SCALE: 3/4" = 1'-0"



3 TYPICAL DETAIL EXTERIOR COLUMN LEAVOUT

SCALE: 3/4" = 1'-0"

DEVELOPMENT LENGTHS OF STANDARD HOOKS IN TENSION
GRADE 60 (UNCOATED) REINFORCEMENT
(NORMAL WEIGHT CONCRETE)

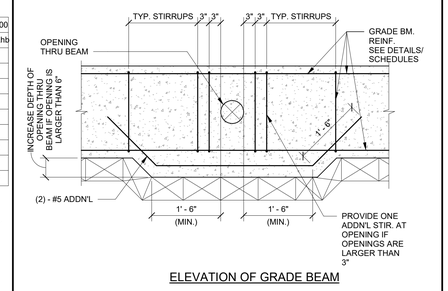
BAR SIZE	F'c = 3000		F'c = 4000		F'c = 5000		F'c = 6000		F'c = 7000		F'c = 8000		F'c = 9000		F'c = 10000	
	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh	Ldh	0.7Ldh
#3	9	6	8	6	7	6	6	6	6	6	6	6	6	6	6	6
#4	11	8	10	7	9	6	8	6	8	6	7	6	7	6	6	6
#5	14	10	12	9	11	8	10	7	9	7	9	6	8	6	8	6
#6	17	12	15	10	13	9	12	9	11	8	11	8	10	7	9	7
#7	20	14	17	12	15	11	14	10	13	9	12	9	12	8	11	8
#8	22	16	19	14	17	12	16	11	15	11	14	10	13	9	12	9
#9	25	18	22	15	20	14	18	13	17	12	16	11	15	10	14	10
#10	28	20	25	17	22	16	20	14	19	13	18	12	17	12	16	11
#11	31	22	27	19	24	17	22	16	21	15	19	14	18	13	17	12

90° HOOKS — Ldh — 180° HOOKS — Ldh

NOTES:
1. ALL LENGTHS SHOWN IN THE TABLE ARE IN INCHES.
2. Lhb = TENSION DEVELOPMENT LENGTH.
3. Ldh = Lhb, UNLESS CONDITIONS OF ITEM 4 ARE SATISFIED.
4. Ldh = 0.7 Lhb, WHEN SIDE COVER NORMAL TO PLANE OF HOOK IS NOT LESS THAN 2 1/2 INCHES AND FOR 90° HOOK, COVER ON BAR EXTENSION BEYOND HOOK SHALL NOT BE LESS THAN 2 INCHES.
5. HOOKS SHALL NOT BE CONSIDERED EFFECTIVE IN DEVELOPING BARS IN COMPRESSION.

18 TYPICAL DETAIL DEVELOPMENT LENGTH OF STANDARD HOOKS IN TENSION (NORMAL WEIGHT CONCRETE)

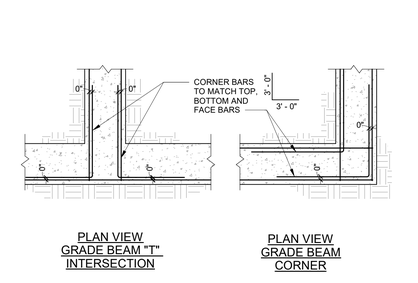
SCALE: 3/4" = 1'-0"



ELEVATION OF GRADE BEAM

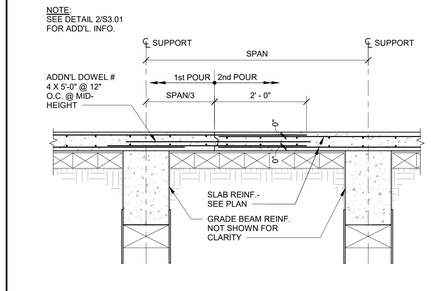
14 TYPICAL DETAIL OPENING THRU GRADE BEAM (STRUCTURAL SLAB)

SCALE: N.T.S.



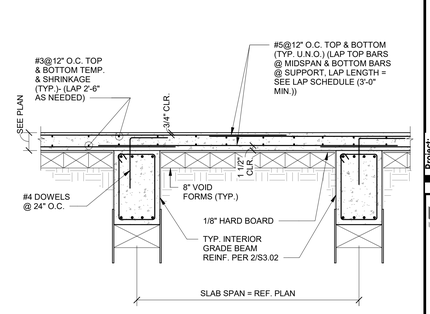
10 TYPICAL DETAIL GRADE BEAM REINFORCEMENT STEEL CORNER BARS

SCALE: N.T.S.



6 TYPICAL DETAIL CONSTRUCTION JOINT (STRUCTURAL SLAB)

SCALE: N.T.S.



2 TYPICAL DETAIL INTERIOR GRADE BEAM (STRUCTURAL SLAB)

SCALE: N.T.S.

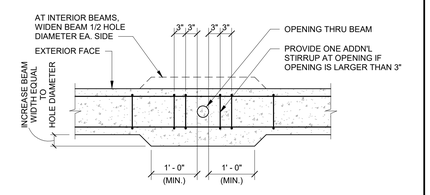
TENSION DEVELOPMENT LENGTHS AND TENSION LAP SPLICE LENGTHS
GRADE 60 (UNCOATED) REINFORCEMENT
(NORMAL WEIGHT CONCRETE)

BAR SIZE	F'c = 3000		F'c = 4000		F'c = 5000		F'c = 6000		F'c = 7000		F'c = 8000		F'c = 9000		F'c = 10000	
	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld	CLASS A 1.0Ld	CLASS B 1.3Ld
#3	17	22	15	19	13	17	12	16	12	16	12	16	12	16	12	16
#4	22	29	19	25	17	23	16	21	15	19	14	18	13	17	12	16
#5	28	36	24	31	22	28	20	26	18	24	17	22	16	21	15	20
#6	33	43	29	37	26	34	24	31	22	28	21	27	19	25	18	24
#7	48	63	42	54	38	49	34	45	32	41	30	39	28	36	27	35
#8	55	72	48	62	43	56	39	51	36	47	34	44	32	42	30	39
#9	62	81	54	70	48	63	44	57	41	53	38	50	36	47	34	44
#10	70	91	61	79	54	71	50	64	46	60	43	56	41	53	39	50
#11	78	101	67	87	60	78	55	71	51	66	48	62	45	58	43	55

NOTES:
1. ALL LENGTHS SHOWN IN THE TABLE ARE IN INCHES.
2. Ld = TENSION DEVELOPMENT LENGTH.
3. THE ABOVE TABLE IS VALID FOR
   a. BEAMS AND COLUMNS WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 2db AND WITH STIRRUPS OR TIES THROUGHOUT Ld NOT LESS THAN THE CODE MINIMUM.
   b. OTHER ELEMENTS SUCH AS SLABS, WALLS, ETC. WHERE CONCRETE COVER > = db, c/c BAR SPACING > = 3db.
4. FOR TOP BARS, MULTIPLY THE SPLICE LENGTHS BY 1.30. TOP BARS REQUIRE A MINIMUM OF 12" OF FRESH CONCRETE BELOW BAR.
5. WHEN BARS OF A DIFFERENT SIZE ARE LAP SPLICED IN TENSION, SPLICE LENGTH SHALL BE THE LARGER OF Ld OF THE LARGER BAR AND COMPRESSION LAP SPLICE LENGTH OF SMALLER BAR.
6. BARS SPLICED BY NON-CONTACT LAP SPLICES SHALL NOT BE SPACED TRANSVERSELY FARTHER APART THAN THE SMALLER OF ONE-FIFTH THE REQUIRED LAP SPLICE LENGTH AND 6

17 TYPICAL DETAIL TENSION DEVELOPMENT AND SPLICE LENGTHS (NORMAL WEIGHT CONCRETE)

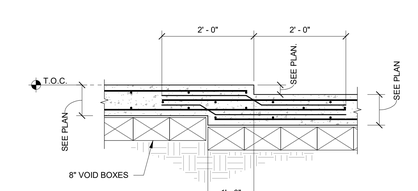
SCALE: 3/4" = 1'-0"



PLAN VIEW

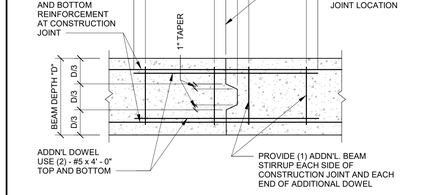
13 TYPICAL DETAIL VERTICAL HOLE THRU GRADE BEAM LARGER THAN 3" DIAMETER

SCALE: N.T.S.



9 TYPICAL DETAIL SLAB DEPRESSION (STRUCTURAL SLAB)

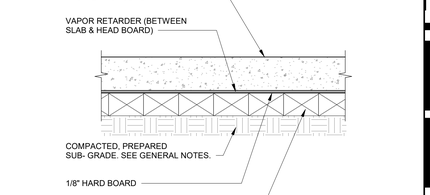
SCALE: 3/4" = 1'-0"



NOTES:
1. GENERAL CONTRACTOR SHALL SUBMIT DESIRED CONSTRUCTION JOINT LAYOUT AS A SHOP DRAWING FOR APPROVAL A MINIMUM OF TWO WEEKS PRIOR TO POUR.
2. CONSTRUCTION JOINT LOCATIONS SHALL BE COORDINATED WITH REINFORCING STEEL SUPPLIER AND ERECTOR.
3. JOINT LOCATIONS SHALL BE WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN.
4. FOR JOINT LOCATIONS OTHER THAN WITHIN TWO FEET EITHER SIDE OF BEAM MIDSPAN, CONTRACTOR SHALL COORDINATE REQUIRED ADDITIONAL REINFORCEMENT WITH THE ENGINEER ON THE SHOP DRAWINGS.

5 TYPICAL DETAIL GRADE BEAM CONSTRUCTION JOINT

SCALE: N.T.S.



NOTES:
1. UNLESS SPECIFIED ELSEWHERE, VAPOR RETARDER SHALL BE A MINIMUM OF 15 MILS THICK (UNLESS THICKER SPECIFIED IN SPECS/ARCH. DRAWINGS) MEETING OR EXCEEDING ASTM E-1745, CLASS C, AND HAVE NO MORE THAN 0.04 PERMS WHEN TESTED IN ACCORDANCE WITH ASTM E-96.

1 TYPICAL DETAIL SLAB-ON-GRADE CONSTRUCTION SUBGRADE PREPARATION

SCALE: N.T.S.

Revision / Date
10/29/2025 Issue for Bid

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
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Houston, TX 77046-2401
Tel: 713.664.0130
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TBPE Firm Registration No. F-2640
STATE OF TEXAS
TRAVIS KOEHRING
103549
LICENSED
PROFESSIONAL ENGINEER
10/29/2025

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FOUNDATION DETAILS

PACKAGE VOLUME 1

Job No. 1821-13-02
Sheet No. S3.01
Drawn By: KG
Date: 10-29-2025

10/28/2025 11:17:56 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD & RIVERWOOD MS ADD RENO/23069_RIVERWOOD-MS_ADDITION & RENOVATION_STRUCT-R9723.rvt

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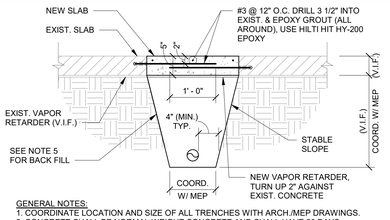
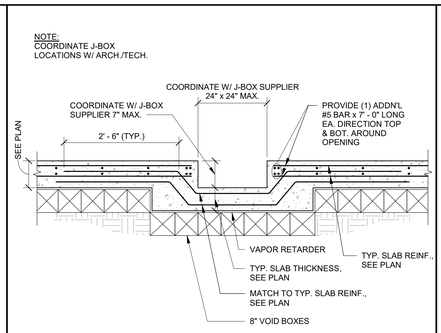
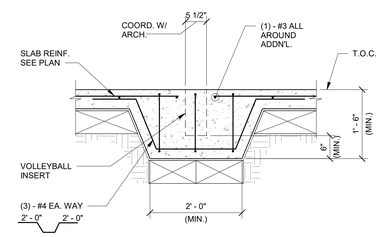


GENERAL NOTES:
1. COORDINATE LOCATION AND SIZE OF ALL TRENCHES WITH ARCH./MEP DRAWINGS.
2. CONCRETE SHALL BE NORMAL WEIGHT CONCRETE AND SHALL HAVE 28 DAYS COMPRESSION STRENGTH OF MINIMUM 3,000 PSI (MAXIMUM AGGREGATE SIZE = 1 1/2"). MIX DESIGN SHALL CONFORM TO THE STANDARDS OF ACI 318 AND ACI 301.
3. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60.
4. VAPOR RETARDER UNDER THE NEW SLAB SHALL BE 15 MIL STEGO VAPOR BARRIERS AS MANUFACTURED BY STEGO OR EQUIVALENT. ALL SEAMS SHALL BE OVERLAPPED MINIMUM 6 INCHES AND TAPED WITH MANUFACTURER'S TAPE.
5. FILL UNDER THE NEW SLAB SHALL BE STRUCTURAL FILL (SANDY CLAY OR CLAYEY SAND) HAVING PLASTICITY INDEX BETWEEN 10 AND 20 AND LIQUID LIMIT NOT EXCEEDING 40. FILL MATERIAL SHALL BE PLACED IN 6 INCH LOOSE LIFTS AND COMPACTED TO AT LEAST 95% MAXIMUM DENSITY (ASTM D698). THE SELECT FILL SHALL BE MOISTURE ADJUSTED TO WITHIN 2% OF OPTIMUM MOISTURE CONTENT. AS AN ALTERNATE TO SELECT FILL, CONTRACTOR MAY UTILIZE CEMENT STABILIZED SAND FOR BACKFILLING TRENCHES. SAND SHALL BE CLEAN AND SHALL CONFORM TO ASTM C33 AND CEMENT SHALL CONFORM TO ASTM C150. SAND-CEMENT MIXTURE SHALL PROVIDE COMPRESSIVE STRENGTH OF MINIMUM 100 PSI WHEN COMPACTED TO MINIMUM 95% (ASTM D558). PLACE MATERIAL IN 8 INCH LOOSE LIFTS AND COMPACT TO MINIMUM 95% WITH MOISTURE CONTENT AT OPTIMUM OR BELOW OPTIMUM MOISTURE CONTENT.
6. V.I.F. - VERIFY IN FIELD.

20 TYPICAL DETAIL AT PLUMBING TRENCHES
SCALE: N.T.S.

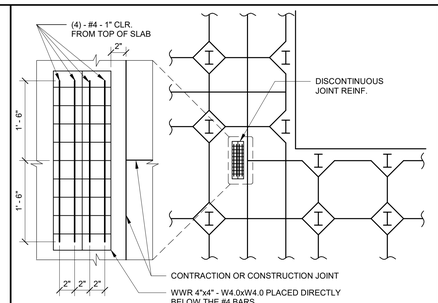


16 TYPICAL DETAIL SLAB DEPRESSION AT J-BOX (STRUCTURAL SLAB)
SCALE: 3/4" = 1'-0"



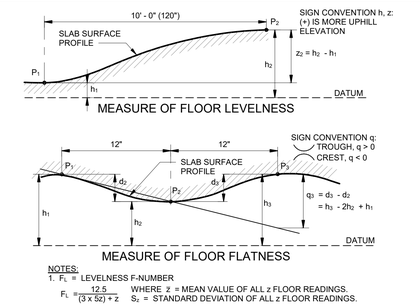
NOTE:
SEE ARCH. DWGS. FOR THE LOCATION OF INSERTS.

12 TYPICAL DETAIL VOLLEYBALL INSERTS
SCALE: 3/4" = 1'-0"



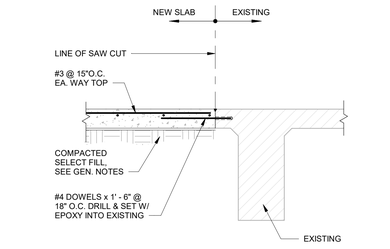
NOTE:
DISCONTINUOUS CONTRACTION OR CONSTRUCTION JOINTS SHOULD BE AVOIDED WHERE POSSIBLE.

8 TYPICAL DETAIL ADDITIONAL REINFORCEMENT AT DISCONTINUOUS JOINT IN SLAB-ON-GRADE
SCALE: N.T.S.

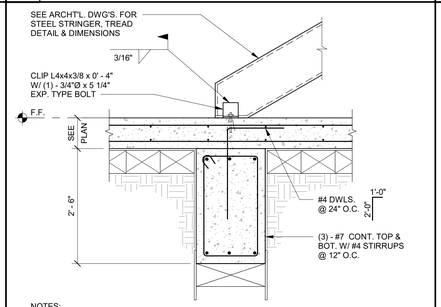


NOTES:
1. F_L = LEVELNESS F-NUMBER
   $F_L = \frac{12.5}{(3 \times Sz) + z}$ WHERE z = MEAN VALUE OF ALL z FLOOR READINGS. S_z = STANDARD DEVIATION OF ALL z FLOOR READINGS.
2. F_F = LEVELNESS F-NUMBER
   $F_F = \frac{4.57}{(3 \times Sq) + q}$ WHERE q = MEAN VALUE OF ALL z FLOOR READINGS. S_z = STANDARD DEVIATION OF ALL q FLOOR READINGS
3. F_L AND F_F SHALL BE STATISTICALLY DETERMINED ACCORDING TO ASTM E 1155 "STANDARD TEST METHOD FOR DETERMINING FLOOR FLATNESS AND LEVELNESS USING THE F-NUMBER SYSTEM."
4. REFER TO CONCRETE SPECIFICATIONS FOR REQUIRED F_F AND F_L VALUES.

4 TYPICAL DETAIL SLAB SURFACE TOLERANCE
SCALE: N.T.S.

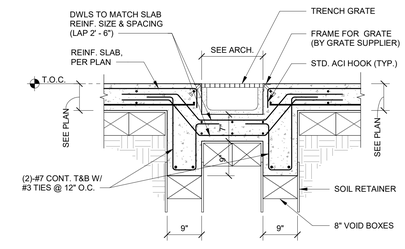


19 TYPICAL DETAIL SLAB REPAIR NEAR BEAM
SCALE: 3/4" = 1'-0"



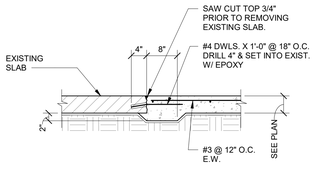
NOTES:
1. GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF STAIR STRINGER LOCATIONS WITH ARCHITECTURAL DRAWINGS & PROVIDE GRADE BEAMS WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT.
2. CLIP ANGLE TO BE HIDDEN BENEATH FIRST TREAD. WHERE OPEN RISERS ARE USED, COORDINATE THE LOCATION WITH THE ARCHITECT.

15 TYPICAL DETAIL GRADE BEAM AT STEEL STAIR
SCALE: N.T.S.

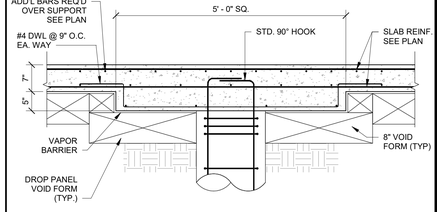


NOTE:
SEE KITCHEN DRAWINGS FOR ACTUAL LOCATION AND TRENCH SIZE.

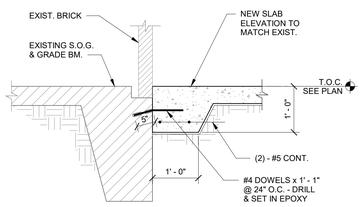
11 TYPICAL DETAIL TRENCH AT KITCHEN AREA (STRUCTURAL SLAB)
SCALE: 3/4" = 1'-0"



7 TYPICAL DETAIL NEW SLAB AT EXISTING
SCALE: 3/4" = 1'-0"

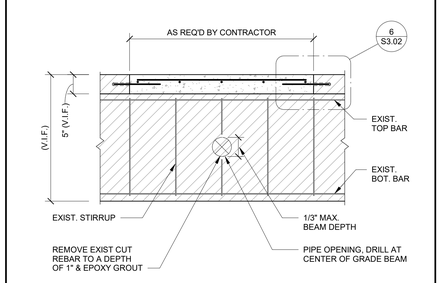


3 TYPICAL DROP CAP DETAIL
SCALE: 3/4" = 1'-0"



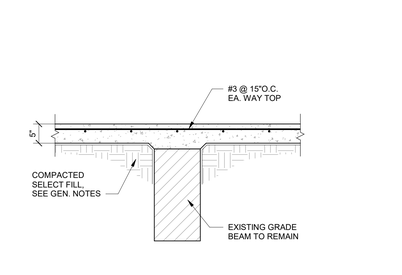
NOTES:
1. AT LOCATIONS WHERE EXISTING BRICK IS TO BE REMOVED, CONTINUE NEW SLAB OVER LEDGE.
2. PROVIDE TOOLED JOINT AT ALL LOCATIONS WHERE NEW SLAB ABUTS EXISTING SLAB. FILL JOINT W/ SEALANT.

18 TYPICAL DETAIL SLAB-ON-GRADE AT EXISTING BUILDING
SCALE: 3/4" = 1'-0"

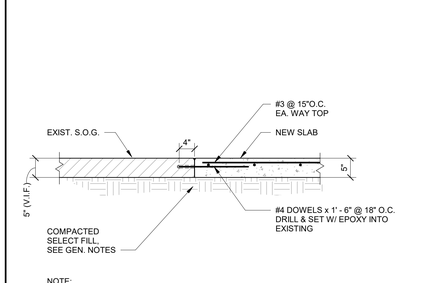


NOTE:
OPENINGS SHOULD ONLY BE PROVIDED WITHIN MIDDLE 8' - 0" OF GRADE BEAM SPAN AND MIDDLE 1/3 OF BEAM DEPTH.

14 TYPICAL DETAIL PIPE OPENING THROUGH EXIST GRADE BEAM
SCALE: 3/4" = 1'-0"

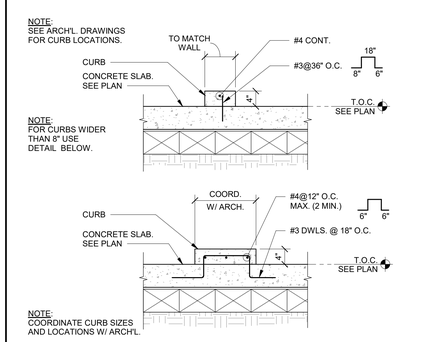


10 TYPICAL DETAIL SLAB REPAIR OVER EXISTING BEAM
SCALE: 3/4" = 1'-0"

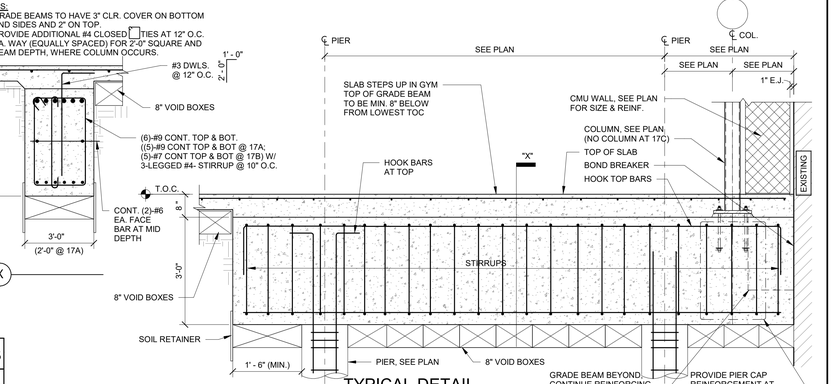


NOTE:
1. SAWCUT TOP 1" OF EXISTING SLAB PRIOR TO REMOVING EXISTING CONCRETE.
2. EXTENT OF SLAB DEMOLITION TO BE DETERMINED BY CONTRACTOR.

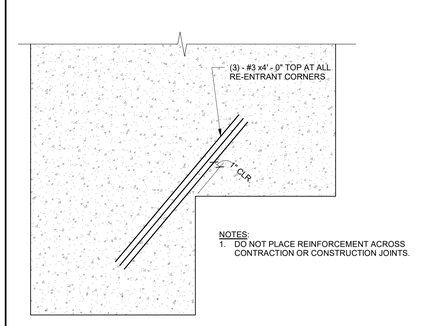
6 TYPICAL DETAIL AT EXISTING SLAB-ON-GRADE
SCALE: 3/4" = 1'-0"



2 CURB AT MECHANICAL ROOMS
SCALE: N.T.S.



17B
17A
17 TYPICAL DETAIL CANTILEVERED GRADE BEAM
SCALE: N.T.S.

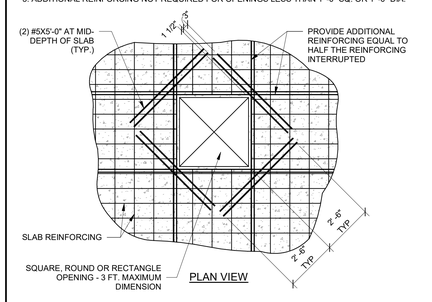


NOTES:
1. DO NOT PLACE REINFORCEMENT ACROSS CONTRACTION OR CONSTRUCTION JOINTS.

SCHEMATIC SLAB-ON-GRADE

5 TYPICAL DETAIL RE-ENTRANT CORNER BARS AT SLAB-ON-GRADE
SCALE: 1 1/2" = 1'-0"

NOTES:
1. ALL TOP & BOTTOM BARS INTERRUPTED BY THE OPENING SHALL BE REPLACED WITH ADDITIONAL REINFORCING EQUAL TO THAT INTERRUPTED. PLACE HALF OF THE ADDITIONAL REINFORCING ON EACH SIDE OF THE OPENING AND EXTEND IT 2' -0" BEYOND THE OPENING.
2. BOXED OUT OPENINGS, RECESSED BOXES AND PIPE SLEEVE CLUSTERS SHALL BE TREATED AS SLAB OPENINGS.
3. ADDITIONAL REINFORCING NOT REQUIRED FOR OPENINGS LESS THAN 1' -0" SQ. OR 1' -0" DIA.



1 TYPICAL SLAB OPENING DETAIL
SCALE: 3/8" = 1'-0"

Revision / Date
10/29/2025 Issue for Bid

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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FOUNDATION DETAILS

PACKAGE	VOLUME 1
Job No. 1821-13-02	Sheet No. S3.02
Drawn By: KG	
Date: 10-29-2025	

10/28/2025 11:17:57 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/23609_RIVERWOOD-MS_ADDITION & RENOVATION_STRUCT-R/Y23.rvt

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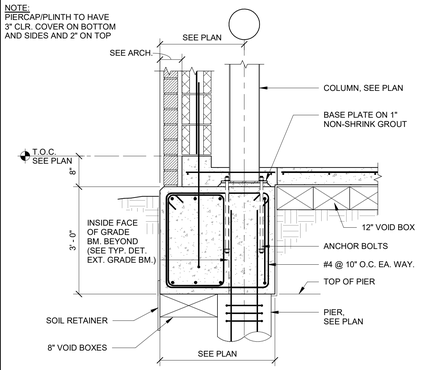
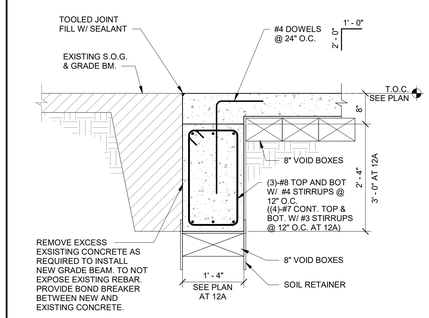
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL
EXTERIOR GRADE BEAM AT COLUMN

20 SCALE: 3/4" = 1'-0"

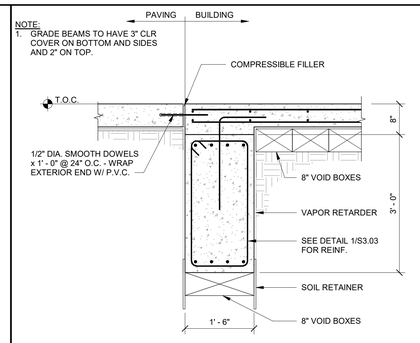
NOTE:
1. CMU FIREWALL AND ASSOCIATED REINFORCEMENT NOT SHOWN FOR CLARITY.



TYPICAL DETAIL
AT EXISTING SLAB-ON-GRADE

12A
12 SCALE: 3/4" = 1'-0"

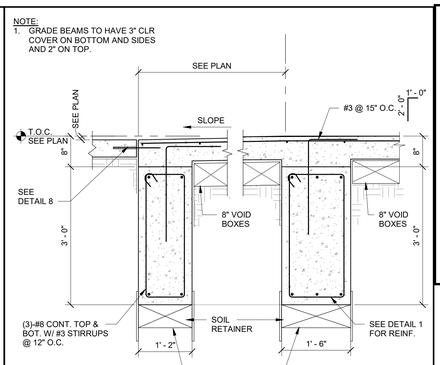
NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
EXTERIOR GRADE BEAM
AT DOORS/FLATWORK
(STRUCTURAL SLAB)

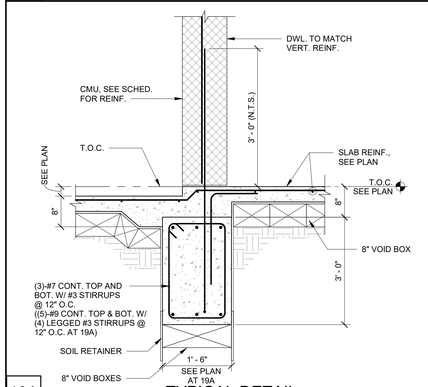
8 SCALE: 3/4" = 1'-0"

NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
GRADE BEAM AT PORCH

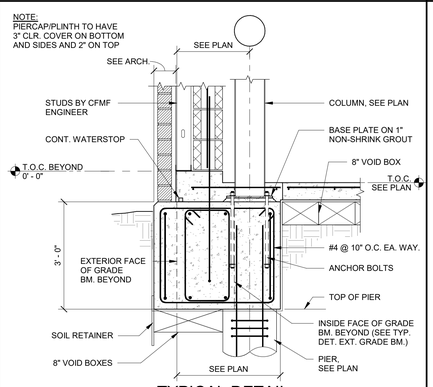
4 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
CMU WALL AT FLOOR DEPRESSION

19A
19 SCALE: 3/4" = 1'-0"

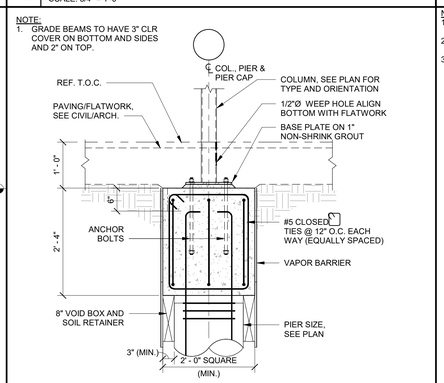
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL
EXTERIOR GRADE BEAM AT COLUMN

15 SCALE: 3/4" = 1'-0"

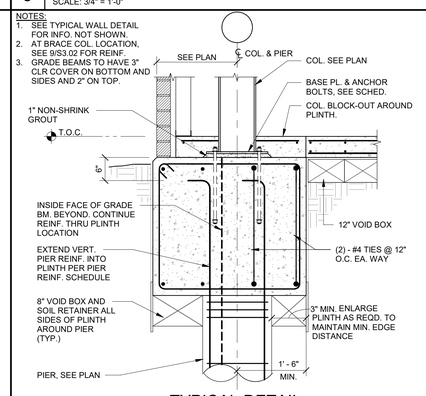
NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
EXTERIOR COLUMN WITH PIER CAP

11 SCALE: 3/4" = 1'-0"

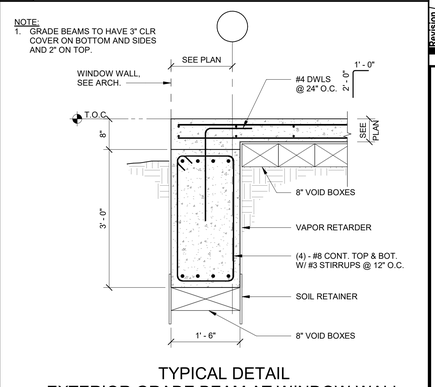
NOTES:
1. SEE TYPICAL WALL DETAIL FOR INFO, NOT SHOWN.
2. AT BRACE COL. LOCATION, SEE S/S3.02 FOR REINF.
3. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
PERIMETER COLUMN

7 SCALE: 3/4" = 1'-0"

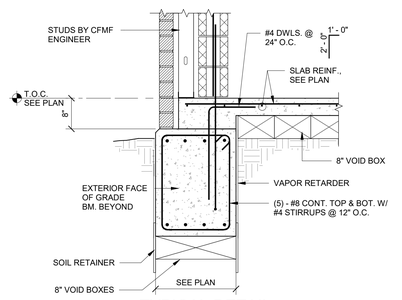
NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
EXTERIOR GRADE BEAM AT WINDOW WALL
(STRUCTURAL SLAB)

3 SCALE: 3/4" = 1'-0"

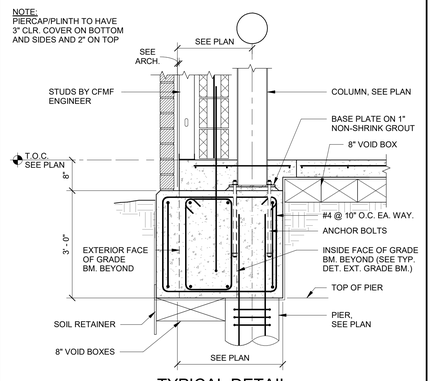
NOTE:
1. ELIMINATE BRICK / MASONRY LEDGE & CMU AT DOORS
2. GRADE BEAMS TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL
EXTERIOR GRADE BEAM

18 SCALE: 3/4" = 1'-0"

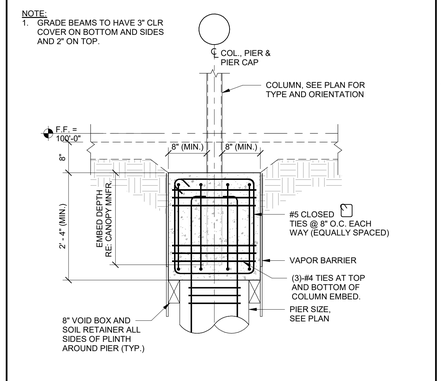
NOTE:
PIERCAP/PLINTH TO HAVE 3" CLR. COVER ON BOTTOM AND SIDES AND 2" ON TOP



TYPICAL DETAIL
EXTERIOR GRADE BEAM AT COLUMN

14 SCALE: 3/4" = 1'-0"

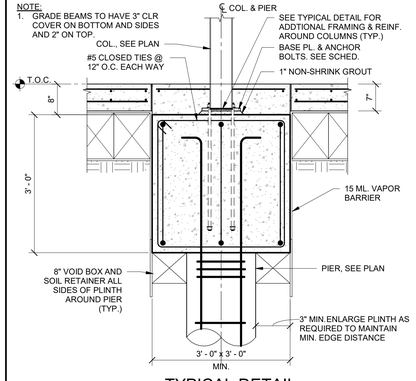
NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



CANOPY COLUMN FOUNDATION

10 SCALE: 3/4" = 1'-0"

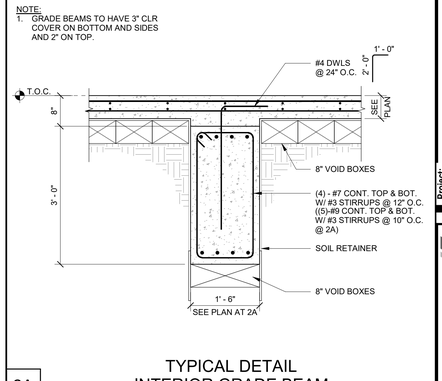
NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
INTERIOR PIER WITH COLUMN

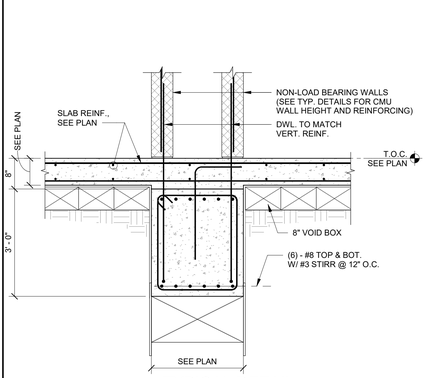
6 SCALE: 3/4" = 1'-0"

NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



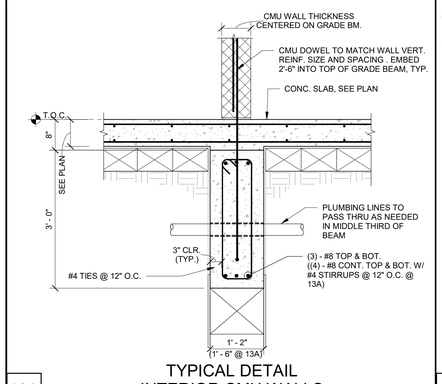
TYPICAL DETAIL
INTERIOR GRADE BEAM
(STRUCTURAL SLAB)

2A
2 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
GRADE BEAM AT DOUBLE CMU WALL

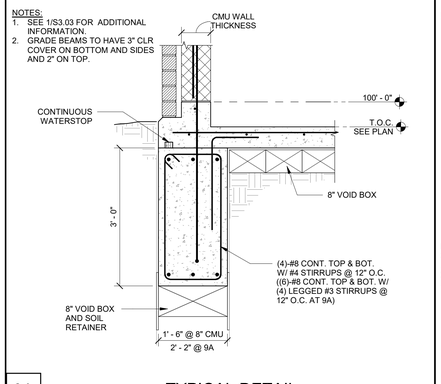
17 SCALE: 3/4" = 1'-0"



TYPICAL DETAIL
INTERIOR CMU WALLS
(STRUCTURAL SLAB)

13A
13 SCALE: 3/4" = 1'-0"

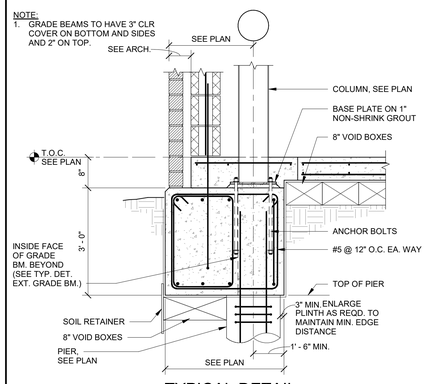
NOTES:
1. SEE 1/S3.03 FOR ADDITIONAL INFORMATION.
2. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
PERIMETER CMU WALLS

9A
9 SCALE: 3/4" = 1'-0"

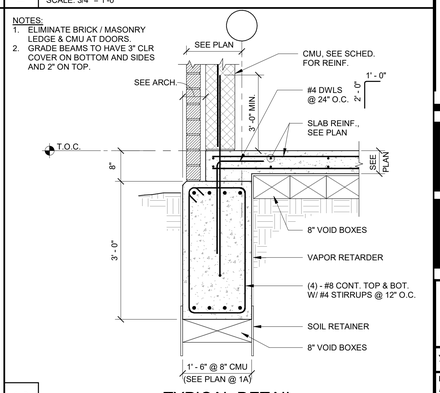
NOTE:
1. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
EXTERIOR GRADE BEAM AT COLUMN

5 SCALE: 3/4" = 1'-0"

NOTES:
1. ELIMINATE BRICK / MASONRY LEDGE & CMU AT DOORS.
2. GRADE BEAMS TO HAVE 3" CLR COVER ON BOTTOM AND SIDES AND 2" ON TOP.



TYPICAL DETAIL
EXTERIOR GRADE BEAM (STRUCTURAL SLAB)

1A
1 SCALE: 3/4" = 1'-0"

Revision / Date
10/29/2025 Issue for Bid

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
5177 Richmond Avenue, Suite 670
Houston, TX 77046-2401
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FOUNDATION DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S3.03
Drawn By: Author	
Date: 10-29-2025	

10/28/2025 11:17:59 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO23030_RIVERWOOD-MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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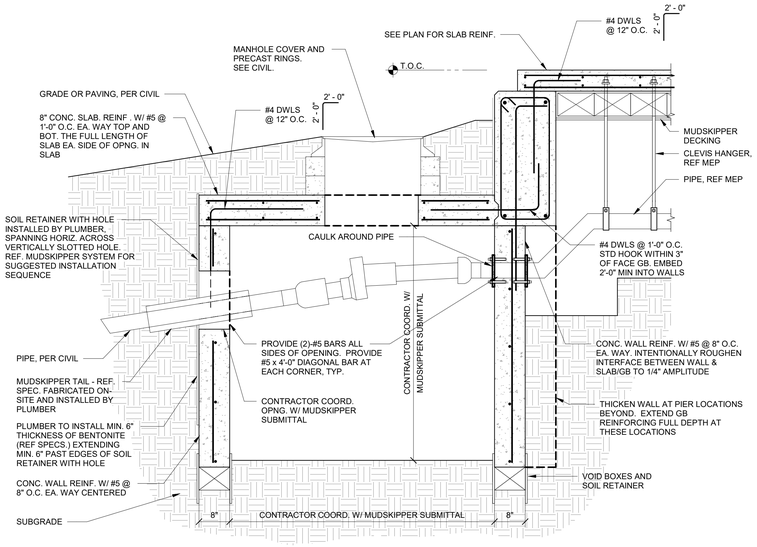
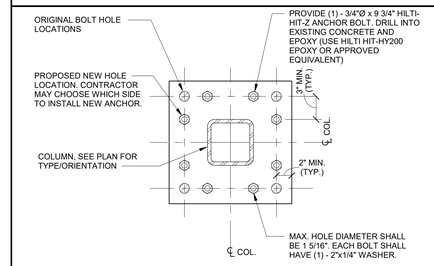


MUDSKIPPER VAULT SECTION

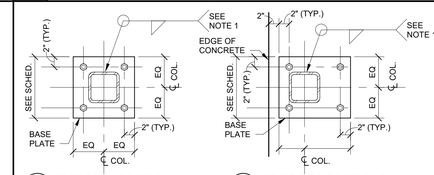
11 SCALE: 3/4" = 1'-0"



NOTES:
1. THIS DETAIL SHALL NOT BE USED AT BRACE FRAMES OR MOMENT FRAMES. ENGINEER APPROVAL IS REQUIRED PRIOR TO INSTALLATION FOR EA. LOCATION WITH DAMAGED ANCHOR BOLTS.
2. CUT AWAY DAMAGED ANCHOR BOLTS AND PROVIDE NEW HOLES FOR EPOXY ANCHOR.
3. HIT-Z-R ANCHORS SHALL BE USED IN LIEU OF HIT-Z ANCHORS AT COLUMNS EXPOSED TO WEATHER.

TYPICAL DETAIL
REPAIR AT GRAVITY BASE PLATE

3 SCALE: N.T.S.



A TYPICAL LOCATION

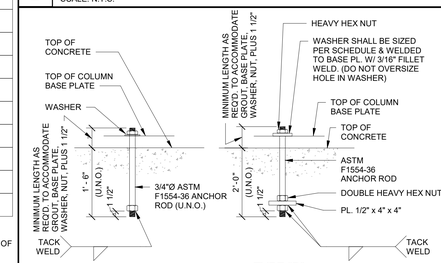
B AT EDGE LOCATIONS

BASE PLATE SCHEDULE		
COLUMN	BASE PLATE	ANCHOR BOLTS
HSS 6 x 6	14" x 14" x 3/4"	(4)-3/4"Ø TYPE A
HSS 8 x 8	16" x 16" x 3/4"	(4)-3/4"Ø TYPE A
HSS 10 x 10	18" x 18" x 1 1/4"	(4)-3/4"Ø TYPE A

NOTES:
1. MINIMUM FILLET WELD ACCORDING TO AISC (1/4" MIN.). WELDING AROUND CORNER RADIUS IS NOT REQUIRED U.N.O.
2. USE OVERSIZED HOLES FOR ANCHOR RODS ACCORDING TO AISC.
3. WASHERS SHALL BE INSTALLED OVER OVERSIZED HOLES.
4. CONTRACTOR SHALL PROVIDE 1/8" THICK TEMPLATE FOR ANCHOR ROD INSTALLATION.

TYPICAL DETAIL
BASE PLATE AT HSS COLUMNS

2 SCALE: N.T.S.



TYPE "A" TYPE "B"

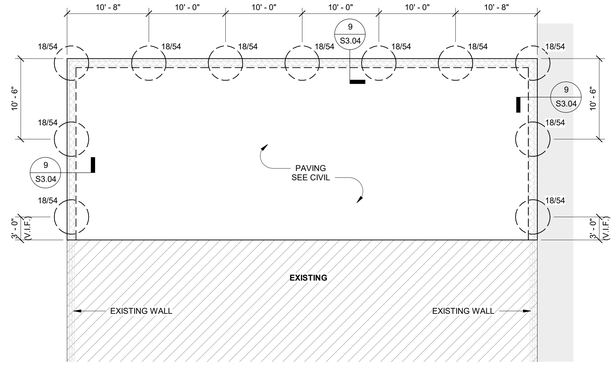
TYPE "B" WASHER SCHEDULE		
ANCHOR ROD DIA.	WASHER SIZE*	MIN. WASHER THICKNESS
3/4"	2"	1/4"
7/8"	2 1/2"	5/16"
1"	3"	3/8"
1 1/4"	3 1/2"	1/2"
1 1/2"	4"	1/2"
1 3/4"	4 1/2"	5/8"
2"	5"	3/4"
2 1/2"	5 1/2"	7/8"

NOTE:
USE TYPE "B" ANCHOR BOLTS AT COLUMNS WITH DIAGONAL BRACES, MOMENT CONNECTIONS, & AT CANOPY COLUMNS

*CIRCULAR OR SQUARE WASHERS MEETING WASHER SIZE ARE ACCEPTABLE

TYPICAL DETAIL ANCHOR BOLT

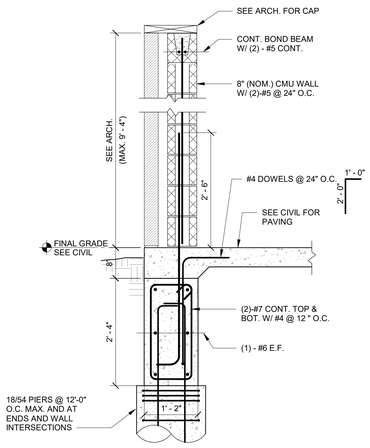
1 SCALE: N.T.S.



FOUNDATION PLAN - CHILLER YARD EXTENSION

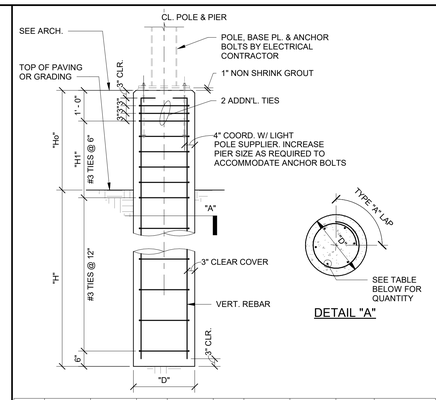
18 SCALE: 1/8" = 1'-0"

NOTE:
PROVIDE 8" VOID BOXES WITH SOIL RETAINERS UNDER GRADE BEAM BETWEEN PIER LOCATIONS.



FOUNDATION DETAIL
AT FREE STANDING WALL

9 SCALE: 3/4" = 1'-0"



POLE MARK	NOM. POLE HEIGHT	ASSUMED EPA (sf)	"H" DEPTH OF PIER	"Ho" ABOVE GRADE	"H1"	"D" DIAMETER OF PIER	VERTICAL REINF	TIES	REMARKS
LP1	15' - 0"	5.0	5' - 0"	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	TYPICAL PARKING
LP2	25' - 0"	10.0	8' - 0"	RE: ARCH.	1' - 6"	24"	6 - #6	#3 @ 12"	TYPICAL PARKING
LP3	35' - 0"	10.0	10' - 0"	RE: ARCH.	1' - 6"	24"	6 - #7	#3 @ 12"	
LP4	40' - 0"	25.0	12' - 0"	9"	2' - 0"	24"	6 - #8	#3 @ 12"	TENNIS
LP5	50' - 0"	30.0	14' - 0"	9"	2' - 0"	30"	8 - #9	#3 @ 12"	
LP6	60' - 0"	40.0	16' - 0"	9"	2' - 6"	30"	10 - #9	#3 @ 12"	
LP7	70' - 0"	40.0	18' - 0"	9"	3' - 0"	36"	12 - #9	#3 @ 18"	SOFTBALL
LP8	80' - 0"	80.0	20' - 0"	9"	4' - 0"	42"	15 - #9	#3 @ 18"	BASEBALL
LP9	90' - 0"	80.0	22' - 0"	9"	5' - 0"	42"	17 - #9	#3 @ 18"	BASEBALL

NOTES:
1. WIND LOAD CRITERIA IS PER IBC 2018. Vult = 140 MPH.
2. CONCRETE COMPRESSIVE STRENGTH, F'C = 3,000 PSI (NWC), WITH A MAX WATER/CEMENT RATIO OF 0.54.
3. STEEL REINFORCEMENT SHALL BE ASTM A615, GR. 60.
4. REFER TO ARCH DRAWINGS/CIVIL DRAWINGS FOR LOCATIONS OF LIGHT POLES.
5. REFER TO ELECTRICAL DRAWINGS FOR ADDITIONAL INFORMATION (AND SPECIFICATIONS FOR LIGHT STANDARDS).
6. VERIFY PROJECTION OF CONCRETE ABOVE GROUND WITH ARCHITECT.
7. EPA INDICATES MAXIMUM EXPOSED PROJECTED AREA AT THE TOP OF THE POLE IN ANY DIRECTION.
8. FOR A STATED POLE HEIGHT SHOWN ON THE TABLE, THE DEPTH OF PIER IS DEEMED ADEQUATE IF EPA IS LESS THAN SHOWN ON TABLE ABOVE.
9. THE PRESENCE OF SAND SEAMS AND SLICKENSIDES IN THE LAYERS MAY CAUSE SLOUGHING DURING PIER EXCAVATION, THIS MAY REQUIRE THE USE OF TEMPORARY STEEL CASING.
10. CONCRETE SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.

TYPICAL DETAIL
LIGHT POLE FOUNDATION

5 SCALE: N.T.S.

Revision / Use	Date
Issue for Bid	10/29/2025

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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FOUNDATION DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S3.04
Drawn By: Author	
Date: 10-29-2025	

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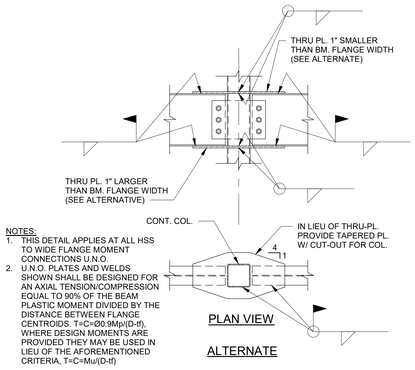
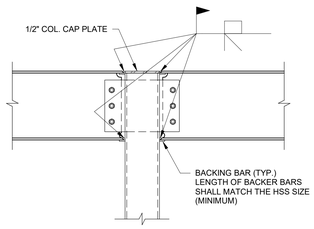


NOTES:
1. THIS DETAIL APPLIES AT ALL HSS TO WIDE FLANGE MOMENT CONNECTIONS U.N.O.
2. U.N.O. PLATES AND WELDS SHOWN SHALL BE DESIGNED FOR AN AXIAL TENSION/COMPRESSION EQUAL TO 90% OF THE BEAM PLASTIC MOMENT DIVIDED BY THE DISTANCE BETWEEN FLANGE CENTROIDS. T=C=Ø0.9Mp/(D-tf), WHERE DESIGN MOMENTS ARE PROVIDED THEY MAY BE USED IN LIEU OF THE AFOREMENTIONED CRITERIA, T=C=Mu/(D-tf)

HSS STRENGTH HSS COLUMN TO WIDE FLANGE BEAM MOMENT CONNECTION

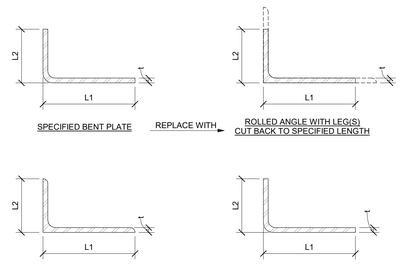
20 SCALE: N.T.S.



NOTES:
1. THIS DETAIL SHALL ONLY BE USED WHERE SPECIFICALLY NOTED. FOR GENERIC OR UNMARKED MOMENT CONNECTIONS, SEE20/S4.01
2. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

WIDE FLANGE BEAM TO HSS COLUMN MOMENT CONNECTION

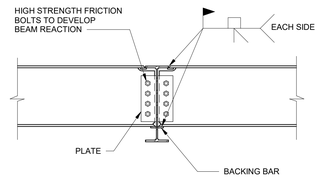
16 SCALE: N.T.S.



NOTE:
1. AT CONTRACTOR/FABRICATOR PREFERENCE ANGLE AND 90° BENT PLATES MAY BE SUBSTITUTED AS SHOWN U.N.O. BY EOR/ARCH.

TYPICAL DETAIL ANGLE OR BENT PLATE SUBSTITUTION

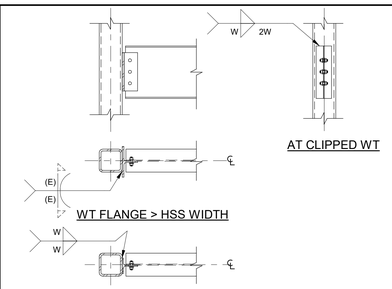
12 SCALE: N.T.S.



NOTE:
1. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

TYPICAL DETAIL STEEL BEAM TO BEAM MOMENT CONNECTION

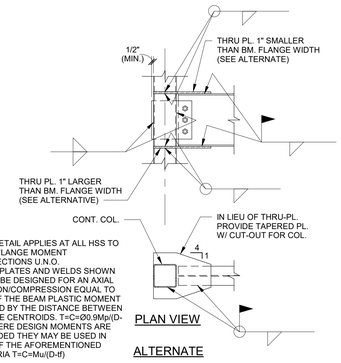
8 SCALE: N.T.S.



NOTES:
1. WELD SIZES W & E SHALL MEET AISC MIN. SIZE TO ENSURE ROTATIONAL DUCTILITY.
2. WT WEB THICKNESS SHALL NOT EXCEED 7/16".
3. THIS DETAIL MAY BE USED IN LIEU OF THE TYPICAL CONN. DETAIL AT CONTRACTOR PREFERENCE.
4. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
5. REFER TO GENERAL NOTES FOR BOLT TYPE.
6. EITHER WELDED/BOLTED OR WELDED/WELDED CONNECTIONS ARE ACCEPTABLE.

ALTERNATE DETAIL STEEL BEAM TO HSS COLUMN CONNECTION

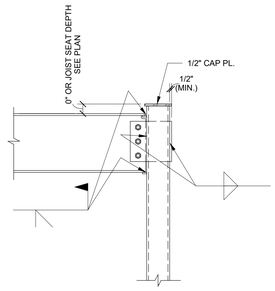
4 SCALE: N.T.S.



NOTES:
1. THIS DETAIL APPLIES AT ALL HSS TO WIDE FLANGE MOMENT CONNECTIONS U.N.O.
2. U.N.O. PLATES AND WELDS SHOWN SHALL BE DESIGNED FOR AN AXIAL TENSION/COMPRESSION EQUAL TO 90% OF THE BEAM PLASTIC MOMENT DIVIDED BY THE DISTANCE BETWEEN FLANGE CENTROIDS. T=C=Ø0.9Mp/(D-tf), WHERE DESIGN MOMENTS ARE PROVIDED THEY MAY BE USED IN LIEU OF THE AFOREMENTIONED CRITERIA T=C=Mu/(D-tf)

HIGH STRENGTH HSS COLUMN TO WIDE FLANGE BEAM MOMENT CONNECTION

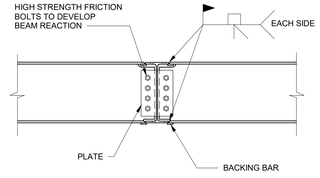
19 SCALE: N.T.S.



NOTES:
1. THIS DETAIL SHALL ONLY BE USED WHERE SPECIFICALLY NOTED. FOR GENERIC OR UNMARKED MOMENT CONNECTIONS, SEE19/S4.01
2. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

TYPICAL DETAIL HSS COLUMN TO WIDE FLANGE BEAM MOMENT CONNECTION

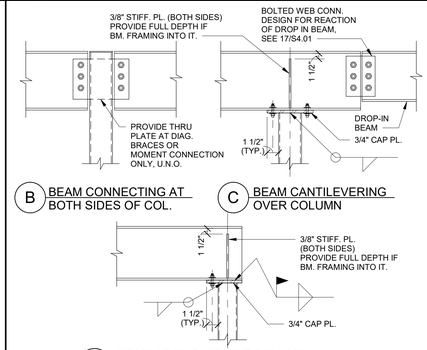
15 SCALE: N.T.S.



NOTE:
1. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.

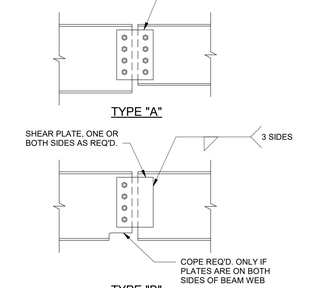
TYPICAL DETAIL STEEL BEAM TO BEAM MOMENT CONNECTION

7 SCALE: N.T.S.



TYPICAL DETAIL STEEL BEAM TO HSS/PIPE - COLUMN CONNECTION

3 SCALE: N.T.S.

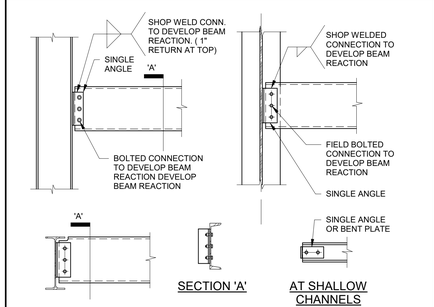


NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. REFER TO GENERAL NOTES FOR BOLT TYPE.
3. ALL CONNECTIONS SHALL MEET THE ROTATIONAL DUCTILITY AND STABILITY REQUIREMENTS PROVIDED BY AISC.

OPTION 2: ANGLE TYPE SHEAR SPLICE

TYPICAL DETAIL SHEAR SPLICE AT BEAM

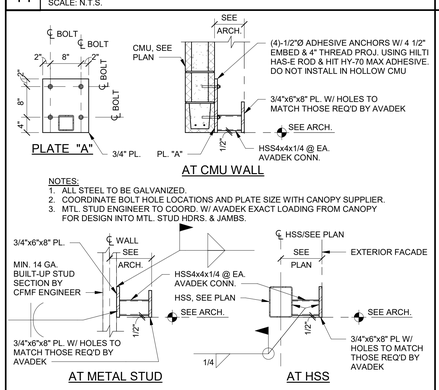
17 SCALE: N.T.S.



NOTES:
1. ANGLES MAY BE SHOP WELDED TO THE CHANNEL AND FIELD BOLTED TO THE COLUMN AT CONTRACTOR'S OPTION.
2. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
3. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN A.I.S.C. MANUAL WHERE APPLICABLE.
4. REFER TO GENERAL NOTES FOR BOLT TYPE.

TYPICAL DETAIL CONNECTION AT CHANNELS

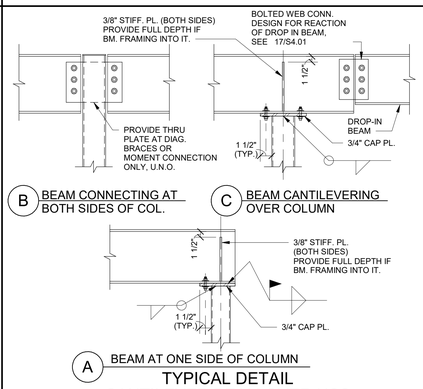
14 SCALE: N.T.S.



NOTES:
1. ALL STEEL TO BE GALVANIZED.
2. COORDINATE BOLT HOLE LOCATIONS AND PLATE SIZE WITH CANOPY SUPPLIER.
3. MTL. STUD ENGINEER TO COORD. W/ AVADEK EXACT LOADING FROM CANOPY FOR DESIGN INTO MTL. STUD HDRS. & JAMBS.

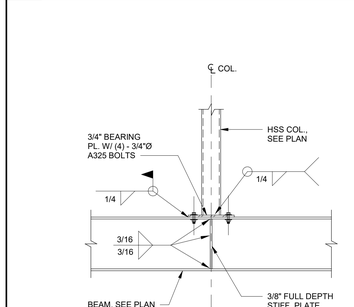
DETAIL AT AVADEK CANOPY CONNECTION

13 SCALE: 3/4" = 1'-0"



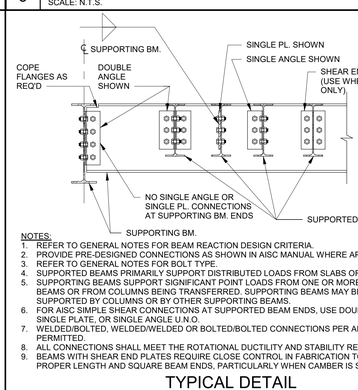
TYPICAL DETAIL CANTILEVER BEAM OVER HSS COLUMN CONNECTION

9 SCALE: N.T.S.



TYPICAL DETAIL STUB COLUMN ON STEEL BEAM

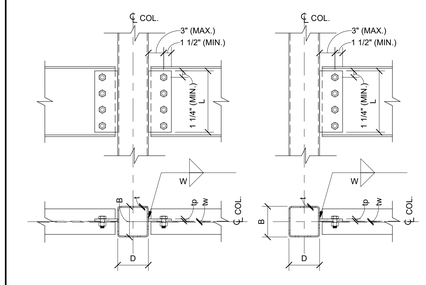
6 SCALE: N.T.S.



NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA.
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL WHERE APPLICABLE.
3. REFER TO GENERAL NOTES FOR BOLT TYPE.
4. SUPPORTED BEAMS PRIMARILY SUPPORT DISTRIBUTED LOADS FROM SLABS OR DECKING.
5. SUPPORTING BEAMS SUPPORT SIGNIFICANT POINT LOADS FROM ONE OR MORE SUPPORTED BEAMS OR FROM COLUMNS BEING TRANSFERRED. SUPPORTING BEAMS MAY BE SUPPORTED BY COLUMNS OR BY OTHER SUPPORTING BEAMS.
6. FOR AISC SIMPLE SHEAR CONNECTIONS AT SUPPORTED BEAM ENDS, USE DOUBLE ANGLE, SINGLE PLATE, OR SINGLE ANGLE U.N.O.
7. WELDED/BOLTED, WELDED/WELDED OR BOLTED/BOLTED CONNECTIONS PER AISC ARE PERMITTED.
8. ALL CONNECTIONS SHALL MEET THE ROTATIONAL DUCTILITY AND STABILITY REQUIREMENTS
9. BEAMS WITH SHEAR END PLATES REQUIRE CLOSE CONTROL IN FABRICATION TO ENSURE PROPER LENGTH AND SQUARE BEAM ENDS, PARTICULARLY WHEN CAMBER IS SPECIFIED.

TYPICAL DETAIL BEAM TO BEAM SHEAR CONNECTION (4 TYPES)

5 SCALE: N.T.S.



MAX. COLUMN WIDTH	
t	B OR D MAX.
3/16"	6"
1/4"	8"
5/16"	10"
3/8"	12"
1/2"	16"
5/8"	18"

MAX. DESIGN END REACTION Ru (KIPS)*						
L (IN.)	t = 3/16"	t = 1/4"	t = 5/16"	t = 3/8"	t = 1/2"	t = 5/8"
5.5	15	20	25	30	40	50
8.5	36	48	60	73	97	121
11.5	66	89	111	133	178	222
14.5	106	142	177	212	283	354
17.5	154	206	258	309	412	516
20.5	212	283	354	425	566	708
23.5	278	373	466	558	744	930
26.5	354	474	592	710	946	1183

* - VALUES SHOWN FOR ASTM A500 GR. B STEEL. FOR ASTM A500 GR. C, MULTIPLY VALUES BY 1.07.

NOTES:
1. REFER TO GENERAL NOTES FOR BEAM REACTION DESIGN CRITERIA, REACTIONS SHOWN ARE FACTORED LOADS (LRFD).
2. PROVIDE PRE-DESIGNED CONNECTIONS AS SHOWN IN AISC MANUAL WHERE APPLICABLE.
3. REFER TO GENERAL NOTES FOR BOLT TYPE.
4. THIS CONNECTION MAY ONLY BE USED WITH THE GEOMETRY SHOWN ABOVE AND WHERE THE BEAM DESIGN REACTION IS LESS THAN THE VALUE SHOWN IN THE SCHEDULE. ALL VALUES SHOWN ARE ULTIMATE DESIGN (LRFD) VALUES.
5. tp SHALL BE LESS THAN OR EQUAL TO 1/4" AT 3/16" THICK HSS, AND LESS THAN OR EQUAL TO 3/8" AT 1/4" THICK HSS.
6. AT ALL PLATE CONNECTIONS WITH STANDARD HOLES, tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 7/16" FOR CONNECTIONS WITH 2 TO 5 BOLTS, AND SHALL BE LESS THAN OR EQUAL TO 5/16" FOR CONNECTIONS WITH 6 OR MORE BOLTS. AT ALL PLATE CONNECTIONS WITH HORIZONTAL SHORT SLOTTED HOLES, tp AND/OR tw SHALL BE LESS THAN OR EQUAL TO 7/16 FOR CONNECTIONS WITH 6 OR MORE BOLTS.
7. COLUMN WIDTH B OR D SHALL BE LESS THAN OR EQUAL TO THE MAXIMUM WIDTH SHOWN IN THE SCHEDULE.
8. W SHALL BE 5/8 (tp).
9. FOR TWO SIDED CONNECTIONS, ALL CRITERIA MUST BE MET AT BOTH SIDES. WHERE ONLY ONE SIDE FAILS THE CRITERIA A WT CONNECTION MAY BE PROVIDED AT THAT SIDE.
10. THIS DETAIL IS NOT ALLOWED AT BRACED FRAMES OR OTHER AXIALLY LOADED CONNECTIONS.
11. SEE 3/S4.01 FOR THRU PLATE AND END BEARING CONNECTIONS OR SEE 4/S4.01 FOR WT CONNECTIONS WHERE THIS DETAIL DOES NOT APPLY.
12. PLATE DEPTH "L" SHALL NOT BE LESS THAN 1/2 THE "T" DIMENSION OF THE SUPPORTED BEAM.

TYPICAL DETAIL SINGLE PLATE TO RECTANGULAR HSS WALL CONNECTION

1 SCALE: N.T.S.

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FOR
HUMBLE ISD
HUMBLE, TX

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TYPICAL FRAMING DETAILS

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Job No. 1821-13-02	Sheet No. S4.01
Drawn By: Author	
Date: 10-29-2025	

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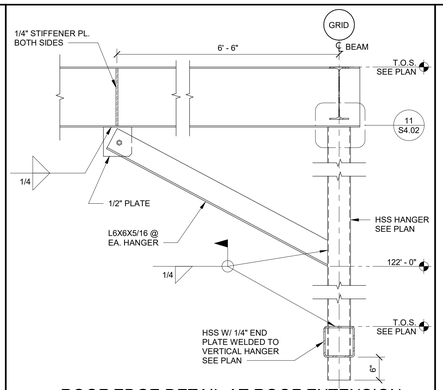
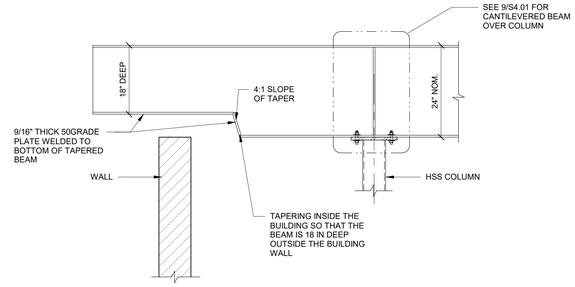


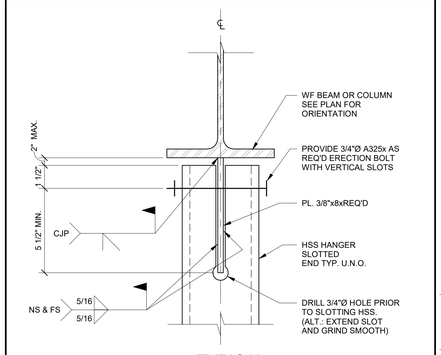
ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW

12 SCALE: 3/4" = 1'-0"



TAPPERING THE CANTILEVER BEAM INSIDE THE BUILDING

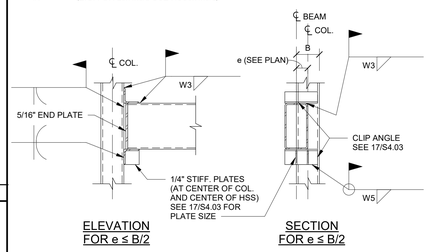
8 SCALE: N.T.S.



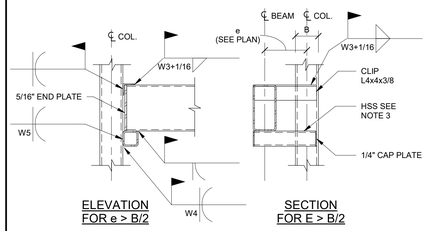
TYPICAL TUBE HANGER DETAIL

11 SCALE: N.T.S.

NOTES:
1. SEE FOR INFORMATION NOT SHOWN.
2. W5 SHALL BE W1 + 1/16" FOR (e-B/2)<6", and W1+ 1/4" FOR (e-B/2)>6" U.N.O.
3. HSS SHALL MATCH ANGEL DEPTH, WIDTH AND THICKNESS IN (E.G. FOR L6x4x3/8 USE HSS6x4x3/8)



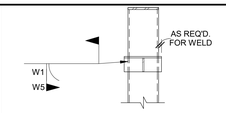
ELEVATION FOR e ≤ B/2 — SECTION FOR e ≤ B/2



ELEVATION FOR e > B/2 — SECTION FOR E > B/2

TYPICAL DETAIL OFFSET TUBE BEAM TO COLUMN OFFSET CONNECTION

6 SCALE: N.T.S.



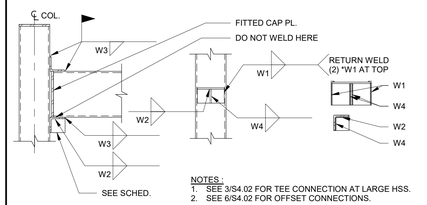
REINFORCED FILLET SIZE W5 SCHEDULE						
t \ W1	3/16	1/4	5/16	3/8	7/16	1/2
3/16	3/16	3/16	1/4	5/16	3/8	7/16
1/4	3/16	3/16	1/4	5/16	3/8	7/16
5/16	N/A	1/4	1/4	5/16	3/8	7/16
3/8	N/A	N/A	3/16	1/4	5/16	3/8
1/2	N/A	N/A	N/A	1/4	5/16	3/8
5/8	N/A	N/A	N/A	N/A	1/4	5/16

NOTES:
1. WHERE CONTRACTOR/FABRICATOR PREFERS SEAT WIDER THAN TUBE COLUMN FLAIR BEVEL WELDS SHALL BE REINFORCED TO MATCH W1 FILLET WELD CAPACITY AS SHOWN
2. REFERENCE 5/S4.04 FOR INFORMATION NOT SHOWN.
3. t INDICATES NOMINAL COLUMN THICKNESS
4. THIS DETAIL MAY NOT BE USED FOR ARCHITECTURALLY EXPOSED CONNECTIONS U.N.O.

TYPICAL DETAIL TUBE SEAT WIDER THAN TUBE COLUMN

3 SCALE:N.T.S.

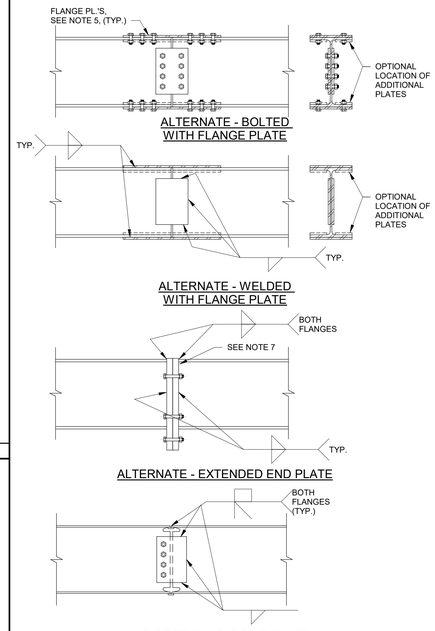
CONNECTION SCHEDULE							
GIRT SIZE	BOTTOM CONN.	STIFF. PL.	TOP ANGLE	W1	W2	W3	W4
HSS6x6	L4x4x3/8	5/16	L3x3x3/16	3/16	3/16	3/16	3/16
HSS8x8	L4x4x3/8	3/8	L3x3x1/4	3/16	3/16	3/16	3/16
HSS10x8 & HSS 10x10	L6x4x3/8 (LLV)	3/8	L3x3x5/16	5/16	1/4	1/4	5/16
HSS12x10 & HSS 16X12	L6x4x3/8 (LLV)	3/8	L3x3x5/16	5/16	1/4	1/4	5/16



NOTES:
1. SEE 3/S4.02 FOR TEE CONNECTION AT LARGE HSS.
2. SEE 6/S4.02 FOR OFFSET CONNECTIONS.

TYPICAL DETAIL TUBE BEAM TO COLUMN

5 SCALE: N.T.S.



ALTERNATE - BOLTED WITH FLANGE PLATE

ALTERNATE - WELDED WITH FLANGE PLATE

ALTERNATE - EXTENDED END PLATE

DIRECTLY WELDED FLANGE

NOTES:
1. BOLTS IN WEB CONNECTION SHALL BE TIGHTENED PRIOR TO WELDING OF FLANGES.
2. ALL BOLTED MOMENT AND AXIAL CONNECTIONS SHALL USE SLIP CRITICAL BOLTS. ALLOWABLE STRENGTH OF BOLTS SHALL BE BASED ON A CLASS "A" FAYING SURFACE. DO NOT PAINT STEEL AT SLIP CRITICAL CONNECTIONS.
3. U.N.O. FLANGE PLATES, BOLTS, AND WELDS SHOWN SHALL BE DESIGNED FOR AN AXIAL TENSION/COMPRESSION EQUAL TO 90% OF THE BEAM PLASTIC MOMENT CAPACITY DIVIDED BY THE DISTANCE BETWEEN FLANGE CENTROIDS. T=C=0.9ØMp/(D-tf) ,WHERE DESIGN MOMENTS ARE PROVIDED THEY MAY BE USED IN LIEU OF THE AFOREMENTIONED CRITERIA. T=C=Mu/(D-tf)
4. BOLTED MOMENT CONNECTIONS MAY BE USED IN LIEU OF A FULLY WELDED MOMENT CONNECTION AT CONTRACTOR PREFERENCE EXCEPT WHERE PROHIBITED IN NOTE 5.
5. BOLTED MOMENT CONNECTIONS MAY NOT BE USED AT ROOF BEAMS WHERE THE DECK IS DIRECTLY ATTACHED TO THE BEAM OR WHERE BOLTS WILL INTERFERE WITH JOIST SEATS OR OTHER BEARING CONNECTIONS.
6. BOLTS IN FLANGE SHALL BE SIZED SUCH THAT THE CROSS-SECTIONAL AREA OF THE FLANGE IS NOT REDUCED BY MORE THAN 30%, ANY VARIANCE MUST BE SUBMITTED TO E.O.R. FOR APPROVAL.
7. EXTENDED END PLATES MAY NOT BE USED WHERE PLATES INTERFERE WITH JOIST SEATS OR OTHER BEARINGS CONNECTIVES. LOCALLY CUT DECK IF REQUIRED.

TYPICAL DETAIL MOMENT SPLICE AT BEAM

1 SCALE: N.T.S.

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PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S4.02
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Date: 10-29-2025	

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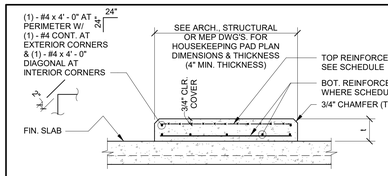
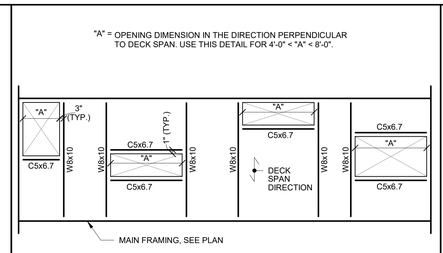


HOUSEKEEPING PAD REINF. SCHEDULE		
PAD THICKNESS	TOP REINFORCEMENT	BOTTOM REINF.
4" (MAX.)	4"x4" - W4.0 x W4.0	NONE

NOTE:
1. GENERAL CONTRACTOR TO DETERMINE REQUIREMENTS FOR HOUSEKEEPING PADS OVER STRUCTURAL SLAB AND PROVIDE WHERE REQUIRED WHETHER SHOWN ON STRUCTURAL DRAWINGS OR NOT. COORDINATE DIMENSIONS AND OTHER SPECIAL REQUIREMENTS WITH EQUIPMENT MANUFACTURERS AS REQUIRED.
2. PAD SHALL NOT BE POURED UNTIL AFTER SLAB HAS REACHED ITS SPECIFIED 28 DAYS STRENGTH.
3. CONCRETE FOR HOUSEKEEPING PAD SHALL BE LIGHTWEIGHT CONCRETE WITH f'c = 3,000 psi

TYPICAL DETAIL
CONCRETE ISLAND OR HOUSEKEEPING PAD
ELEVATED FLOOR

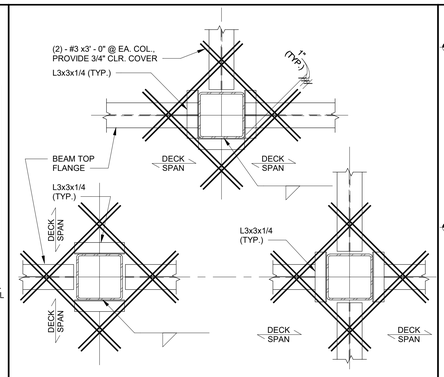
20 SCALE: N.T.S.



NOTES :
1. COORDINATE OPENING SIZE AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. THIS DETAIL SHOWS TYPICAL CONFIGURATIONS. VERIFY WITH STRUCTURE ENGINEER FOR SPECIAL CASES.
3. REFER TO STRUCTURAL ENGINEER FOR FRAMING IF DIMENSION "A" EXCEEDS 8'-0".
4. DECK MANUFACTURER TO PROVIDE 14 GAGE METAL EDGE CLOSURE AROUND EACH OPENING UNLESS DETAILED OTHERWISE.

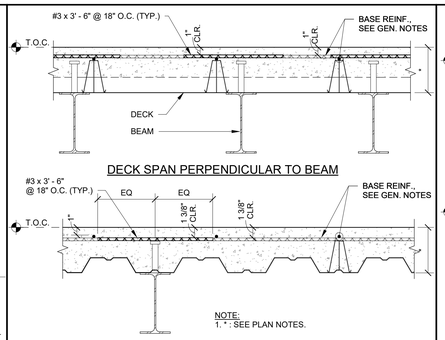
TYPICAL DETAIL
FRAMED OPENINGS IN COMPOSITE
METAL DECK SLAB FLOOR OR ROOF

16 SCALE: N.T.S.



TYPICAL DETAIL
METAL DECK SUPPORT AT STEEL COLUMNS

12 SCALE: N.T.S.

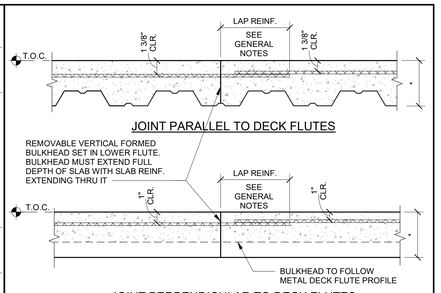


NOTE:
1. * : SEE PLAN NOTES.

DECK SPAN PARALLEL TO BEAM

TYPICAL DETAIL
ADDITIONAL REBAR FOR
CONCRETE ON STEEL DECK

8 SCALE: N.T.S.

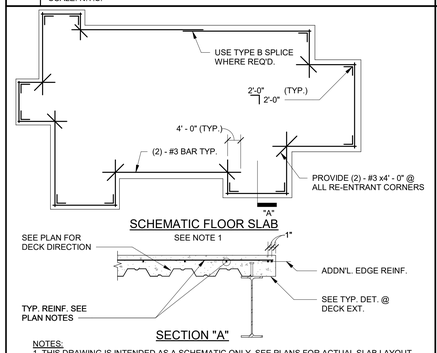


JOINT PERPENDICULAR TO DECK FLUTES

NOTES:
1. CONSTRUCTION JOINTS PARALLEL TO DECK FLUTES SHALL BE LOCATED NO CLOSER THAN 5' - 0" FROM THE CENTERLINE OF THE NEAREST GIRDER.
2. CONSTRUCTION JOINTS PERPENDICULAR TO DECK FLUTES SHALL BE LOCATED AT THE CENTER OF THE METAL DECK SPAN.
3. * : SEE PLAN NOTES.

TYPICAL DETAIL
CONSTRUCTION JOINT
CONCRETE SLAB ON METAL DECK

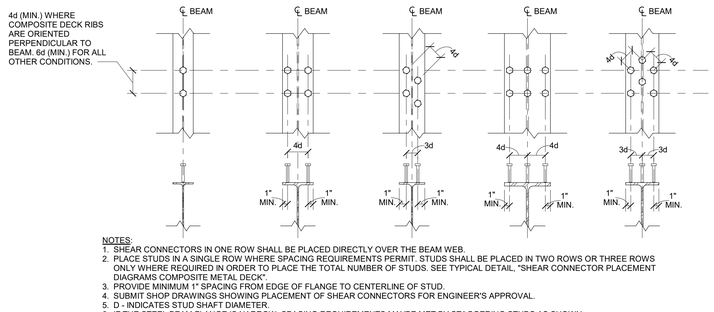
4 SCALE: N.T.S.



NOTES:
1. THIS DRAWING IS INTENDED AS A SCHEMATIC ONLY. SEE PLANS FOR ACTUAL SLAB LAYOUT.
2. TYPICAL REINFORCING PARALLEL TO EDGE REINF. SHALL START 6" FROM EDGE REBAR.

TYPICAL DETAIL
REINFORCING AT SLAB EDGE

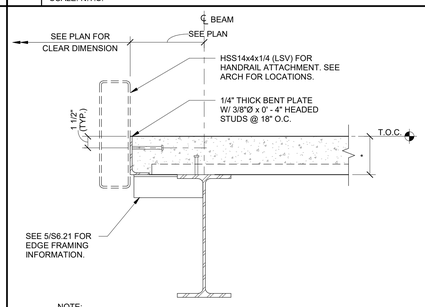
19 SCALE: N.T.S.



NOTES:
1. SHEAR CONNECTORS IN ONE ROW SHALL BE PLACED DIRECTLY OVER THE BEAM WEB.
2. PLACE STUDS IN A SINGLE ROW WHERE SPACING REQUIREMENTS PERMIT. STUDS SHALL BE PLACED IN TWO ROWS OR THREE ROWS ONLY WHERE REQUIRED IN ORDER TO PLACE THE TOTAL NUMBER OF STUDS. SEE TYPICAL DETAIL, "SHEAR CONNECTOR PLACEMENT DIAGRAMS COMPOSITE METAL DECK".
3. PROVIDE MINIMUM 1" SPACING FROM EDGE OF FLANGE TO CENTERLINE OF STUD.
4. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR ENGINEER'S APPROVAL.
5. D - INDICATES STUD SHAFT DIAMETER.
6. IF THE STEEL BEAM FLANGE IS NARROW. SPACING REQUIREMENTS MAYBE MET BY STAGGERING STUDS AS SHOWN.
7. SPACINGS SHOWN ARE MINIMUM AND MAY BE EXCEEDED WHERE SPACE IS AVAILABLE. SEE TYPICAL DETAIL "SHEAR CONNECTOR PLACEMENT DIAGRAMS ON COMPOSITE METAL DECK" FOR ADDITIONAL INFO.

TYPICAL DETAIL
SHEAR CONNECTOR SPACING CRITERIA

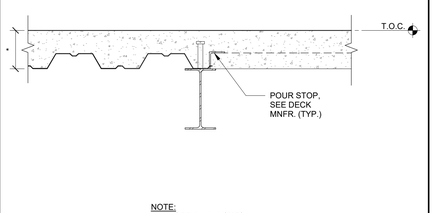
15 SCALE: N.T.S.



NOTE:
1. SEE PLAN FOR DECK DIRECTION.
2. REFER TO STAIR DRAWINGS FOR CONNECTION OF STAIR STRINGERS TO BEAM.
3. * : SEE PLAN NOTES.

TYPICAL DETAIL
STEEL STAIR FLOOR LANDING
/HANDRAIL ATTACHMENT
COMPOSITE METAL DECK

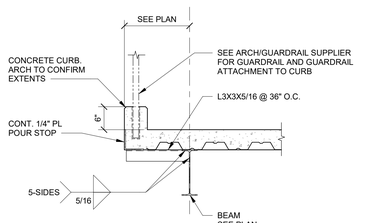
7 SCALE: N.T.S.



NOTE:
1. * : SEE PLAN NOTES.

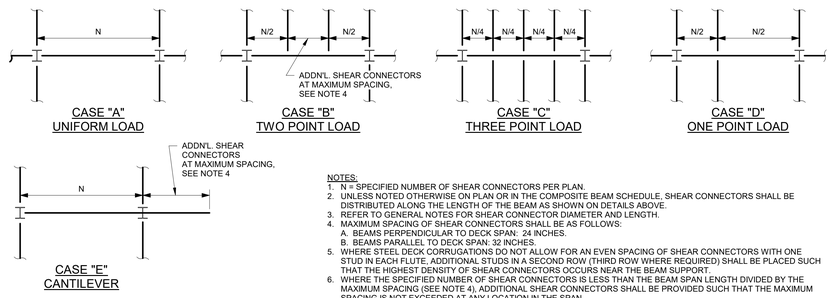
TYPICAL DETAIL
CHANGE IN DECK DIRECTION IN
COMPOSITE METAL DECK

3 SCALE: N.T.S.



TYPICAL DETAIL
GUARDRAIL DETAIL AT MEZZANINE
CONCRETE CURB

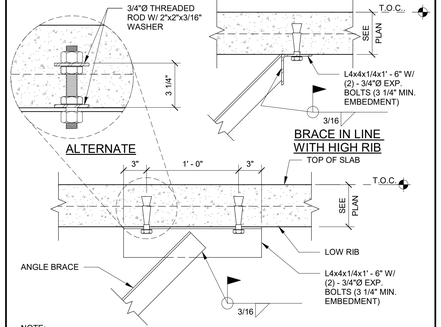
18 SCALE: N.T.S.



NOTES:
1. N = SPECIFIED NUMBER OF SHEAR CONNECTORS PER PLAN.
2. UNLESS NOTED OTHERWISE ON PLAN OR IN THE COMPOSITE BEAM SCHEDULE, SHEAR CONNECTORS SHALL BE DISTRIBUTED ALONG THE LENGTH OF THE BEAM AS SHOWN ON DETAILS ABOVE.
3. REFER TO GENERAL NOTES FOR SHEAR CONNECTOR DIAMETER AND LENGTH.
4. MAXIMUM SPACING OF SHEAR CONNECTORS SHALL BE AS FOLLOWS:
   A. BEAMS PERPENDICULAR TO DECK SPAN: 24 INCHES.
   B. BEAMS PARALLEL TO DECK SPAN: 32 INCHES.
5. WHERE STEEL DECK CORRUGATIONS DO NOT ALLOW FOR AN EVEN SPACING OF SHEAR CONNECTORS WITH ONE STUD IN EACH FLUTE, ADDITIONAL STUDS IN A SECOND ROW (THIRD ROW WHERE REQUIRED) SHALL BE PLACED SUCH THAT THE HIGHEST DENSITY OF SHEAR CONNECTORS OCCURS NEAR THE BEAM SUPPORT.
6. WHERE THE SPECIFIED NUMBER OF SHEAR CONNECTORS IS LESS THAN THE BEAM SPAN LENGTH DIVIDED BY THE MAXIMUM SPACING (SEE NOTE 4), ADDITIONAL SHEAR CONNECTORS SHALL BE PROVIDED SUCH THAT THE MAXIMUM SPACING IS NOT EXCEEDED AT ANY LOCATION IN THE SPAN.
7. SUBMIT SHOP DRAWINGS SHOWING PLACEMENT OF SHEAR CONNECTORS FOR ENGINEER'S APPROVAL.

TYPICAL DETAIL
SHEAR CONNECTOR PLACEMENT DIAGRAMS COMPOSITE METAL DECK

14 SCALE: N.T.S.

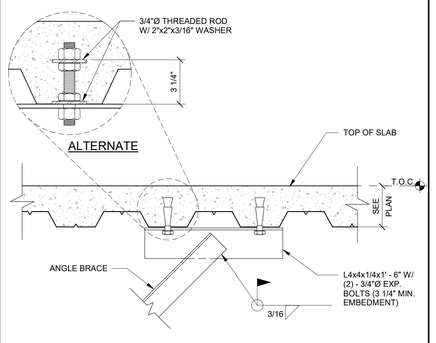


NOTE:
LOCATE EXPANSION BOLTS IN CENTER OF DECK FLUTE

BRACE IN LINE WITH LOW RIB

TYPICAL DETAIL
BRACE CONNECTION TO SLAB

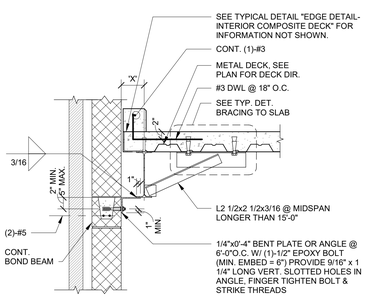
6 SCALE: N.T.S.



NOTE:
LOCATE EXPANSION BOLTS IN CENTER OF DECK FLUTE

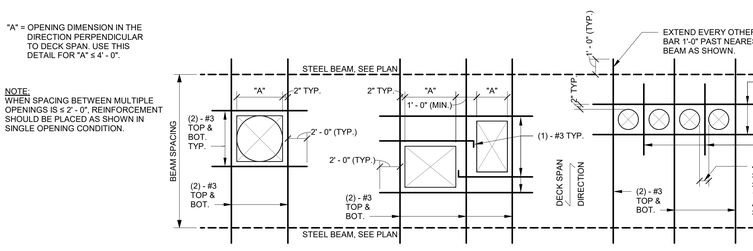
TYPICAL DETAIL
BRACE CONNECTION TO SLAB

2 SCALE: N.T.S.



DETAIL AT EXTERIOR NON-LOAD BEARING
CMU AT MEZZANINE

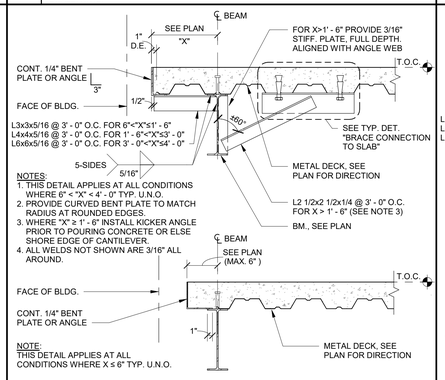
17 SCALE: N.T.S.



NOTES:
1. COORDINATE OPENING SIZE AND LOCATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.
2. MAXIMUM DIMENSION "A" SHALL BE 4'-0". REFER TO PLAN OR DETAIL ON DRAWINGS FOR FRAMING OF OPENINGS GREATER THAN 4' - 0".
3. OPENINGS 10" AND SMALLER DO NOT REQUIRE ADDITIONAL REINFORCEMENT.
4. FIELD CUT OPENINGS IN DECK AFTER CONCRETE SLAB HAS BEEN POURED AND HAS ATTAINED MINIMUM OF 75% OF ITS SPECIFIED 28-DAY COMPRESSIVE STRENGTH.
5. REINFORCEMENT PERPENDICULAR TO DECK SPAN SHALL BE PLACED ON TOP OF DECK FLUTES.
6. REINFORCEMENT PARALLEL TO DECK SPAN SHALL BE PLACED IN THE LOWER FLUTE AND SHALL BE CHAIRED TO PROVIDE 3/4" COVER.
7. THIS DETAIL SHOWS TYPICAL CONDITIONS. VERIFY REINFORCING STEEL PLACEMENT WITH ENGINEER FOR SPECIAL CASES.
8. PROVIDE REINFORCEMENT AS SHOWN FOR SQUARE, RECTANGULAR AND ROUND OPENINGS.

TYPICAL DETAIL
OPENINGS IN COMPOSITE METAL DECK SLAB, FLOOR OR ROOF

13 SCALE: N.T.S.

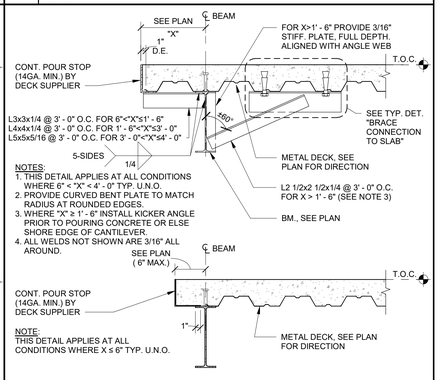


NOTES:
1. THIS DETAIL APPLIES AT ALL CONDITIONS WHERE 6" < "X" < 4' - 0" TYP. U.N.O.
2. PROVIDE CURVED BENT PLATE TO MATCH RADIUS AT ROUNDED EDGES.
3. WHERE "X" ≥ 1' - 6" INSTALL KICKER ANGLE PRIOR TO POURING CONCRETE OR ELSE SHORE EDGE OF CANTILEVER.
4. ALL WELDS NOT SHOWN ARE 3/16" ALL AROUND.

NOTE:
THIS DETAIL APPLIES AT ALL CONDITIONS WHERE X ≤ 6" TYP. U.N.O.

TYPICAL DETAIL
EDGE DETAIL - EXTERIOR
COMPOSITE METAL DECK

5 SCALE: N.T.S.



NOTES:
1. THIS DETAIL APPLIES AT ALL CONDITIONS WHERE 6" < "X" < 4' - 0" TYP. U.N.O.
2. PROVIDE CURVED BENT PLATE TO MATCH RADIUS AT ROUNDED EDGES.
3. WHERE "X" ≥ 1' - 6" INSTALL KICKER ANGLE PRIOR TO POURING CONCRETE OR ELSE SHORE EDGE OF CANTILEVER.
4. ALL WELDS NOT SHOWN ARE 3/16" ALL AROUND.

NOTE:
THIS DETAIL APPLIES AT ALL CONDITIONS WHERE X ≤ 6" TYP. U.N.O.

TYPICAL DETAIL
EDGE DETAIL - INTERIOR
COMPOSITE METAL DECK

1 SCALE: N.T.S.

Revision / Date
10/29/2025 Issue for Bid

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

MATRIX STRUCTURAL
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FLOOR FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S5.01
Drawn By: JW	
Date: 10-29-2025	

10/28/2025 11:18:04 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/23030_RIVERWOOD MS_ADDITION & RENOVATION_STRUCT-RVT23.rvt

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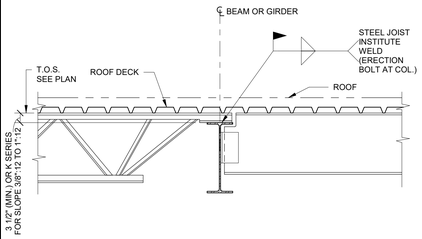
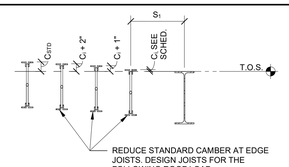


NOTE:
COORDINATE JOIST SEATS WITH JOIST SUPPLIER.

TYPICAL DETAIL
STEEL JOIST/STEEL BEAM AT INTERIOR STEEL BEAM, ROOF

20 SCALE: N.T.S.

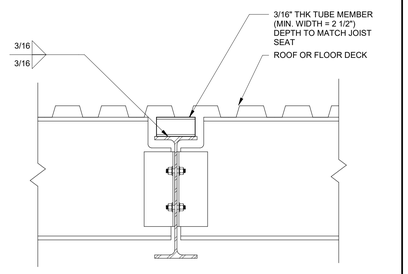


NOTES:
1. TO FACILITATE DECK INSTALLATION THE MAX. CAMBER OF THE NEAREST JOIST TO THE WALL SHALL BE AS SCHEDULED. ALL LOADING AND DEFLECTION CRITERIA REMAIN THE SAME U.N.O.
2. AT EACH SUBSEQUENT JOIST, CAMBER MAY BE INCREASED 1" UNTIL STANDARD CAMBER IS ACHIEVED.

	MAX. OUTSIDE JOIST CAMBER C (INCHES)		
JOIST SPAN (FT.)	$S_1 \leq 2' - 0"$	$2' - 0" < S_1 \leq 4' - 6"$	$4' - 6" < S_1 \leq 6' - 0"$
0 - 59	0"	1/2"	3/4"
60 - 69	1/2"	3/4"	1"
70 - 79	3/4"	1"	1 1/4"
80 - 89	1"	1 1/4"	1 1/2"
90 - 99	1 1/4"	1 1/2"	1 3/4"
100 - 109	1 1/2"	1 3/4"	2"
110+	1.5 + 2.5 (SPAN - 110)/100	1.75 + 2.5 (SPAN - 110)/100	2 + 2.5 (SPAN - 110)/100

TYPICAL DETAIL
EXTERIOR JOIST CAMBER

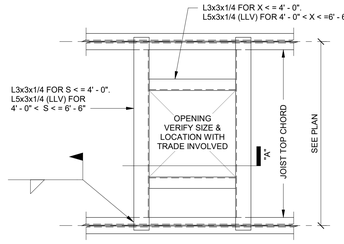
16 SCALE: 3/4" = 1'-0"



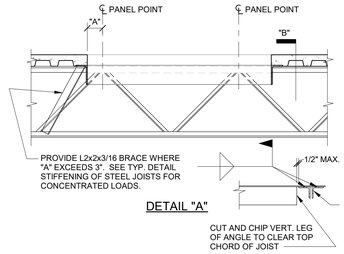
NOTE:
AT LOCATIONS WITH A JOIST ON ONE SIDE AND A BEAM ON THE OTHER SIDE, PROVIDE FILLER TS MEMBER ON HALF THE FLANGE. ALTERNATIVELY, THE TOP CHORD OF THE JOIST CAN BE EXTENDED TO THE EDGE OF THE MAIN BEAM FLANGE.

TYPICAL DETAIL
FILLER MEMBER FOR DECK AND SUPPORT AT SECONDARY BEAMS PARALLEL TO JOISTS

12 SCALE: N.T.S.

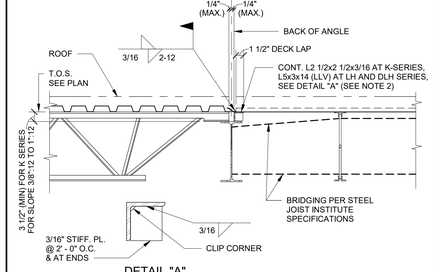


PLAN



TYPICAL DETAIL
OPEN WEB STEEL JOIST ROOF OPENING

7 SCALE: N.T.S.

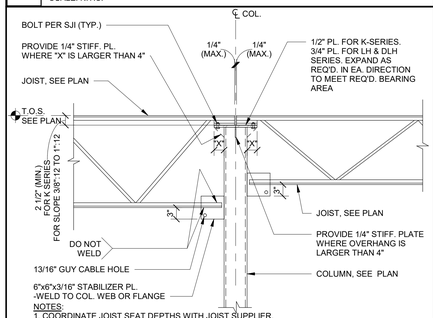


DETAIL "A"

NOTES:
1. PROVIDE JOIST BRIDGING AS REQUIRED BY STEEL JOIST INSTITUTE SPECIFICATIONS.
2. WHERE JOIST SEAT REQUIRES MORE THAN 1/2 THE FLANGE WIDTH FOR BEARINGS EXTEND JOIST SEATS TO THE EDGE OF FLANGE AND PROVIDE ANGLES BETWEEN JOISTS. WHERE JOIST SEAT DEPTH DIFFERS FROM ANGLE LENGTH SHOWN USE CONT. 1/4" BENT PLATE OF EQUAL DEPTH TO JOIST SEAT WITH 3" FLANGE.

TYPICAL DETAIL OPEN WEB STEEL JOIST INTERIOR STEEL BEAM AT CHANGE IN METAL DECK DIRECTION, ROOF

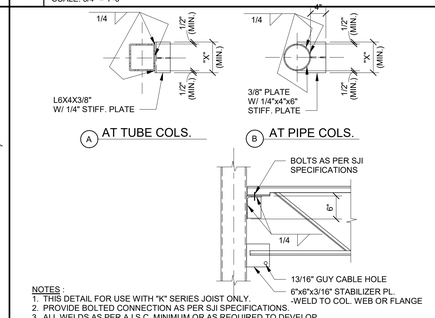
4 SCALE: N.T.S.



NOTES:
1. COORDINATE JOIST SEAT DEPTHS WITH JOIST SUPPLIER.
2. PER OSHA STANDARDS WHERE STEEL JOISTS ARE USED & COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH SOLID WEB STRUCTURAL STEEL MEMBERS, STEEL JOIST SHALL BE FIELD BOLTED TO COLUMN.
3. DIMENSION "X" SHALL BE DETERMINED BY JOIST MANUFACTURER.

TYPICAL DETAIL
JOIST SEAT AT HSS COLUMN

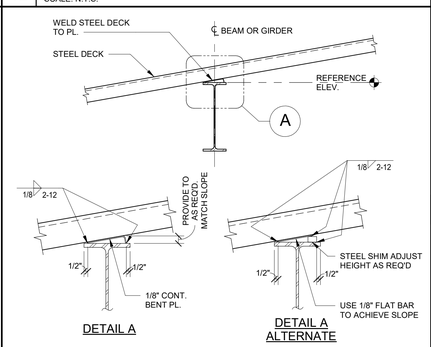
19 SCALE: N.T.S.



NOTES :
1. THIS DETAIL FOR USE WITH "K" SERIES JOIST ONLY.
2. PROVIDE BOLTED CONNECTION AS PER SJI SPECIFICATIONS.
3. ALL WELDS AS PER A.I.S.C. MINIMUM OR AS REQUIRED TO DEVELOP JOIST REACTION WHICHEVER IS GREATER.
4. "X" DIMENSION SHALL BE AS FOLLOWS:
7" FOR K1-12 & LH02-06
9" FOR LH07-17 & DLH10-17
14" FOR DLH18-25

TYPICAL DETAIL
JOIST SEAT AT TUBE/PIPE COLUMN

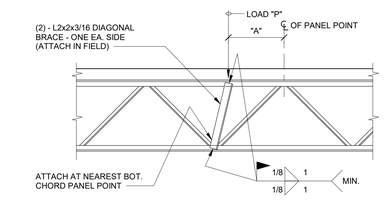
15 SCALE: N.T.S.



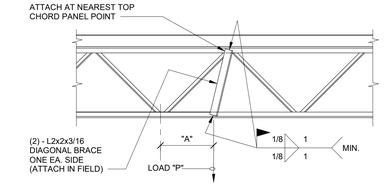
DETAIL A DETAIL A ALTERNATE

TYPICAL SLOPING STEEL DECK SUPPORT ON BEAM WITH VERTICAL WEB

11 SCALE: N.T.S.



LOAD ON TOP CHORD

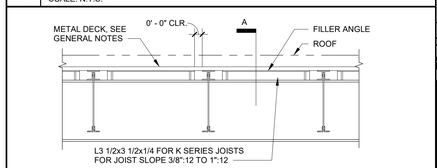


LOAD ON BOTTOM CHORD

NOTES:
1. DIAGONAL BRACE IS NOT REQUIRED FOR "A" LESS THAN 3".
2. PROVIDE DIAGONAL BRACE AT LOCATION OF CONCENTRATED LOADS SUCH AS HEAVY PIPES, MECHANICAL UNITS, HEAVY LIGHTS AND ANY OTHER CONCENTRATED LOADS AS DIRECTED BY EOR.
3. P = CONCENTRATED LOAD.

TYPICAL DETAIL
STIFFENING OF STEEL JOIST FOR CONCENTRATED LOADS

6 SCALE: N.T.S.



NOTES:
1. PROVIDE FILLER ANGLES AT BEAMS WITH DIAGONAL BRACES OR MOMENT CONNECTIONS.
2. INCREASE SIZE OR PROVIDE BENT PLATES TO FILL GAP WHERE REQUIRED TO MATCH JOIST SEATS.

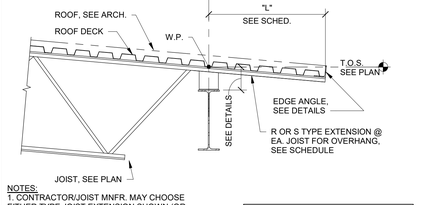
TYPICAL DETAIL
OPEN WEB STEEL JOIST DECK DIAPHRAGM CONNECTION TO STEEL BEAM

3 SCALE: N.T.S.

NOTES:
1. COORDINATE JOIST SEAT DEPTHS WITH JOIST SUPPLIER.
2. PER OSHA STANDARDS WHERE STEEL JOISTS ARE USED & COLUMNS ARE NOT FRAMED IN AT LEAST TWO DIRECTIONS WITH SOLID WEB STRUCTURAL STEEL MEMBERS, STEEL JOIST SHALL BE FIELD BOLTED TO COLUMN.
3. DIMENSION "X" SHALL BE DETERMINED BY JOIST MANUFACTURER.

TYPICAL DETAIL
JOIST SEAT AT HSS COLUMN

14 SCALE: N.T.S.



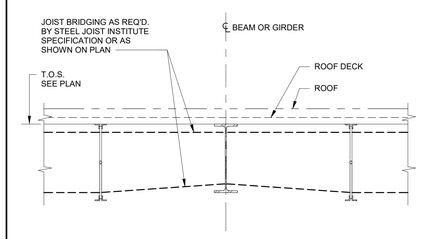
NOTES:
1. CONTRACTOR/JOIST MNFR. MAY CHOOSE EITHER TYPE JOIST EXTENSION SHOWN (OR LARGER) FOR "L" ≤ MAX. "L" SHOWN.
2. FOR ANY "L" JOIST, MNFR. MAY DESIGN JOIST EXTENSION FOR THE FOLLOWING CRITERIA IN LIEU OF SIZE SHOWN, U.N.O.:
TL = 240 PLF
TOTAL DEFLECTION ≤ 2 x "L" / 240
LL = 120 PLF
LIVE LOAD DEFLECTION < 2 x "L" / 360
MNFR. SHALL ACCOUNT FOR SKIP LOADING OF LIVE LOADS.
3. LOADS ON JOIST EXTENSIONS SHOWN ON PLAN OR IN DETAILS SHALL BE IN ADDITION TO THOSE SHOWN HERE. DEFLECTION CRITERIA SHALL REMAIN THE SAME AS SHOWN ABOVE. THE SCHEDULE SHOWN HERE DOES NOT APPLY WHERE ADDITIONAL LOADS ARE SHOWN.

TOP CHORD JOIST EXTENSION SCHEDULE*		
MAX "L"	R-TYPE	S-TYPE
≤ 1' - 6"	R1	S3
2' - 0"	R1	S7
2' - 6"	R1	S10
3' - 0"	R1	S12
3' - 6"	R1	N/A
4' - 0"	R3	N/A
4' - 6"	R8	N/A
5' - 0"	R11	N/A
≥ 5' - 6"	DESIGN SPECIAL EXTENSION	

*CONTRACTOR/FABRICATOR MAY CHOOSE EITHER TYPE JOIST EXTENSION FOR "L" ≤ MAX "L" SHOWN

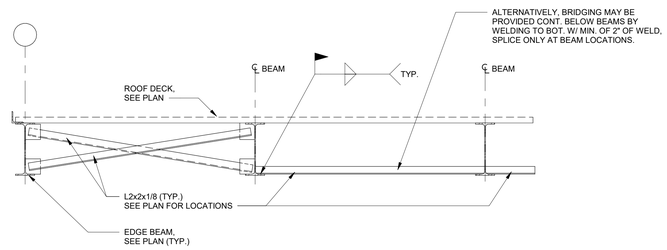
TYPICAL DETAIL
K-JOIST EXTENSION SCHEDULE

10 SCALE: N.T.S.



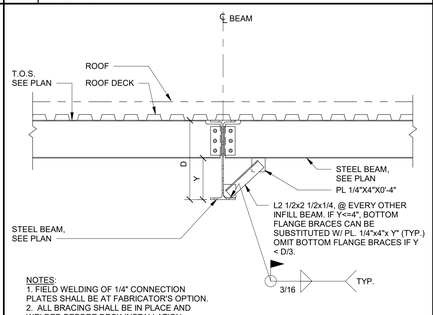
TYPICAL DETAIL
OPEN WEB STEEL JOIST AT INTERIOR TIE BEAM, ROOF

2 SCALE: N.T.S.



TYPICAL BEAM BRIDGING

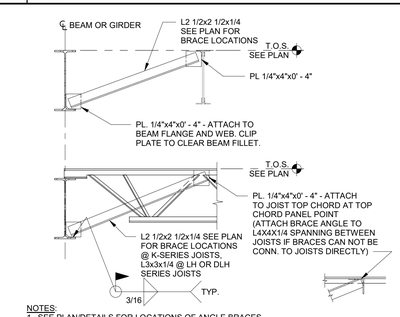
17 SCALE: 3/4" = 1'-0"



NOTES:
1. FIELD WELDING OF 1/4" CONNECTION PLATES SHALL BE AT FABRICATOR'S OPTION.
2. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION.
3. BRACE SIZES SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
4. SEE GENERAL NOTES FOR DECK CONSTRUCTION

TYPICAL BEAM AT INTERIOR STEEL BEAM, ROOF

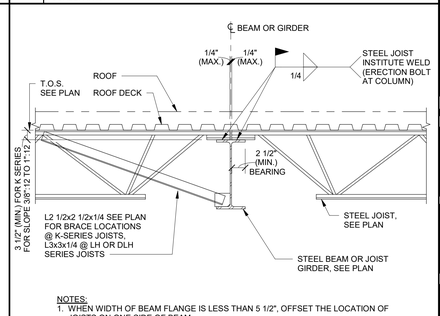
9 SCALE: 3/4" = 1'-0"



NOTES:
1. SEE PLAN/DETAILS FOR LOCATIONS OF ANGLE BRACES.
2. FIELD WELDING OF 1/4" CONNECTION PLATES SHALL BE AT FABRICATOR'S OPTION.
3. ALL BRACING SHALL BE IN PLACE AND WELDED BEFORE DECK INSTALLATION.
4. BRACE SIZES SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE ON PLAN.
5. SEE GENERAL NOTES FOR DECK CONSTRUCTION.

TYPICAL DETAIL
BEAM BOTTOM FLANGE BRACE JOIST CONSTRUCTION

5 SCALE: N.T.S.



NOTES:
1. WHEN WIDTH OF BEAM FLANGE IS LESS THAN 5 1/2", OFFSET THE LOCATION OF JOISTS ON ONE SIDE OF BEAM.
2. COORDINATE JOIST SEAT DEPTHS WITH JOIST SUPPLIER.

TYPICAL DETAIL
OPEN WEB STEEL JOIST AT INTERIOR STEEL BEAM, ROOF

1 SCALE: N.T.S.

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Matrix Structural Engineers
TBPE Firm Registration No. F-2640
STATE OF TEXAS
TRAVIS KOEHRING
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ROOF FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S6.01
Drawn By: Author	
Date: 10-29-2025	

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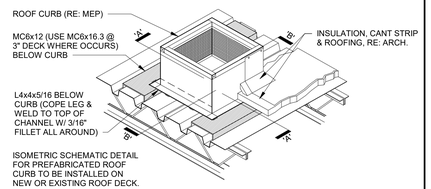
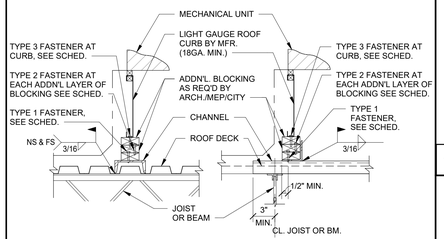
NOTE:
SIZES SHOWN ARE VALID ONLY FOR JOIST / BEAM SPACING ≤ 6'-0" O.C.



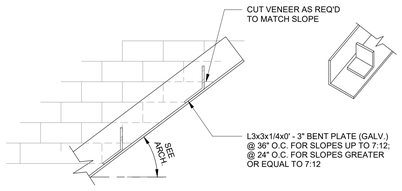
ISOMETRIC SCHEMATIC DETAIL FOR PREFABRICATED ROOF CURB TO BE INSTALLED ON NEW OR EXISTING ROOF DECK.



SECTION "A" SECTION "B"

OPTIONAL DETAIL SUPPORT AT ROOFTOP MECHANICAL EQUIPMENT

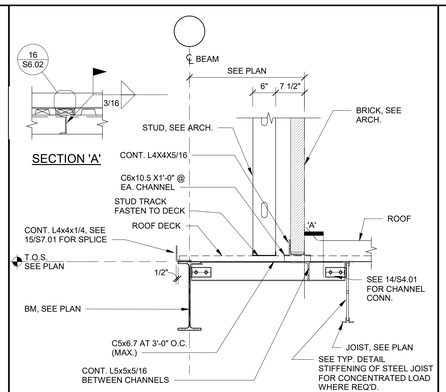
19 SCALE: N.T.S.



"A"

SUPPORT ANGLE AT SLOPED BRICK/STONE

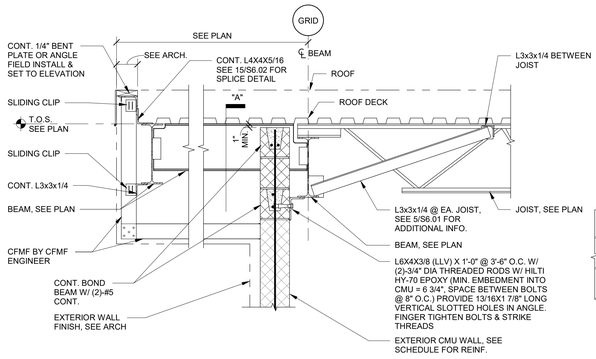
16 SCALE: 1 1/2" = 1'-0"



SECTION 'A'

DETAIL AT LOW ROOF WITH SLOPE

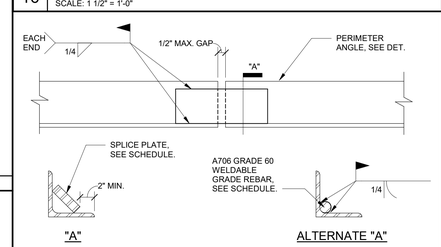
12 SCALE: 3/4" = 1'-0"



SECTION "A"

ROOF EDGE DETAIL AT HIGH ROOF EXTENSION

8 SCALE: 3/4" = 1'-0"

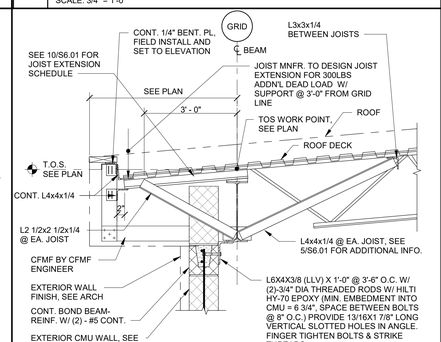


"A" ALTERNATE "A"

PERIMETER ANGLE	SPLICE MEMBER		LENGTH
	PLATE	REBAR	L(INCH)
L3x3x1/4	1/2x2	#7 BAR	9"
L4x4x1/4	1/2x3	#9 BAR	12"
L5x5x5/16	1/2x4	#9 BAR	12"
L6x4x5/16	1/2x4 1/2	#11 BAR	15"

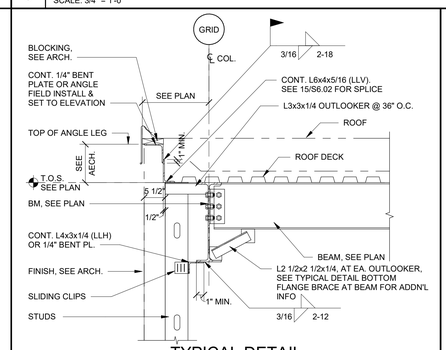
TYPICAL DETAIL SPLICE AT PERIMETER ROOF ANGLE

15 SCALE: N.T.S.



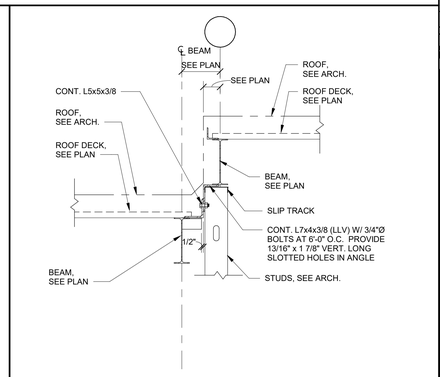
ROOF EDGE DETAIL AT ROOF EXTENSION

11 SCALE: 3/4" = 1'-0"



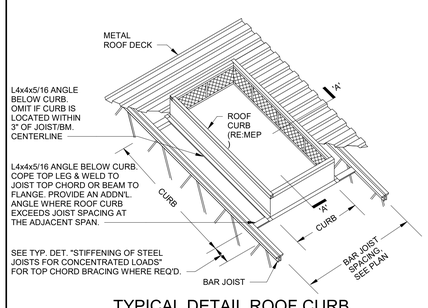
TYPICAL DETAIL EXTERIOR EDGE AT STUDS (PERPENDICULAR TO BEAMS)

7 SCALE: 3/4" = 1'-0"



DETAIL AT ROOF TRANSITION

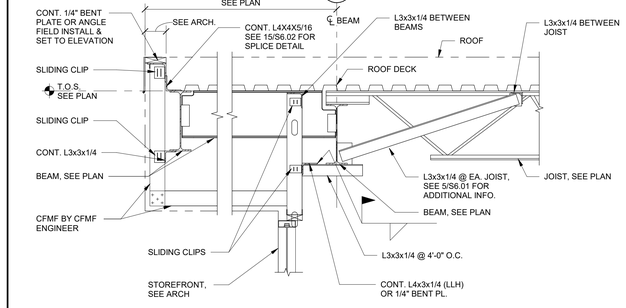
3 SCALE: 3/4" = 1'-0"



SEE TYP. DET. "STIFFENING OF STEEL JOISTS FOR CONCENTRATED LOADS" FOR TOP CHORD BRACING WHERE REQ'D.

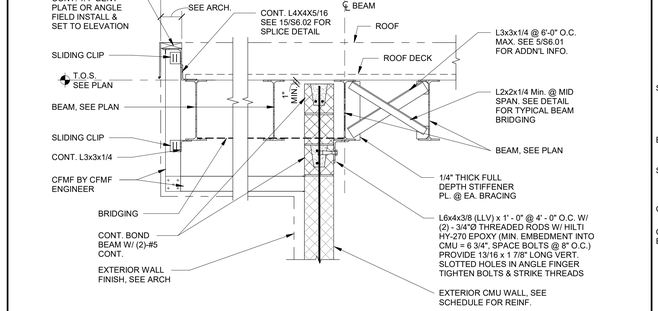
TYPICAL DETAIL ROOF CURB AT MECHANICAL UNITS

18 SCALE: N.T.S.



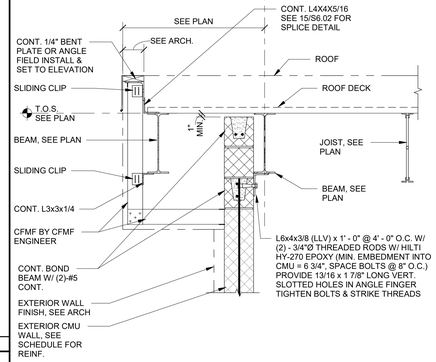
ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW

14 SCALE: 3/4" = 1'-0"



ROOF EDGE DETAIL AT ROOF EXTENSION

10 SCALE: 3/4" = 1'-0"

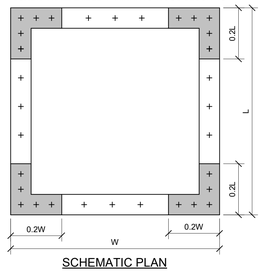


ROOF EDGE DETAIL AT ROOF EXTENSION

2 SCALE: 3/4" = 1'-0"

FASTENER SCHEDULE			
TYPE	MINIMUM FASTENER SIZE	SPACINGS	
		TYPICAL	CORNER
1	#8 SELF TAPPING SCREW	16" O.C.	6" O.C.
2	#10 SCREW*	12" O.C.	4" O.C.
3	#10 SCREW*	12" O.C.	4" O.C.

*SCREW SHALL EMBED 1" MIN. INTO WOOD BLOCKING

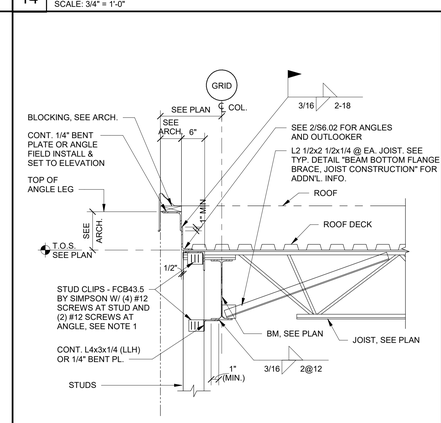


SCHEMATIC PLAN

NOTES:
1. FASTENING SCHEDULE SHALL ONLY APPLY UNDER THE FOLLOWINGS CONDITIONS.
   a. MEAN ROOF HEIGHT IS ≤ 60'-0"
   b. MECHANICAL EQUIPMENT IS LESS THAN 6'-0" TALL
   c. MECHANICAL UNIT HEIGHT TO WIDTH RATIO IS ≤ 1.5
   d. WIND SPEED IS LESS THAN OR EQUAL TO 140mph(V ULT) OR 110mph (V ASD), SEE GEN. NOTES FOR DESIGN WIND SPEED.
2. REFER TO MEP/MFR. FOR W & L DIMENSIONS.

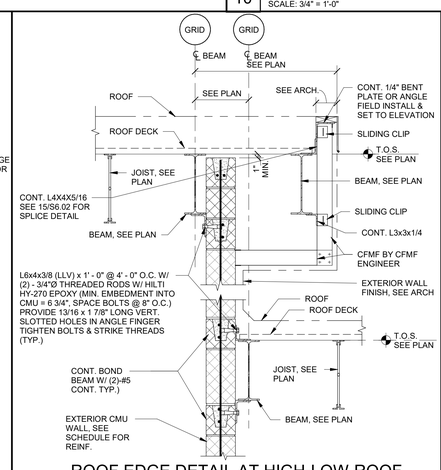
TYPICAL DETAIL FASTENER SCHEDULE AT MECHANICAL UNITS

17 SCALE: N.T.S.



TYPICAL DETAIL EXTERIOR EDGE AT STUDS (PERPENDICULAR TO BEAMS)

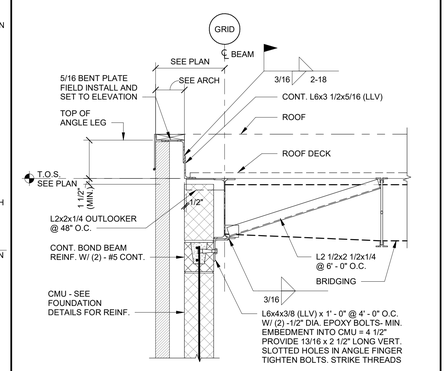
13 SCALE: 3/4" = 1'-0"



ROOF EDGE DETAIL AT HIGH-LOW ROOF WITH ROOF EXTENSION

9 SCALE: 3/4" = 1'-0"

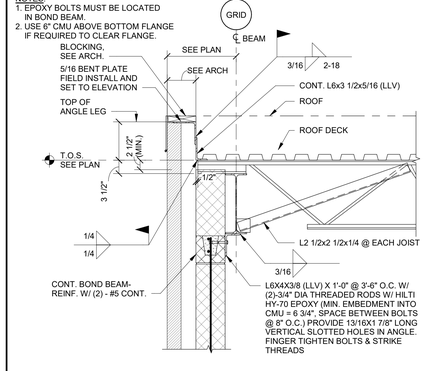
NOTES:
1. EPOXY BOLTS MUST BE LOCATED IN BOND BEAM.
2. USE 6" CMU ABOVE BOTTOM FLANGE IF REQUIRED TO CLEAR FLANGE.



TYPICAL DETAIL EXTERIOR EDGE AT CMU

5 SCALE: 3/4" = 1'-0"

NOTES:
1. EPOXY BOLTS MUST BE LOCATED IN BOND BEAM.
2. USE 6" CMU ABOVE BOTTOM FLANGE IF REQUIRED TO CLEAR FLANGE.



TYPICAL DETAIL EXTERIOR EDGE AT CMU

1 SCALE: 3/4" = 1'-0"

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FOR
HUMBLE ISD
HUMBLE, TX

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ROOF FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S6.02
Drawn By: Author	
Date: 10-29-2025	

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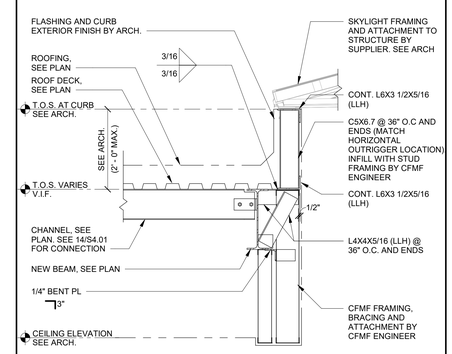
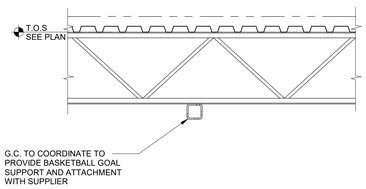
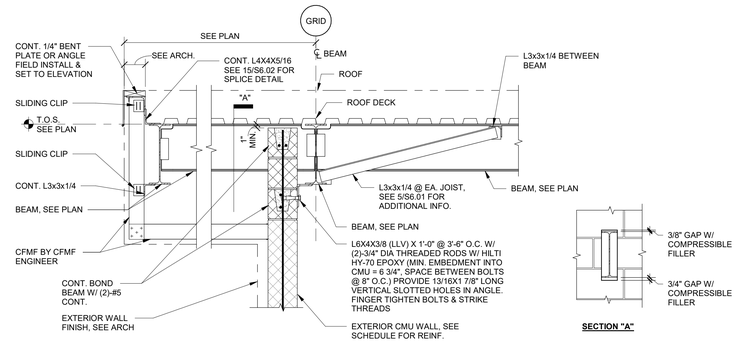
NOTE:
WELD NOT SHOWN TO BE 1/4"
WELD ALL AROUND



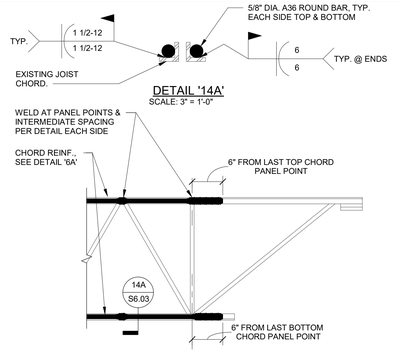
4 DETAIL AT CURB FOR SKYLIGHT SUPPORT
SCALE: 3/4" = 1'-0"



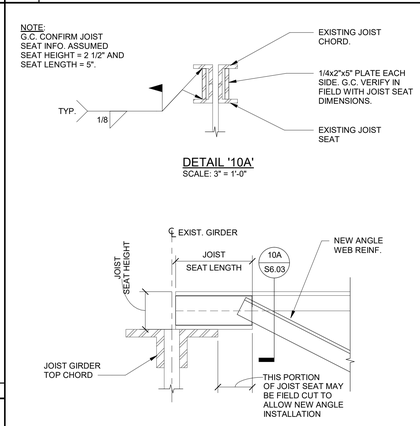
11 CONNECTION FOR BASKETBALL SUPPORT
SCALE: N.T.S.



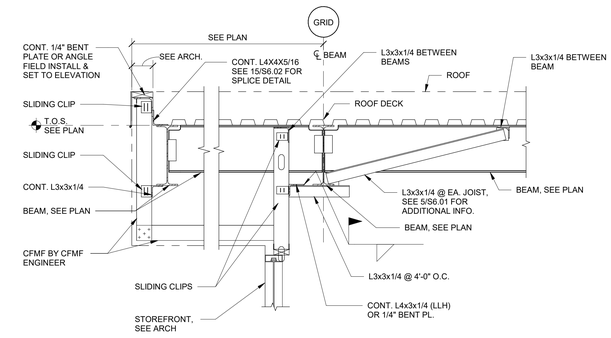
7 ROOF EDGE DETAIL AT HIGH ROOF EXTENSION
SCALE: 3/4" = 1'-0"



14 JOIST TOP/BOTTOM CHORD REINFORCING
SCALE: 1" = 1'-0"

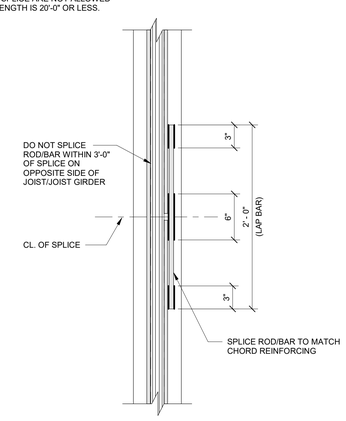


10 JOIST SEAT REINFORCING
SCALE: 3" = 1'-0"

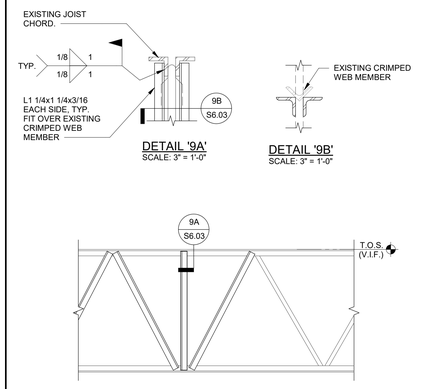


6 ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW
SCALE: 3/4" = 1'-0"

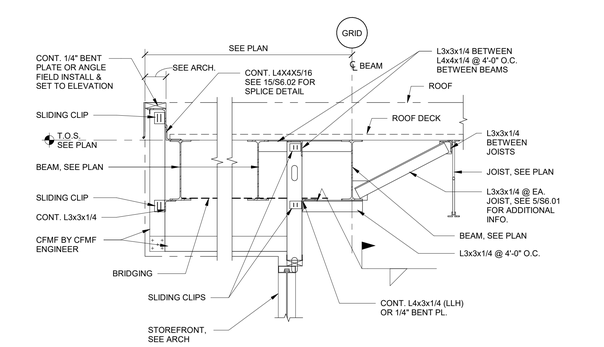
NOTE:
ROD/BAR SPLICE ARE NOT ALLOWED WHERE LENGTH IS 20'-0" OR LESS.



13 CHORD REINFORCING SPLICE DETAIL
SCALE: 1 1/2" = 1'-0"



9 JOIST WEB REINFORCING
SCALE: 1" = 1'-0"



5 ROOF EDGE DETAIL AT ROOF EXTENSION OVER WINDOW
SCALE: 3/4" = 1'-0"

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TRAVIS KOEHRING
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ROOF FRAMING DETAILS

PACKAGE	VOLUME
Job No. 1521-13-02	Sheet No. S6.03
Drawn By: Author	
Date: 10-29-2025	

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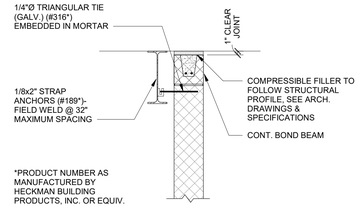
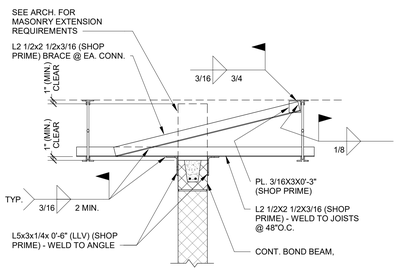


NOTE:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL SIDE CONNECTION TO STEEL BEAM

20 SCALE: N.T.S.

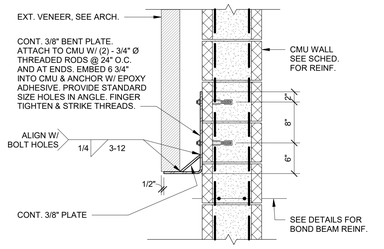


NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PARALLEL TO BAR JOISTS

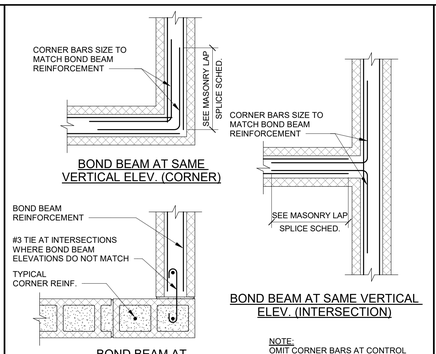
16 SCALE: N.T.S.

NOTE:
1. ALL STEEL SHALL BE HOT-DIPPED GALVANIZED.



TYPICAL DETAIL
VENEER SUPPORT AT CMU WALL

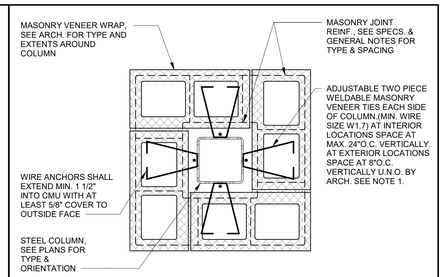
12 SCALE: 1" = 1'-0"



NOTE:
OMIT CORNER BARS AT CONTROL JOINT LOCATIONS AS INDICATED ON TYPICAL CMU ELEVATION.

TYPICAL CMU BOND BEAM REINFORCEMENT

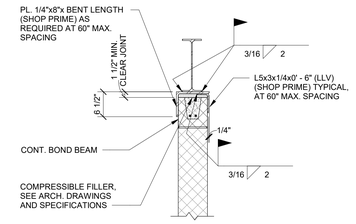
8 SCALE: N.T.S.



NOTES:
1. REDUCE ANCHOR SPACING OR PROVIDE DOUBLE ANCHORS AT EA. LOCATION AS REQ'D SO THAT THERE IS AT LEAST ONE ANCHOR FOR EACH 2.67 SQUARE FEET OF WALL AREA AT INTERIOR LOCATIONS & ONE ANCHOR FOR EACH 1.87 SQUARE FEET OF WALL AREA AT EXTERIOR LOCATIONS.
2. WHERE STUDS & SHEATHING ARE PROVIDED AROUND COLUMN, THIS DETAIL DOES NOT APPLY REFER TO ARCH. FOR DETAIL.
3. THIS DETAIL APPLIES AT BRICK CONCRETE & STONE MASONRY.

TYPICAL DETAIL
MASONRY WRAP AT STEEL COLUMN

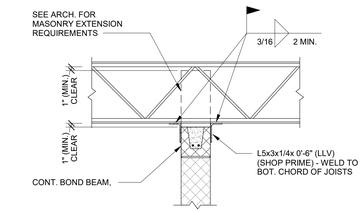
4 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

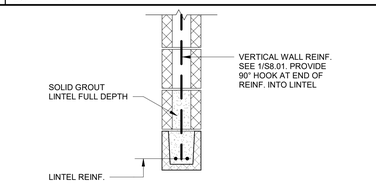
19 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PERPENDICULAR TO BAR JOISTS

15 SCALE: N.T.S.



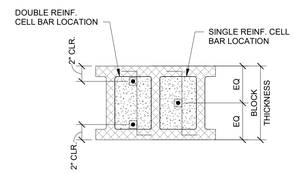
WALL THICKNESS	OPENING WIDTH	LINTEL DEPTH	LINTEL REINF.
6"	X ≤ 4'-0"	8"	(1)-#5
	4'-0" < X ≤ 8'-0"	16"	(1)-#5
	8'-0" < X ≤ 10'-0"	24"	(1)-#5
8"	X ≤ 4'-0"	8"	(2)-#5
	4'-0" < X ≤ 8'-0"	16"	(2)-#5
	8'-0" < X ≤ 10'-0"	24"	(2)-#5
12"	X ≤ 4'-0"	8"	(2)-#5
	4'-0" < X ≤ 8'-0"	16"	(2)-#5
	8'-0" < X ≤ 10'-0"	24"	(2)-#5

NOTES:
1. SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. EXTEND LINTEL REINFORCING AND GROUT A MINIMUM OF 16" BEYOND OPENING EACH SIDE, U.N.O.
3. CONTACT E.O.R. FOR RECOMMENDATIONS ON OPENINGS LARGER THAN SHOWN.
4. SEE DETAIL 9/S8.01 FOR OPENING IN EXTERIOR AND/ OR LOAD BEARING WALLS.
5. CMU CONTROL JOINTS SHALL NOT BE LOCATED OVER OPENINGS OR IN JAMBS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU LINTEL SCHEDULE

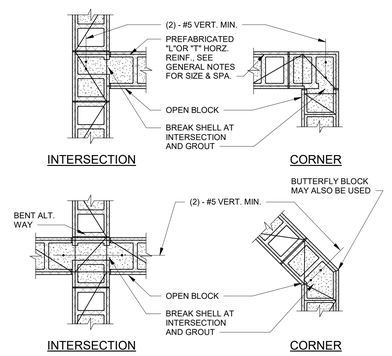
11 SCALE: N.T.S.

NOTES:
1. GROUT SOLID ALL CELLS WITH REINFORCING.
2. MINIMUM 1/2" CLEAR BETWEEN REINFORCING AND CMU BLOCK REQUIRED.



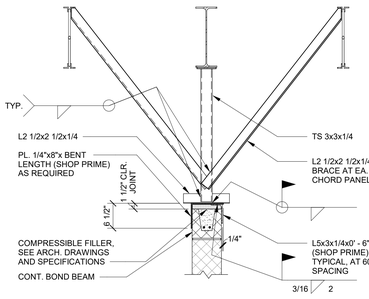
TYPICAL DETAIL
CMU CELL REINFORCING

7 SCALE: N.T.S.



CMU WALL INTERSECTIONS

3 SCALE: N.T.S.

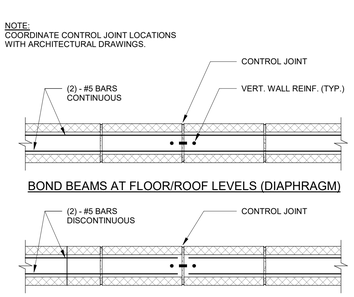


NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION TO STEEL BEAM

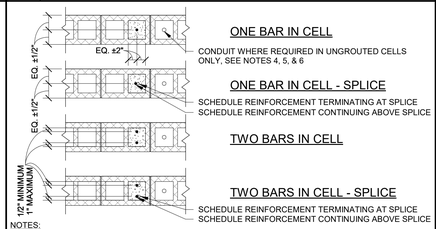
18 SCALE: N.T.S.

NOTE:
COORDINATE CONTROL JOINT LOCATIONS WITH ARCHITECTURAL DRAWINGS.



TYPICAL BOND BEAM AT CONTROL JOINTS

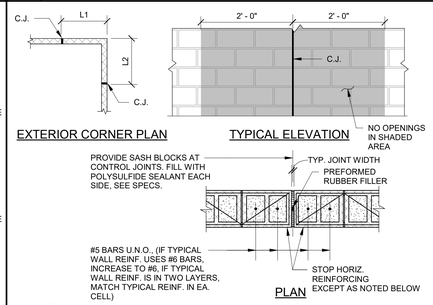
14 SCALE: N.T.S.



NOTES:
1. REINFORCEMENT MUST BE PLACED USING REINFORCING BAR POSITIONERS THAT LOCATE THE BAR AS SPECIFIED AND PREVENT MOVEMENT OF THE BAR DURING CONSTRUCTION.
2. SPLICED REINFORCEMENT MUST BE A CONTACT LAP SPLICE WITH SPLICED BARS ALIGNED PARALLEL TO THE WALL AS SHOWN.
3. THE ENGINEER MUST BE NOTIFIED PRIOR TO PLACEMENT OF REINFORCEMENT THAT IS REQUIRED TO BE PLACED OUTSIDE OF THE TOLERANCES OF THIS DETAIL SUCH AS TO AVOID INTERFERENCE WITH OTHER REINFORCEMENT, CONDUITS, OR EMBEDDED ITEMS.
4. CONDUIT, PIPES AND SLEEVES SHALL BE NO CLOSER THAN 3 DIAMETERS ON CENTER (USE LARGER DIAMETER WHERE MULTIPLE SIZES ARE USED).
5. ALUMINUM PIPES MAY NOT BE USED UNLESS EFFECTIVELY COATED TO PREVENT CHEMICAL REACTION.
6. PIPES SHALL NOT BE EMBEDDED IN MASONRY WHEN:
   (a) CONTAINING LIQUIDS, GAS, OR VAPORS AT A TEMPERATURE HIGHER THAN 150°F (66°C).
   (b) UNDER PRESSURE IN EXCESS OF 55 PSI (379 KPA).
   (c) CONTAINING WATER OR OTHER LIQUIDS SUBJECT TO FREEZING.

TYPICAL DETAIL
CMU VERTICAL BAR PLACEMENT

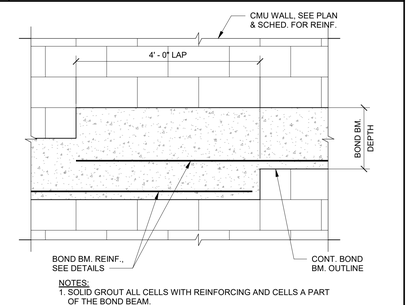
10 SCALE: N.T.S.



NOTES:
1. CONTRACTOR SHALL OBTAIN ARCHITECT'S APPROVAL OF JOINT LOCATIONS, WHICH SHALL NOT EXCEED THE MINIMUM OF 1.5 TIMES THE WALL HEIGHT OR 20'-0".
2. HORIZONTAL REINFORCING AT FLOOR AND ROOF LINES SHALL BE CONTINUOUS THRU JOINT.
3. CONCRETE BLOCK SHOWN - BRICK SIMILAR.
4. SAWCUT BLOCK OR BRICK AS REQUIRED.
5. AT EXTERIOR CORNERS LOCATE JOINTS SUCH THAT: L1+L2 ≤ 20' - 0", EITHER L1 OR L2 ≤ 10' - 0".

MASONRY WALL CONTROL JOINT

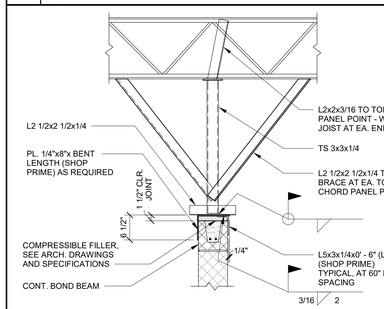
6 SCALE: N.T.S.



NOTES:
1. SOLID GROUT ALL CELLS WITH REINFORCING AND CELLS A PART OF THE BOND BEAM.
2. SEE DETAILS FOR CONTINUOUS BOND BEAM DEPTHS AND REINFORCING.
3. DISCONTINUE BOND BEAM REINFORCING THROUGH CMU CONTROL JOINTS.
4. SEE PLAN FOR T.O.S. ELEVATIONS AND ARCHITECTURAL FOR ROOF SLOPES.

TYPICAL DETAIL
CMU BOND BEAM STEP

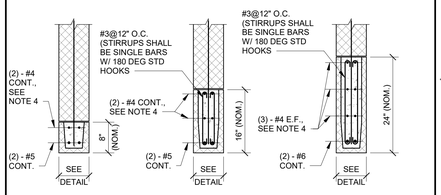
2 SCALE: N.T.S.



NOTES:
1. THIS DETAIL IS TO BE USED ONLY IF INTERSECTING SUPPORT WALLS EXCEED A SPACING OF 26 TIMES THE NOMINAL THICKNESS.
2. SEE 5/S5.01 FOR BRACE LOCATION REQUIREMENTS.

TYPICAL DETAIL
INTERIOR NON-LOAD BEARING CMU WALL TOP CONNECTION PERPENDICULAR TO JOISTS

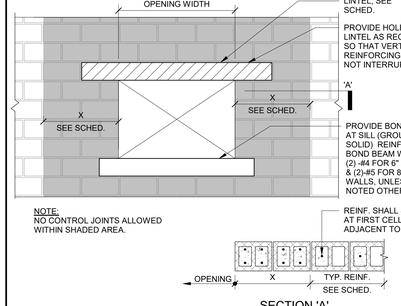
17 SCALE: N.T.S.



NOTES:
1. SEE ARCH. DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING @ EACH JAMB FOR EACH FOOT OF CLEARSPAN BUT NOT LESS THAN 8". REINF. SHALL PROJECT A MIN. OF 6" ONTO THE BEARING CMU.
3. BOND BEAMS SHALL BE FULLY GROUTED (2500 PSI @ 28 DAYS).
4. THE #4 BARS ARE ONLY REQUIRED AT EXTERIOR CMU WALLS.

TYPICAL DETAIL
EXTERIOR BLOCK LINTEL

13 SCALE: N.T.S.

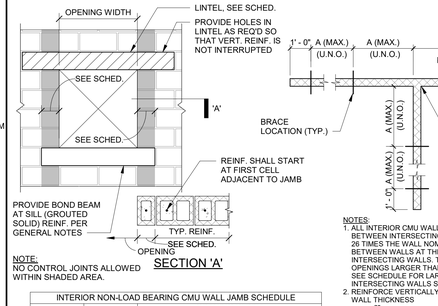


NOTE:
NO CONTROL JOINTS ALLOWED WITHIN SHADED AREA.

WALL THICKNESS	OPENING SIZE	JAMB WIDTH 'X'	JAMB REINF.
8"	≥ 3' - 0" & ≤ 5' - 0"	2' - 0"	(2) - #5 @ 8" O.C.
8"	< 5' - 0" & ≤ 8' - 0"	2' - 0"	(2) - #6 @ 8" O.C.
8"	≤ 12' - 0"	2' - 8"	(2) - #6 @ 8" O.C.
12"	≥ 3' - 0" & ≤ 5' - 0"	1' - 4"	(2) - #8 @ 8" O.C.
12"	≤ 14' - 0"	2' - 0"	(2) - #7 @ 8" O.C.

CMU JAMB REINFORCING SCHEDULE

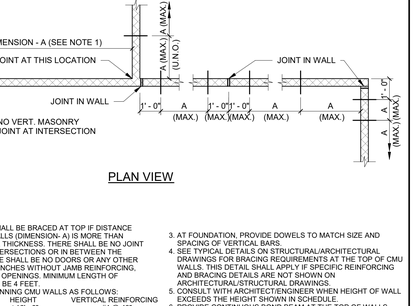
9 SCALE: N.T.S.



NOTE:
NO CONTROL JOINTS ALLOWED WITHIN SHADED AREA.

WALL THICKNESS	SPANNING CMU HEIGHT	OPENING WIDTH ≤ 4' - 0" # OF CELLS	REINF.	≤ 8' - 0" # OF CELLS	REINF.	≤ 10' - 0" # OF CELLS	REINF.
6"	≤ 16' - 0"	1	#4	2	#4	2	#4
8"	≤ 18' - 0"	1	#4	2	#4	2	#4
12"	≤ 30' - 0"	1	#5	2	#5	2	#5

CONSULT W/ ARCHITECT/ENGINEER WHEN WIDTH OF OPENING EXCEEDS SCHEDULE



NOTES:
1. ALL INTERIOR CMU WALLS SHALL BE BRACED AT TOP IF DISTANCE BETWEEN INTERSECTING WALLS (DIMENSION- A) IS MORE THAN 26 TIMES THE WALL NOMINAL THICKNESS. THERE SHALL BE NO JOINT BETWEEN WALLS AT THE INTERSECTIONS OR IN BETWEEN THE INTERSECTING WALLS. THERE SHALL BE NO DOORS OR ANY OTHER OPENINGS LARGER THAN 24 INCHES WITHOUT JAMB REINFORCING, SEE SCHEDULE FOR LARGER OPENINGS. MINIMUM LENGTH OF INTERSECTING WALLS SHALL BE 4 FEET.
2. REINFORCE VERTICALLY SPANNING CMU WALLS AS FOLLOWS:

WALL THICKNESS	HEIGHT	VERTICAL REINFORCING
6"	≤ 16' - 0"	#4 @ 48"
8"	≤ 18' - 0"	#4 @ 48"
8"	≤ 30' - 0"	#5 @ 24"
12"	≤ 30' - 0"	#5 @ 48"

ALL REINFORCED CELLS SHALL BE GROUTED SOLID.

3. AT FOUNDATION, PROVIDE DOWELS TO MATCH SIZE AND SPACING OF VERTICAL BARS.
4. SEE TYPICAL DETAILS ON STRUCTURAL/ARCHITECTURAL DRAWINGS FOR BRACING REQUIREMENTS AT THE TOP OF CMU WALLS. THIS DETAIL SHALL APPLY IF SPECIFIC REINFORCING AND BRACING DETAILS ARE NOT SHOWN ON ARCHITECTURAL/STRUCTURAL DRAWINGS.
5. CONSULT WITH ARCHITECT/ENGINEER WHEN HEIGHT OF WALL EXCEEDS THE HEIGHT SHOWN IN SCHEDULE.
6. PROVIDE CONTINUOUS BOND BEAM AT THE TOP OF WALLS. REINFORCE BOND BEAMS WITH (1) - #5 FOR 6" WALLS & (2)-#5 FOR 8" & 12" WALLS, UNLESS NOTED OTHERWISE.
7. SEE GENERAL NOTES FOR ADDITIONAL INFORMATION.

TYPICAL DETAIL - NON-LOAD BEARING INTERIOR/CMU WALLS BRACING AND REINFORCING STEEL

5 SCALE: N.T.S.

Revision / Date
10/29/2025 Issue for Bid

Project:
RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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MASONRY DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S7.01
Drawn By: JW	
Date: 10-29-2025	

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THROUGH BOLT AT CANTILEVER		
CANTILEVER LENGTH	MAX. CONN. SPACING	THROUGH BOLT DIA.
5' - 0"	12" - 0"	3/8"
	15" - 0"	1/2"

THREADED ROD W/ HY-270 AT CANTILEVER			
CANTILEVER LENGTH	MAX. CONN. SPACING	THREADED ROD	
		DIA.	EMBEDMENT
3' - 0"	5' - 0"	3/8"	3 3/8"
	12" - 0"	3/8"	3 3/8"
5' - 0"	5' - 0"	1/2"	4 1/2"
	8' - 0"	5/8"	5 5/8
	10' - 0"	3/4"	6 3/4"

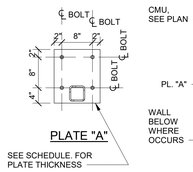
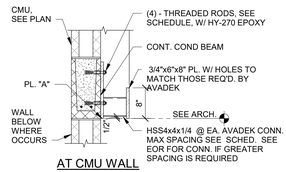
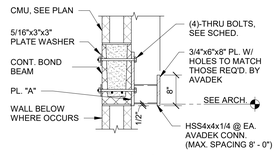


PLATE "A"

SEE SCHEDULE. FOR PLATE THICKNESS



AT CMU WALL



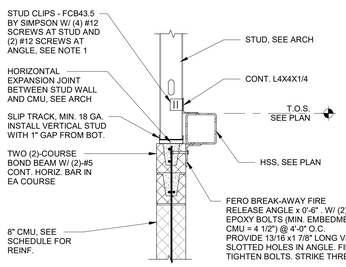
AT CMU WALL (FOR CANTILEVER CANOPIES LONGER THAN 5' - 0" OR WHERE REQ'D FOR STRENGTH)

NOTES:
1. CONTRACTOR SHALL CONFIRM SPACING FROM CANOPY SUPPLIER PRIOR TO FABRICATION & SUBMIT SHOP DRAWINGS FOR APPROVAL.
2. SIMPLE SPAN INDICATES CANOPY IS SUPPORTED ON EXTERIOR COLUMNS.

TYPICAL DETAIL AT AVADEK CANOPY CONNECTION

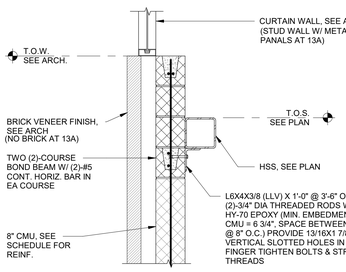
15 SCALE: 3/4" = 1'-0"

NOTES:
1. IN LIEU OF STUD SIZES AND CLIPS SHOWN CFMF ENGINEER TO DESIGN STUDS AND CLIPS AS DOUBLE CANTILEVER TO SUPPORT WIND REACTIONS AT WALL AND WINDOW HEAD AS WELL AS PARAPET.



INTERMEDIATE HSS BEAM AT CMU WALL

14 SCALE: 3/4" = 1'-0"

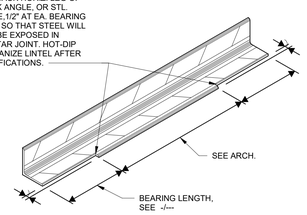


13A

INTERMEDIATE HSS BEAM AT CMU WALL

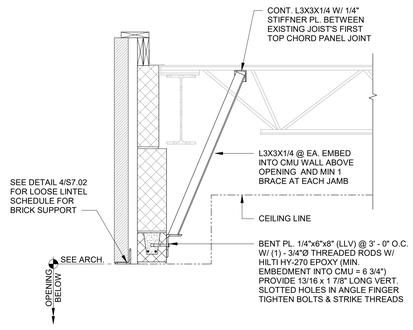
13 SCALE: 3/4" = 1'-0"

NOTE:
SEE -/--- FOR LINTEL SCHEDULE



TYPICAL DETAIL LOOSE LINTEL CUT BACK AND BEARING

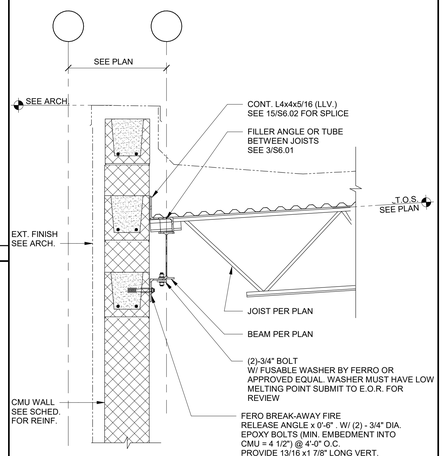
12 SCALE: N.T.S.



BRACING OF EXTERIOR EXISTING CMU WALL WITH NEW OPENING

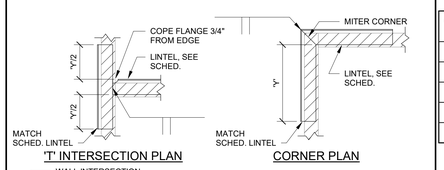
11 SCALE: N.T.S.

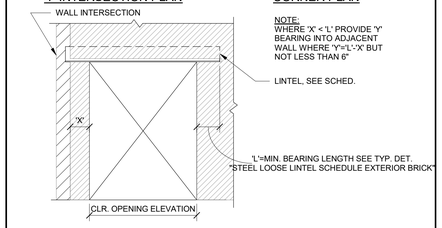
NOTE:
1. DO NOT WELD BREAKAWAY ANCHORS TO ADJACENT STEEL.
2. BREAK AWAY ANCHORS TO BE MANUFACTURED BY FEROCORP OR ENGINEER APPROVED EQUAL.



CMU WALL AT EXPANSION JOINT

9 SCALE: 3/4" = 1'-0"

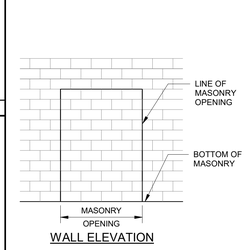




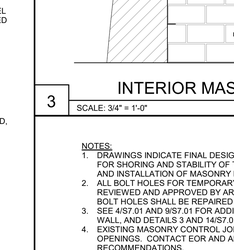
BRICK LOOSE LINTEL AT CORNER AND INTERSECTION

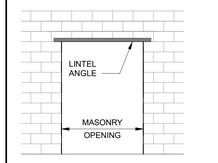
8 SCALE: N.T.S.

LINTEL SCHED. OPNG.	FOR 8" CMU WALLS	FOR 12" CMU WALLS
< = 3' - 0"	L6x3 1/2x5/16 (LLH)	(2) - L4x4x1/4
4' - 0"	L6x3 1/2x5/16 (LLH)	(2) - L4x4x1/4
5' - 0"	L6x3 1/2x5/16 (LLH)	(2) - L4x4x1/4
6' - 0"	L6x4x5/16 (LLH)	(2) - L4x4x5/16
7' - 0"	L6x6x5/16	(2) - L6x4x5/16 (LLV)
8' - 0"	L6x6x3/8	(2) - L6x4x5/16 (LLV)
9' - 0"	L6x6x3/8	(2) - L6x4x3/8 (LLV)
10' - 0"	(2) - L7x4x3/8 (LLV)	(2) - L7x4x3/8 (LLV)

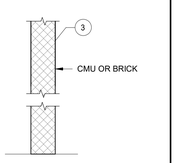


WALL ELEVATION

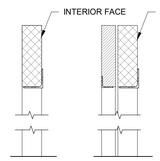




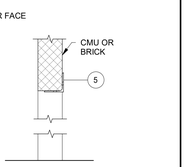
FINISH WALL ELEVATION



SECTION DETAIL



WALL SECTIONS



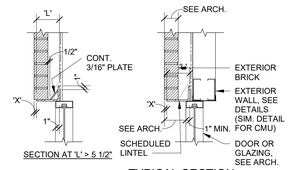
SECTION DETAIL
8" CMU WALL

CONSTRUCTION SEQUENCE:
1. ESTABLISH THE SIZE OF THE M.O. (MASONRY OPENING).
2. FURNISH A LOOSE LINTEL AND PLATE 1' - 4" LONGER THAN THE MASONRY OPENING, THIS ALLOWS 8" OF BEARING AT EACH END.
3. SYSTEMATICALLY REMOVE THE MORTAR FROM THE JOINT THAT IS TO RECEIVE THE HORIZONTAL LEG OF THE LOOSE LINTEL. LEAVE SOME MORTAR IN PLACE OR INSTALL SHIMS AT 12" O.C. TO SUPPORT THE UPPER MASONRY.
4. SAW CUT THE JAMBS.
5. HAMMER THE ANGLE INTO PLACE. THIS STEP WILL DISLODGE THE SHIMS.
6. REMOVE THE MASONRY AT THE DOOR OPENING.
7. FOR BRICK WALL, SEE LOOSE STEEL LINTEL SCHEDULE FOR ANGLE SIZE.
8. AT WALL WITH MULTIPLE WYTHES, PROVIDE ANGLE SUPPORT AT EACH WYTHE.
9. ALL ANGLES SHALL BE HOT-DIPPED GALVANIZED AT EXTERIOR OPENINGS.
10. EXISTING MASONRY CONTROL JOINTS ARE NOT PERMITTED OVER NEW OPENINGS. CONTACT E.O.R. AND ARCH. FOR STEEL LINTEL BEAM RECOMMENDATIONS.

TYPICAL DETAIL NEW OPENING IN EXISTING CMU WALL

5 SCALE: 3/4" = 1'-0"

CLEAR OPNG.	MINIMUM ANGLE SIZE
≤ 6'-0"	1 - L 3 1/2 x 'L' x 5/16
6'-8"	1 - L 4 x 'L' x 5/16
7'-4"	1 - L 5 x 'L' x 5/16
8'-0"	1 - L 6 x 'L' x 5/16
10'-0"	1 - L 6 x 'L' x 3/8

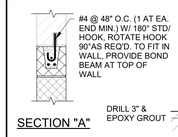


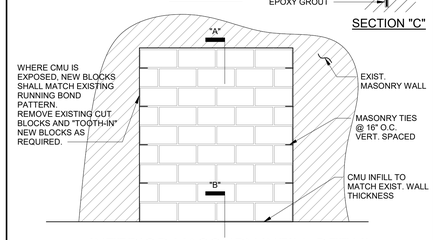
TYPICAL SECTION

NOTES:
1. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF OPENINGS.
2. PROVIDE 1" OF BEARING AT EACH JAMB FOR EACH FOOT OF CLEAR SPAN BUT NOT LESS THAN 6".
3. WHERE MINIMUM BEARING CANNOT BE ACHIEVED, PROVIDE ADEQUATE CONNECTION TO ADJACENT STRUCTURAL MEMBERS OR PROVIDE SEPARATE VERTICAL SUPPORTS. SUBMIT SUCH DETAILS FOR THE ENGINEER'S APPROVAL.
4. ALL LINTELS SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
5. FOR MASONRY OPENINGS GREATER THAN 10'-0", SEE DETAILS ON THE DRAWINGS OR REFER TO ENGINEER.
6. BRICK HEIGHTS OVER OPENINGS GREATER THAN ONE HALF THE LINTEL SPAN SHALL BE SHORED UNTIL MORTAR HAS SET AND CURED.
7. 'L' DIMENSION SHALL NOT BE LESS THAN 4" FOR 'L' DIMENSION GREATER THAN 5 1/2". PROVIDE 3/16" PLATE STIFFENER.
8. UNLESS NOTED OTHERWISE BY ARCHITECT, 'X' DIMENSION SHALL BE 5/8" AT NOMINAL BRICK OR 4" CMU, AT KING BRICK 'X' SHALL BE 1/2".
9. WHERE MINIMUM ANGLE THICKNESS EXCEEDS GROUT BED THICKNESS. BOOT CUT BRICK AS REQ'D IN ORDER TO MAINTAIN LEVEL COURSING

TYPICAL DETAIL STEEL LOOSE LINTEL SCHEDULE EXTERIOR BRICK

4 SCALE: N.T.S.

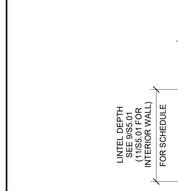




INTERIOR MASONRY INFILL DETAIL

3 SCALE: 3/4" = 1'-0"

NOTES:
1. DRAWINGS INDICATE FINAL DESIGN. THE CONTRACTOR IS RESPONSIBLE FOR SHORING AND STABILITY OF THE STRUCTURE DURING DEMOLITION AND INSTALLATION OF MASONRY LINTELS.
2. ALL BOLT HOLES FOR TEMPORARY SHORING/STABILITY SHALL BE REVIEWED AND APPROVED BY ARCHITECT PRIOR TO INSTALLATION. BOLT HOLES SHALL BE REPAIRED AS APPROVED BY ARCHITECT.
3. SEE 4/S7.01 AND 9/S7.01 FOR ADDITIONAL INFORMATION. FOR INTERIOR WALL, AND DETAILS 3 AND 14/S7.01 FOR EXTERIOR WALLS
4. EXISTING MASONRY CONTROL JOINTS ARE NOT PERMITTED OVER NEW OPENINGS. CONTACT EOR AND ARCH. FOR STEEL LINTEL BEAM RECOMMENDATIONS.
5. SEE DETAIL 11/S7.02 FOR BRACING AT EXTRIOR CMU WALLS WITH NEW OPENINGS.



NEW OPENING IN EXISTING NON-LOAD BEARING CMU WALL

1 SCALE: 3/4" = 1'-0"

Date 10/29/2025 Issue for Bid

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RIVERWOOD MS ADDITION & RENOVATION
FOR
HUMBLE ISD
HUMBLE, TX

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TYPICAL CMU WALL DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. S7.02
Drawn By: KN/TH	
Date: 10-29-2025	

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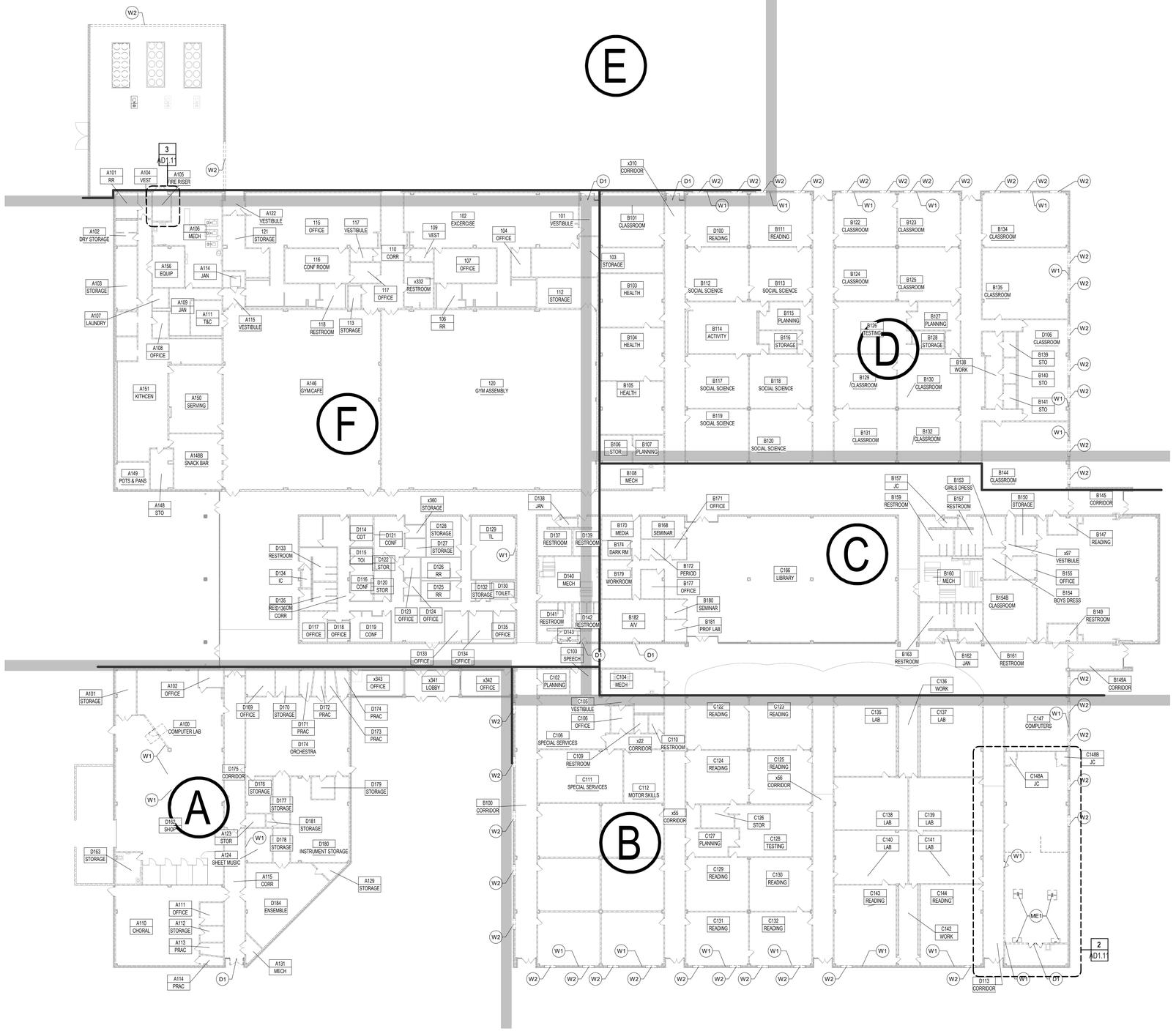


1 DEMOLITION PLAN
1" = 20'-0"

EXTERIOR

E1. SAW CUT & REMOVE EXISTING CONC SIDEWALK, CURB OR FLAT WORK

FLOORS

F1. REMOVE EXISTING TILE FLOORING & BASE DOWN TO EXISTING SUBSTRATE. PATCH AND/OR REPAIR EXISTING SUBSTRATE. APPLY LEVELING COMPOUND AS REQ'D. FOR NEW SCHEDULED FINISH.

WALLS

W1. REMOVE CASEWORK AND ANY OTHER ITEMS MOUNTED TO WALLS TO RECEIVE NEW EXTERIOR STOREFRONT. STORE/PROTECT AND REINSTALL AS DIRECTED BY OWNER.

W2. SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. PREPARE FOR INSTALLATION OF STOREFRONT/DOOR. PAINT INTERIOR WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

W3. REMOVE EXISTING MASONRY WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF OR TERMINATE UTILITIES THEREIN

W4. REMOVE EXISTING WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN

CEILINGS

C1. REMOVE EXISTING CEILING GRID, TILE, GRILLES, DIFFUSERS, LIGHTING, EQUIPMENT, DEVICES, AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. REMOVE ANY CEILING TRIM WHERE OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN ON REFLECTED CEILING PLANS. REF. ELEC.

DOORS & WINDOWS

D1. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO REPLACE DOOR AS SHOWN ON FLOOR PLANS.

D2. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO INFILL OPENING AS SHOWN ON FLOOR PLANS.

MISCELLANEOUS

M1. REMOVE/MOVE/DEMO EXISTING CASEWORK AND ACCESSORIES. COORDINATE WITH OWNER.

MECHANICAL

ME1. REMOVE EXISTING KITCHEN HOOD, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. MECHANICAL.

PLUMBING

P1. REMOVE EXISTING PLUMBING FIXTURES, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. PLUMBING.

ROOF

R1. REMOVE PORTION OF EXISTING ROOF AND DECK AND PREPARE ADJACENT AREAS FOR NEW CONSTRUCTION AS SHOWN.

STRUCTURAL

S1. REMOVE EXISTING CONCRETE COLUMN. REF. STRUCTURAL DRAWINGS FOR BRACING AND COLUMN REPLACEMENT IF APPLICABLE.

NOTES BY SYMBOL

A. BIDDERS SHALL VISIT SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO EXISTING DIMENSIONS, EQUIPMENT, LOCATIONS, SIZES, QUANTITIES, AND MATERIALS.

B. EXISTING ELECTRICAL POWER SERVING THE EXISTING FACILITY SHALL REMAIN ON LINE. DISRUPTIONS REQUIRED FOR CONSTRUCTION TO BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

C. EXISTING DRAIN LINES SERVING THE EXISTING FACILITY SHALL REMAIN FUNCTIONAL. ANY DISRUPTIONS REQUIRED FOR NEW TIE-INS DURING CONSTRUCTION MUST BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

D. CONTRACTOR SHALL COORDINATE EXACT SIZES AND LOCATIONS FOR MECHANICAL, PLUMBING, ELECTRICAL, AND TECHNOLOGY PENETRATIONS REQUIRED FOR NEW WORK WITH EACH RESPECTIVE TRADE.

E. CONTRACTOR SHALL KEEP OPENINGS TO THE EXTERIOR TEMPORARILY COVERED FOR PROTECTION FROM WATER.

F. CONTRACTOR SHALL KEEP OPENINGS TEMPORARILY COVERED FOR PEDESTRIAN SAFETY.

G. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF TEMPORARY SHORING AND BRACING REQUIRED FOR DEMOLITION.

H. REFER TO MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING SHEETS FOR ADDITIONAL PENETRATIONS AND OTHER RELATED DEMOLITION OR EQUIPMENT REMOVAL.

I. EXISTING CONSTRUCTION IS SHOWN BASED UPON OWNER FURNISHED PLANS, OWNER FURNISHED SURVEYS, AND ONSITE OBSERVATIONS. DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE REPORTED TO THE ARCHITECT/ENGINEER/PROJECT MANAGER PRIOR TO PROCEEDING WITH WORK.

J. EXISTING CONSTRUCTION ADJACENT TO DEMOLITION WORK WILL BE PATCHED AND REPAIRED TO MATCH ORIGINAL CONDITION.

K. DEMOLITION WORK TIMES SHALL BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

L. THIS EXISTING FACILITY SHALL REMAIN FUNCTIONAL DURING THE COURSE OF THE DEMOLITION WORK. CONTRACTOR WILL MAINTAIN DUST BARRIERS, BARRICADES, PEDESTRIAN PROTECTION, WATER PROTECTION, AND SAFETY DEVICES IN PLACE AT ALL TIMES DURING AND AFTER DEMOLITION UNTIL NEW WORK IS INSTALLED.

M. CONTRACTOR SHALL MAINTAIN SITE DRAINAGE DEVICES AND COMPONENTS DURING THE COURSE OF DEMOLITION AND UP UNTIL NEW WORK IS IN PLACE. THIS INCLUDES, BUT IS NOT LIMITED TO, EXISTING SUB-SOIL DRAINAGE.

N. REFER TO MECHANICAL, ELECTRICAL, ROOF PLAN, AND OTHER DISCIPLINE DRAWINGS FOR ADDITIONAL DEMOLITION NOT SPECIFICALLY COVERED BY ARCHITECTURAL DEMOLITION PLANS, ESPECIALLY RELATIVE TO MODIFICATIONS TO EXISTING H.V.A.C. SYSTEMS.

O. DEMOLITION, AS NOTED, CONSISTS OF COMPLETE REMOVAL OF THE LISTED ITEMS, RELATED FASTENERS, AND ATTACHMENT MATERIALS LEAVING A CLEAN SURFACE READY TO RECEIVE NOTED MATERIALS OR SCHEDULED FINISHES.

P. UNLESS NOTED OTHERWISE, MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED OF AT CONTRACTOR'S EXPENSE. DISPOSAL WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND GUIDELINES.

Q. DEMOLITION SHALL FOLLOW THE CONSTRUCTION SCHEDULE PROVIDED IN THE SPECIFICATIONS.

R. PRECAUTIONS SHALL BE TAKEN TO SEPARATE STUDENTS, SCHOOL STAFF, AND VISITORS FROM DEMOLITION, AND CONSTRUCTION EFFORTS, ACTIVITIES, AND WORK, TO PROTECT THEIR HEALTH AND SAFETY.

S. ADDITIONAL MATERIALS, WHERE CONSTRUCTION ADJOINS EXISTING, NOT SPECIFICALLY IDENTIFIED IN THE DEMOLITION PLANS, WILL BE REMOVED AS REQUIRED TO COMPLETE THE CONSTRUCTION. THESE MATERIALS TYPICALLY INCLUDE MATERIAL PROJECTION BEYOND THE FACE OF THE WALL, INCLUDING BRICK SILLS, OTHER PROJECTIONS, AND ROOF FLASHINGS, GUTTERS, AND TRIMS. REFER TO WALL SECTIONS FOR SPECIFIC CONDITIONS.

T. INVESTIGATE EACH WALL SUBJECT TO DEMOLITION TO DETERMINE IF IT IS USED FOR BEARING. COORDINATE WITH CONSTRUCTION SEQUENCE AND PROVIDE SHORING AT ANY WALL CARRYING STRUCTURAL LOAD TO PREVENT COLLAPSE UNTIL NEW STRUCTURE IS IN PLACE.

U. OWNER RESERVES FIRST RIGHT TO RETAIN AND KEEP ANY EXISTING ITEMS REMOVED AS A PART OF THE DEMOLITION WORK.

V. GENERAL CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL TECHNOLOGY AND COMMUNICATION DEVICES INCLUDING INTERCOM SPEAKERS, CLOCKS, WIRELESS ACCESS POINTS, DEVICES, CAFETERIA SPEAKERS, PROJECTORS, PROJECTOR PLATES, AUDIO-VIDEO CABLING, INTELLIGENT BOARDS, SCREENS, ETC WITH THE SOUND, INTERCOM AND TECHNOLOGY CONTRACTORS. THIS WORK MUST BE DONE PRIOR TO REMOVAL OF CEILING TILE OR OTHER CEILING AND PLENUM WORK.

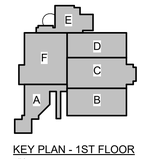
W. GATHER AND TEMPORARILY NEATLY AND LOOSELY COIL AND SUSPEND ALL EXISTING-TO-REMAIN PLENUM-RELATED CABLING FROM EXISTING STRUCTURE.

X. ALL TECHNOLOGY AND LOW-VOLTAGE CABLING IN THE PLENUM SHALL REMAIN IN PLACE. ANY DAMAGE TO THIS CABLING SHALL HAVE NEW CABLING PLACED BY THE PROPER TRADE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR THAT DAMAGED THE CABLING. ALL CABLES HAVE BEEN TESTED PRIOR TO RENOVATION WORK AND ALL WILL BE TESTED AFTER THE WORK IS COMPLETED.

DEMOLITION GENERAL NOTES

- EXISTING PARTITION TO BE REMOVED. INCLUDING BASE, DOORS, WINDOWS, OUTLETS, DEVICES, SWITCHES, CHALK/TACK BOARDS, POWER POLES, WALL CAPS AND ANY ITEM ATTACHED TO OR ASSOCIATED WITH THE PARTITION. CONTRACTOR WILL VERIFY ELECTRICAL, MECHANICAL & PLUMBING IN EXISTING WALLS & TERMINATE OR RELOCATE AS REQUIRED FOR CONTRACT WORK. PATCH, REPAIR & CLEAN ALL ADJACENT WALLS AND PREPARE TO RECEIVE NEW PARTITION WALLS AS SHOWN ON FLOOR PLANS.
- EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS OTHERWISE NOTED.
- EXISTING ITEM TO BE REMOVED AS NOTED.
- EXISTING WALL / PARTITION TO REMAIN.
- EXISTING DOOR, FRAME, AND HARDWARE TO REMAIN.

DEMOLITION LEGEND



KEY PLAN - 1ST FLOOR
N.T.S.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

SUSAN F. WISE
REGISTERED ARCHITECT
TX 24614
STATE OF TEXAS
01/24/2025

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DEMOLITION MASTER PLAN

PACKAGE | VOLUME

Job No. 1821-13-02
Drawn By: MK
Date: 01.22.2025
Sheet No. 100% QC AD1.01

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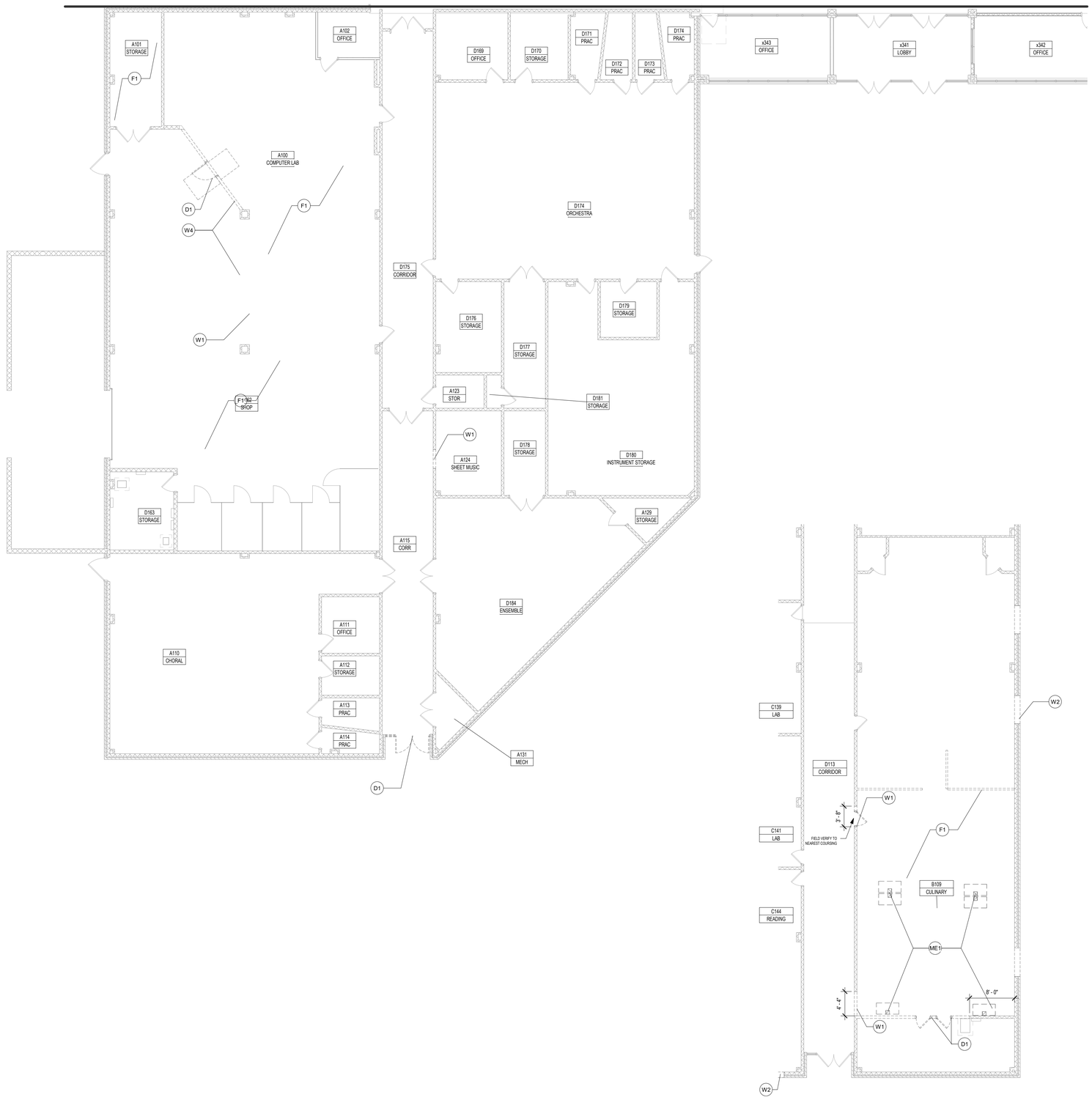

1 DEMOLITION PLAN - SECTION A
1/8" = 1'-0"

2 ENLARGED DEMO PLAN - CULINARY ROOM (SECTION B)
1/8" = 1'-0" BACK REF: AD1.01

3 ENLARGED DEMO PLAN - FIRE RISER ROOM (SECTION F)
1/8" = 1'-0" BACK REF: AD1.01

EXTERIOR

E1. SAW CUT & REMOVE EXISTING CONC SIDEWALK, CURB OR FLAT WORK

FLOORS

F1. REMOVE EXISTING TILE FLOORING & BASE DOWN TO EXISTING SUBSTRATE. PATCH AND/OR REPAIR EXISTING SUBSTRATE. APPLY LEVELING COMPOUND AS REQ'D. FOR NEW SCHEDULED FINISH.

WALLS

W1. REMOVE PORTION OF EXISTING WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN. PREPARE WALL FOR NEW STOREFRONT SYSTEM/DOOR, RE: NEW WORK PLANS. PAINT EXISTING WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

W2. SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. PREPARE FOR INSTALLATION OF STOREFRONT/DOOR. PAINT INTERIOR WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

W3. REMOVE EXISTING MASONRY WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF OR TERMINATE UTILITIES THEREIN

W4. REMOVE EXISTING GYP WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN.

CEILINGS

C1. REMOVE EXISTING CEILING GRID, TILE, GRILLES, DIFFUSERS, LIGHTING, EQUIPMENT, DEVICES, AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. REMOVE ANY CEILING TRIM WHERE OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN ON REFLECTED CEILING PLANS. REF. ELEC.

C2. REMOVE EXISTING CEILING GRID, TILE AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C3. REMOVE EXISTING HARD CEILING AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C4. REMOVE EXISTING CEILING AND PAINT ALL WALLS UP TO DECK.

DOORS & WINDOWS

D1. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO REPLACE DOOR AS SHOWN ON FLOOR PLANS.

D2. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO INFILL OPENING AS SHOWN ON FLOOR PLANS.

MISCELLANEOUS

M1. REMOVE/MOVE/DEMO EXISTING CASEWORK AND ACCESSORIES. COORDINATE WITH OWNER.

MECHANICAL

ME1. REMOVE EXISTING KITCHEN HOOD, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. MECHANICAL.

PLUMBING

P1. REMOVE EXISTING PLUMBING FIXTURES, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. PLUMBING.

ROOF

R1. REMOVE PORTION OF EXISTING ROOF AND DECK AND PREPARE ADJACENT AREAS FOR NEW CONSTRUCTION AS SHOWN.

STRUCTURAL

S1. REMOVE EXISTING CONCRETE COLUMN. REF. STRUCTURAL DRAWINGS FOR BRACING AND COLUMN REPLACEMENT IF APPLICABLE.

NOTES BY SYMBOL

A. BIDDERS SHALL VISIT SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO EXISTING DIMENSIONS, EQUIPMENT, LOCATIONS, SIZES, QUANTITIES, AND MATERIALS.

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G. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF TEMPORARY SHORING AND BRACING REQUIRED FOR DEMOLITION.

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J. EXISTING CONSTRUCTION ADJACENT TO DEMOLITION WORK WILL BE PATCHED AND REPAIRED TO MATCH ORIGINAL CONDITION.

K. DEMOLITION WORK TIMES SHALL BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

L. THIS EXISTING FACILITY SHALL REMAIN FUNCTIONAL DURING THE COURSE OF THE DEMOLITION WORK. CONTRACTOR WILL MAINTAIN DUST BARRIERS, BARRICADES, PEDESTRIAN PROTECTION, WATER PROTECTION, AND SAFETY DEVICES IN PLACE AT ALL TIMES DURING AND AFTER DEMOLITION UNTIL NEW WORK IS INSTALLED.

M. CONTRACTOR SHALL MAINTAIN SITE DRAINAGE DEVICES AND COMPONENTS DURING THE COURSE OF DEMOLITION AND UP UNTIL NEW WORK IS IN PLACE. THIS INCLUDES, BUT IS NOT LIMITED TO, EXISTING SUB-SOIL DRAINAGE.

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P. UNLESS NOTED OTHERWISE, MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED OF AT CONTRACTOR'S EXPENSE. DISPOSAL WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND GUIDELINES.

Q. DEMOLITION SHALL FOLLOW THE CONSTRUCTION SCHEDULE PROVIDED IN THE SPECIFICATIONS.

R. PRECAUTIONS SHALL BE TAKEN TO SEPARATE STUDENTS, SCHOOL STAFF, AND VISITORS FROM DEMOLITION, AND CONSTRUCTION EFFORTS, ACTIVITIES, AND WORK, TO PROTECT THEIR HEALTH AND SAFETY.

S. ADDITIONAL MATERIALS, WHERE CONSTRUCTION ADJOINS EXISTING, NOT SPECIFICALLY IDENTIFIED IN THE DEMOLITION PLANS, WILL BE REMOVED AS REQUIRED TO COMPLETE THE CONSTRUCTION. THESE MATERIALS TYPICALLY INCLUDE MATERIAL PROJECTION BEYOND THE FACE OF THE WALL, INCLUDING BRICK SILLS, OTHER PROJECTIONS, AND ROOF FLASHINGS, GUTTERS, AND TRIMS. REFER TO WALL SECTIONS FOR SPECIFIC CONDITIONS.

T. INVESTIGATE EACH WALL SUBJECT TO DEMOLITION TO DETERMINE IF IT IS USED FOR BEARING. COORDINATE WITH CONSTRUCTION SEQUENCE AND PROVIDE SHORING AT ANY WALL CARRYING STRUCTURAL LOAD TO PREVENT COLLAPSE UNTIL NEW STRUCTURE IS IN PLACE.

U. OWNER RESERVES FIRST RIGHT TO RETAIN AND KEEP ANY EXISTING ITEMS REMOVED AS A PART OF THE DEMOLITION WORK.

V. GENERAL CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL TECHNOLOGY AND COMMUNICATION DEVICES INCLUDING INTERCOM SPEAKERS, CLOCKS, WIRELESS ACCESS POINTS, DEVICES, CAFETERIA SPEAKERS, PROJECTORS, PROJECTOR PLATES, AUDIO-VIDEO CABLING, INTELLIGENT BOARDS, SCREENS, ETC WITH THE SOUND, INTERCOM AND TECHNOLOGY CONTRACTORS. THIS WORK MUST BE DONE PRIOR TO REMOVAL OF CEILING TILE OR OTHER CEILING AND PLENUM WORK.

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X. ALL TECHNOLOGY AND LOW-VOLTAGE CABLING IN THE PLENUM SHALL REMAIN IN PLACE. ANY DAMAGE TO THIS CABLING SHALL HAVE NEW CABLING PLACED BY THE PROPER TRADE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR THAT DAMAGED THE CABLING. ALL CABLES HAVE BEEN TESTED PRIOR TO RENOVATION WORK AND ALL WILL BE TESTED AFTER THE WORK IS COMPLETED.

DEMOLITION GENERAL NOTES

EXISTING PARTITION TO BE REMOVED. INCLUDING BASE, DOORS, WINDOWS, OUTLETS, DEVICES, SWITCHES, CHALKTACK BOARDS, POWER POLES, WALL CAPS AND ANY ITEM ATTACHED TO OR ASSOCIATED WITH THE PARTITION. CONTRACTOR WILL VERIFY ELECTRICAL, MECHANICAL & PLUMBING IN EXISTING WALLS & TERMINATE OR RELOCATE AS REQUIRED FOR CONTRACT WORK. PATCH, REPAIR & CLEAN ALL ADJACENT WALLS AND PREPARE TO RECEIVE NEW PARTITION WALLS AS SHOWN ON FLOOR PLANS.

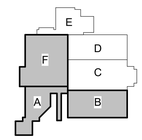
EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS OTHERWISE NOTED.

EXISTING ITEM TO BE REMOVED AS NOTED.

EXISTING WALL / PARTITION TO REMAIN.

EXISTING DOOR, FRAME, AND HARDWARE TO REMAIN.

DEMOLITION LEGEND



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISE
TX 24614
STATE OF TEXAS
10/24/2025

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DEMOLITION FLOOR PLAN - SECTION A, PARTIAL B & F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC AD1.11
Drawn By: MK	
Date: 01.22.2025	

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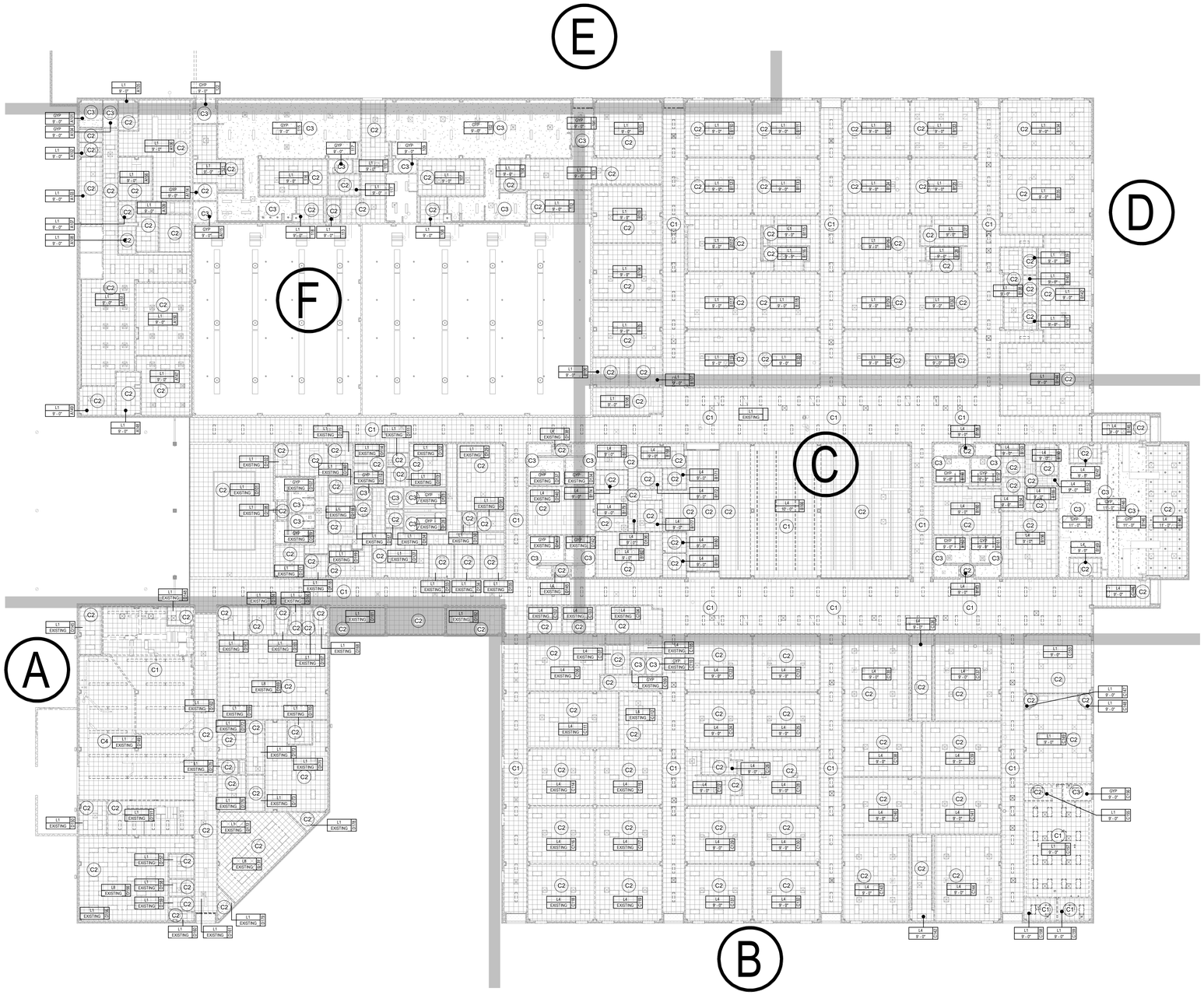

1 DEMO REFLECTED CEILING PLAN - SECTION A
1" = 20'-0"

EXTERIOR

E1. SAW CUT & REMOVE EXISTING CONC SIDEWALK, CURB OR FLAT WORK

FLOORS

F1. REMOVE EXISTING TILE FLOORING & BASE DOWN TO EXISTING SUBSTRATE. PATCH AND/OR REPAIR EXISTING SUBSTRATE. APPLY LEVELING COMPOUND AS REQ'D. FOR NEW SCHEDULED FINISH.

WALLS

W1. REMOVE PORTION OF EXISTING WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN. PREPARE WALL FOR NEW STOREFRONT SYSTEM/DOOR, RE: NEW WORK PLANS. PAINT EXISTING WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

W2. SAW CUT & REMOVE PORTION OF EXISTING MASONRY WALL INDICATED. PREPARE FOR INSTALLATION OF STOREFRONT/DOOR. PAINT INTERIOR WALL CORNER TO CORNER AFTER DEMO/INSTALLATION OF STOREFRONT/DOOR.

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W4. REMOVE EXISTING GYP WALL PARTITION, INCLUDING ANYTHING CONTAINED WITHIN THE WALL. CAP OFF / TERMINATE UTILITIES THEREIN.

CEILINGS

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C2. REMOVE EXISTING CEILING GRID, TILE AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C3. REMOVE EXISTING HARD CEILING AND ANY CEILING TRIM WHERE IT OCCURS. PREPARE ADJACENT WALLS TO RECEIVE NEW CEILING AS SHOWN. SUSPEND IN PLACE AND PROTECT ALL LIGHT FIXTURES, DIFFUSERS, GRILLES, EQUIPMENT, DEVICES AND ALL OTHER ITEMS OCCURRING WITHIN THE CEILING PLANE. THESE WILL BE RE-INSTALLED IN NEW CEILING IN THEIR ORIGINAL LOCATIONS.

C4. REMOVE EXISTING CEILING AND PAINT ALL WALLS UP TO DECK.

DOORS & WINDOWS

D1. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO REPLACE DOOR AS SHOWN ON FLOOR PLANS.

D2. REMOVE EXISTING DOOR AND/OR WINDOW, FRAME, AND HARDWARE (SHOWN DASHED, TYPICAL). PATCH, REPAIR, AND CLEAN OPENING AND PREPARE TO INFILL OPENING AS SHOWN ON FLOOR PLANS.

MISCELLANEOUS

M1. REMOVE/MOVE/DEMO EXISTING CASEWORK AND ACCESSORIES. COORDINATE WITH OWNER.

MECHANICAL

ME1. REMOVE EXISTING KITCHEN HOOD, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. MECHANICAL.

PLUMBING

P1. REMOVE EXISTING PLUMBING FIXTURES, BRACKETS, AND ACCESSORIES. TERMINATE OR RELOCATE UTILITIES AS REQUIRED. REF. PLUMBING.

ROOF

R1. REMOVE PORTION OF EXISTING ROOF AND DECK AND PREPARE ADJACENT AREAS FOR NEW CONSTRUCTION AS SHOWN.

STRUCTURAL

S1. REMOVE EXISTING CONCRETE COLUMN. REF. STRUCTURAL DRAWINGS FOR BRACING AND COLUMN REPLACEMENT IF APPLICABLE.

NOTES BY SYMBOL

A. BIDDERS SHALL VISIT SITE AND BE FAMILIAR WITH EXISTING CONDITIONS, INCLUDING BUT NOT LIMITED TO EXISTING DIMENSIONS, EQUIPMENT, LOCATIONS, SIZES, QUANTITIES, AND MATERIALS.

B. EXISTING ELECTRICAL POWER SERVING THE EXISTING FACILITY SHALL REMAIN ON LINE. DISRUPTIONS REQUIRED FOR CONSTRUCTION TO BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

C. EXISTING DRAIN LINES SERVING THE EXISTING FACILITY SHALL REMAIN FUNCTIONAL. ANY DISRUPTIONS REQUIRED FOR NEW TIE-INS DURING CONSTRUCTION MUST BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

D. CONTRACTOR SHALL COORDINATE EXACT SIZES AND LOCATIONS FOR MECHANICAL, PLUMBING, ELECTRICAL, AND TECHNOLOGY PENETRATIONS REQUIRED FOR NEW WORK WITH EACH RESPECTIVE TRADE.

E. CONTRACTOR SHALL KEEP OPENINGS TO THE EXTERIOR TEMPORARILY COVERED FOR PROTECTION FROM WATER.

F. CONTRACTOR SHALL KEEP OPENINGS TEMPORARILY COVERED FOR PEDESTRIAN SAFETY.

G. CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF TEMPORARY SHORING AND BRACING REQUIRED FOR DEMOLITION.

H. REFER TO MECHANICAL, ELECTRICAL, TECHNOLOGY, AND PLUMBING SHEETS FOR ADDITIONAL PENETRATIONS AND OTHER RELATED DEMOLITION OR EQUIPMENT REMOVAL.

I. EXISTING CONSTRUCTION IS SHOWN BASED UPON OWNER FURNISHED PLANS, OWNER FURNISHED SURVEYS, AND ONSITE OBSERVATIONS. DISCREPANCIES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE REPORTED TO THE ARCHITECT/ENGINEER/PROJECT MANAGER PRIOR TO PROCEEDING WITH WORK.

J. EXISTING CONSTRUCTION ADJACENT TO DEMOLITION WORK WILL BE PATCHED AND REPAIRED TO MATCH ORIGINAL CONDITION.

K. DEMOLITION WORK TIMES SHALL BE COORDINATED WITH THE OWNER REPRESENTATIVE ASSIGNED TO THIS SPECIFIC PROJECT.

L. THIS EXISTING FACILITY SHALL REMAIN FUNCTIONAL DURING THE COURSE OF THE DEMOLITION WORK. CONTRACTOR WILL MAINTAIN DUST BARRIERS, BARRICADES, PEDESTRIAN PROTECTION, WATER PROTECTION, AND SAFETY DEVICES IN PLACE AT ALL TIMES DURING AND AFTER DEMOLITION UNTIL NEW WORK IS INSTALLED.

M. CONTRACTOR SHALL MAINTAIN SITE DRAINAGE DEVICES AND COMPONENTS DURING THE COURSE OF DEMOLITION AND UP UNTIL NEW WORK IS IN PLACE. THIS INCLUDES, BUT IS NOT LIMITED TO, EXISTING SUB-SOIL DRAINAGE.

N. REFER TO MECHANICAL, ELECTRICAL, ROOF PLAN, AND OTHER DISCIPLINE DRAWINGS FOR ADDITIONAL DEMOLITION NOT SPECIFICALLY COVERED BY ARCHITECTURAL DEMOLITION PLANS, ESPECIALLY RELATIVE TO MODIFICATIONS TO EXISTING H.V.A.C. SYSTEMS.

O. DEMOLITION, AS NOTED, CONSISTS OF COMPLETE REMOVAL OF THE LISTED ITEMS, RELATED FASTENERS, AND ATTACHMENT MATERIALS LEAVING A CLEAN SURFACE READY TO RECEIVE NOTED MATERIALS OR SCHEDULED FINISHES.

P. UNLESS NOTED OTHERWISE, MATERIALS SHALL BE REMOVED FROM SITE AND DISPOSED OF AT CONTRACTOR'S EXPENSE. DISPOSAL WILL COMPLY WITH APPLICABLE LOCAL, STATE, AND FEDERAL LAWS AND GUIDELINES.

Q. DEMOLITION SHALL FOLLOW THE CONSTRUCTION SCHEDULE PROVIDED IN THE SPECIFICATIONS.

R. PRECAUTIONS SHALL BE TAKEN TO SEPARATE STUDENTS, SCHOOL STAFF, AND VISITORS FROM DEMOLITION, AND CONSTRUCTION EFFORTS, ACTIVITIES, AND WORK, TO PROTECT THEIR HEALTH AND SAFETY.

S. ADDITIONAL MATERIALS, WHERE CONSTRUCTION ADJOINS EXISTING, NOT SPECIFICALLY IDENTIFIED IN THE DEMOLITION PLANS, WILL BE REMOVED AS REQUIRED TO COMPLETE THE CONSTRUCTION. THESE MATERIALS TYPICALLY INCLUDE MATERIAL PROJECTION BEYOND THE FACE OF THE WALL, INCLUDING BRICK SILLS, OTHER PROJECTIONS, AND ROOF FLASHINGS, GUTTERS, AND TRIMS. REFER TO WALL SECTIONS FOR SPECIFIC CONDITIONS.

T. INVESTIGATE EACH WALL SUBJECT TO DEMOLITION TO DETERMINE IF IT IS USED FOR BEARING. COORDINATE WITH CONSTRUCTION SEQUENCE AND PROVIDE SHORING AT ANY WALL CARRYING STRUCTURAL LOAD TO PREVENT COLLAPSE UNTIL NEW STRUCTURE IS IN PLACE.

U. OWNER RESERVES FIRST RIGHT TO RETAIN AND KEEP ANY EXISTING ITEMS REMOVED AS A PART OF THE DEMOLITION WORK.

V. GENERAL CONTRACTOR SHALL COORDINATE THE REMOVAL OF ALL TECHNOLOGY AND COMMUNICATION DEVICES INCLUDING INTERCOM SPEAKERS, CLOCKS, WIRELESS ACCESS POINTS, DEVICES, CAFETERIA SPEAKERS, PROJECTORS, PROJECTOR PLATES, AUDIO-VIDEO CABLING, INTELLIGENT BOARDS, SCREENS, ETC WITH THE SOUND, INTERCOM AND TECHNOLOGY CONTRACTORS. THIS WORK MUST BE DONE PRIOR TO REMOVAL OF CEILING TILE OR OTHER CEILING AND PLENUM WORK.

W. GATHER AND TEMPORARILY NEATLY AND LOOSELY COIL AND SUSPEND ALL EXISTING-TO-REMAIN PLENUM-RELATED CABLING FROM EXISTING STRUCTURE.

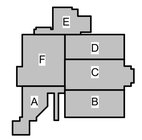
X. ALL TECHNOLOGY AND LOW-VOLTAGE CABLING IN THE PLENUM SHALL REMAIN IN PLACE. ANY DAMAGE TO THIS CABLING SHALL HAVE NEW CABLING PLACED BY THE PROPER TRADE CONTRACTOR AT THE SOLE EXPENSE OF THE CONTRACTOR THAT DAMAGED THE CABLING. ALL CABLES HAVE BEEN TESTED PRIOR TO RENOVATION WORK AND ALL WILL BE TESTED AFTER THE WORK IS COMPLETED.

DEMOLITION GENERAL NOTES

═══	EXISTING PARTITION TO BE REMOVED. INCLUDING BASE, DOORS, WINDOWS, OUTLETS, DEVICES, SWITCHES, CHALK/TACK BOARDS, POWER POLES, WALL CAPS AND ANY ITEM ATTACHED TO OR ASSOCIATED WITH THE PARTITION. CONTRACTOR WILL VERIFY ELECTRICAL, MECHANICAL, & PLUMBING IN EXISTING WALLS & TERMINATE OR RELOCATE AS REQUIRED FOR CONTRACT WORK. PATCH, REPAIR & CLEAN ALL ADJACENT WALLS AND PREPARE TO RECEIVE NEW PARTITION WALLS AS SHOWN ON FLOOR PLANS.
	EXISTING DOOR, FRAME, AND HARDWARE TO BE REMOVED UNLESS OTHERWISE NOTED.
- - -	EXISTING ITEM TO BE REMOVED AS NOTED.
═══	EXISTING WALL / PARTITION TO REMAIN.
	EXISTING DOOR, FRAME, AND HARDWARE TO REMAIN.

DEMOLITION LEGEND

PLAN N
TRUE



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISE
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STATE OF TEXAS
10/24/2025

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DEMOLITION REFLECTED CEILING PLAN - MASTER PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC AD2.10
Drawn By: Author	
Date: 01.22.2025	

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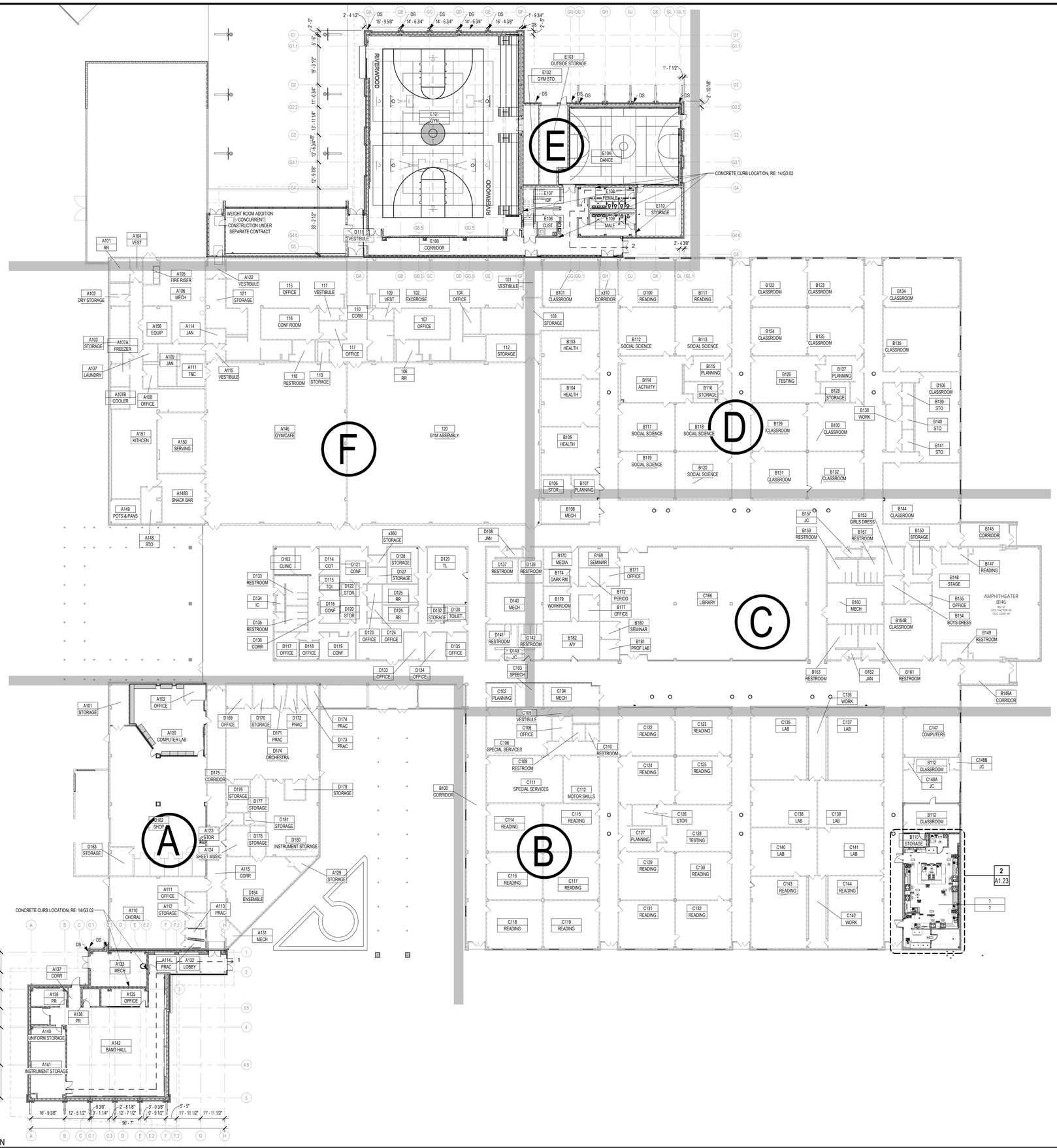
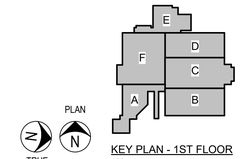


1 MASTER PLAN
1" = 20'-0"



PLAN TRUE NORTH

KEY PLAN - 1ST FLOOR
N.T.S

THE MASTER FLOOR PLAN SHOWS THE OVERALL BUILDING CONFIGURATION AND THE RELATIONSHIP OF THE PLAN AREAS WHICH FOLLOW. REFER TO LARGER SCALE FLOOR PLANS AND PLAN DETAILS FOR ADDITIONAL INFORMATION AND CONSTRUCTION REQUIREMENTS. MASTER PLAN LEGENDS ALSO APPLY TO 1/8" SCALE FLOOR PLAN AREAS.

MASTER FLOOR PLAN

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2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
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REGISTERED ARCHITECT
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MASTER FLOOR PLAN

PACKAGE	VOLUME
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Date: 01.22.2025	

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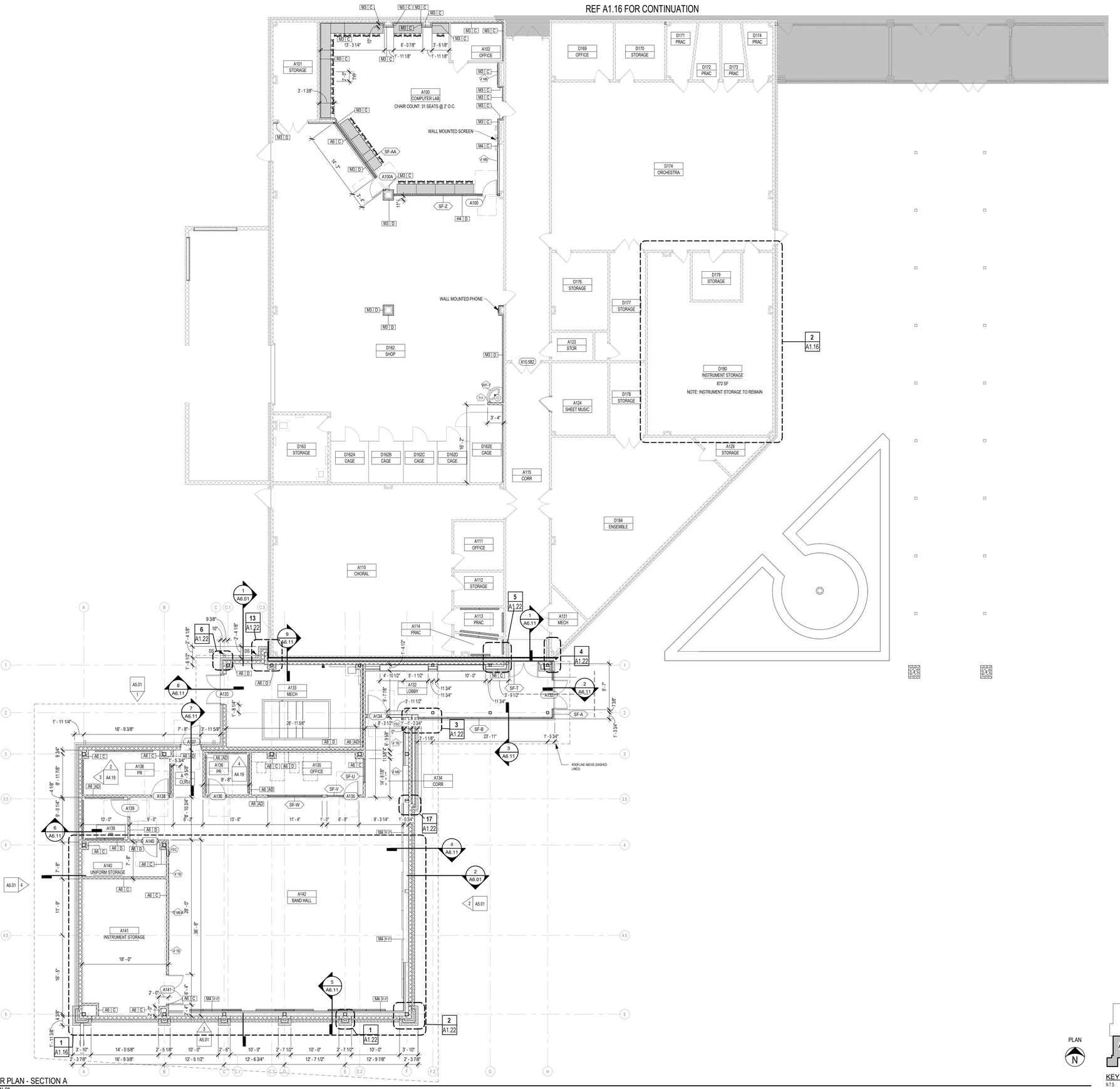


1 FLOOR PLAN - SECTION A
1/8" = 1'-0"

NOTES:

1) THE CONTRACT DOCUMENTS ARE COMPRISED OF BOTH THE DRAWINGS AND THE SPECIFICATIONS.

2) ALL ARCHITECTURAL FLOOR PLAN DIMENSIONS SHOWN ARE TO FACE OF C.F.M.F., MASONRY OR CONCRETE, U.N.O.

3) SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.

4) SEE SPECIFICATIONS AND G3 SHEETS FOR ADDITIONAL MASONRY AND CFMF PARTITION REQUIREMENTS.

5) SEE PLUMBING PLANS AND ENLARGED FLOOR PLANS FOR LOCATIONS OF FIXTURES.

6) REF. DOOR SCHEDULES AND DETAILS FOR MASONRY ROUGH OPENING SIZES.

7) VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).

8) PROVIDE WD BLOCKING IN ALL GYP BD WALLS AS REQ'D AT LOCATIONS INCLUDING, BUT NOT LIMITED TO; HANDRAILS, TOILET ACCESSORIES, PROJECTORS, CASEWORK, TACK BD'S, MARKER BD'S, WALL STOPS & DOOR HOLDERS.

GENERAL FLOOR PLAN NOTES

F.E. **FIRE EXTINGUISHER (WALL MOUNTED)** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C. **FIRE EXTINGUISHER CABINET** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

P.S. **PROJECTION SCREEN** REF. TYP. DET. ON A4 SHEETS

X' M.B. **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

SO1.01 **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 **CALLOUT REFERENCE**

1 / A101 SIM — XX / A101 **WALL SECTION REFERENCE**

XXX' - X" FIN FLOOR **ELEVATION REFERENCE**

1-01 ROOM **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

APPLIES TO SECTION PLANS

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

- MASONRY VENEER
- STANDARD CMU
- CFMF PARTITION
- EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 D

WALL ASSEMBLY 'A' PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES. WALL TAGS WITHOUT LETTERS TO RIGHT REFER TO ELEVATIONS FOR HEIGHT.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3 5/8" CFMF OR CMU
- 6 - 6" CFMF OR 5 5/8" CMU
- 8 - 8" CFMF OR 7 5/8" CMU
- 10 - 9 5/8" CMU
- 12 - 11 5/8" CMU

PARTITION NOTES:

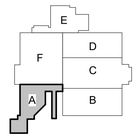
1) ALL INTERIOR PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

2) UNTAGGED PARTITIONS AND COLUMN FURRINGS SHOULD BE ASSUMED TO BE **"TYPICAL"** FOR BIDDING PURPOSES. THE "TYPICAL" **GYP BOARD PARTITION** IS TYPE **M4**, ACOUSTICAL, TO DECK, AND THE "TYPICAL" GYP BOARD **COLUMN FURRING** AND CHASES IS **M4**, NON-ACOUSTICAL TO 6" ABOVE CEILING U.N.O.
THE "TYPICAL" **MASONRY PARTITION** IS TYPE **A8**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING, AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS **A6**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

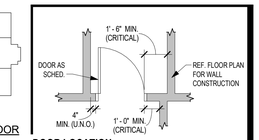
REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

PARTITION LEGEND

PLAN N



KEY PLAN - 1ST FLOOR
N.T.S.



DOOR LOCATION

Date

Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A1.11
Drawn By: MK	
Date: 01.22.2025	

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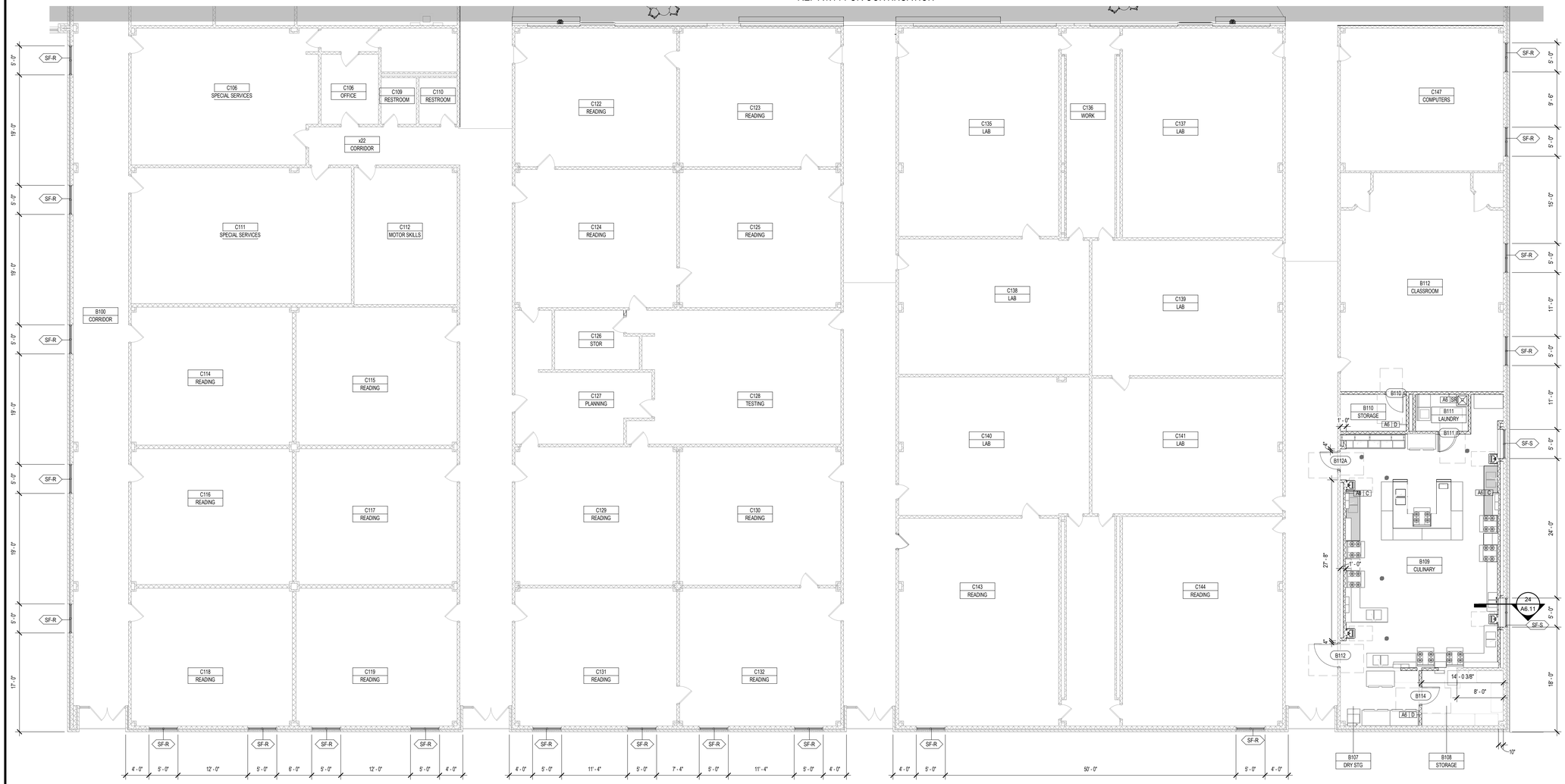

NOTES:

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2) ALL ARCHITECTURAL FLOOR PLAN DIMENSIONS SHOWN ARE TO FACE OF C.F.M.F, MASONRY OR CONCRETE, U.N.O.

3) SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.

4) SEE SPECIFICATIONS AND G3 SHEETS FOR ADDITIONAL MASONRY AND CFMF PARTITION REQUIREMENTS.

5) SEE PLUMBING PLANS AND ENLARGED FLOOR PLANS FOR LOCATIONS OF FIXTURES.

6) REF. DOOR SCHEDULES AND DETAILS FOR MASONRY ROUGH OPENING SIZES.

7) VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).

8) PROVIDE WD BLOCKING IN ALL GYP BD WALLS AS REQ'D AT LOCATIONS INCLUDING, BUT NOT LIMITED TO; HANDRAILS, TOILET ACCESSORIES, PROJECTORS, CASEWORK, TACK BD'S, MARKER BD'S, WALL STOPS & DOOR HOLDERS.

GENERAL FLOOR PLAN NOTES

F.E. — **FIRE EXTINGUISHER (WALL MOUNTED)** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C. — **FIRE EXTINGUISHER CABINET** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

P.S. — **PROJECTION SCREEN** REF. TYP. DET. ON A4 SHEETS

X' M.B. — **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. — **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 — **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A — **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

SO1.01 — **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 — **CALLOUT REFERENCE**

1 / A101 SIM — **WALL SECTION REFERENCE** XX / A101

XXX' - X" FIN FLOOR — **ELEVATION REFERENCE**

1-01 ROOM — **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

APPLIES TO SECTION PLANS

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

- MASONRY VENEER
- STANDARD CMU
- CFMF PARTITION
- EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 | D

WALL ASSEMBLY 'A' PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES. WALL TAGS WITHOUT LETTERS TO RIGHT REFER TO ELEVATIONS FOR HEIGHT.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

- 1 - 7/8" HAT CHANNEL
- 2 - 1 5/8" CFMF
- 3 - 2 1/2" CFMF
- 4 - 3-5/8" CFMF OR CMU
- 6 - 6" CFMF OR 5 5/8" CMU
- 8 - 8" CFMF OR 7 5/8" CMU
- 10 - 9 5/8" CMU
- 12 - 11 5/8" CMU

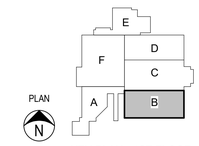
PARTITION NOTES:

1) ALL INTERIOR PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

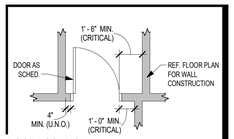
2) **UNTAGGED PARTITIONS AND COLUMN FURRINGS** SHOULD BE ASSUMED TO BE **"TYPICAL"** FOR BIDDING PURPOSES. THE "TYPICAL" **GYP BOARD PARTITION** IS TYPE **H4**, ACOUSTICAL, TO DECK, AND THE "TYPICAL" GYP BOARD **COLUMN FURRING** AND CHASES IS **M4**, NON-ACOUSTICAL, TO 8' ABOVE CEILING U.N.O.
THE "TYPICAL" **MASONRY PARTITION** IS TYPE **A8**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING ON NEAREST 8" COURSING ABOVE CEILING, AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS **A6**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

PARTITION LEGEND



KEY PLAN - 1ST FLOOR
N.T.S



DOOR LOCATION

1 FLOOR PLAN - SECTION B
1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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KINGWOOD, TX



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FLOOR PLAN - SECTION B

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Job No. 1821-13-02	Sheet No. 100% QC A1.12
Drawn By: MK	
Date: 01.22.2025	

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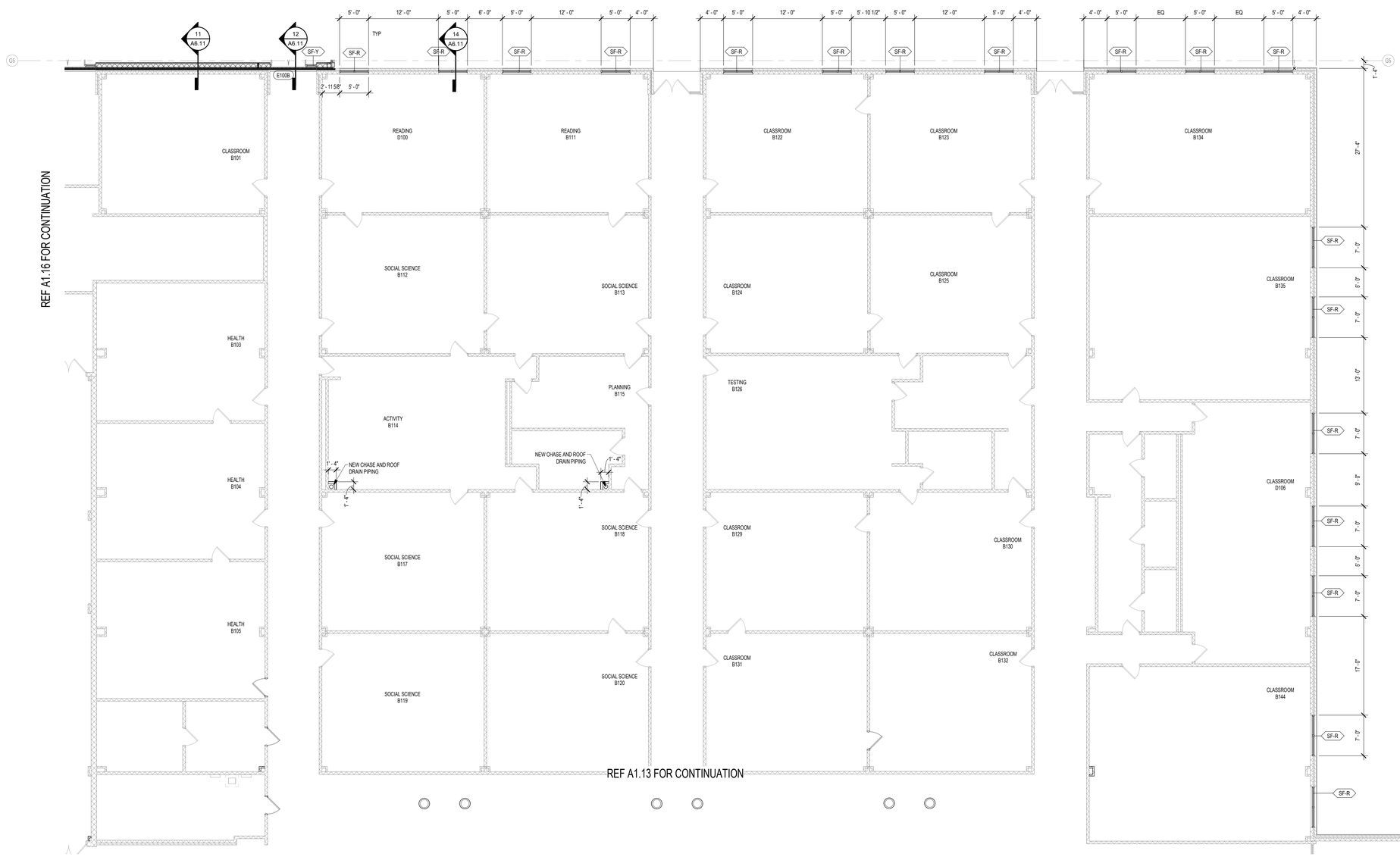
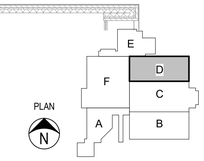


1 FLOOR PLAN - SECTION D
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

NOTES:

1) THE CONTRACT DOCUMENTS ARE COMPRISED OF BOTH THE DRAWINGS AND THE SPECIFICATIONS.

2) ALL ARCHITECTURAL FLOOR PLAN DIMENSIONS SHOWN ARE TO FACE OF C.F.M.F, MASONRY OR CONCRETE, U.N.O.

3) SEE STRUCTURAL DRAWINGS FOR ADDITIONAL REINFORCEMENT REQUIREMENTS.

4) SEE SPECIFICATIONS AND G3 SHEETS FOR ADDITIONAL MASONRY AND CFMF PARTITION REQUIREMENTS.

5) SEE PLUMBING PLANS AND ENLARGED FLOOR PLANS FOR LOCATIONS OF FIXTURES.

6) REF. DOOR SCHEDULES AND DETAILS FOR MASONRY ROUGH OPENING SIZES.

7) VERIFY ALL MASONRY OPENINGS WITH MANUFACTURERS' PRODUCTS (E.G. FIRE EXTINGUISHER CABINETS, ELECTRICAL PANELS, ETC.).

8) PROVIDE WD BLOCKING IN ALL GYP BD WALLS AS REQ'D AT LOCATIONS INCLUDING, BUT NOT LIMITED TO; HANDRAILS, TOILET ACCESSORIES, PROJECTORS, CASEWORK, TACK BD'S, MARKER BD'S, WALL STOPS & DOOR HOLDERS.

GENERAL FLOOR PLAN NOTES

F.E. **FIRE EXTINGUISHER (WALL MOUNTED)** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

F.E.C. **FIRE EXTINGUISHER CABINET** - REF SPEC SECT. 10 4400. PROVIDE TYPE "K" @ KITCHEN AREAS

P.S. **PROJECTION SCREEN** REF. TYP. DET. ON A4 SHEETS

X' M.B. **MARKERBOARD** REF. TYP. DET. ON A4 SHEETS

X' T.B. **TACKBOARD** REF. TYP. DET. ON A4 SHEETS

ELECTRIC WATER COOLER - REF PLUMBING PLAN.

1.01 **DOOR ASSEMBLY NUMBER** - REF. SCHEDULE ON A3 SHTS.

SF-A **WINDOW/STOREFRONT/CURTAIN WALL ASSEMBLY TYPE** - REF. A3 SHTS.

SO1.01 **SPECIAL OPENING NUMBER (ROLLING DOOR)** - REF. SCHEDULE ON A3 SHTS.

1 / A1.1 **CALLOUT REFERENCE**

1 / A101 SIM / XX / A101 **WALL SECTION REFERENCE**

XXX' - X" FIN FLOOR **ELEVATION REFERENCE**

1-01 ROOM **ROOM NUMBER & NAME**

FLOOR PLAN LEGEND

APPLIES TO SECTION PLANS

REF. TYP. CONST. DTLS. FOR ADDITIONAL INFO.

- MASONRY VENEER
- STANDARD CMU
- CFMF PARTITION
- EXISTING CFMF PARTITION

PARTITION TYPE TAGS

A3 / D — WALL ASSEMBLY IN PLAN VIEW

LETTERS TO THE RIGHT INDICATE PARTITION HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES. WALL TAGS WITHOUT LETTERS TO RIGHT REFER TO ELEVATIONS FOR HEIGHT.

D	WALL TO DECK / STRUCTURE
C	WALL TO 6" (MIN.) ABOVE CEILING
FR	FIRE RATED WALL TO DECK
AD	ACOUSTICAL WALL TO DECK
AC	ACOUSTICAL WALL TO 6" (MIN.) ABOVE CEILING
AR	ACOUSTICAL RATED WALL TO DECK
GD	GYP WALL ABOVE TO DECK
SR	SMOKE RESISTANT PARTITION

LETTER & NUMBER TO THE LEFT INDICATE PARTITION TYPE & STUD OR CMU SIZE AS FOLLOWS:

1 - 7/8" HAT CHANNEL
2 - 1 5/8" CFMF
3 - 2 1/2" CFMF
4 - 3 5/8" CFMF OR CMU
6 - 6" CFMF OR 5 5/8" CMU
8 - 8" CFMF OR 7 5/8" CMU
10 - 9 5/8" CMU
12 - 11 5/8" CMU

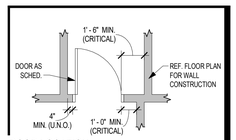
PARTITION NOTES:

1) ALL INTERIOR PARTITIONS NOT OTHERWISE DESCRIBED BY A WALL SECTION ARE IDENTIFIED BY A SYMBOL WITH AN ALPHANUMERIC CODE INDICATING MATERIALS (BY LETTER), NOMINAL THICKNESS OF STRUCTURE (BY NUMBER) AND AN ALPHANUMERIC CODE REPRESENTING HEIGHT, FIRE RATING AND ACOUSTICAL PROPERTIES.

2) UNTAGGED PARTITIONS AND COLUMN FURRINGS SHOULD BE ASSUMED TO BE **"TYPICAL"** FOR BIDDING PURPOSES. THE "TYPICAL" **GYP BOARD PARTITION** IS TYPE **M4**, ACOUSTICAL, TO DECK, AND THE "TYPICAL" GYP BOARD **COLUMN FURRING** AND CHASES IS **M4**, NON-ACOUSTICAL, TO 8" ABOVE CEILING U.N.O.
THE "TYPICAL" **MASONRY PARTITION** IS TYPE **A8**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. AND THE "TYPICAL" **MASONRY COLUMN** FURRING IS **A6**, NON-ACOUSTICAL, TO EXTEND 4" ABOVE CEILING OR NEAREST 8" COURSING ABOVE CEILING. ANY UNTAGGED PARTITIONS WHICH APPEAR TO BE INCONSISTENT WITH THESE "TYPICAL" DESCRIPTIONS SHOULD BE VERIFIED WITH THE ARCHITECT PRIOR TO CONSTRUCTION.

REF. G3 SHEETS FOR EXTERIOR WALL TYPES AND INTERIOR PARTITION TYPE ASSEMBLIES.

PARTITION LEGEND



DOOR LOCATION

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX



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FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A1.14
Drawn By: MK	
Date: 01.22.2025	

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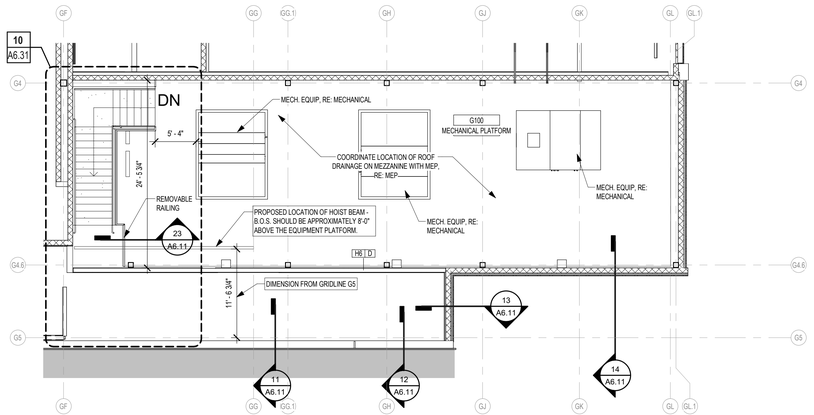
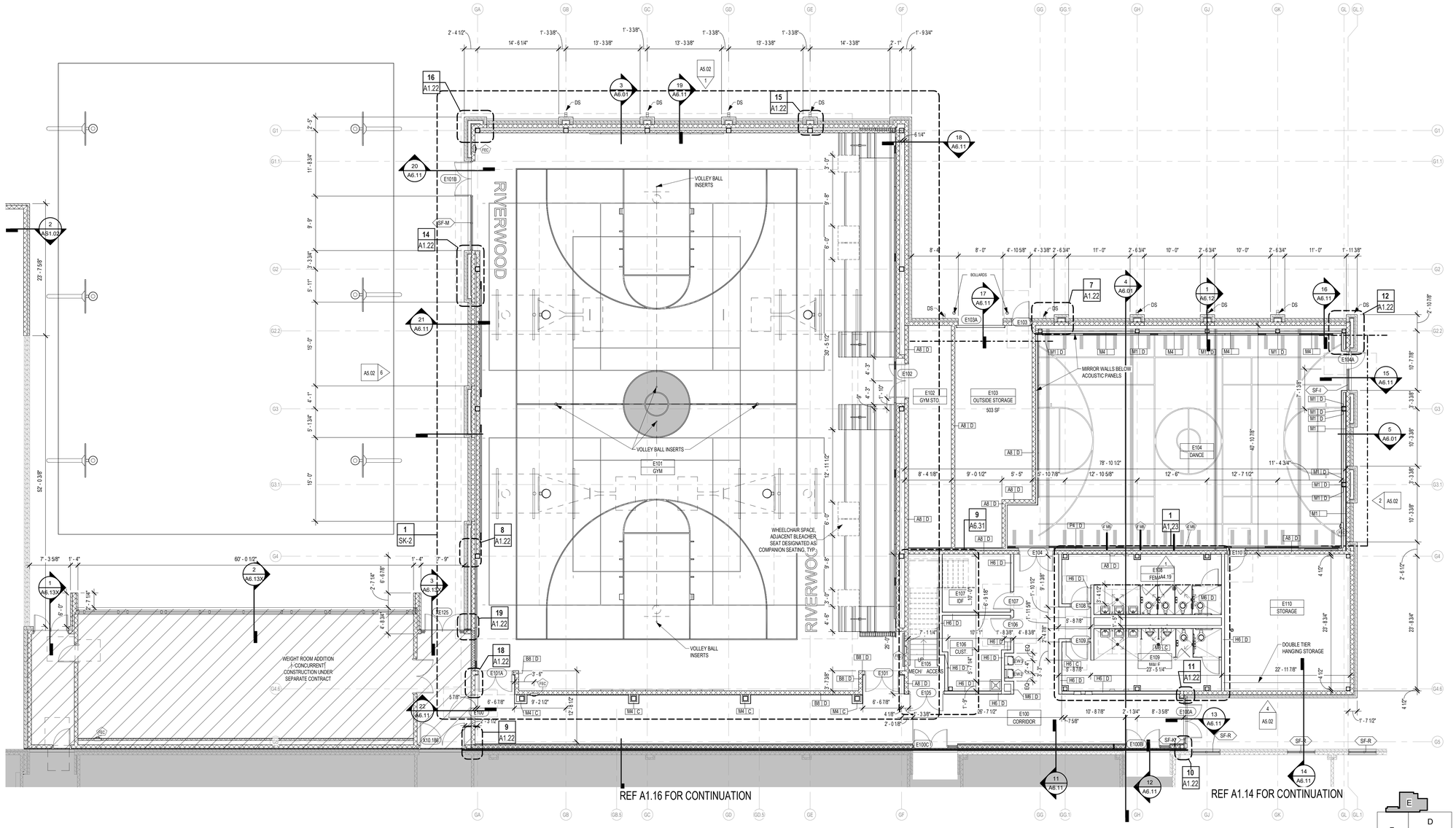


2 MECHANICAL MEZZANINE PLAN - SECTION G
1/8" = 1'-0"


REF A1.16 FOR CONTINUATION
REF A1.14 FOR CONTINUATION
RIVERWOOD DR
VOLLEY BALL INSERTS
WHEELCHAIR SPACE, ADJACENT BLEACHER SEAT DESIGNATED AS COMPANION SEATING, TYP.
WEIGHT ROOM ADDITION
/- CONCURRENT CONSTRUCTION UNDER SEPARATE CONTRACT
E101 GYM
E102 GYM STO.
E103 OUTSIDE STORAGE
503 SF
E104 DANCE
E100 CORRIDOR
E110 STORAGE
DOUBLE TIER HANGING STORAGE
MIRROR WALLS BELOW ACOUSTIC PANELS
BOLLARDS
MECH. ACCESS
IDF
E125
E101A
E103A
E104A
E108
E109
E100A
E100B
E100C
SF-M
SF-I
SF-R
SF-K2
SF-A
DS
YEC
M4 C
M1 D
M6 D
M8 C
A8 D
H6 D
PAT D
6' MIR
8' MIR
1 SK-2
1 A1.23
2 A5.02
3 A6.13X
4 A6.01
5 A6.01
7 A1.22
8 A1.22
9 A6.31
9 A1.22
10 A1.22
11 A1.22
12 A1.22
13 A6.11
14 A6.11
15 A6.11
16 A1.22
16 A6.11
17 A6.11
18 A1.22
18 A6.11
19 A1.22
20 A6.11
21 A6.11
22' A6.11
23 A6.11
E10186
A5.02 1
A5.02 6
2 A6.13X
1 A6.12X
2 A6.12X
1 A6.12
2 A6.11
E10186
E10186
E10186

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EXISTING INSTRUMENT STORAGE SCHEDULE

TO BE REPOSITIONED AS INDICATED

A141 INSTRUMENT STORAGE & A142 BAND HALL

MARK	QTY	DESCRIPTION
1	4	#01 ACOUSTICABINET
2N	1	#02N ACOUSTICABINET
3N	1	#03N ACOUSTICABINET
4N	8	#04N ACOUSTICABINET
5	3	#05 ACOUSTICABINET
5N	3	#05N ACOUSTICABINET
7N	1	#7N ACOUSTICABINET
10N	4	#10N ACOUSTICABINET
11	4	#11 ACOUSTICABINET
11N	5	#11N ACOUSTICABINET
12	2	#12 ACOUSTICABINET
TOTAL	36	

NEW INSTRUMENT STORAGE SCHEDULE

A141 INSTRUMENT STORAGE

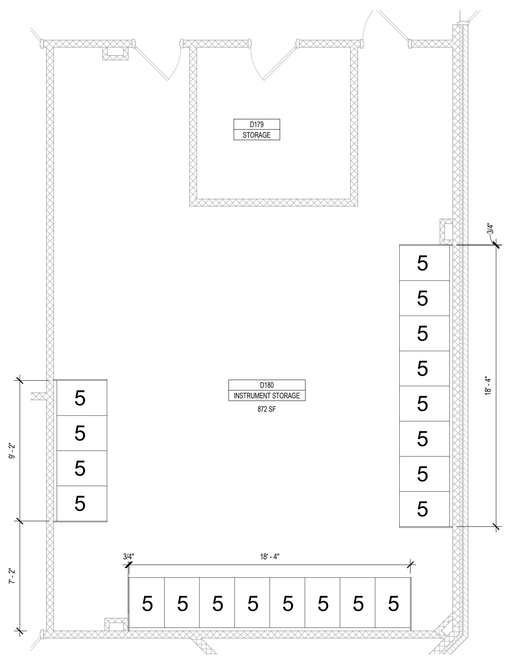
MARK	QTY	MANUFACTURER	DESCRIPTION
3A	1	WENGER CORPORATION	GEARBOSS SHELF STARTER BAY
3B	3	WENGER CORPORATION	GEARBOSS SHELF ADD-ON BAY
	14	WENGER CORPORATION	GEARBOSS SHELF WORK SURFACE
	14	WENGER CORPORATION	GEARBOSS SHELF, 30 1/2"
5	1	WENGER CORPORATION	#05 ACOUSTICABINET
TOTAL	28		

EXISTING INSTRUMENT STORAGE SCHEDULE

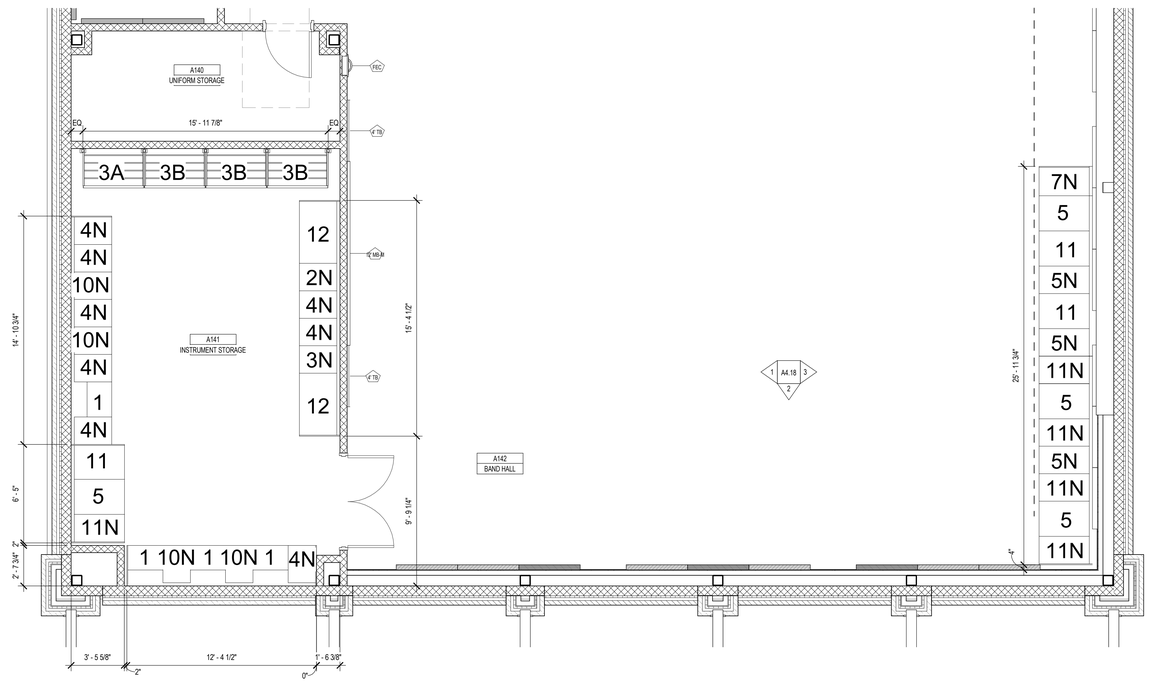
TO BE RELOCATED AS INDICATED IN FLOOR PLANS

A141 INSTRUMENT STORAGE & A142 BAND HALL

MARK	QTY	DESCRIPTION
5	20	#05 ACOUSTICABINET
TOTAL	20	



2 EQUIPMENT PLAN - INSTRUMENT STORAGE - D180
1/4" = 1'-0" BACK REF: A1.11



1 EQUIPMENT PLAN - INSTRUMENT STORAGE - A141/A142
1/4" = 1'-0" BACK REF: A1.11

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WARD
TX 24614
STATE OF TEXAS
10/24/2025

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EQUIPMENT PLANS - INSTRUMENT STORAGE

Job No. 1821-13-02
Drawn By: Author
Date: 01.22.2025
Sheet No. 100% QC
A1.16

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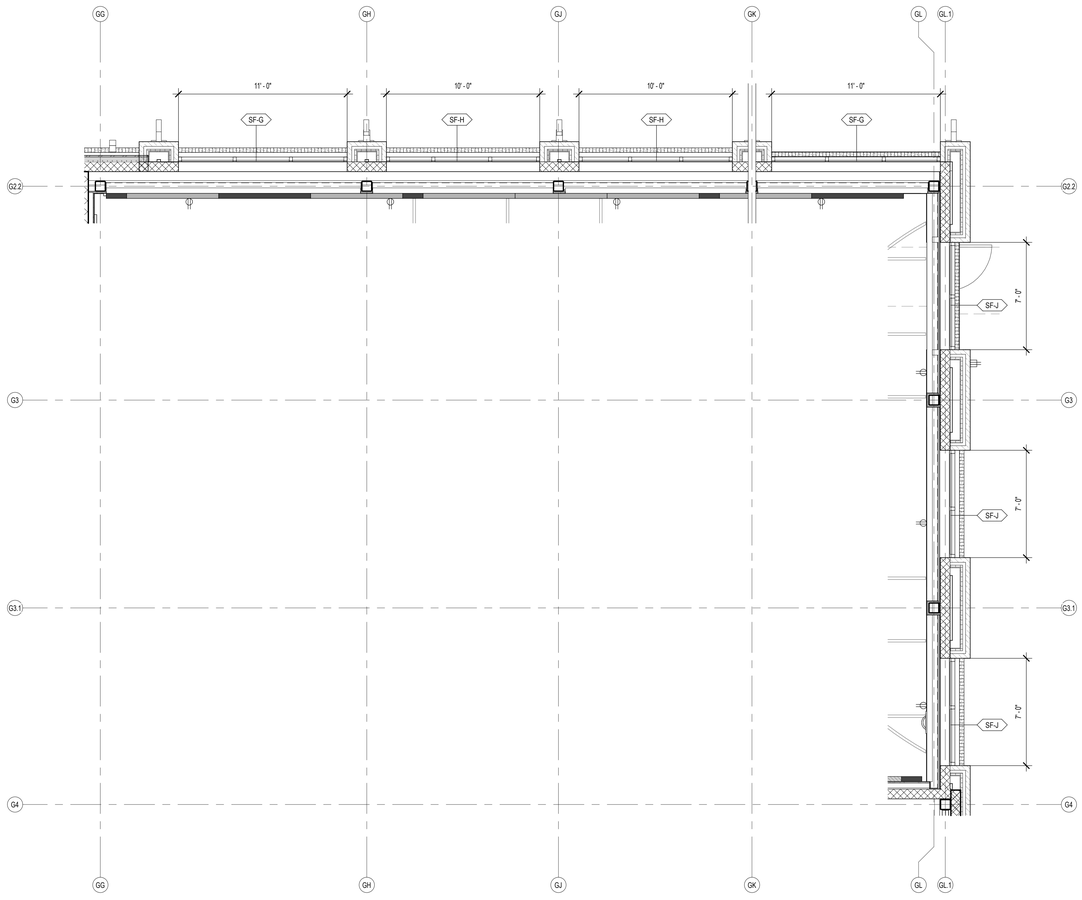

2 CLERESTORY PLAN - DANCE
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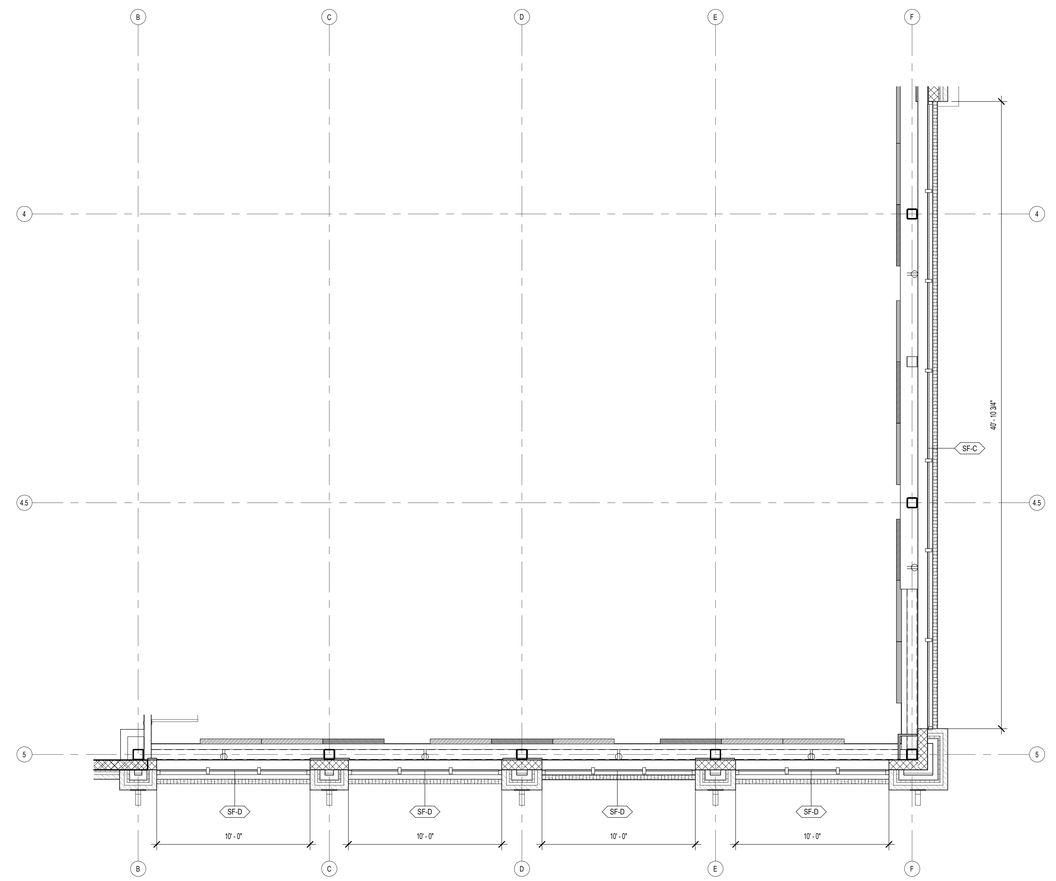

1 CLERESTORY PLAN - BAND HALL
1/4" = 1'-0" BACK REF:

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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10/24/2025

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CLERESTORY PLANS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC
Drawn By: Author	A1.20
Date: 01.22.2025	

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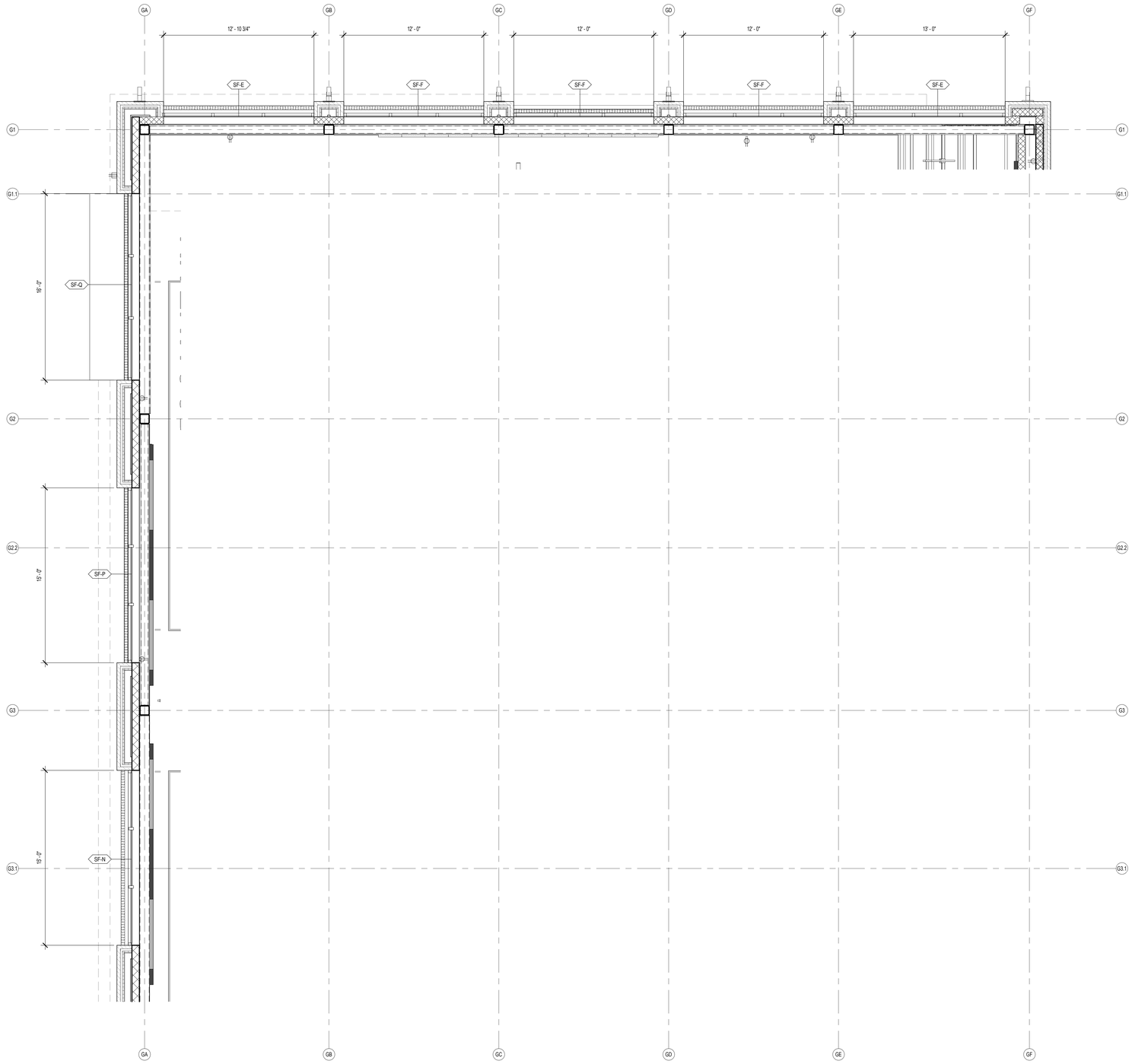

1 CLERESTORY PLAN - GYM
1/4" = 1'-0" BACK REF:

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt

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Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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CLERESTORY PLANS

PACKAGE	VOLUME
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Date: 01.22.2025	

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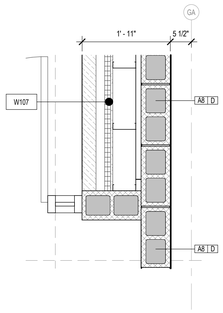
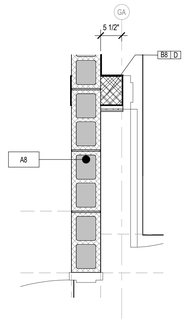


19 DANCE/GYM - PLAN DETAIL 19
3/4" = 1'-0" BACK REF: A1.15



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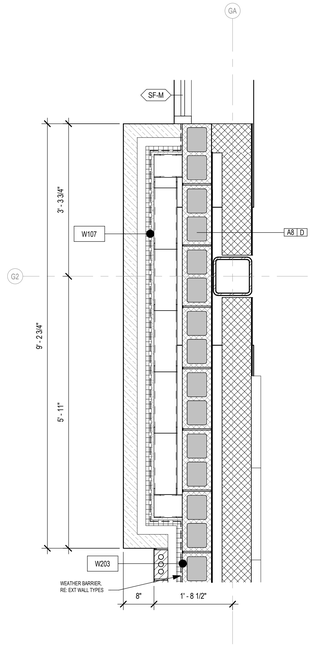

14 DANCE/GYM - PLAN DETAIL 14
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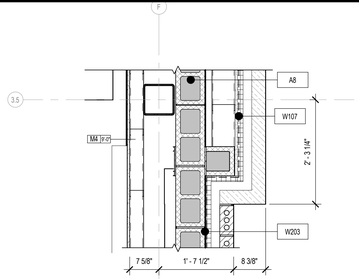

17 BAND HALL - PLAN DETAIL 17
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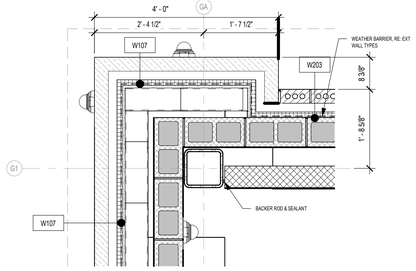

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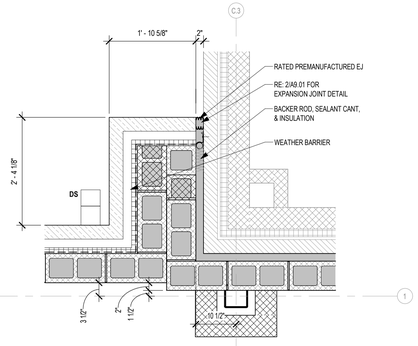

13 BAND HALL - NW CORNER PLAN DETAIL 13
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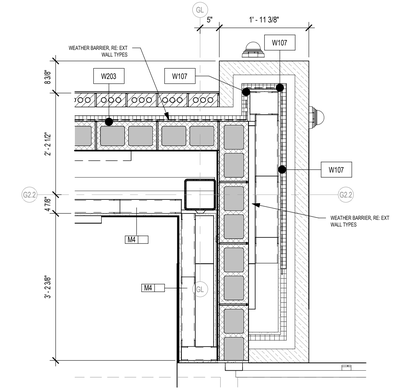

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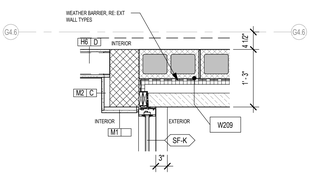

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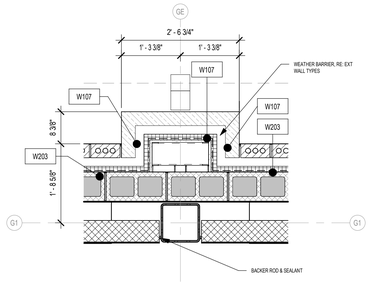

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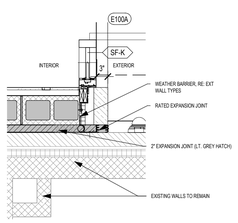

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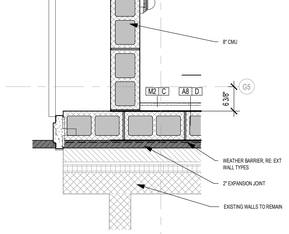

9 DANCE/GYM - PLAN DETAIL 09
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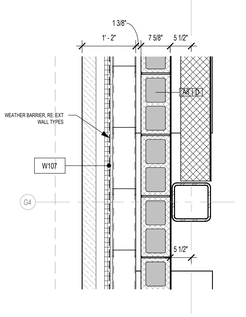

8 DANCE/GYM - PLAN DETAIL 08
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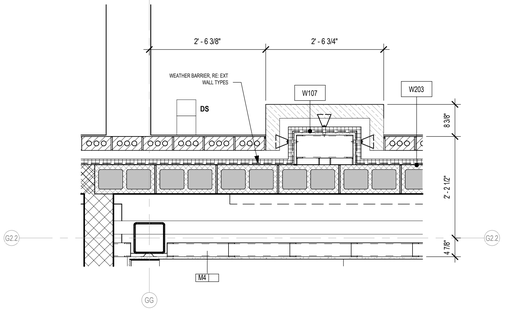

7 DANCE/GYM - PLAN DETAIL 07
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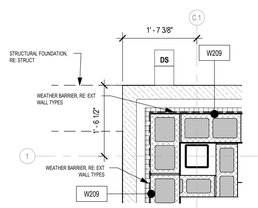

6 BAND HALL -PLAN DETAIL 06
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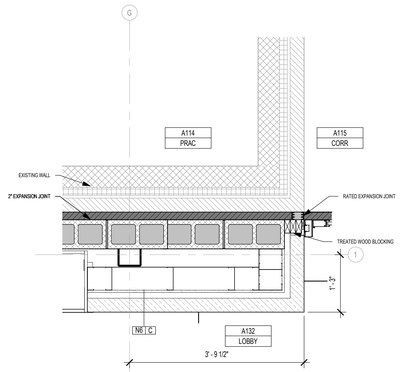

5 BAND HALL/LOBBY - PLAN DETAIL 05
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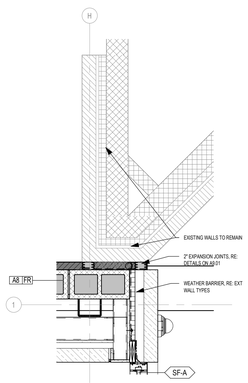
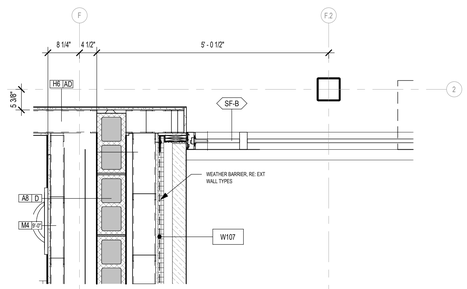
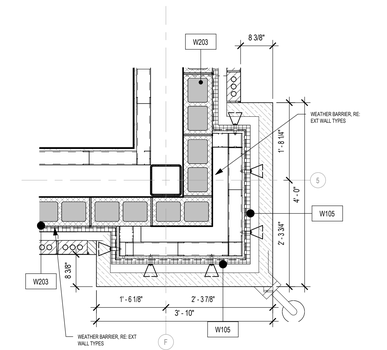


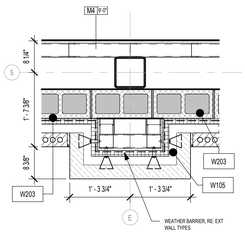
4 LOBBY - NE CORNER - PLAN DETAIL 04
3/4" = 1'-0" BACK REF: A1.11



3 BAND HALL - PLAN DETAIL 03
3/4" = 1'-0" BACK REF: A1.11



2 BAND HALL - PLAN DETAIL 02
3/4" = 1'-0" BACK REF: A1.11



1 BAND HALL - PLAN DETAIL 01
3/4" = 1'-0" BACK REF: A1.11

PLAN DETAIL LEGEND

- **COLUMN** - REFER TO STRUCTURAL DRAWINGS.
- **WINDOW FRAME** - REFER TO A3 SHEETS FOR SCHEDULE AND DETAILS.
- **DOOR FRAME** - REFER TO A3 SHEETS FOR SCHEDULE AND DETAILS.
- **GROUT FILLED CMU CELL** FILL SOLID WITH GROUT - REF. STRUCT. FOR REINF.
- **CMU**
- **GROUND FACE CMU**
- **FACE BRICK**
- **WEATHER BARRIER**
- **I.C.F. WALL SYSTEM**
- **CFMF WALL** 5/8" GYP. BD. ON EACH SIDE OF 3-5/8" MTL. STUDS @ 16" O.C. U.N.O. W/ BATT INSUL. WHERE SHOWN OR SPECIFIED.
- **E.J. DETAILS** - REF. A9 SHEETS.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

SUSAN F. WILLIAMS
REGISTERED ARCHITECT
TX 24614
STATE OF TEXAS
10/24/2025

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PLAN DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A1.22
Drawn By: MK	
Date: 01.22.2025	

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30" x 48" CLEAR FLOOR SPACE PER ACCESSIBILITY REQUIREMENTS

5' - 0" DIAMETER TURNING SPACE PER ACCESSIBILITY REQUIREMENTS

PLAN LEGEND

1) FOR ACCESSIBLE FIXTURES & ACCESSORIES REFER TO SHEET A1.26 "TOILET FIXTURE & ACCESSORIES SCHEDULE" FOR MOUNTING HEIGHTS & ACCESSIBILITY REQUIREMENTS. THE ACCESSORIES ARE CALLED OUT IN THE INDIVIDUAL STALL / ROOM TYPES / SHOWER TYPES. S1 T1 SH1

2) FIXTURES THAT STAND ALONE WILL BE TAGGED W/ A SYMBOL: LAV'S, URINAL'S & EWC'S LV U EC

3) PROVIDE PIPE INSULATION AS SPECIFIED AT ALL EXPOSED PIPING AND DRAIN AT ACCESSIBLE LAVATORIES.

GENERAL NOTES

COLUMN - REFER TO STRUCTURAL DRAWINGS.

WINDOW FRAME - REFER TO A3 SHEETS FOR SCHEDULE AND DETAILS.

DOOR FRAME - REFER TO A3 SHEETS FOR SCHEDULE AND DETAILS.

GROUT FILLED CMU CELL FILL SOLID WITH GROUT - REF. STRUCT. FOR REINF.

CMU

GROUND FACE CMU

FACE BRICK

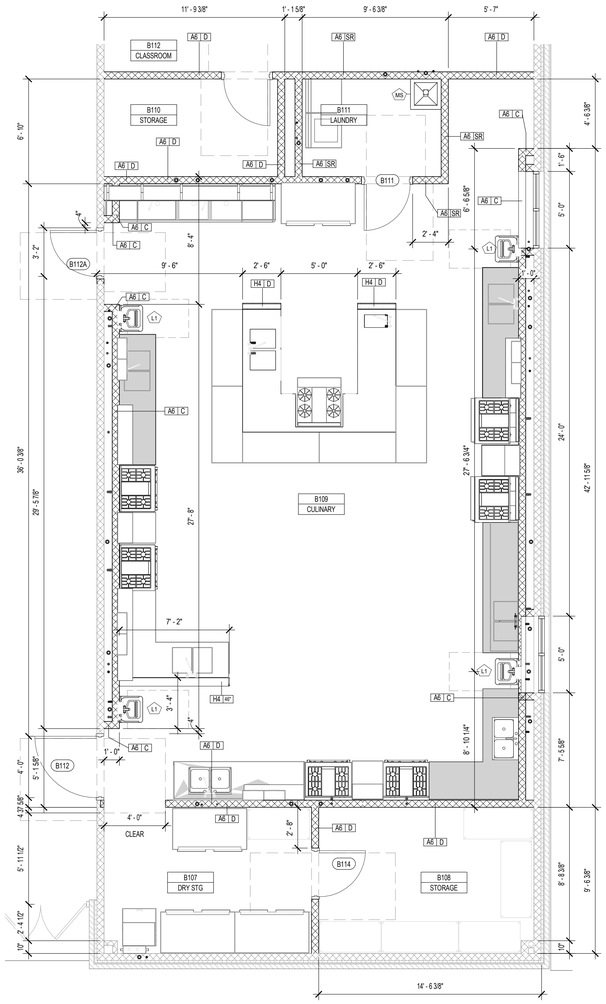
WEATHER BARRIER

I.C.F. WALL SYSTEM

CFMF WALL 5/8" GYP. BD. ON EACH SIDE OF 3-5/8" MTL. STUDS @ 16" O.C. U.N.O. W/ BATT INSUL. WHERE SHOWN OR SPECIFIED.

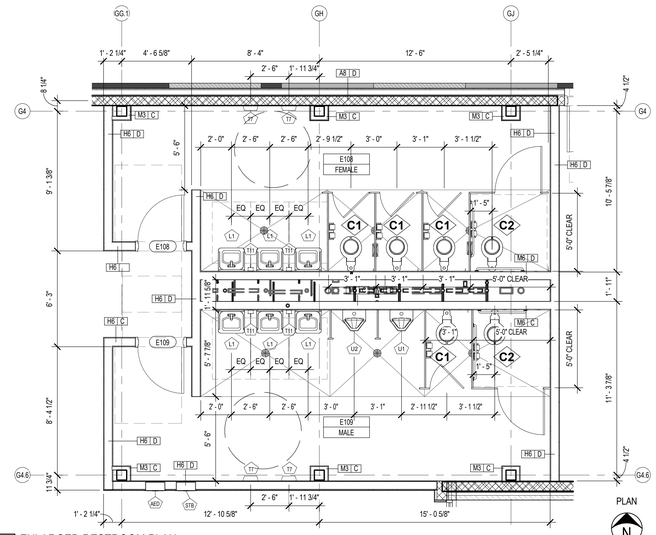
E.J. DETAILS - REF. A9 SHEETS.

PLAN DETAIL LEGEND



2 ENLARGED PLAN - CULINARY
1/4" = 1'-0" BACK REF: A1.01

REF QF1.03 FOR FOOD SERVICES EQUIPMENT INFORMATION



PLAN N

1 ENLARGED RESTROOM PLAN
1/4" = 1'-0"

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ENLARGED PLANS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A1.23
Drawn By: Author	
Date: 01.22.2025	

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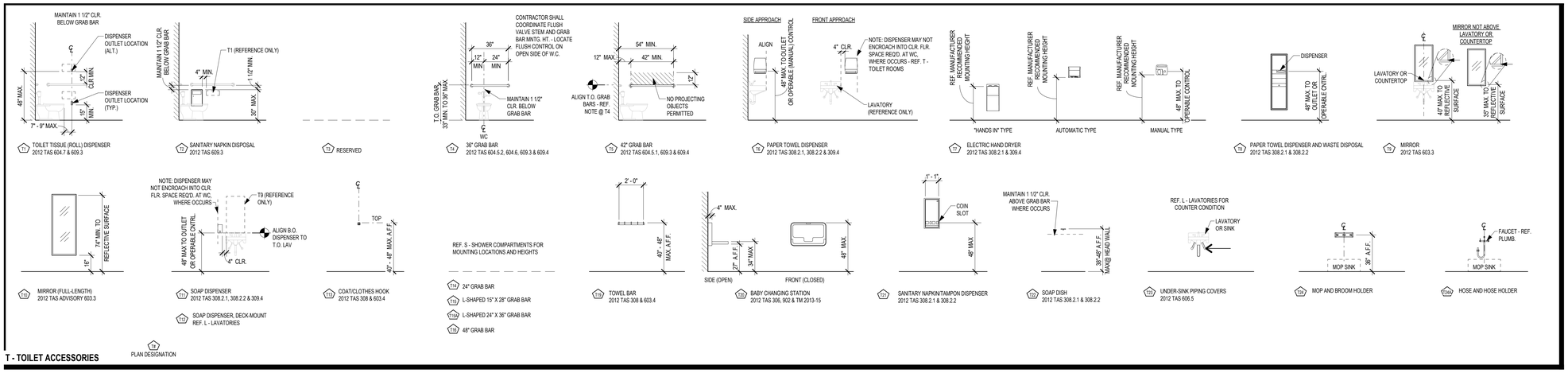


T1 TOILET TISSUE (ROLL) DISPENSER 2012 TAS 604.7 & 609.3
T2 SANITARY NAPKIN DISPOSAL 2012 TAS 609.3
T3 RESERVED
T4 36" GRAB BAR 2012 TAS 604.5.2, 604.6, 609.3 & 609.4
T5 42" GRAB BAR 2012 TAS 604.5.1, 609.3 & 609.4
T6 PAPER TOWEL DISPENSER 2012 TAS 308.2.1, 308.2.2 & 309.4
T7 ELECTRIC HAND DRYER 2012 TAS 308.2.1 & 309.4
T8 PAPER TOWEL DISPENSER AND WASTE DISPOSAL 2012 TAS 308.2.1 & 308.2.2
T9 MIRROR 2012 TAS 603.3
T10 MIRROR (FULL-LENGTH) 2012 TAS ADVISORY 603.3
T11 SOAP DISPENSER 2012 TAS 308.2.1, 308.2.2 & 309.4
T12 SOAP DISPENSER, DECK-MOUNT REF. L - LAVATORIES
T13 COAT/CLOTHES HOOK 2012 TAS 308 & 603.4
T14 24" GRAB BAR
T15 L-SHAPED 15" X 28" GRAB BAR
T15A L-SHAPED 24" X 36" GRAB BAR
T16 48" GRAB BAR
T19 TOWEL BAR 2012 TAS 308 & 603.4
T20 BABY CHANGING STATION 2012 TAS 306, 902 & TM 2013-15
T21 SANITARY NAPKIN/TAMPON DISPENSER 2012 TAS 308.2.1 & 308.2.2
T22 SOAP DISH 2012 TAS 308.2.1 & 308.2.2
T23 UNDER-SINK PIPING COVERS 2012 TAS 606.5
T24 MOP AND BROOM HOLDER
T24A HOSE AND HOSE HOLDER

T# PLAN DESIGNATION

T - TOILET ACCESSORIES

1. THIS SHEET PROVIDES GUIDANCE FOR MOUNTING LOCATIONS AND HEIGHTS RELATIVE TO TEXAS ACCESSIBILITY STANDARDS. NOT ALL TYPES SCHEDULED MAY BE USED. REFER TO ENLARGED FLOOR PLANS FOR QUANTITIES AND LOCATIONS.

2. CONFIGURATIONS ON THIS SHEET ARE DIAGRAMMATIC. IN THE EVENT A PROJECT-SPECIFIC CONDITION DOES NOT COMPLY WITH CLEARANCES INDICATED, NOTIFY THE ARCHITECT FOR RESOLUTION PRIOR TO PROCEEDING WITH THE WORK.

3. TOILET ACCESSORIES: REFER TO SPECIFICATION SECTION 10 2800 TOILET, BATH AND LAUNDRY ACCESSORIES FOR ADDITIONAL INFORMATION.

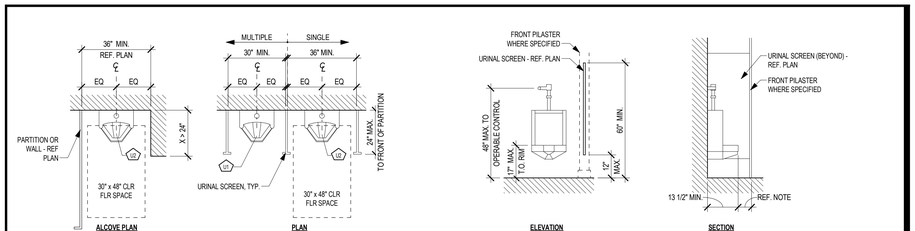
4: FIXTURES: REFER TO PLUMBING PLANS FOR SCHEDULED TYPE AND DIVISION 22 SPECIFICATIONS FOR ADDITIONAL INFORMATION.

5. AT METAL STUD PARTITIONS, PROVIDE FIRE-RETARDANT TREATED WOOD BLOCKING FOR ANCHORAGE OF GRAB BARS, WALL-MOUNTED SEATS AND BENCHES. BABY CHANGING STATIONS, AND OTHER SUCH WALL-MOUNTED ACCESSORIES WHERE ADDITIONAL LOADS ARE ANTICIPATED.

GENERAL NOTES

PLUMBING FIXTURE LEGEND	
ITEM	DESCRIPTION
EW1	ELECTRIC WATER COOLER, WALL-MOUNTED, ACCESSIBLE
EW2	ELECTRIC WATER COOLER, WALL-MOUNTED, ACCESSIBLE, WITH BOTTLE FILLER
EW3	ELECTRIC WATER COOLER, WALL-MOUNTED
L1	LAVATORY, WALL-MOUNTED, ACCESSIBLE
L2	LAVATORY, COUNTER-MOUNTED, ACCESSIBLE
MS	MOP SINK
U1	URINAL
U2	URINAL, ACCESSIBLE
WC1	WATER CLOSET
WC2	WATER CLOSET, ACCESSIBLE
WF	WASH FOUNTAIN

TOILET ACCESSORY LEGEND	
ITEM	DESCRIPTION
T1	TOILET TISSUE DISPENSER
T2	SANITARY NAPKIN DISPOSAL
T3	(NOT USED)
T4	36" GRAB BAR
T5	42" GRAB BAR
T6	PAPER TOWEL DISPENSER
T7	ELECTRIC HAND DRYER
T8	COMBINATION PAPER TOWEL DISPENSER AND WASTE DISPOSAL
T9	MIRROR
T10	MIRROR, FULL-LENGTH
T11	SOAP DISPENSER
T12	SOAP DISPENSER, DECK-MOUNT ON COUNTER OR VANITY
T13	COAT/CLOTHES HOOK
T14	24" GRAB BAR
T15	L-SHAPED 15" X 28" GRAB BAR
T15A	L-SHAPED 24" X 36" GRAB BAR
T16	48" GRAB BAR
T19	TOWEL BAR
T22	RECESSED SOAP DISH
T23	UNDERSINK PIPING COVERS
T24	MOP AND BROOM HOLDER
T24A	MOP BASIN HOSE AND BRACKET



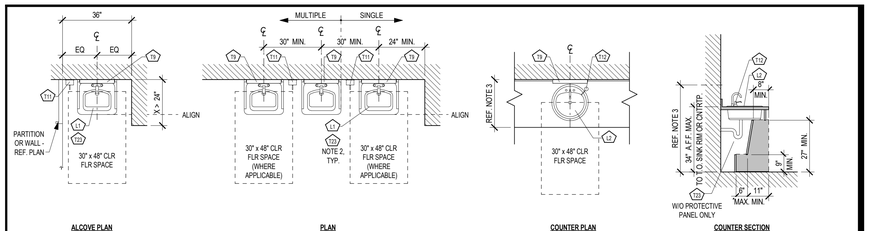
ALCOVE PLAN | PLAN | ELEVATION | SECTION

NOTE:
PARTITION SHALL EXTEND MINIMUM 18 INCHES OR TO A POINT NOT LESS THAN 6 INCHES BEYOND THE OUTERMOST FRONT LIP OF THE URINAL MEASURED FROM THE FINISHED BACK WALL SURFACE, WHICHEVER IS GREATER (2018 IPC 405.3.5 URINAL PARTITIONS)

U# PLAN DESIGNATION

U1 URINAL (NON-ACCESSIBLE)
U2 ACCESSIBLE URINAL
2012 TAS 605 & 305.7.1

U - URINALS



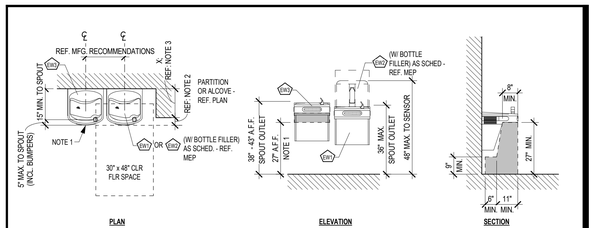
ALCOVE PLAN | PLAN | COUNTER PLAN | COUNTER SECTION

L# PLAN DESIGNATION

L1 WALL-MOUNTED LAVATORY
L2 COUNTER-MOUNTED SINK
2012 TAS 606 & 306

NOTES:
1. MOUNT 34" A.F.F. TO TOP OF FRONT RIM OF LAVATORY
2. PROVIDE AT EACH LAVATORY
3. COUNTER DEPTH = 20-25" MAX. REDUCE T.A. MNTG. HEIGHTS TO OPERABLE CONTROLS TO 44" A.F.F. FOR OBSTRUCTED HIGH REACH

L - LAVATORIES



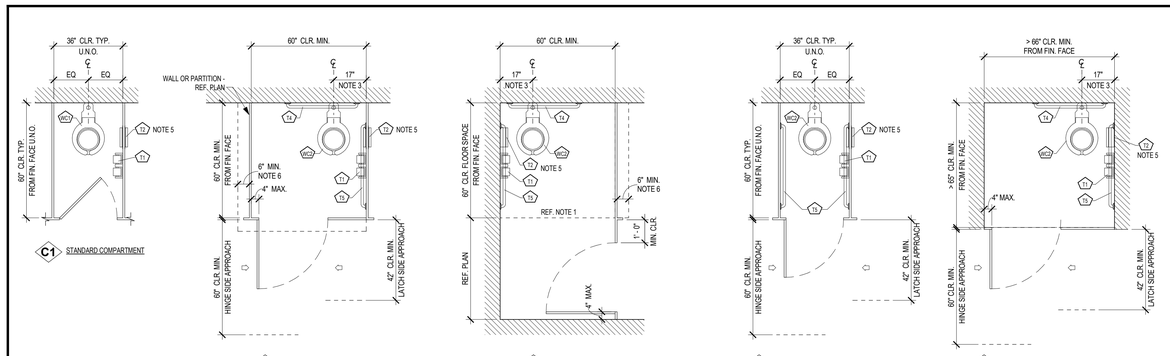
PLAN | ELEVATION | SECTION

EW# PLAN DESIGNATION

EW1 ACCESSIBLE WATER COOLER (LOW)
EW2 ACCESSIBLE WATER COOLER W/ BOTTLE FILLER (LOW)
EW3 STANDING PERSONS WATER COOLER (HIGH)
2012 TAS 211, 602, 305.7.1 & 306

NOTES:
1. PROVIDE CANE DETECTION APRON. MUST NOT IMPEDE CLEAR FLOOR SPACE REQUIREMENT FOR ADJACENT UNIT.
2. WHERE LOCATED IN ALCOVES, CANE DETECTION APRON NOT REQUIRED WHEN PROTRUSION IS 4" OR LESS
3. WHERE ALCOVE DEPTH >24", MIN. WIDTH SHALL BE INCREASED TO 30" X 48" CLEAR FLOOR SPACE.

EW - ELECTRIC WATER COOLERS



C1 STANDARD COMPARTMENT
C2 ACCESSIBLE COMPARTMENT 2012 TAS 404.2.4.1 & 604.8
C3 ACCESSIBLE COMPARTMENT (ALT.) 2012 TAS 604.8
C4 AMBULATORY ACCESSIBLE COMPARTMENT 2012 TAS 404.2.4.1 & 604.8.2
C5 ACCESSIBLE COMPARTMENT (W/O TOE CLEARANCE) 2012 TAS 604.8.1.4 EXCEPTION

C# PLAN DESIGNATION

NOTES:

1. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

2. HAND-OPERATED FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.

3. CENTERLINE OF WATER CLOSET SHALL BE 16" MIN. TO 18" MAX. AS MEASURED FROM FACE OF FINISHED WALL OR PARTITION.

4. TOILET PARTITION DIMENSIONS SHOWN REPRESENT MINIMUM REQUIRED CLEARANCES AND SHALL GOVERN U.N.O. ON ENLARGED PLANS.

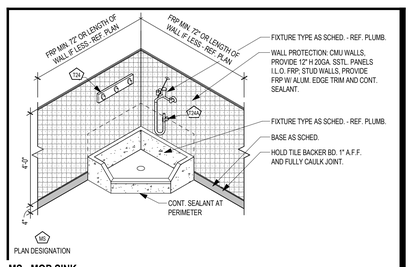
5. PROVIDE AT FEMALE RESTROOMS ONLY. REFER TO SPEC SECTION 10 2800 FOR ADDITIONAL INFORMATION ON TYPE.

6. THE FRONT AND SIDE PARTITION SHALL PROVIDE A TOE CLEARANCE OF 9" MIN. ABOVE THE FINISH FLOOR AND 6" DEEP MIN. BEYOND THE COMPARTMENT-SIDE FACE OF THE PARTITION (EITHER SIDE OF COMPARTMENT), EXCLUSIVE OF PARTITION SUPPORT MEMBERS.

7. WC1 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 15" - 16".

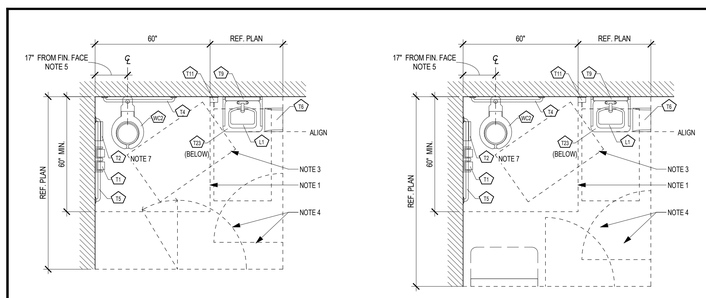
8. WC2 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 17" - 19".

C - TOILET COMPARTMENTS



MS# PLAN DESIGNATION

MS - MOP SINK



T1 SINGLE-USER TOILET ROOM 2012 TAS 603 & 604
T2 SINGLE-USER OR FAMILY TOILET ROOM 2012 TAS 213.2.1, 603, 604 & 902

T# PLAN DESIGNATION

NOTES:

1. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE LOCATED WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

2. HAND-OPERATED FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.

3. WHERE A 30" x 48" CLEAR FLOOR SPACE IS PROVIDED BEYOND THE ARC OF THE DOOR SWING, DOORS SHALL BE PERMITTED TO SWING INTO THE CLEAR FLOOR SPACE OR CLEARANCE REQUIRED FOR ANY FIXTURE. (2012 TAS 603.2.3 EXCEPTION 2)

4. DOOR LOCATION/POSITION SHOWN DIAGRAMMATICALLY. REF. PLAN FOR DIMENSIONS AND REQUIRED CLEARANCES.

5. CENTERLINE OF WATER CLOSET SHALL BE 16" MIN. TO 18" MAX. AS MEASURED FROM FACE OF FINISHED WALL OR PARTITION.

6. WC2 TOP OF SEAT HEIGHT ABOVE FINISH FLOOR: 17" - 19".

7. AT TOILET ROOM 'T1', PROVIDE TOILET ACCESSORY 'T2' AT FEMALE RESTROOMS ONLY.

8. REFER TO TOILET ACCESSORY SHEET FOR MOUNTING HEIGHTS AND ADDITIONAL INFORMATION.

T - TOILET ROOMS

Date
Revision /

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TOILET ACCESSORIES AND PLUMBING FIXTURES

PACKAGE

Job No. 1821-13-02
Drawn By: MK
Date: 01.22.2025
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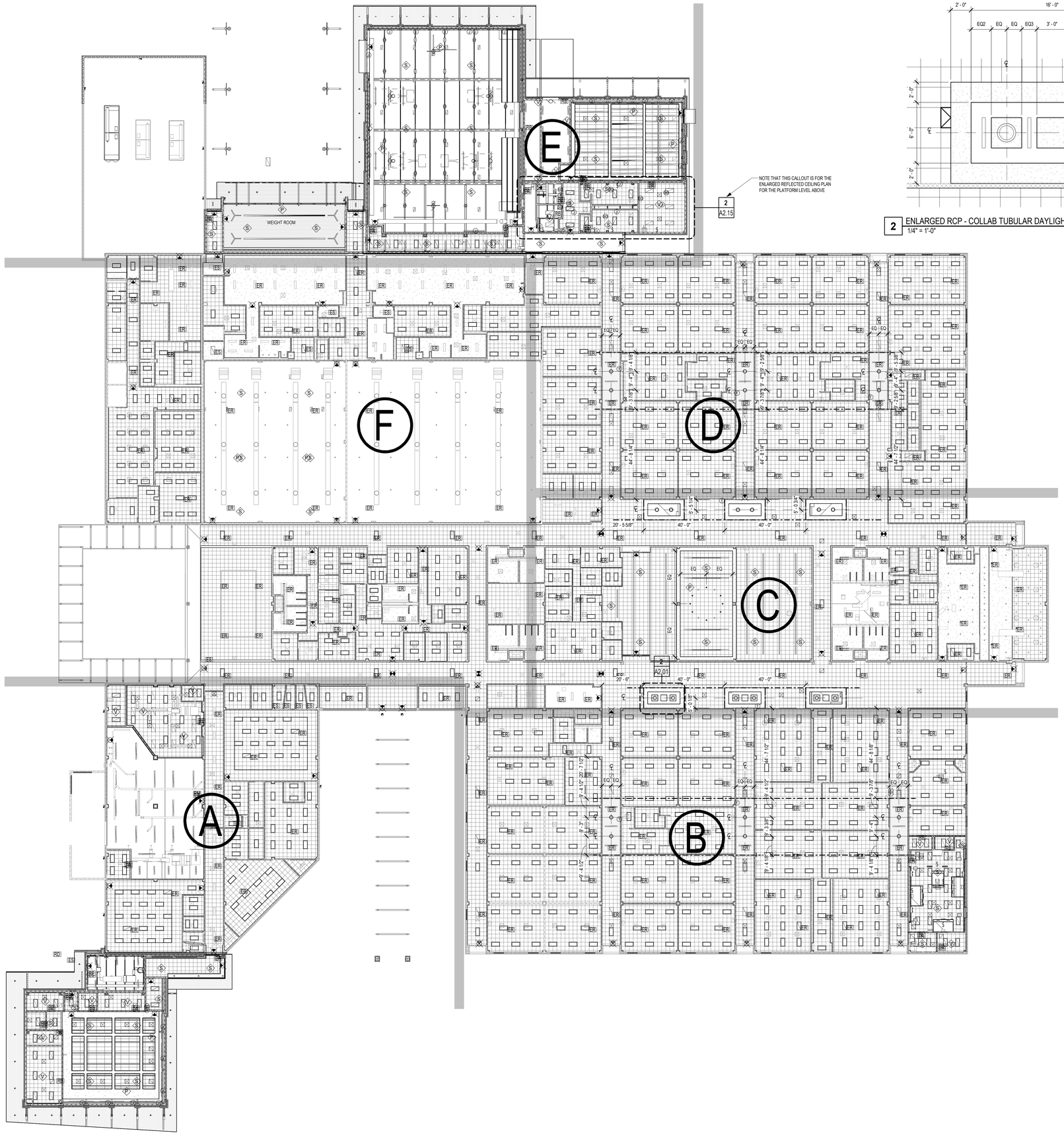
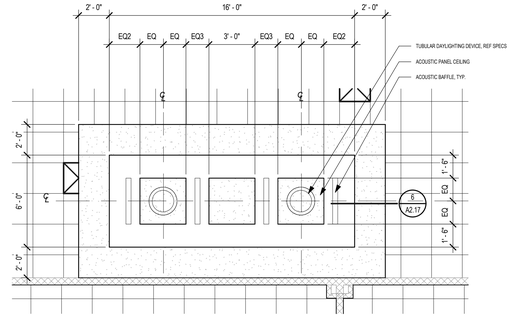


1 MASTER REFLECTED CEILING PLAN
1" = 20'-0"



2 ENLARGED RCP - COLLAB TUBULAR DAYLIGHTING DEVICES
1/4" = 1'-0"

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYP1-** 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
- **L3** - TYPE III 24" x 24" LAY-IN SUSPENDED CEILING TILE (HIGH HUMIDITY)
- **L4** - TYPE IV 24" x 24" LAY-IN SUSPENDED CEILING TILE (VINYL COVERED) (FOODSERVICE)
- **L5** - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'REFLECTIVE')
- **L6** - TYPE VI 24" x 48" LAY-IN SUSPENDED CEILING TILE WITH CONCEALED GRID (ACOUSTICAL 'ABSORPTIVE') (GLASS FIBER)
- **L7** - TYPE VII 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'ABSORPTIVE' - GEN. USE)
- **L8** - TYPE VIII 24" x 24" LAY-IN SUSPENDED CEILING TILE (UL FIRE RESISTANT)
- **L9** - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

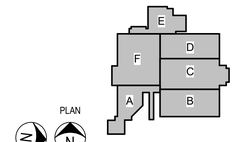
CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED (C.J.)
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED (C.J.)
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS (P.S.)
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**

  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**

WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
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MASTER REFLECTED CEILING PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A2.01
Drawn By: MK	
Date: 01.22.2025	

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1 REFLECTED CEILING PLAN - SECTION A
1/8" = 1'-0"

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYP1** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
- **L2** - TYPE II 24" x 24" LAY-IN SUSPENDED CEILING TILE (IMPACT RESISTANT)
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- **L5** - TYPE V 24" x 24" LAY-IN SUSPENDED CEILING TILE (ACOUSTICAL 'REFLECTIVE')
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- **L9** - TYPE IX LARGE FORMAT LAY-IN SUSPENDED CEILING TILE (GLASS FIBER)
- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

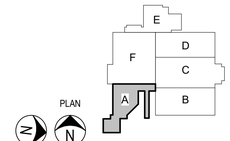
CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**

  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**

WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND



KEY PLAN - 1ST FLOOR
N.T.S

Revision /	Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

SUSAN F. WIRA
TX 24614
REGISTERED ARCHITECT
STATE OF TEXAS
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REFLECTED CEILING PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A2.11
Drawn By: MK	
Date: 01.22.2025	

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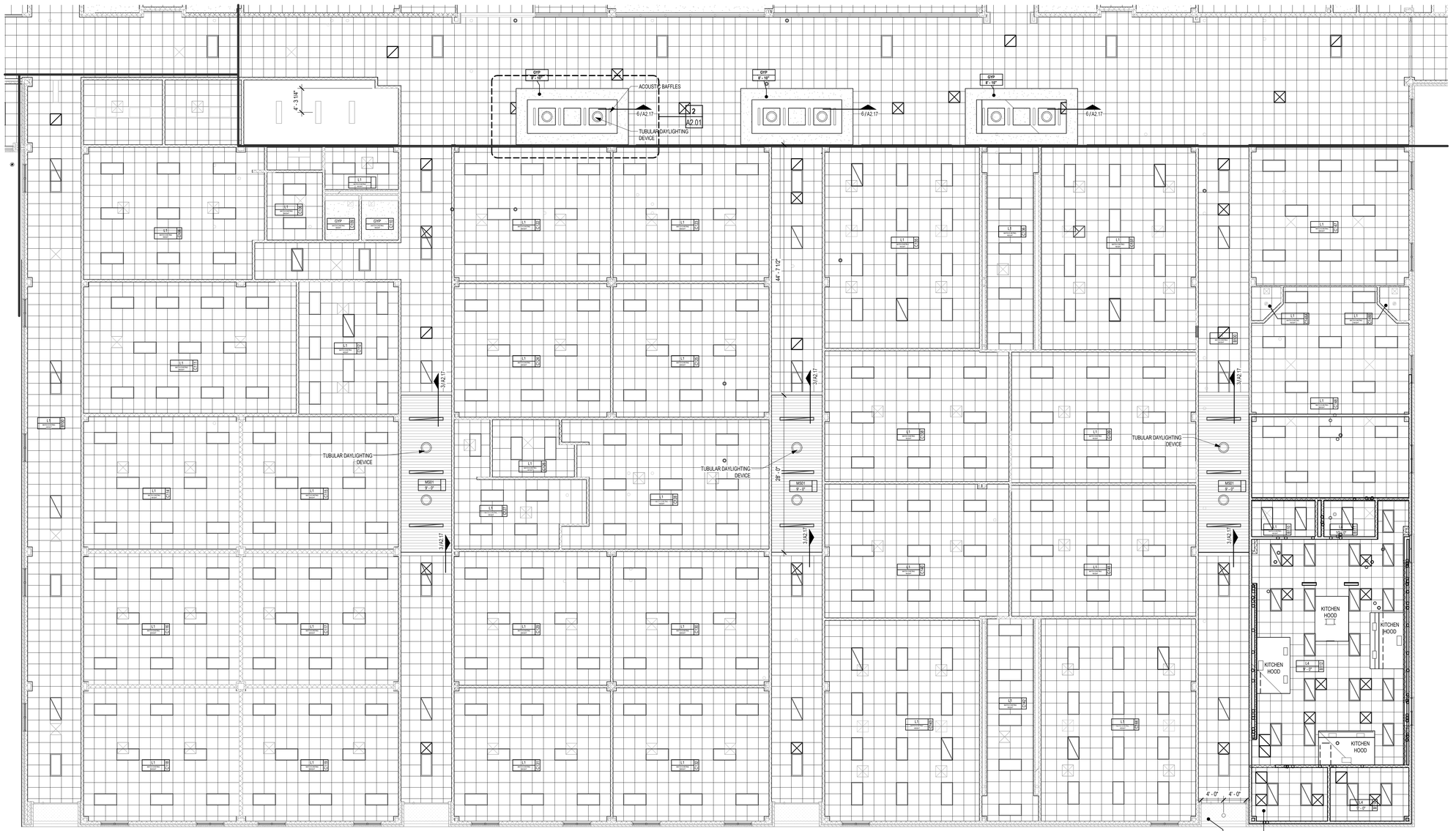
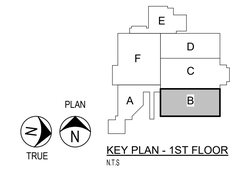


1 REFLECTED CEILING PLAN - SECTION B
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

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- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
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- **PL** - PLASTER
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CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

- **LAY-IN CEILING**
- C.J. **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- C.J. **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- P.S. P.S. **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
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REFLECTED CEILING LEGEND

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX



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REFLECTED CEILING PLAN - SECTION B

PACKAGE	VOLUME

Job No. 1821-13-02	Sheet No. 100% QC A2.12
Drawn By: MK	
Date: 01.22.2025	

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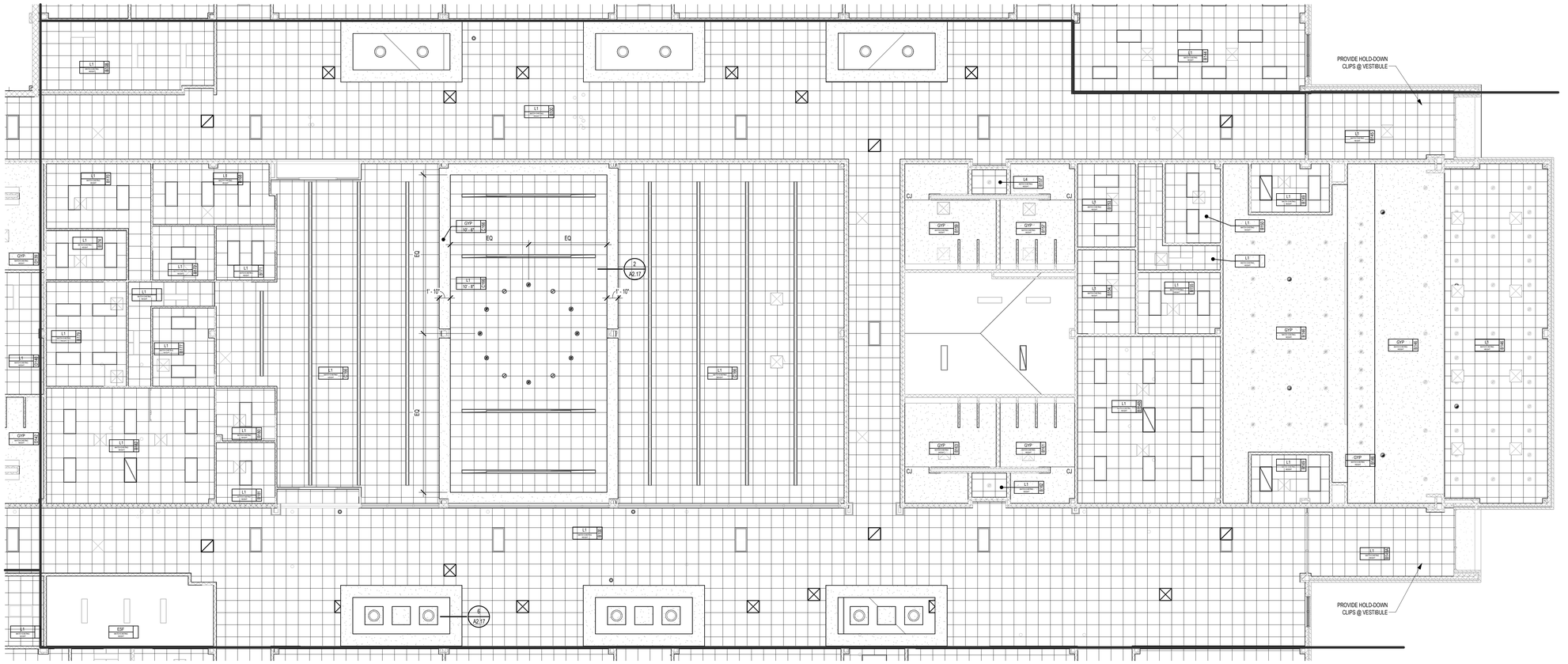

1 REFLECTED CEILING PLAN - SECTION C
1/8" = 1'-0"

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYP1** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
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- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

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CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
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- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
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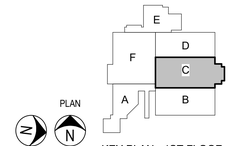
REFLECTED CEILING LEGEND



KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

Project:
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2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX



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REFLECTED CEILING PLAN - SECTION C

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A2.13
Drawn By: MK	
Date: 01.22.2025	

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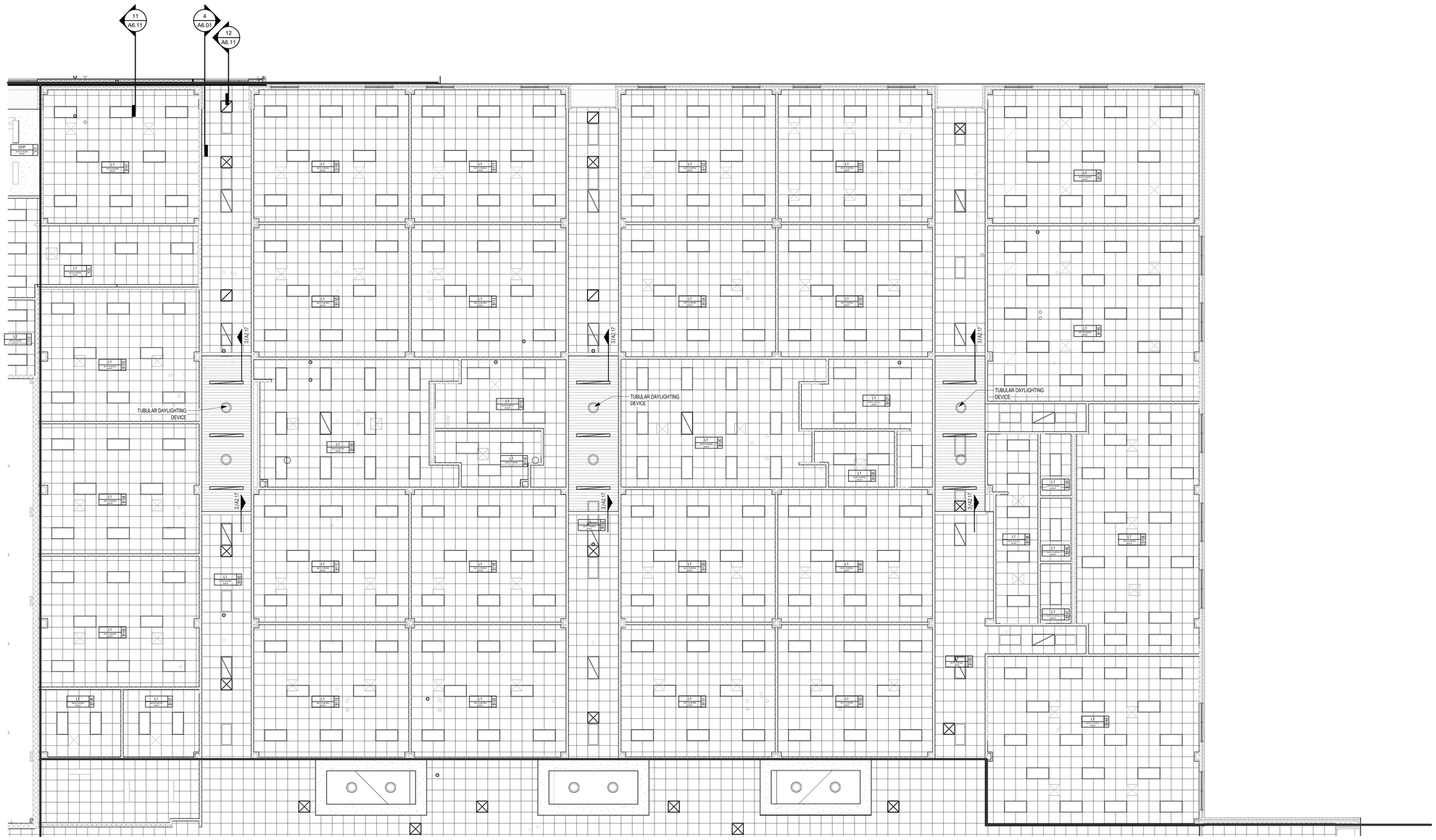

1 REFLECTED CEILING PLAN - SECTION D
1/8" = 1'-0"

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0" — 101

CEILING

ES - EXPOSED DECK AND STRUCTURE

ESF - EXPOSED DECK AND STRUCTURE (FINISHED)

GYP - 5/8" GYPSUM BOARD

GYP1- 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)

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CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

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METAL SOFFIT PANELS

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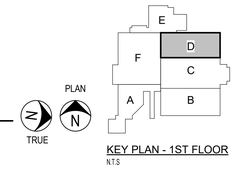

KEY PLAN - 1ST FLOOR
N.T.S

Revision / Date

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REFLECTED CEILING PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A2.14
Drawn By: MK	
Date: 01.22.2025	

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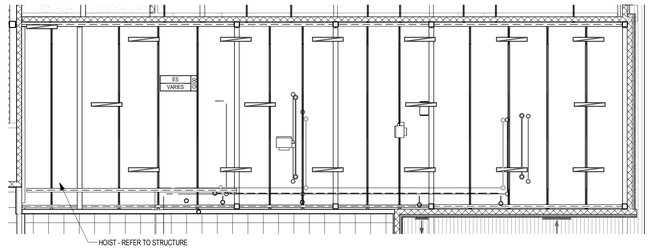
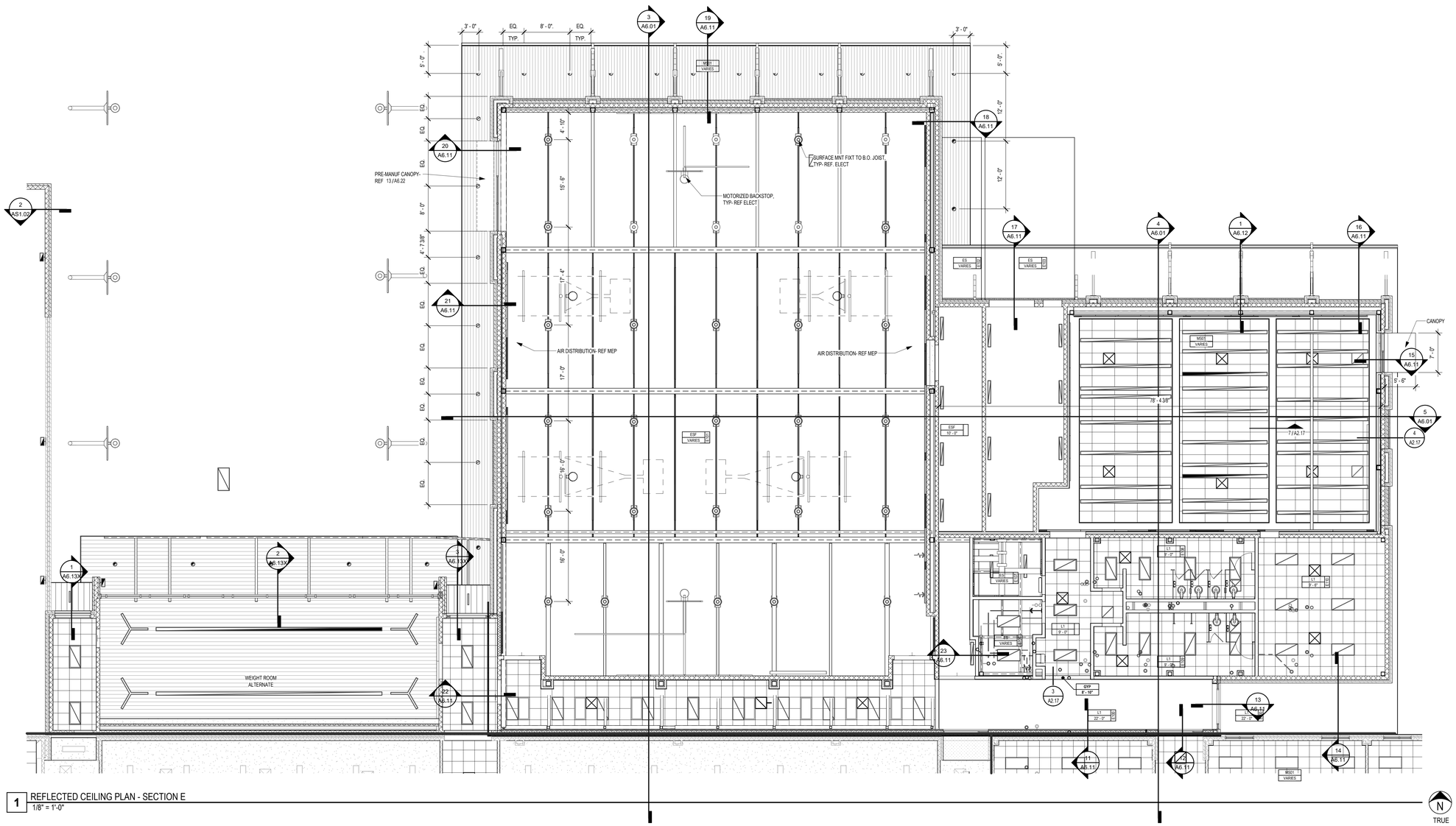


2 ENLARGED REFLECTED CEILING PLAN - PLATFORM (SECTION G)
1/8" = 1'-0"



1 REFLECTED CEILING PLAN - SECTION E
1/8" = 1'-0"

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

2. PERIMETER WALLS AND/OR PERIMETER PARTITIONS OF ALL SPACES WITH EXPOSED STRUCTURE SHALL EXTEND TO BOTTOM OF DECK ABOVE. FINISH EXPOSED STRUCTURE AS SCHED.

3. CEILINGS AND GRIDS AT ALL MDFS AND IDFS SHALL BE HELD OFF OF DISTRIBUTION WALL 6" TO ACCOMMODATE CABLING.

4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

6. ALL CEILINGS THROUGHOUT EXISTING BUILDING TO BE MODIFIED AS NEEDED FOR NEW FIRE SPRINKLER SYSTEM. ALL EXISTING LAY-IN CEILINGS TO BE REPLACED WITH NEW CEILING TILES AND GRID. REFER TO DEMO AND NEW REFLECTED CEILING PLANS.

REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE — CX — ROOM NUMBER
CEILING HEIGHT — 9'-0"

CEILING

- **ES** - EXPOSED DECK AND STRUCTURE
- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
- **GYP** - 5/8" GYPSUM BOARD
- **GYP1** - 3 LAYERS 5/8" TYPE 'X' GYPSUM BOARD (1-HR. FIRE RATED) (UL i501)
- **L1** - TYPE I 24" x 24" LAY-IN SUSPENDED CEILING TILE (STANDARD)
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- **MCS** - METAL CEILING SYSTEM
- **MS** - METAL SOFFIT PANEL
- **PL** - PLASTER
- **WD** - LINEAR WOOD CEILING

DEFAULT FINISHES

IF ANY ROOM IS NOT IDENTIFIED BY A ROOM FINISH TAG, THE FOLLOWING FINISHES SHALL BE USED AS "TYPICAL" OR "DEFAULT" FINISHES FOR BIDDING PURPOSES. VERIFY FINISHES WITH ARCHITECT BEFORE INSTALLATION.

CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

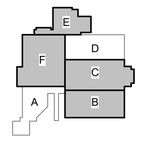
- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
- **SOUND BATT ABOVE CEILING**

  WHERE THIS HATCH IS SHOWN, PROVIDE FULL COVERAGE ACOUSTICAL BATT INSULATION ABOVE FINISHED CEILING.
- **FIRE RATED CEILING ASSEMBLY**

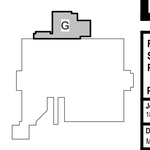
WHERE THIS HATCH IS SHOWN, PROVIDE A FIRE-RATED CEILING ASSEMBLY AS DETAILED AND NOTED. REFER TO PLAN NOTES AND CONSTRUCTION DETAILING FOR TERMINATION POINT OF ADJACENT FIRE-RATED WALL ASSEMBLIES. RATING SHALL EQUAL THAT OF SURROUNDING WALLS.

REFLECTED CEILING LEGEND

PLAN
N
TRUE



KEY PLAN - 1ST FLOOR
N.T.S



KEY PLAN - PLATFORM
N.T.S

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX



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REFLECTED CEILING PLAN - SECTION E & ENLARGED PLATFORM (SECTION G)

PACKAGE	VOLUME
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Drawn By: MK	
Date: 01.22.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-02 - RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt

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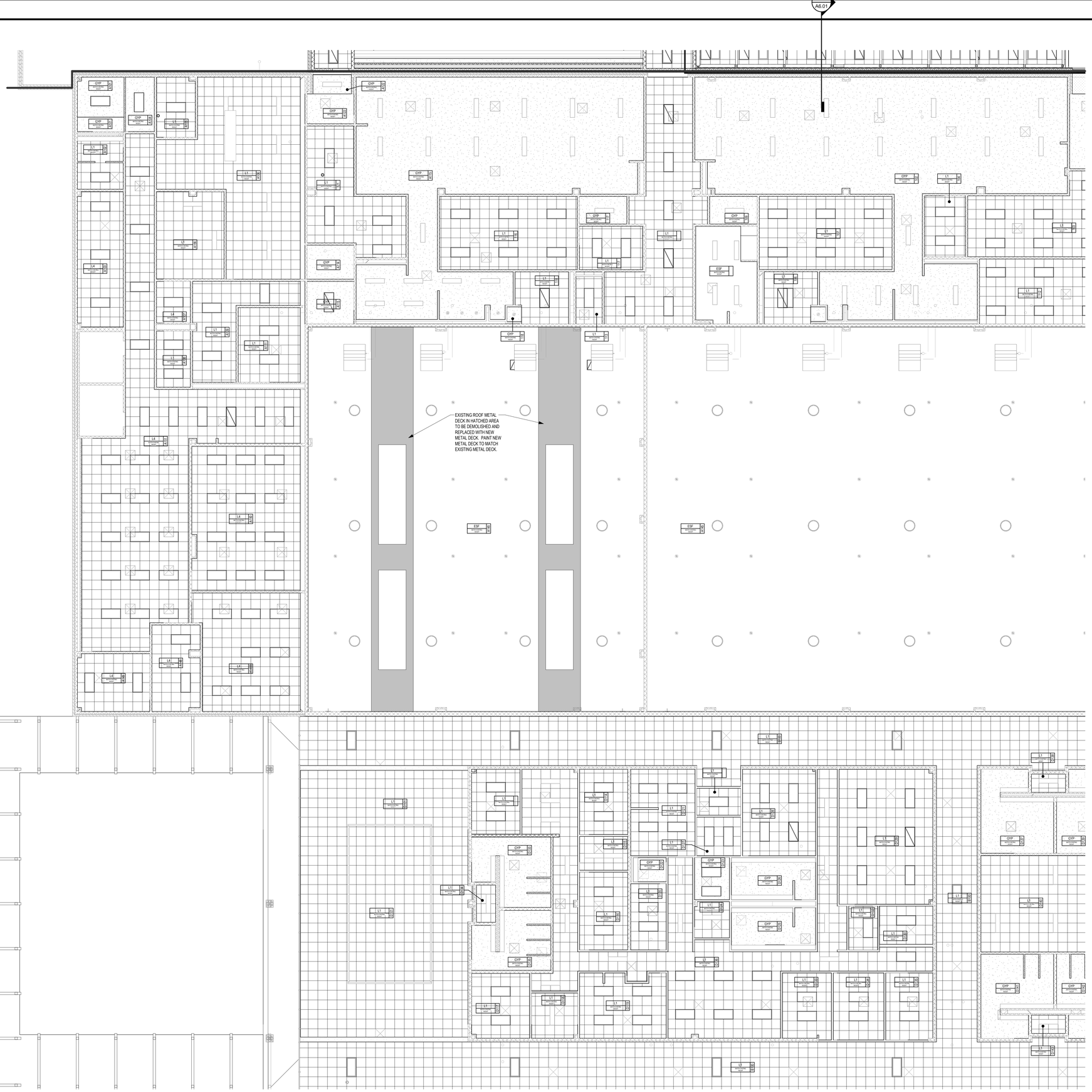

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

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4. PROVIDE 24"x24" ACCESS PANEL(S) IN ALL HARD CEILINGS FOR MAINTENANCE OF EQUIPMENT.

5. ALL DIMENSIONS SHOWN ON REFLECTED CEILING PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CEILING TYPE / **CEILING HEIGHT** — CX / 9'-0" — ROOM NUMBER

CEILING

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- **ESF** - EXPOSED DECK AND STRUCTURE (FINISHED)
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- **MS** - METAL SOFFIT PANEL
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CEILING - L1
CEILING HEIGHT - 9'-0" A.F.F.

CEILING FINISH LEGEND

- **LAY-IN CEILING**
- **GYPSUM BOARD CEILING** WITH CONTROL JOINTS . FINISH AS INDICATED
- **PLASTER SOFFIT** WITH CONTROL JOINTS. FINISH AS INDICATED
- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS
- **HVAC GRILLE, DIFFUSER** - REF. MECHANICAL DRAWINGS.
- TUBULAR SKYLIGHT - REF A2.02 FOR DIMENSIONAL LAYOUT
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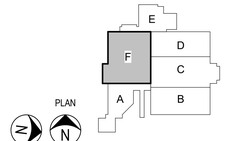
REFLECTED CEILING LEGEND



PLAN NORTH — TRUE NORTH

KEY PLAN - 1ST FLOOR
N.T.S

1 REFLECTED CEILING PLAN - SECTION F
1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
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REFLECTED CEILING PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A2.16
Drawn By: MK	
Date: 01.22.2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt

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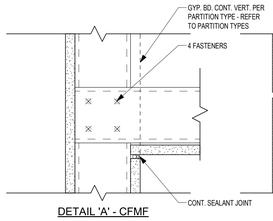
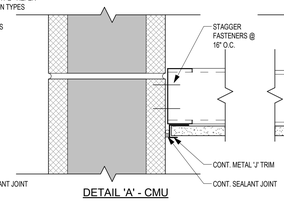
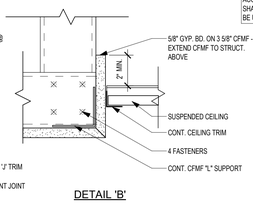


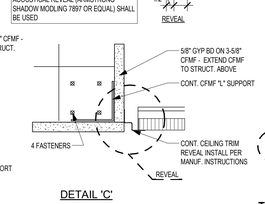
DETAIL 'A' - CFMF



DETAIL 'A' - CMU



DETAIL 'B'

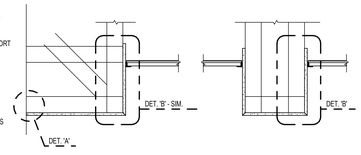


DETAIL 'C'

TYPICAL BULKHEAD DETAILS

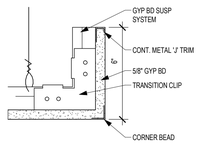
GENERAL NOTES - ALL BULKHEADS, PLASTER AND GYP. CEILINGS

1. ALL BULKHEADS SHALL BE CONSTRUCTED OF 5/8" GYP. BD. ON 3-5/8" MTL. STUDS AT 16" O.C. U.N.O.
2. FINISH ALL BULKHEADS TO CODE 115, U.N.O.
3. PROVIDE CONTROL JOINTS (CJ) IN BULKHEADS AT 15'-0" O.C. OR AS SHOWN ON PLAN AND AS SPEC.
4. ALL SECTION PROFILES SHOWN IN THIS SCHEDULE SHALL BE DETAILED AS SHOWN UNDER TYPICAL DETAILS.
5. PROVIDE BRACING IN ALL BULKHEADS AT 48" O.C.
6. PROVIDE CONTROL JOINTS (CJ) IN ALL PLASTER CLGS., SOFFITS AT MAX. 18'-0" OR AS SHOWN ON PLAN.
7. PROVIDE STOP CONT. WHERE PLASTER SOFFIT MEETS VERTICAL SURFACE AND CAULK CONT.



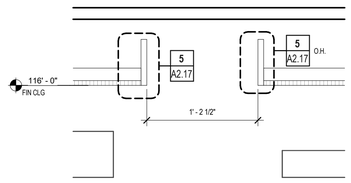
TYPICAL BULKHEAD PROFILES

N.T.S.

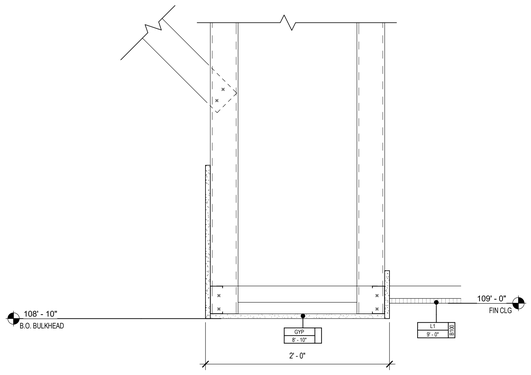


TYP SUSP CLOUD EDGE DETAIL

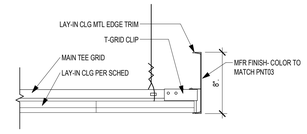
N.T.S.



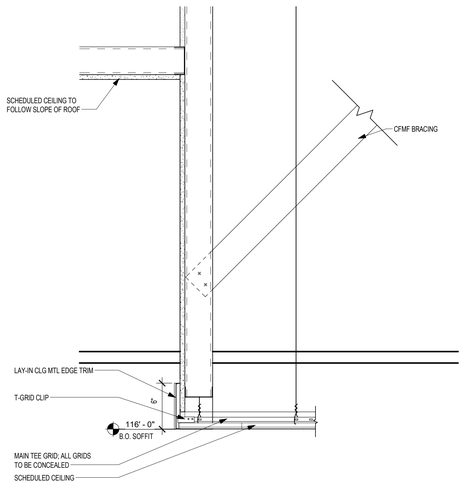
7 CEILING DETAIL - DANCE
1 1/2" = 1'-0" BACK REF: A1.17



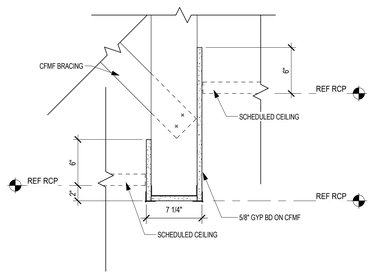
6 CEILING DETAIL- CORRIDOR
1 1/2" = 1'-0" BACK REF: A1.13



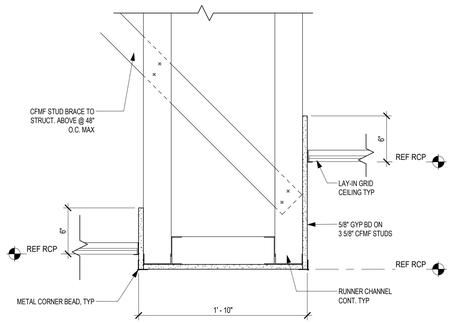
5 LAY-IN MTL EDGE DETAIL
3" = 1'-0"



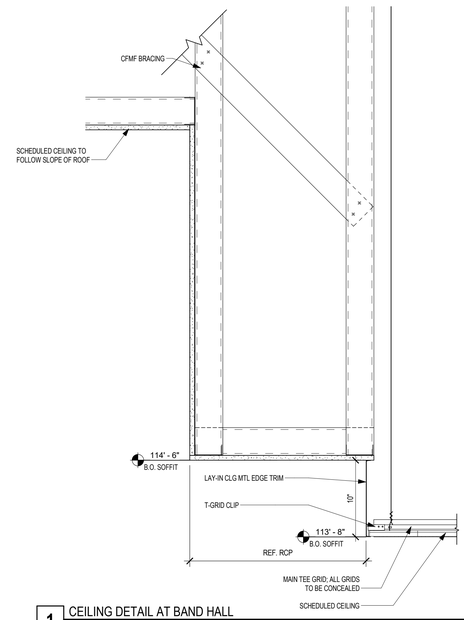
4 CEILING DETAIL AT DANCE
1 1/2" = 1'-0" BACK REF: A1.17



3 CLG DTL - GYP DIVIDER
1 1/2" = 1'-0"



2 CLG DTL - LAY-IN TO BULK HEAD TO LAY-IN
1 1/2" = 1'-0"



1 CEILING DETAIL AT BAND HALL
1 1/2" = 1'-0" BACK REF: A2.11

1. COORDINATE REFLECTED CEILING PLANS WITH MECHANICAL AND ELECTRICAL DRAWINGS TO AVOID CONFLICTS. VERIFY EXACT MOUNTING LOCATIONS OF ALL CEILING-MOUNTED EQUIPMENT PRIOR TO INSTALLATION. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR VERIFYING ALL ITEMS, EQUIPMENT, AND/OR DEVICES AT CEILING.

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REFLECTED CEILING PLAN GENERAL NOTES

REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

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CEILING HEIGHT — 9'-0"

CEILING

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- **METAL SOFFIT PANELS**
- **NEW LIGHT FIXTURES** - REF. ELECTRICAL
- **EXISTING LIGHT FIXTURES** - REF. ELECTRICAL
- **PROJECTION SCREENS** - REF. A8 SHEETS
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Revision / Date

Project:
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CEILING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A2.17
Drawn By: MK	
Date: 01.22.2025	

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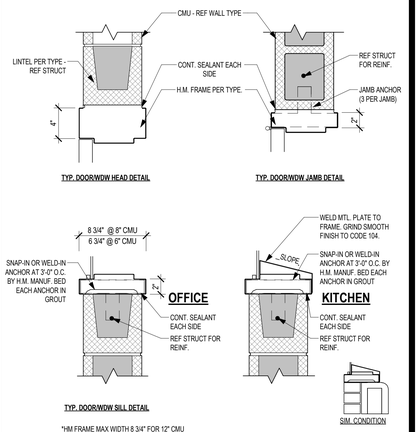
UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN INTERIOR MASONRY SHALL CONFORM TO THESE DETAILS

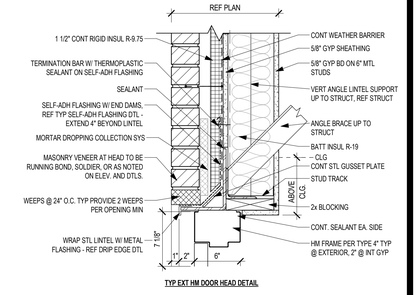


*HM FRAME MAX WIDTH 8 3/4" FOR 12" CMU OR DOUBLE WYTHE, SET TO ONE SIDE

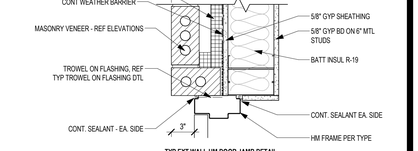
TYPICAL INTERIOR MASONRY DETAILS (T.I.M.)

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



TYP EXT HM DOOR HEAD DETAIL

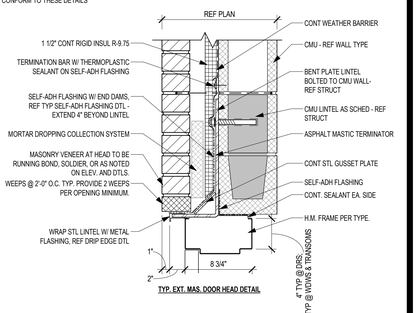


TYP EXT WALL HM DOOR JAMB DETAIL

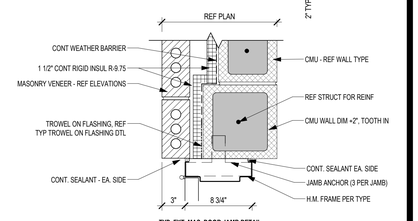
TYP EXTERIOR STUD H.M. DETAILS (T.E.S.M.) - UTILITY

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



TYP. EXT. MAS. DOOR HEAD DETAIL

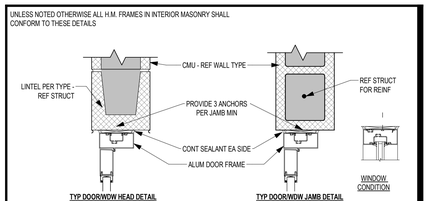


TYP. EXT. MAS. DOOR JAMB DETAIL

TYP EXTERIOR MASONRY DETAILS (T.E.M.) - UTILITY

SCALE 1-1/2" = 1'-0"

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN INTERIOR MASONRY SHALL CONFORM TO THESE DETAILS

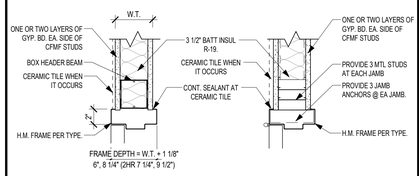


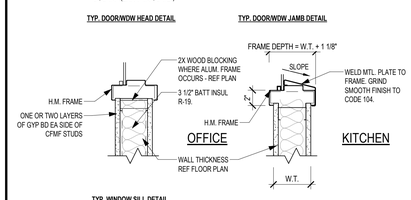
TYPICAL INTERIOR MASONRY ALUM DETAILS (T.I.M.A.)

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL H.M. FRAMES IN DRYWALL SHALL CONFORM TO THESE DETAILS

VERIFY PARTITION THICKNESS TO DETERMINE FRAME SIZES.



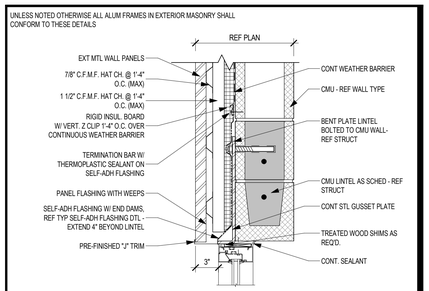


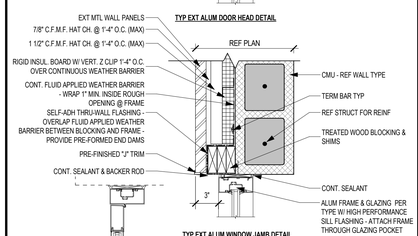
TYP. WINDOW SILL DETAIL

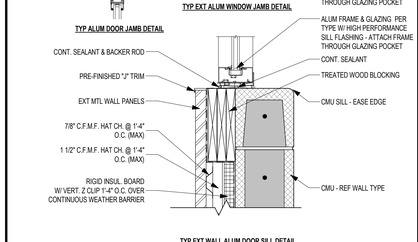
TYPICAL DRYWALL DETAILS (T.D.W.)

SCALE 1-1/2" = 1'-0

UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS

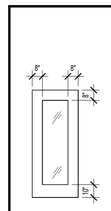




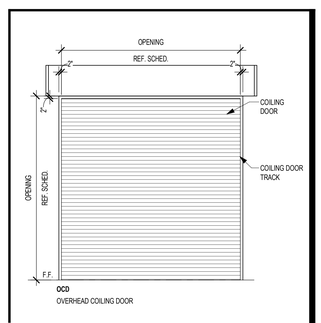


TYP EXT. MASONRY ALUM. DETAILS AT MTL. PANELS (T.E.M.P.)

SCALE 1-1/2" = 1'-0

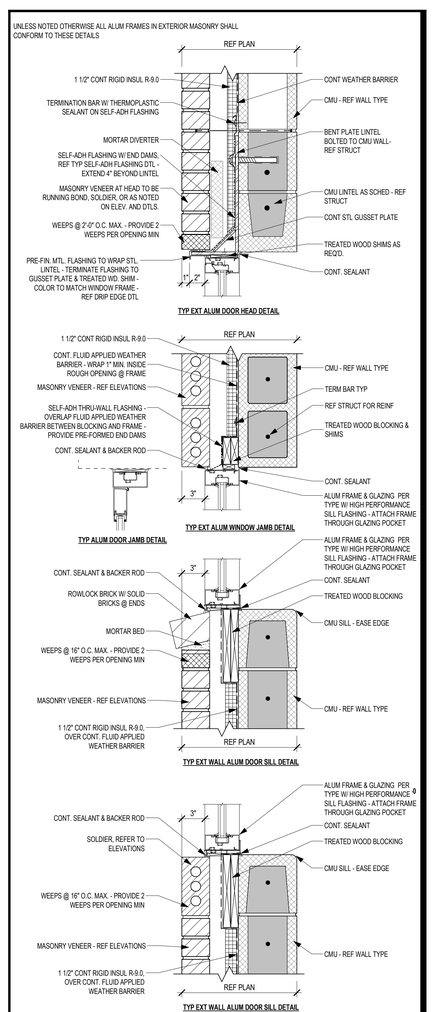


DOOR CONFIGURATIONS - ALUMINUM FRAMES



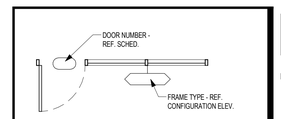
COILING DOOR CONFIGURATIONS

UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



TYP EXTERIOR MASONRY ALUM DETAILS (T.E.M.A.) - UTILITY

SCALE 1-1/2" = 1'-0



STOREFRONT FRAMES

REQUIRED U-FACTOR FOR ALL EXTERIOR GLAZING AT WINDOWS/DOORS TO BE .29
REQUIRED SHGC TO BE .23

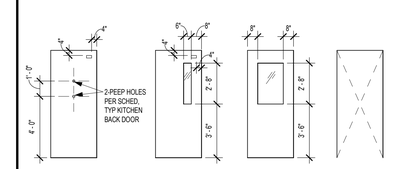
DOOR/WINDOWS GLAZING

A3 - DOOR SCHEDULE

OPENING NUMBER	OPENING HARDWARE SET	OPENING FIRE RATING	OPENING EXTERIOR	DOOR WIDTH	DOOR HEIGHT	DOOR TYPE	DOOR DR GLAZING	DOOR PANIC HARDWARE	FRAME MATERIAL	FRAME TYPE	NOTES
A100			No	3'- 0"	7'- 0"	AL-1L (PR)			STL		
A100A			No	3'- 0"	7'- 0"	AL-1L	GTC	No	AL		
A100B			No	4'- 0"	7'- 0"	AL-1L	GTC	No	AL		
A100C			Yes	4'- 0"	7'- 0"	HM-FL		No	HM	B	CARD READER
A132			No	2'- 6"	7'- 0"	EXIST	--		EXIST	B	
A132		1 HOUR	Yes	3'- 0"	7'- 0"	AL-1L (PR)	IGFPSE	Yes	STL		CARD READER
A133			Yes	3'- 0"	7'- 0"	HM-FL (PR)		No	HM	B	CARD READER
A134			No	4'- 0"	7'- 0"	SC-NL	GTC	Yes	HM	B	
A135			No	3'- 0"	7'- 0"	AL-1L	GTC	No	AL		
A136			No	3'- 6"	7'- 0"	SC-HL	GTC	No	HM	B	
A137			Yes	4'- 0"	7'- 0"	HM-FL		Yes	HM	B	CARD READER
A138			No	3'- 6"	7'- 0"	SC-HL	GTC	No	HM	B	
A139			No	3'- 6"	7'- 0"	SC-HL	GTC	No	HM	B	
A140			No	3'- 0"	7'- 0"	SC-FL		No	HM	B	
A141			No	3'- 0"	7'- 0"	SC-NL (PR)	GTC	No	HM	B	
B110			No	3'- 0"	7'- 0"	SC-FL		No	HM	B	
B111			No	3'- 0"	7'- 0"	HM-NL	GTC	No	HM	B	
B112			No	4'- 0"	8'- 0"	SC-NL	GTC	No	HM	B	
B112A			No	3'- 0"	7'- 0"	SC-NL	GTC	No	HM	B	
B114			No	3'- 0"	7'- 0"	HM-FL		No	HM	B	
E100			Yes	4'- 0"	7'- 0"	HM-FL		Yes	HM	B	CARD READER
E100A		1 HOUR	Yes	3'- 0"	7'- 0"	AL-1L (PR)	IGFPSE	Yes	STL		CARD READER
E100B		2 HOUR	No	3'- 0"	7'- 0"	AL-1L (PR)	GFRR	Yes	STL		LOCATED IN 2 HOUR FIRE WALL
E100C		2 HOUR	No	3'- 0"	7'- 0"	AL-1L (PR)	GFRR	Yes	STL		LOCATED IN 2 HOUR FIRE WALL
E101			No	3'- 0"	7'- 0"	SC-NL (PR)	GLSA	Yes	HM	B	
E101A			No	3'- 0"	7'- 0"	SC-NL (PR)	GLSA	Yes	HM	B	
E101B			Yes	3'- 0"	7'- 0"	AL-1L (PR)	IGSEF	Yes	STL		CARD READER
E102			No	3'- 0"	7'- 0"	SC-FL (PR)		No	HM	B	
E103			Yes	3'- 0"	7'- 0"	HM-FL		No	HM	B	CARD READER
E103A			Yes	8'- 0"	7'- 0"	OCD-ST		No	STL		
E104			No	3'- 0"	7'- 0"	SC-NL (PR)	GTC	No	HM	B	
E104A			Yes	3'- 0"	7'- 0"	AL-SF	IGSEF	No	AL		CARD READER
E105			No	3'- 0"	7'- 0"	HM-FL (PR)		No	HM	B	
E106			No	3'- 0"	7'- 0"	SC-FL		No	HM	B	
E107			No	3'- 0"	7'- 0"	SC-FL		No	HM	B	
E108			No	3'- 0"	7'- 0"	SC-FL		No	HM	B	
E109			No	3'- 0"	7'- 0"	SC-FL		No	HM	B	
E110			No	3'- 0"	7'- 0"	SC-FL		No	HM	B	
E113				12'- 0"	4'- 2"	CL GATE (PR)					

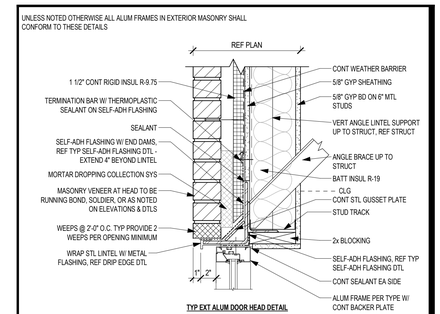
A3 - LOUVER SCHEDULE

FR TYPE	FRAME DESCRIPTION FRAME WDTH	FRAM E HT	DETAILS AND NOTES NOTES
U	9'- 0"	6'- 0"	
U	9'- 0"	6'- 0"	



DOOR CONFIGURATIONS - HOLLOW METAL FRAMES

UNLESS NOTED OTHERWISE ALL ALUM FRAMES IN EXTERIOR MASONRY SHALL CONFORM TO THESE DETAILS



TYP EXTERIOR STUD ALUM DETAILS (T.E.S.A.) - UTILITY

SCALE 1-1/2" = 1'-0

DEFAULT DOORS

IF A DOOR ASSEMBLY APPEARS ON THE FLOOR PLANS BUT IS NOT IDENTIFIED BY A SCHEDULE NUMBER, THE DOOR SHALL BE INCLUDED IN THE BID AS LISTED BELOW. THE CONTRACTOR SHALL REQUEST CLARIFICATION FROM THE ARCHITECT TO DETERMINE WHAT THE ACTUAL DOOR AND FRAME TYPE AND HARDWARE REQUIREMENTS WILL BE. ADJUSTMENTS IN CONTRACT PRICE WILL BE BASED ON THE DIFFERENCE BETWEEN ACTUAL REQUIREMENTS AND THE DEFAULT DOOR VALUE.

THE DEFAULT EXTERIOR DOOR SHALL BE A TYPE "HM-FL" (SINGLE OR PAIR PER PLAN) IN A TYPE "B" ("B1" AT EXTERIOR MASONRY WALL) FRAME WITH DEFAULT HARDWARE PER SPECIFICATIONS AND FRAME DETAILING PER TYPICAL DETAILS FOR EXTERIOR DOORS.

THE DEFAULT INTERIOR DOOR SHALL BE A TYPE "SC-FL" (SINGLE OR PAIR PER PLAN) IN A TYPE "B" FRAME WITH DEFAULT HARDWARE PER SPECIFICATIONS AND FRAME DETAILING PER TYPICAL DETAILS FOR INTERIOR DOORS.

TYPICAL NOTES

A) DOOR TYPES ARE INDICATED AS A MATERIAL-CONFIGURATION CODE. THE MATERIAL CODE DESIGNATES MATERIALS AND FINISHES AS SPECIFIED. REFER TO SPECIAL NOTES FOR NON-TYPICAL FINISHES. THE CONFIGURATION CODE REFERS TO TYPICAL OR SPECIAL CONFIGURATIONS AS DRAWN.

B) DOOR ASSEMBLIES ARE NUMBERED BY ASSEMBLY. MULTIPLE SETS OF DOORS MAY OCCUR IN THE SAME FRAME ASSEMBLY (REFER TO SCHEDULE AND PLAN FOR QUANTITY). DOORS MAY OCCUR IN PAIRS (REFER TO SCHEDULE AND PLAN FOR INCIDENCE).

C) FRAME CONFIGURATION IS DIAGRAMMATIC AND NOMINAL. DIMENSIONS SHALL BE ADJUSTED TO ACCOMMODATE DOOR SIZES AS SCHEDULED. WITHIN ANY HOLLOW METAL ASSEMBLY, THE WIDTH OF SIDELITES SHALL BE EQUAL AND SHALL NOT EXCEED 2'-0" U.N.O.

D) ALTERNATE FINISHES CAN SOMETIMES HAVE AN IMPACT ON DETAILING (E.G. HALF OR OFFSET SADDLES EMPLOYED IN LIEU OF STANDARD SADDLES WHEN ADJACENT TO THICKER FLOOR FINISHES SUCH AS TERRAZZO OR QUARRY TILE). COORDINATE DETAILS WITH FINAL FINISH SELECTIONS.

E) GLAZED FRAMES ASSOCIATED WITH 20-MINUTE, 45-MINUTE, AND/OR 60-MINUTE FIRE-RATED DOORS SHALL BE FIRE-RATED 1-HOUR. GLAZED FRAMES ASSOCIATED WITH 90-MINUTE FIRE-RATED DOORS SHALL BE FIRE-RATED 2-HOUR. GLAZING MUST MEET CODE REQUIREMENTS, INCLUDING SIZE LIMITATIONS, IN FIRE-RATED FRAMES. REF. IBC TABLE 716.1 (2).

F) PROVIDE 2x WOOD BLOCKING @ CFMF STUD WALLS FOR WALL MOUNTED ITEMS LIKE WALL STOPS, HOLD OPENS, ETC.

G) REFER TO FLOOR PLANS AND EXTERIOR ELEVATIONS FOR ALUMINUM FRAME LOCATIONS.

H) OVERHEAD COILING DOORS ARE MOTORIZED UNLESS NOTED OTHERWISE.

SPECIAL NOTES:
1. MAGNETIC HOLD OPEN - REF. FIRE ALARM SHEETS.
2. MANUAL HOLD OPEN.
3. SOUND CONTROL DOOR ASSEMBLY STC50.
4. SOUND SEAL W/ DOOR BOTTOM STC 40-42.
5. DOOR & FRAME PROVIDED AS PART OF SOUND-ISOLATION ROOM.
6. PROVIDE (2) PEEPHOLES IN DOOR PANEL: (1) LOCATED AT STANDARD HEIGHT AND (1) AT 42" AFF.
7. TORNADO RESISTANT DOOR AND FRAME ASSEMBLY.
8. NO LATCH, PUSH OPEN.
9. NO CLOSER.
10. PANIC BUTTON EMERGENCY OPEN.
11. FAIL SAFE IN OPEN POSITION.
12. FAIL SAFE IN CLOSED POSITION.
13. MANUAL OPERATION.

DOOR ASSEMBLY NOTES

AL - ALUMINUM

HM - HOLLOW METAL

SC - SOLID CORE WOOD

CL - CHAIN LINK (VINYL-COATED)

DMF - DECORATIVE METAL FENCING

DOOR/FRAME MATERIALS

IGE - INSULATED GLASS ETCHED

IGLSA - INSULATED GLASS LAMINATED SAFETY

IGCP - INSULATED GLASS-CLAD POLYCARBONATE

IGDF - INSULATED GLASS DECORATIVE FILM

IGFPSE - INSULATED GLASS FIRE PROTECTION RATED SECURITY

IGS - INSULATED GLASS SPANDREL

IGSE - INSULATED GLASS SECURITY

IGSEF - INSULATED GLASS SECURITY FILM

IGSS - INSULATED GLASS STRUCTURAL SILICONE GLAZED

IGU - INSULATED GLASS UNIT

GCP - GLASS-CLAD POLYCARBONATE

GDF - GLASS DECORATIVE FILM

GE - GLASS ETCHED

GEBG - GLASS EXTERIOR BUTT JOINT

GFRR - GLASS FIRE-RESISTANCE-RATED

GFPR - GLASS FIRE-PROTECTION-RATED

GIBJG - GLASS INTERIOR BUTT JOINT

GLSA - GLASS LAMINATED SAFETY

GLSE - GLASS LAMINATED SECURITY

GSEF - GLASS SECURITY FILM

GTC - GLASS TEMPERED CLEAR

MIP - METAL INSULATED PANEL

MIR - UNFRAMED MIRROR

MIRT - TRANSPARENT ONE-WAY MIRROR

TWRA - TRANSLUCENT WALL & ROOF ASSEMBLIES

1.) ALL GLAZING IS 1/4" THICK (U.N.O.). INSULATED GLASS SHALL CONSIST OF AN EXTERIOR LAYER OF GLASS, TINTED AS SPECIFIED, AN INTERIOR LAYER OF CLEAR GLASS, FACTORY SEALED WITH A 1/2" AIR SPACE. WHERE TEMPERED GLASS IS SPECIFIED, BOTH LAYERS OF INSULATED GLASS SHALL BE TEMPERED.

2.) ANY WINDOW OR GLAZING PANELS LOCATED AT A INTERSTITIAL SPACE OR NOT READILY VISIBLE SHALL HAVE SPANDREL GLASS INSTALLED, REGARDLESS OF ANY NOTATION ELSEWHERE.

GLAZING LEGEND

TEM - TYP EXT MASONRY DETAIL - HM

TEMA - TYP EXT MASONRY DETAIL - ALUM

TICF - TYP EXT INSUL CONC FORMS - HM

TICFA - TYP EXT INSUL CONC FORMS - ALUM

TIM - TYP INTERIOR MASONRY DETAIL - HM

TIMA - TYP INTERIOR MASONRY DETAIL - ALUM

TDW - TYP DRYWALL PARTITION DETAIL - HM

TDWA - TYP DRYWALL PARTITION DETAIL - ALUM

HO - DOOR HOLD OPEN (MAGNETIC OR MANUAL - SEE SPECIAL NOTES FOR MORE INFO)

TH - THRESHOLD

SEC - SECURITY CONTACTS (REF. ELEC. AND TECH.)

OH - DENOTES OPPOSITE HAND CONFIGURATION

SCHEDULE ABBREVIATIONS

DOOR SCHEDULE, DOOR AND WINDOW DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. A3.01
Drawn By: MK	100% QC
Date: 01.22.2025	

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
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KINGWOOD, TX

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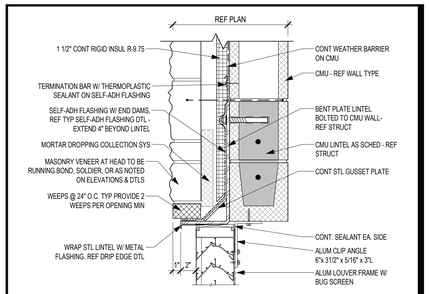
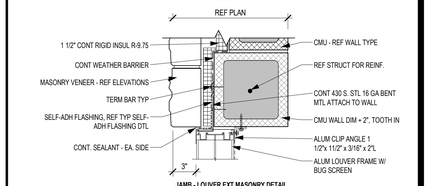
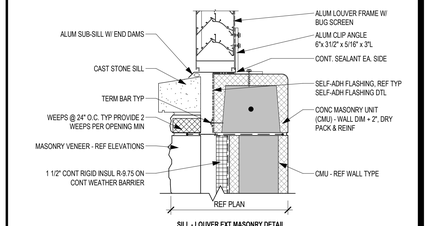


HEAD - LOUVER EXT MASONRY DETAIL

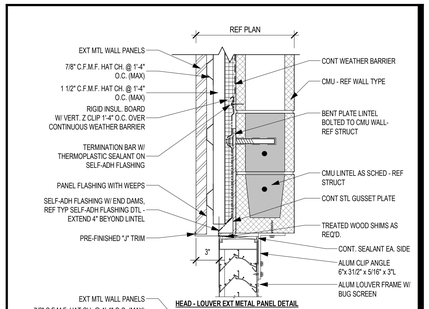


JAMB - LOUVER EXT MASONRY DETAIL

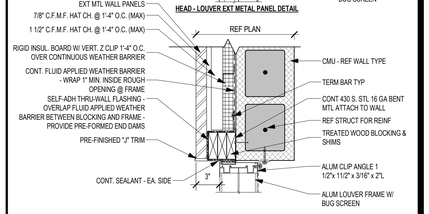


SILL - LOUVER EXT MASONRY DETAIL

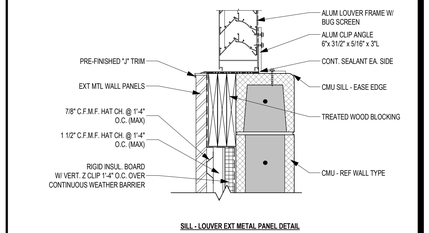
LOUVER - EXT MASONRY DETAILS (L.E.M.S.) - STONE SCALE 1-1/2" = 1'-0



HEAD - LOUVER EXT METAL PANEL DETAIL

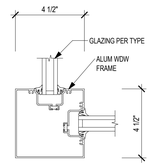


JAMB - LOUVER EXT METAL PANEL DETAIL

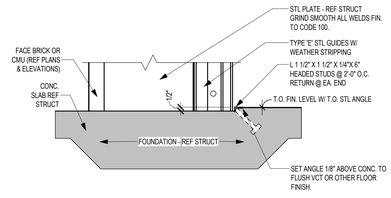


SILL - LOUVER EXT METAL PANEL DETAIL

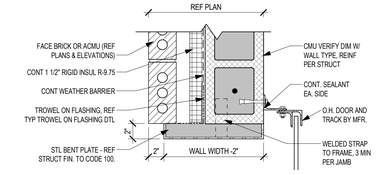
LOUVER - EXT MASONRY DETAILS AT MTL. PANELS (L.E.M.P.) SCALE 1-1/2" = 1'-0



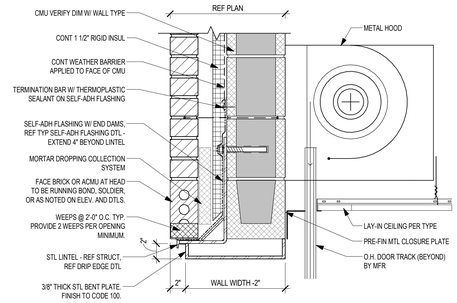
18 JAMB DETAIL - CORNER STOREFRONT
3" = 1'-0"



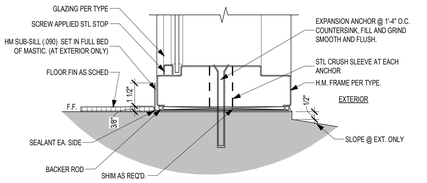
17 TYP. OCD RECESSED SILL
1 1/2" = 1'-0"



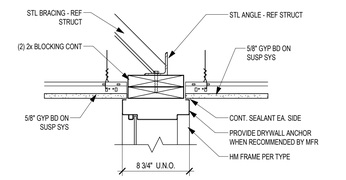
16 JAMB DTL - OCD - CMU / INSUL / MODULAR BRICK
1 1/2" = 1'-0"



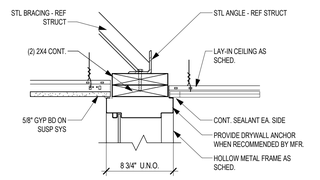
15 HEAD DTL - OCD - CMU / INSUL / UTILITY BRICK
1 1/2" = 1'-0"



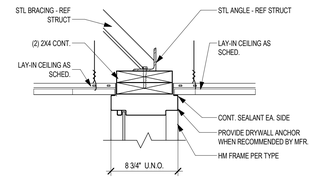
14 DOOR AND WINDOW DETAIL - SILL
3" = 1'-0"



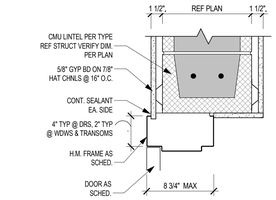
13 HEAD DETAIL - GYP BD / GYP BD
1 1/2" = 1'-0"



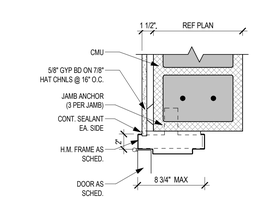
12 HEAD DETAIL - GYP BD / LAY-IN
1 1/2" = 1'-0"



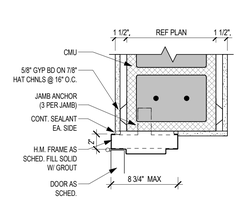
11 HEAD DETAIL - LAY-IN / LAY-IN
1 1/2" = 1'-0"



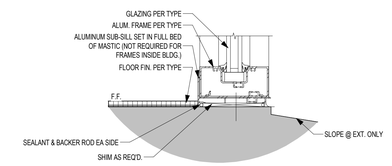
10 HEAD DETAIL - GYP/CMU/GYP
1 1/2" = 1'-0"



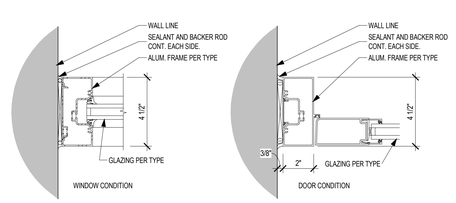
9 JAMB DETAIL - CMU/GYP
1 1/2" = 1'-0"



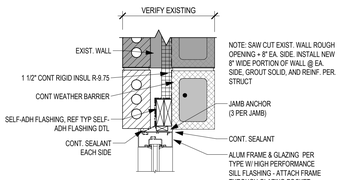
8 JAMB DETAIL - GYP/CMU/GYP
1 1/2" = 1'-0"



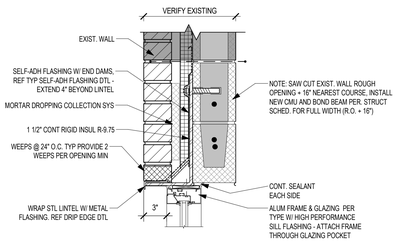
7 DOOR AND WINDOW DETAIL - SILL
3" = 1'-0"



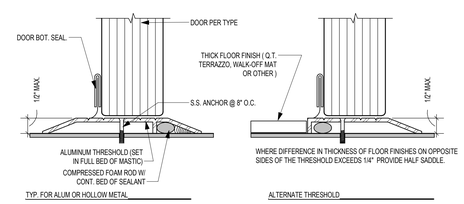
6 DOOR AND WINDOW DETAIL - JAMB (INT USE ONLY)
3" = 1'-0"



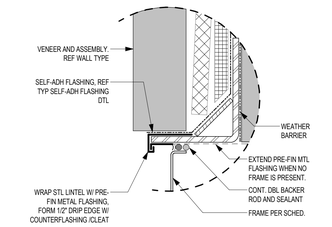
4 JAMB DETAIL - EXIST CMU / BRICK WALL
1 1/2" = 1'-0"



3 HEAD DETAIL - EXIST CMU / BRICK WALL
1 1/2" = 1'-0"



2 TYP THRESHOLDS
6" = 1'-0"



1 TYP DRIP EDGE DTL
3" = 1'-0"

Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO#1821-13-02, RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt
10/27/2025 3:38:55 PM

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISE
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DOOR AND WINDOW DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A3.02
Drawn By: Author	
Date: 01.22.2025	

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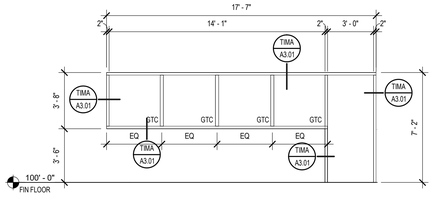
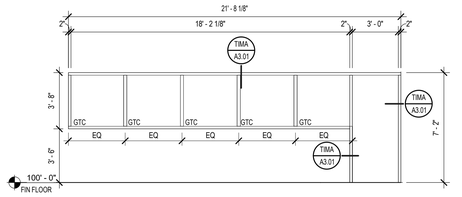
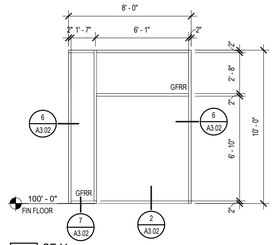


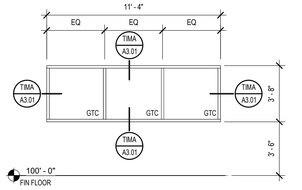
26 SF-AA
1/4" = 1'-0"



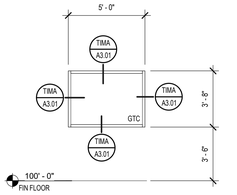
25 SF-Z
1/4" = 1'-0"



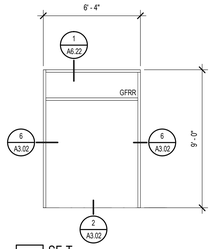
24 SF-Y
1/4" = 1'-0"



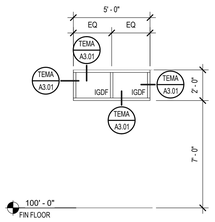
22 SF-W
1/4" = 1'-0"



20 SF-U
1/4" = 1'-0"

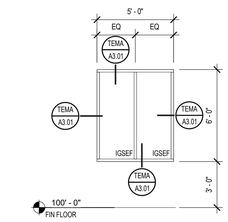


19 SF-T
1/4" = 1'-0"

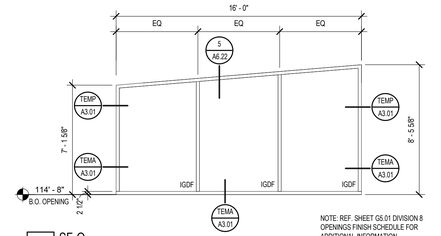


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

18 SF-S
1/4" = 1'-0"



17 SF-R
1/4" = 1'-0"



NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

16 SF-Q
1/4" = 1'-0"

IGE - INSULATED GLASS ETCHED

IGLSA - INSULATED GLASS LAMINATED SAFETY

IGCP - INSULATED GLASS-CLAD POLYCARBONATE

IGDF - INSULATED GLASS DECORATIVE FILM

IGFPSE - INSULATED GLASS FIRE PROTECTION RATED SECURITY

IGS - INSULATED GLASS SPANDREL

IGSE - INSULATED GLASS SECURITY

IGSEF - INSULATED GLASS SECURITY FILM

IGSS - INSULATED GLASS STRUCTURAL SILICONE GLAZED

IGU - INSULATED GLASS UNIT

GCP - GLASS-CLAD POLYCARBONATE

GDF - GLASS DECORATIVE FILM

GE - GLASS ETCHED

GEBG - GLASS EXTERIOR BUTT JOINT

GFRR - GLASS FIRE-RESISTANCE-RATED

GFPR - GLASS FIRE-PROTECTION-RATED

GIBJ - GLASS INTERIOR BUTT JOINT

GLSA - GLASS LAMINATED SAFETY

GLSE - GLASS LAMINATED SECURITY

GSEF - GLASS SECURITY FILM

GTC - GLASS TEMPERED CLEAR

MIP - METAL INSULATED PANEL

MIR - UNFRAMED MIRROR

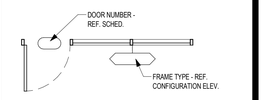
MIRT - TRANSPARENT ONE-WAY MIRROR

TWRA - TRANSLUCENT WALL & ROOF ASSEMBLIES

1.) ALL GLAZING IS 1/4" THICK (U.N.O.). INSULATED GLASS SHALL CONSIST OF AN EXTERIOR LAYER OF GLASS, TINTED AS SPECIFIED, AN INTERIOR LAYER OF CLEAR GLASS, FACTORY SEALED WITH A 1/2" AIR SPACE. WHERE TEMPERED GLASS IS SPECIFIED, BOTH LAYERS OF INSULATED GLASS SHALL BE TEMPERED.

2.) ANY WINDOW OR GLAZING PANELS LOCATED AT A INTERSTITIAL SPACE OR NOT READILY VISIBLE SHALL HAVE SPANDREL GLASS INSTALLED, REGARDLESS OF ANY NOTATION ELSEWHERE.

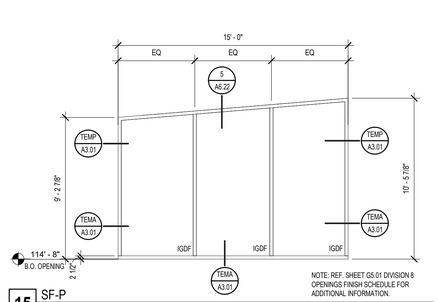
GLAZING LEGEND



STOREFRONT FRAMES

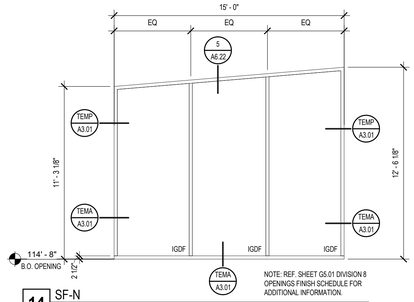
REQUIRED U-FACTOR FOR ALL EXTERIOR GLAZING AT WINDOWS/DOORS TO BE .29
REQUIRED SHGC TO BE .23

DOOR/WINDOWS GLAZING



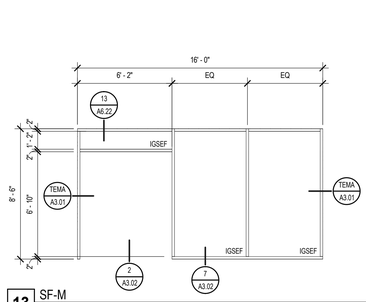
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

15 SF-P
1/4" = 1'-0"

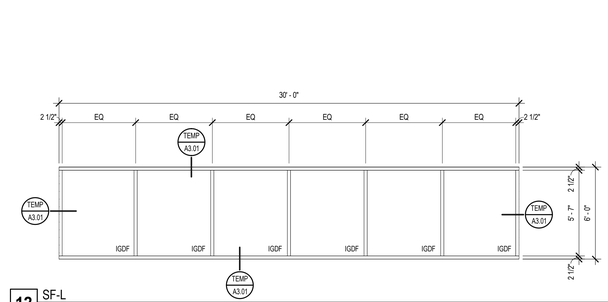


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

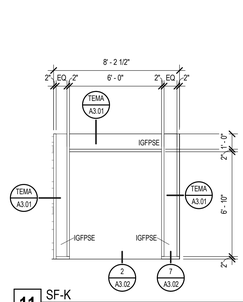
14 SF-N
1/4" = 1'-0"



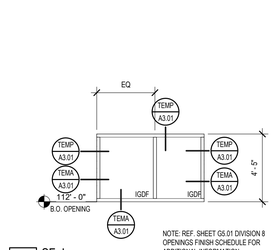
13 SF-M
1/4" = 1'-0"



12 SF-L
1/4" = 1'-0"

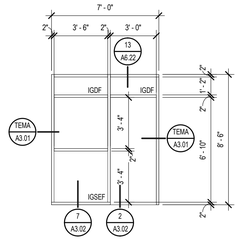


11 SF-K
1/4" = 1'-0"

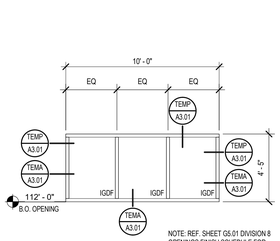


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

10 SF-J
1/4" = 1'-0"

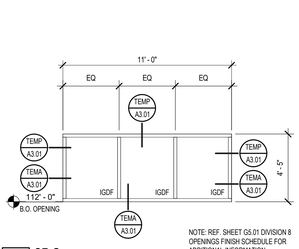


9 SF-I
1/4" = 1'-0"



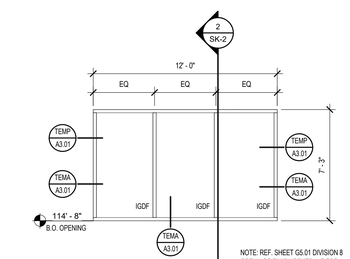
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

8 SF-H
1/4" = 1'-0"



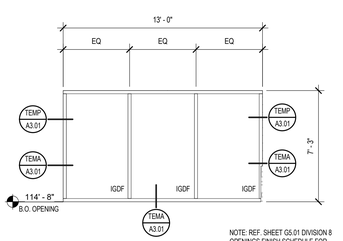
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

7 SF-G
1/4" = 1'-0"



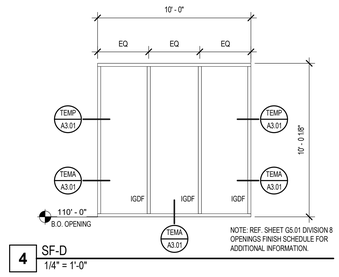
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

6 SF-F
1/4" = 1'-0"



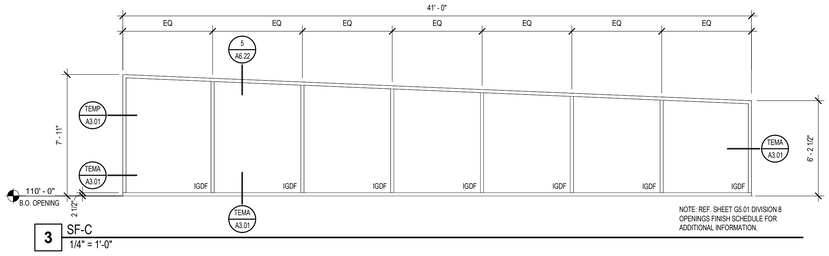
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

5 SF-E
1/4" = 1'-0"



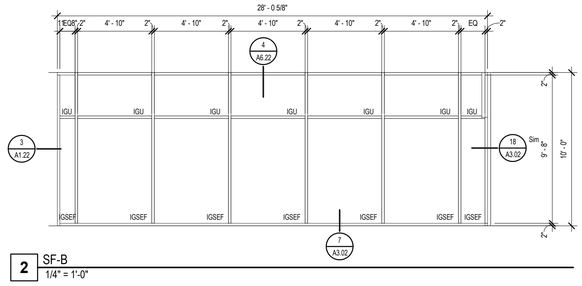
NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

4 SF-D
1/4" = 1'-0"

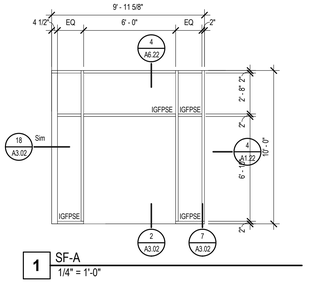


NOTE: REF. SHEET G5.01 DIVISION 8 OPENINGS FINISH SCHEDULE FOR ADDITIONAL INFORMATION.

3 SF-C
1/4" = 1'-0"



2 SF-B
1/4" = 1'-0"



1 SF-A
1/4" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX



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STOREFRONT CONFIGURATIONS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A3.03
Drawn By: Author	
Date: 01.22.2025	

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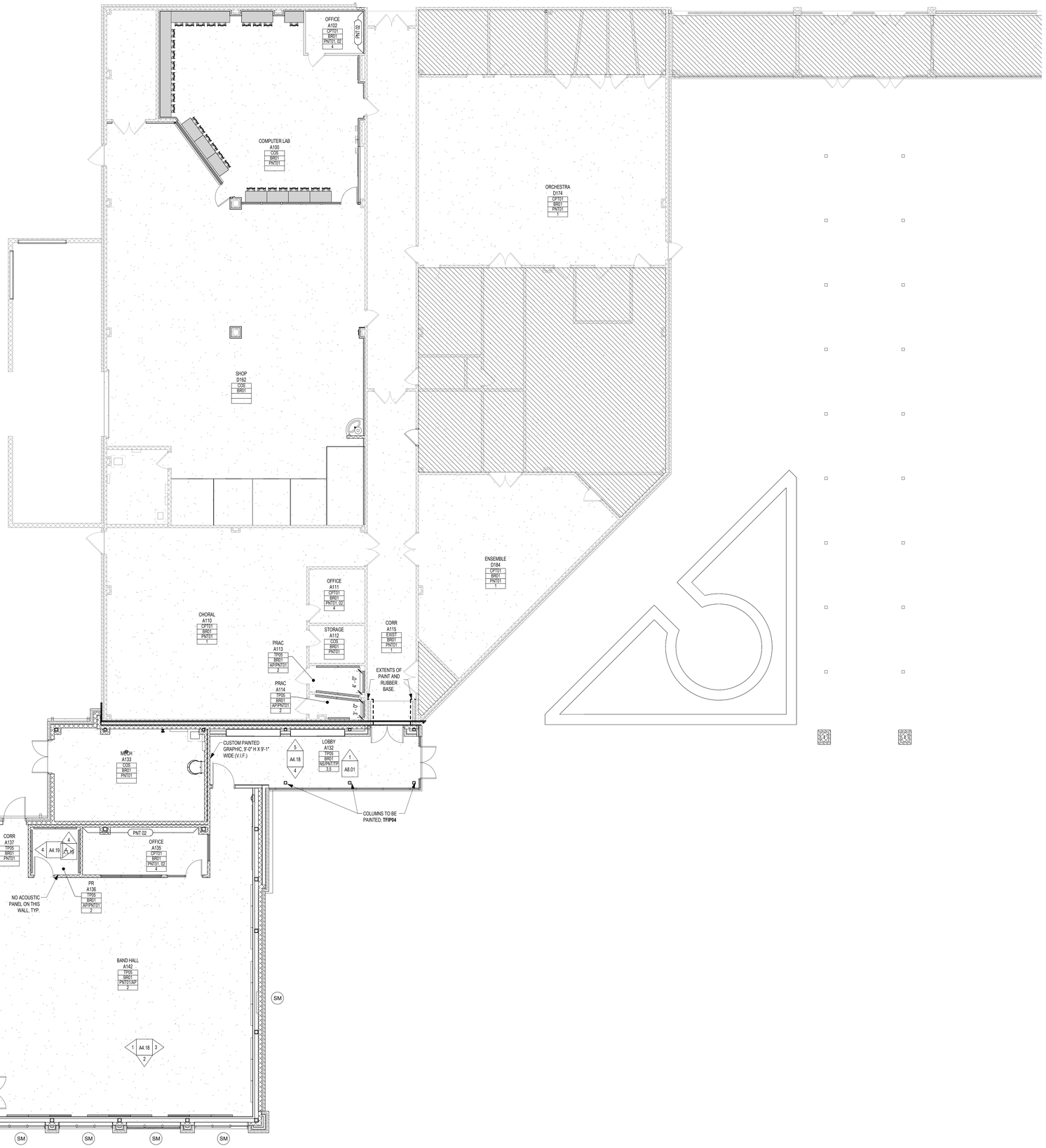
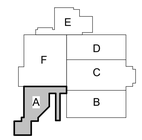


1 FINISH PLAN - SECTION A
1/8" = 1'-0"

PLAN NORTH
TRUE NORTH



KEY PLAN - 1ST FLOOR
N.T.S

A1.1 — ELEVATION REFERENCE

1 / A1.1 — CALLOUT REFERENCE

SIM / 1 / A101 — WALL SECTION REFERENCE

B — B - HORIZONTAL BLINDS; C - CURTAIN HUNG BY SUSPENDED TRACK; SMB - MOTORIZED SHADES - BLACKOUT; SB - WINDOW SHADES - BLACKOUT; SM - MOTORIZED SHADES; S - WINDOW SHADES

FLOOR INSTALLATION DIRECTION

FLOOR TRANSITION

FINISH — WALL FINISH TAG

NOT IN SCOPE

FINISH PLAN LEGEND
APPLIES TO SECTION PLANS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

1. REFER TO PLAN FOR EXTENTS OF PAINT AND RUBBER BASE.
2. REFER TO INTERIOR ELEVATIONS FOR EXTENTS OF ACOUSTIC PANEL.
3. REFER TO SHEET G5.01/G5.02 AND INTERIOR ELEVATIONS FOR EXTENTS OF CUSTOM DIGITAL WALLCOVERING.
4. REFER TO FINISH PLAN FOR LOCATION OF ACCENT WALL PAINTED, **PNT02.**
5. REFER TO FINISH PLAN FOR EXTENTS OF **NS01, TP01, PNT01, AND PNT04.**
6. REFER TO INTERIOR ELEVATIONS FOR EXTENT OF **BTP, TP,** AND **TM** IN RESTROOMS.

FINISH REMARKS

A. ALL DIMENSIONS SHOW ON FINISH FLOOR PLAN DRAWINGS ARE FROM FACE OF FINISH, U.N.O.

B. PROVIDE **WT** AND **TZ** FLOOR FINISHES, AS DEFINED ABOVE, IN LOCATIONS INDICATED ON PLANS.

C. PROVIDE **TZ** AND **TZP** ON STAIR TREADS AND RISERS, AS DEFINED ABOVE, IN LOCATIONS INDICATED ON PLANS.

D. PROVIDE **BRA** AT **WT** FLOOR FINISH AND **BTZP** AT **TZ** FLOOR FINISH, AS DEFINED ABOVE, IN LOCATIONS INDICATED ON PLANS.

E. PROVIDE **PNT** AND **TC** (WAINSCOT) WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.

F. PROVIDE **PNT** AND **TC** (WAINSCOT) WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.

G. PROVIDE **BM** AND/OR **FB**, **PNT** AND **CFB** WALL FINISHES AS DEFINED ABOVE AND DETAILED ON INTERIOR ELEVATIONS.

H. PROVIDE 3/8" MIN SEALANT JOINT WHERE FULL HT TILE MEETS GYP CLG (MATCH CLG COLOR) OR LAY-IN GRID (WHITE)

I. PROVIDE SEALANT JTS @ INSIDE CORNERS OF TILED WALLS

J. VERIFY EXACT FLOOR TILE PATTERN FOR ALL TOILET ROOMS. COORDINATE WITH ARCHITECT.

FINISH PLAN GENERAL NOTES

ALL SCHEDULED WALL FINISH DIRECTIONS ARE DIRECTIONS PER PLAN NORTH OF THE FINISH PLANS, NOT TRUE NORTH OF THE PROJECT SITE

REFER TO G5.01 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

CLASSROOM — ROOM NAME
025 — ROOM NUMBER
TYP FLOOR FINISH — LVT01
WALL BASE FINISH — BR01
TYP WALL FINISH — PNT01
REMARKS — 1

*REMARKS NUMBERS COORDINATED WITH FINISH REMARKS LEGEND LOCATED ON ALL FINISH FLOOR PLAN SHEETS

REFER TO PROJECT SPECIFICATIONS SECTION 01 6210 FOR ADDITIONAL INFORMATION REGARDING FINISH MATERIALS AND PAINT FINISH CODES.

XY — MATERIAL TYPE
— FINISH COLOR AND MATERIAL SIZE AS NOTED IN SPEC. SECTION 01 6210

ACMU - ARCHITECTURAL CONCRETE MASONRY UNIT
AL - ALUMINUM
AP - ACOUSTICAL PANELS
BP - BASE, PORCELAIN TILE
BRES - BASE, RESINOUS INTEGRAL
BRK - BRICK
BR - BASE, RUBBER
BRV - BASE, RUBBER VENTED
BTC - BASE, TILE, CERAMIC
BTZ - BASE, TERRAZZO PRECAST
BWD - BASE, WOOD
CCPS - CERAMIC CLADDING PANEL SYSTEM
CDAP - CUSTOM DIGITALLY PRINTED ACOUSTIC PANEL
CDW - CUSTOM DIGITAL WALLCOVERINGS
COP - CONCRETE POLISHED
COS - CONCRETE SEALED
CPT - CARPET, SHEET
CS - CAST STONE
CSM - CONCRETE STONE MASONRY
CT - CARPET, TILED
CWF - CUSTOM WINDOW FILM
EBWS - EPOXY BASED WALL SYSTEM
EPNT - EPOXY PAINT
FRP - FIBERGLASS REINFORCED PLASTIC PANEL SYSTEM
GFRC - GLASS FIBER REINFORCED CONCRETE
GRF - GROUND FACE CMU (BURNISHED)
LVT - LUXURY VINYL TILE
MB - MARKER BOARD
MCM - METAL COMPOSITE MATERIAL
MP - METAL WALL PANEL
MS - METAL SOFFIT
NB - NO BASE
NS - NATURAL STONE
PL - PLASTIC LAMINATE
PLP - PLASTIC LAMINATE PANEL SYSTEM
PNT - PAINT
QTZ - QUARTZ SURFACING
RAFF - RESILIENT ATHLETIC FLUID FLOORING
RAFP - RESILIENT ATHLETIC FLOORING POLYURETHANE
RAFS - RUBBER FLOORING SHEET
RAFV - RESILIENT ATHLETIC FLOORING VINYL
RES - RESINOUS FLOORING
RT - RUBBER TILE
RTR - RUBBER TREADS AND RISERS
SPEC - SPECIAL FINISHES, REF. ROOM FINISH SCHEDULE & INTERIOR ELEVATIONS
SPF - SPLIT-FACE CONCRETE MASONRY UNIT
SSM - SOLID SURFACE MATERIAL
SVT - SOLID VINYL TILE
TB - TACK BOARD
TC - TILE, CERAMIC
TP - TILE, PORCELAIN
TQ - TILE, QUARRY
TS - TACKABLE SURFACE
TZ - TERRAZZO
TZP - TERRAZZO, PRECAST STAIR TREADS AND RISERS
TZT - TERRAZZO TILE
UP - UPHOLSTERY
VCT - TILE, VINYL COMPOSITION
VSF - VINYL SHEET FLOORING
WMP - WOOD (MAPLE) STRIP AND PLANK FLOORING
WMS - MASONITE WOOD FLOORING
WOM - WALK-OFF MAT
WOT - WALK-OFF TILE

(NOT ALL ABBREVIATIONS MAY BE USED)

FINISH KEY

Date
Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISH
TX 21614
STATE OF TEXAS
10/24/2025

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FINISH PLAN - SECTION A, F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. A4.11
Drawn By: MK	100% QC
Date: 01.22.2025	

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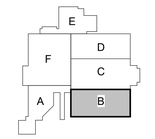
1 FINISH PLAN - SECTION B
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

PLAN
N
TRUE

THE ROOM FINISH LEGEND HAS BEEN OMITTED FROM THIS SHEET DUE TO SPACE LIMITATIONS. REFER TO OTHER FINISH PLAN SHEETS FOR FULL ROOM FINISH SCHEDULE, SPECIAL FINISH NOTES AND DEFAULT FINISHES.

ROOM FINISH LEGEND

A1.1 — ELEVATION REFERENCE

1 / A1.1 — CALLOUT REFERENCE

SIM
1 / A101 — WALL SECTION REFERENCE

B
- B - HORIZONTAL BLINDS
- C - CURTAIN HUNG BY SUSPENDED TRACK
- SMB - MOTORIZED SHADES - BLACKOUT
- SB - WINDOW SHADES - BLACKOUT
- SM - MOTORIZED SHADES
- S - WINDOW SHADES

FLOOR INSTALLATION DIRECTION

FLOOR TRANSITION

FINISH — WALL FINISH TAG

NOT IN SCOPE

FINISH PLAN LEGEND
APPLIES TO SECTION PLANS

NOTES APPLY TO ROOMS AS NOTED IN THE ROOM FINISH TAGS. SEE TAG LAYOUT ABOVE.

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FINISH REMARKS

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

REGISTERED ARCHITECT
SUSAN F. WISE
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STATE OF TEXAS
10/24/2025

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FINISH PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A4.12
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Date: 01.22.2025	

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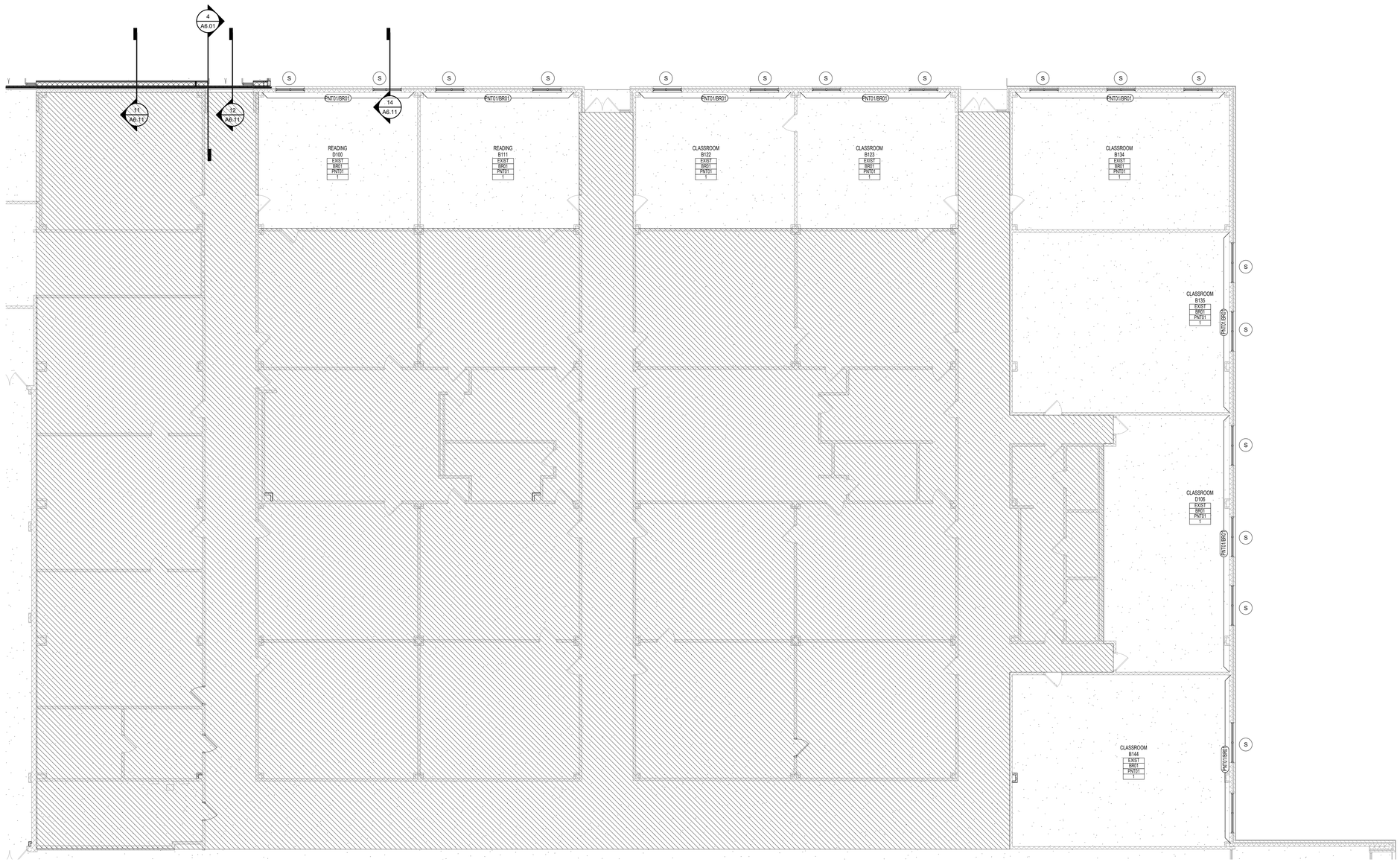

1 FINISH PLAN - SECTION D
1/8" = 1'-0"

THE ROOM FINISH LEGEND HAS BEEN OMITTED FROM THIS SHEET DUE TO SPACE LIMITATIONS. REFER TO OTHER FINISH PLAN SHEETS FOR FULL ROOM FINISH SCHEDULE, SPECIAL FINISH NOTES AND DEFAULT FINISHES.

ROOM FINISH LEGEND

A1.1 — ELEVATION REFERENCE

1 / A1.1 — CALLOUT REFERENCE

SIM
1 / A101 — WALL SECTION REFERENCE

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FLOOR INSTALLATION DIRECTION

FLOOR TRANSITION

FINISH — WALL FINISH TAG

NOT IN SCOPE

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FINISH REMARKS

Revision / Date

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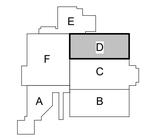
PLAN NORTH / TRUE NORTH



KEY PLAN - 1ST FLOOR
N.T.S

FINISH PLAN - SECTION D

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Job No. 1821-13-02	Sheet No. 100% QC A4.14
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Date: 01.22.2025	

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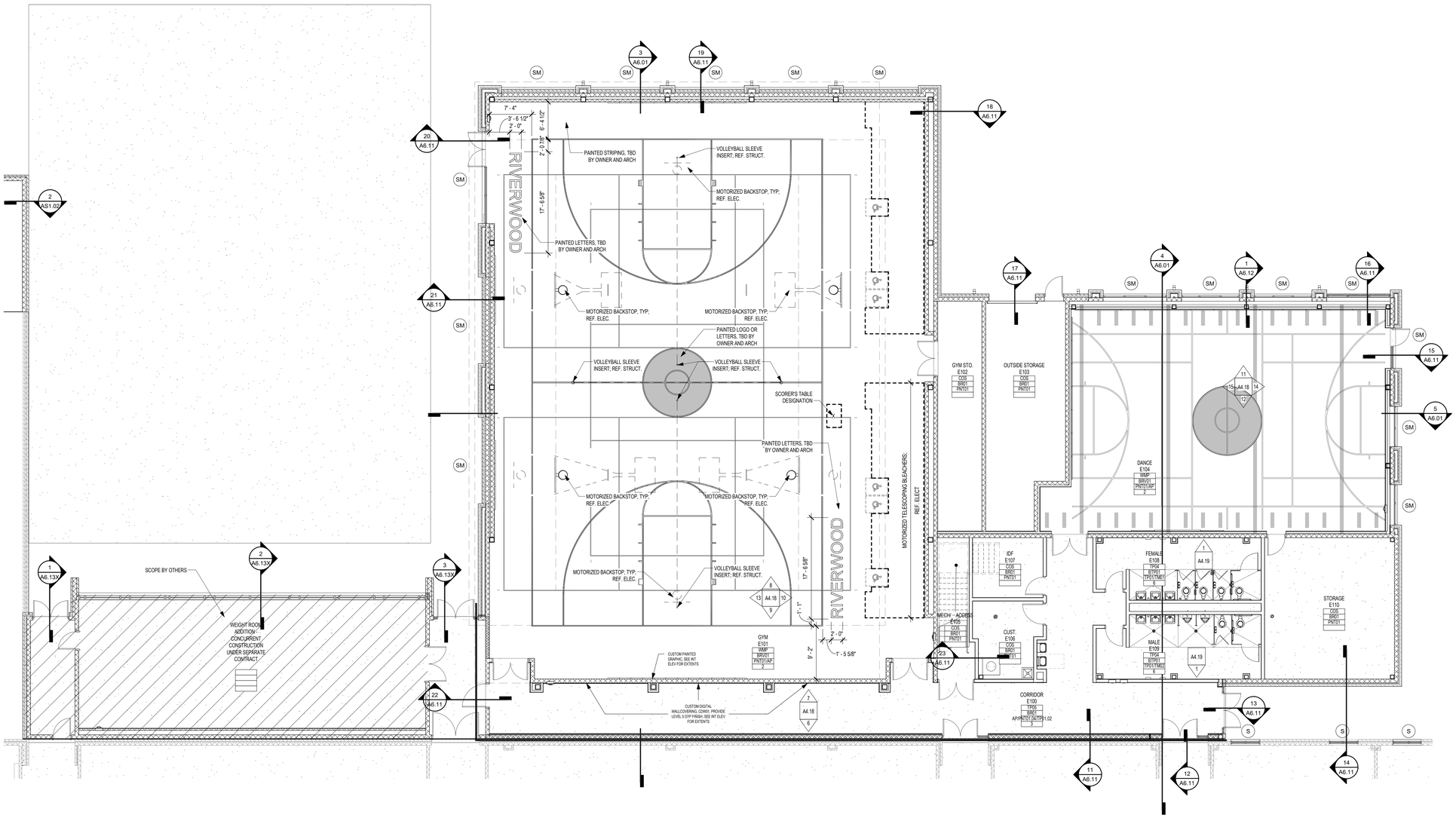

THE ROOM FINISH LEGEND HAS BEEN OMITTED FROM THIS SHEET DUE TO SPACE LIMITATIONS. REFER TO OTHER FINISH PLAN SHEETS FOR FULL ROOM FINISH SCHEDULE, SPECIAL FINISH NOTES AND DEFAULT FINISHES.

ROOM FINISH LEGEND

- A1.1 — ELEVATION REFERENCE
- 1 / A1.1 — CALLOUT REFERENCE
- 1 / A101 SIM — WALL SECTION REFERENCE
- B
  - B - HORIZONTAL BLINDS
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  - SM - MOTORIZED SHADES
  - S - WINDOW SHADES
- FLOOR INSTALLATION DIRECTION
- FLOOR TRANSITION
- FINISH — WALL FINISH TAG
- NOT IN SCOPE

FINISH PLAN LEGEND

APPLIES TO SECTION PLANS

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FINISH REMARKS

Revision / Date

Project:

RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
HUMBLE ISD
KINGWOOD, TX



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FINISH PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A4.15
Drawn By: MK	
Date: 01.22.2025	

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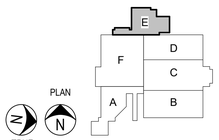

KEY PLAN - 1ST FLOOR
N.T.S

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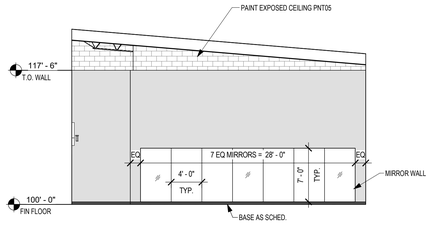
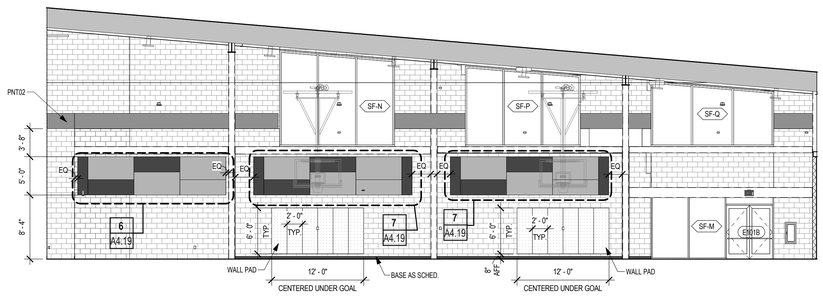


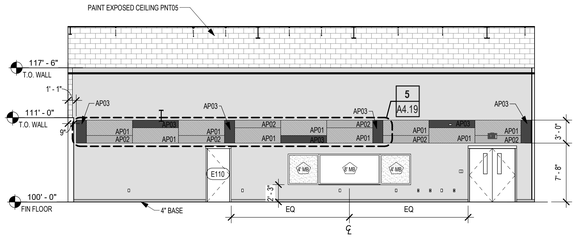
15 INT ELEVATION - DANCE
1/8" = 1'-0"



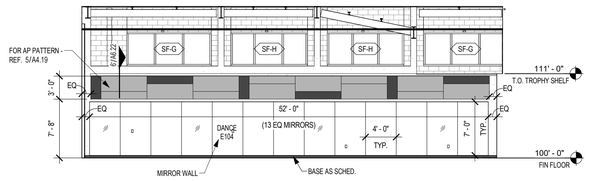
14 INT ELEVATION - DANCE
1/8" = 1'-0"



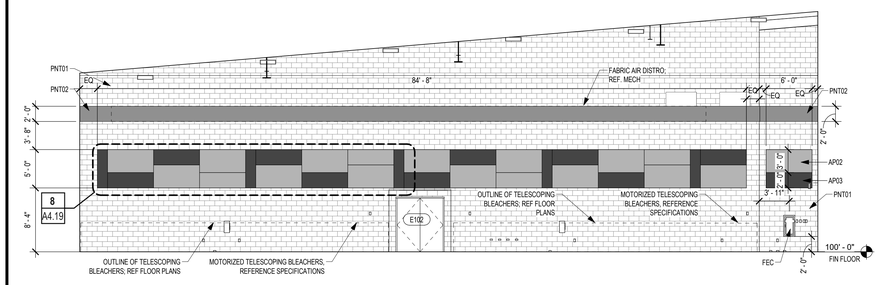
13 INTERIOR ELEVATION - GYM
1/8" = 1'-0"



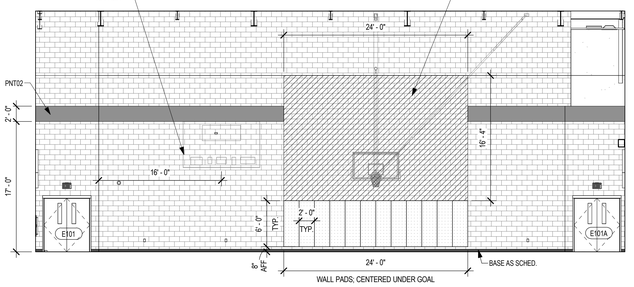
12 INT ELEVATION - DANCE
1/8" = 1'-0"



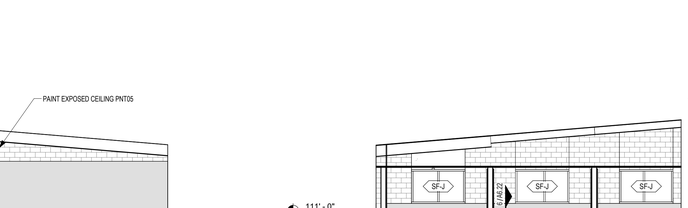
11 INT ELEVATION - DANCE
1/8" = 1'-0"



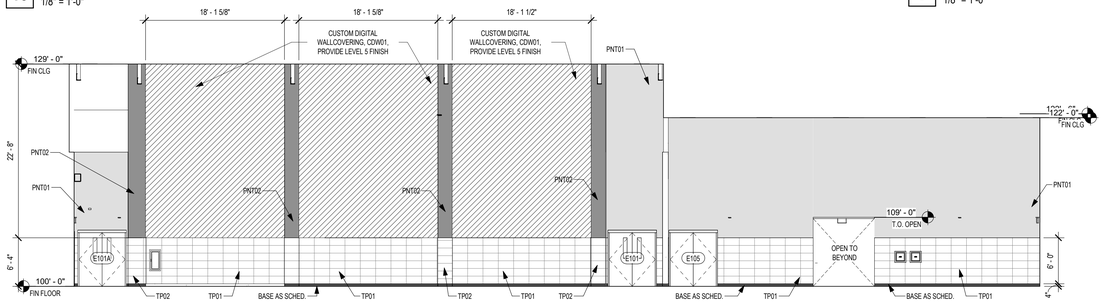
10 INTERIOR ELEVATION - GYM
1/8" = 1'-0"



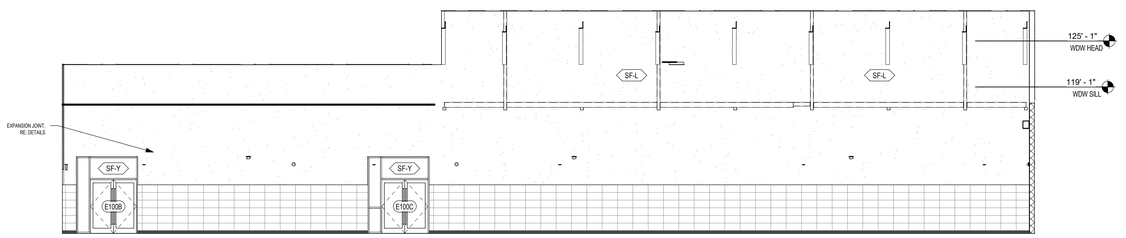
9 INTERIOR ELEVATION - GYM
1/8" = 1'-0"



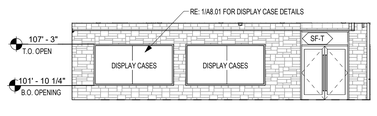
8 INTERIOR ELEVATION - GYM
1/8" = 1'-0"



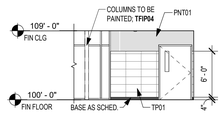
7 INT ELEV - CORRIDOR
1/8" = 1'-0"



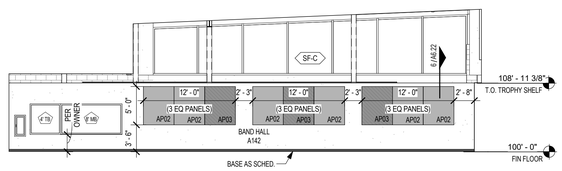
6 INT ELEV - CORRIDOR
1/8" = 1'-0"



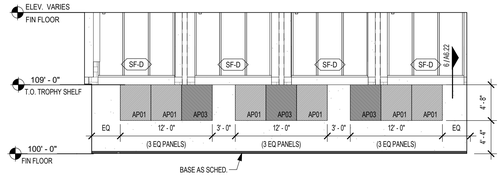
5 INTERIOR ELEVATION - LOBBY A132
1/8" = 1'-0"



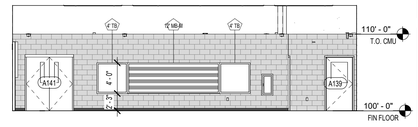
4 INT ELEVATION - LOBBY A132
1/8" = 1'-0"



3 INTERIOR ELEVATION - BAND HALL
1/8" = 1'-0"



2 INTERIOR ELEVATION - BAND HALL
1/8" = 1'-0"



1 INTERIOR ELEVATION - BAND HALL
1/8" = 1'-0"

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Revision / Date

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RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

SUSAN F. WIDA
LICENSED
No. 24614
STATE OF TEXAS
10/24/2025

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INTERIOR ELEVATIONS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A4.18
Drawn By: Author	
Date: 01.22.2025	

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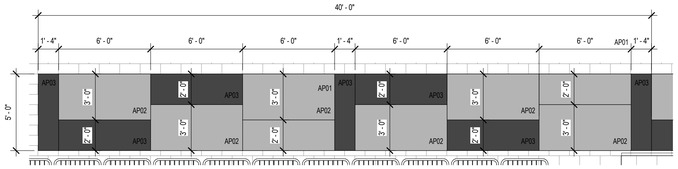
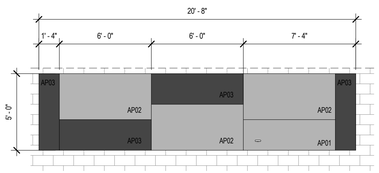
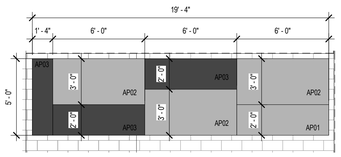


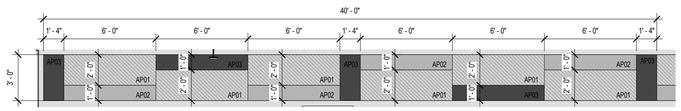
8 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN (GYM)
1/4" = 1'-0"



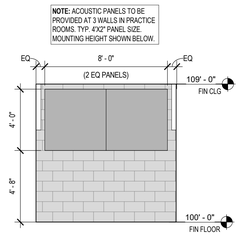
7 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN (GYM)
1/4" = 1'-0"



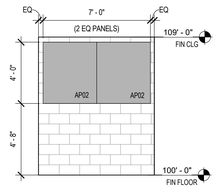
6 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN (GYM)
1/4" = 1'-0"



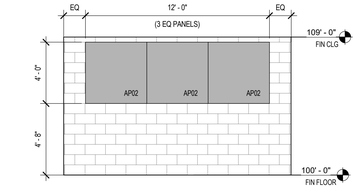
5 INT ELEVATION - ENLARGED ACOUSTIC PANEL PATTERN
1/4" = 1'-0"



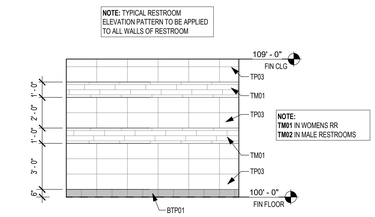
4 INT ELEVATION - TYP. PRACTICE ROOM
1/4" = 1'-0"



3 INTERIOR ELEVATION - PRACTICE ROOM
1/4" = 1'-0"



2 INTERIOR ELEVATION - PRACTICE ROOM
1/4" = 1'-0"



1 INTERIOR ELEVATION - TYP. RESTROOM
1/4" = 1'-0"

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

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INTERIOR ELEVATIONS

PACKAGE	VOLUME
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Date: 01.22.2025	

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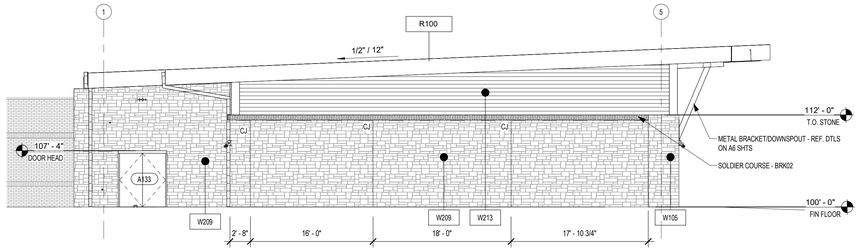
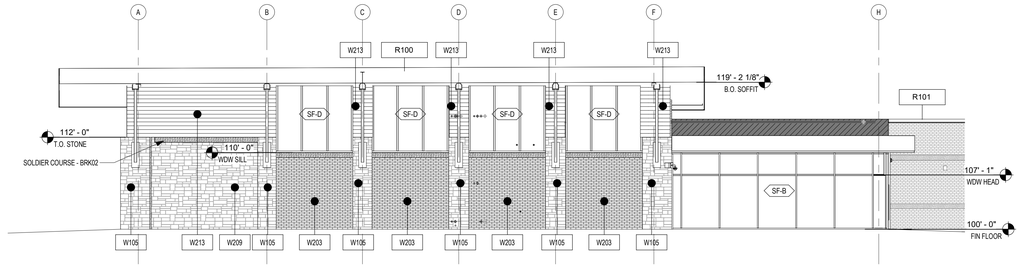
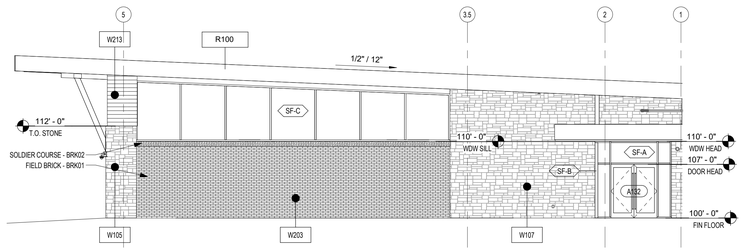


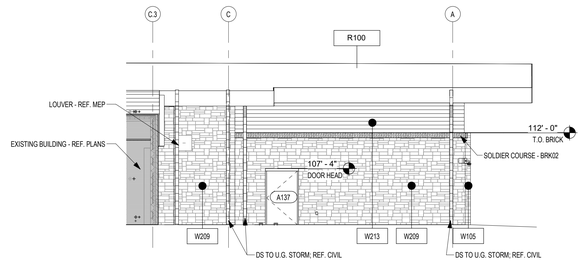
4 BAND HALL - WEST ELEVATION
1/8" = 1'-0"



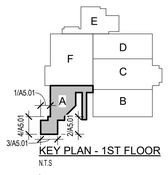
3 BAND HALL - SOUTH ELEVATION
1/8" = 1'-0"



2 BAND HALL EAST ELEVATION
1/8" = 1'-0"



1 BAND HALL - NORTH ELEVATION
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

TRUE

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EXTERIOR ELEVATIONS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A5.01
Drawn By: MK	
Date: 01.22.2025	

10/27/2025 3:28:29 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt

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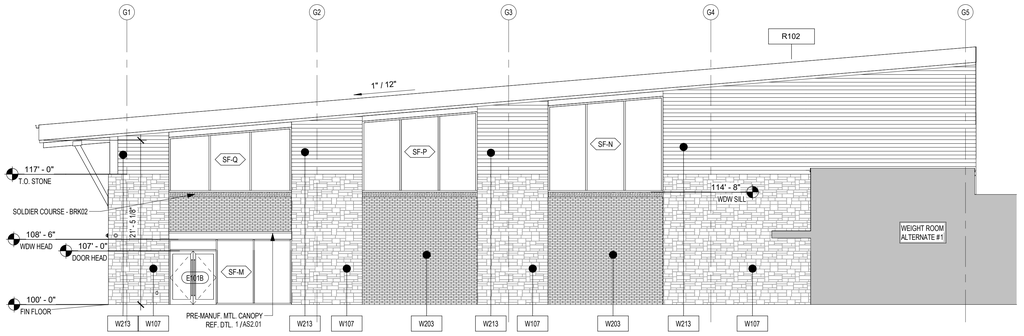
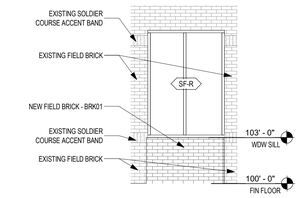
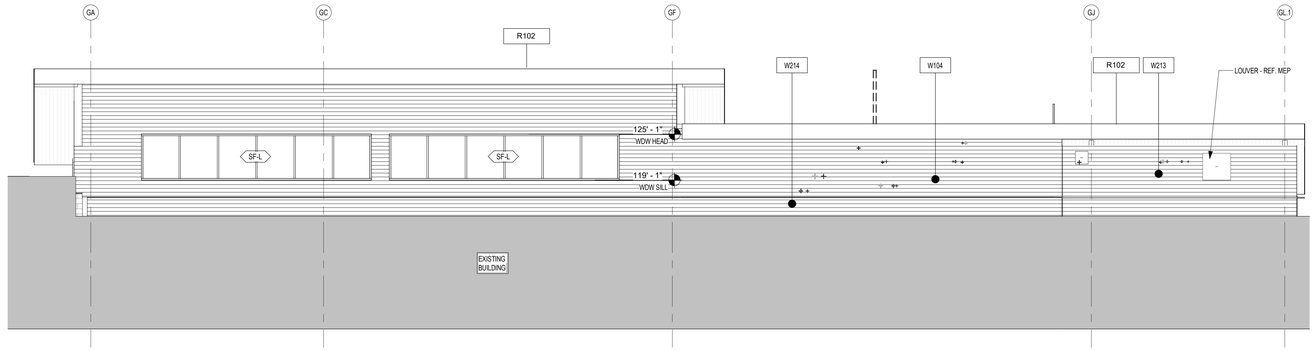


6 DANCE/GYM - WEST ELEVATION
1/8" = 1'-0"



5 ENLARGED EXTERIOR ELEVATION - NEW WINDOW
1/4" = 1'-0"



3 DANCE/GYM - SOUTH ELEVATION 01
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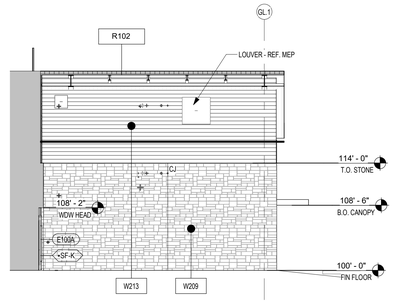

4 DANCE/GYM - SOUTH ELEVATION 02
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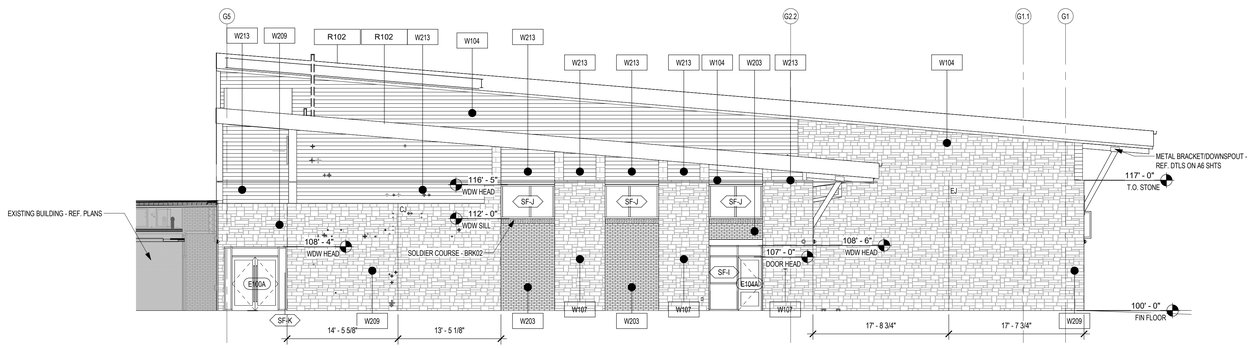
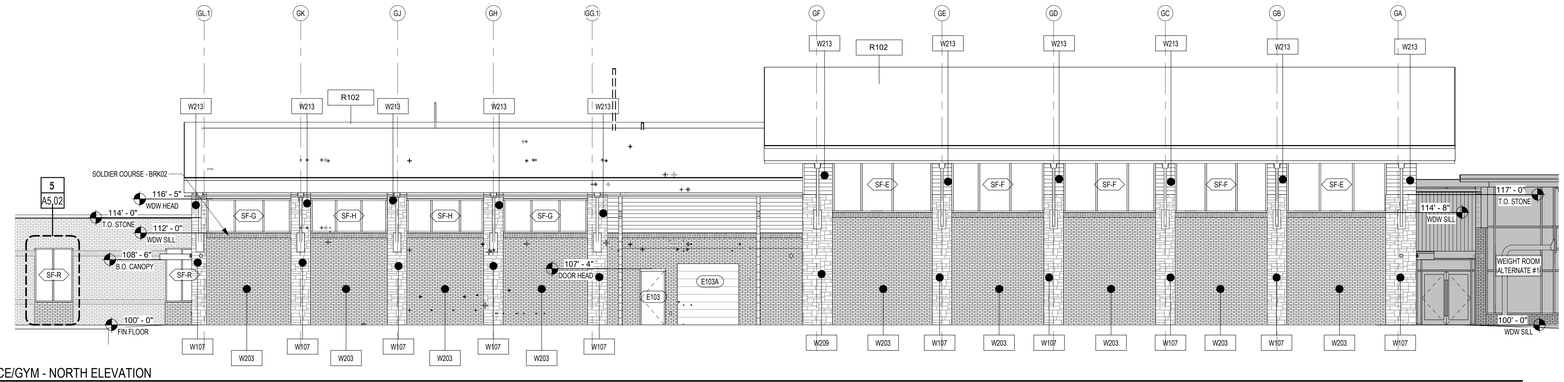
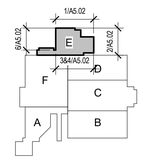


2 DANCE/GYM - EAST ELEVATION
1/8" = 1'-0"



1 DANCE/GYM - NORTH ELEVATION
1/8" = 1'-0"



KEY PLAN - 1ST FLOOR
N.T.S

TRUE

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TX 24614
REGISTERED ARCHITECT
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10/24/2025

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EXTERIOR ELEVATIONS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A5.02
Drawn By: MK	
Date: 01.22.2025	

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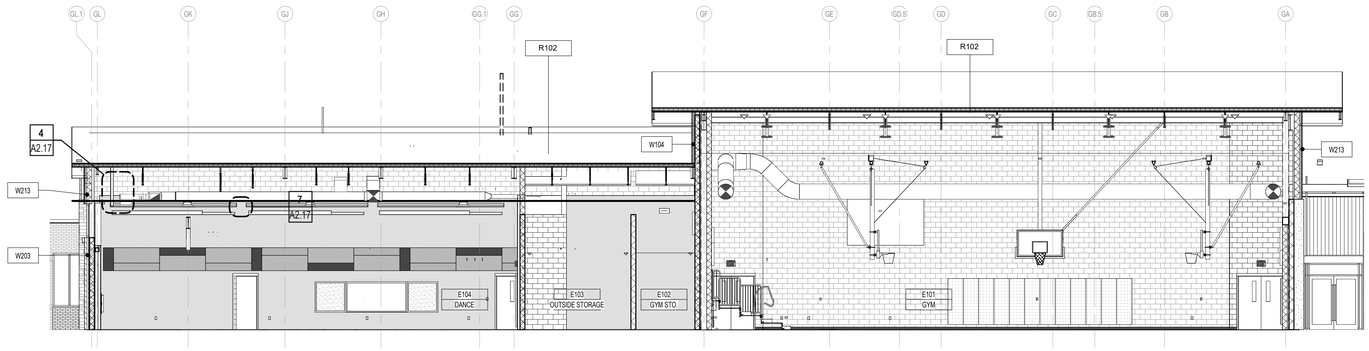
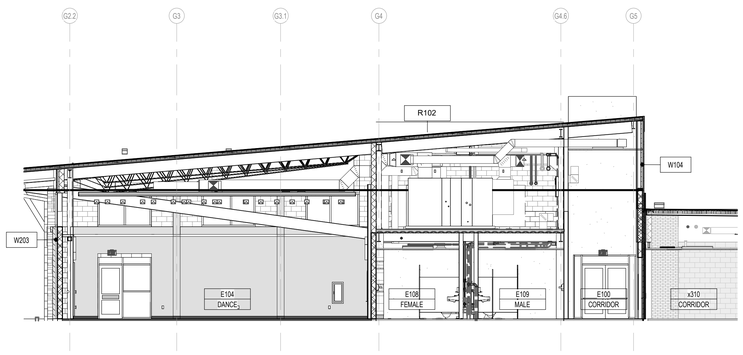
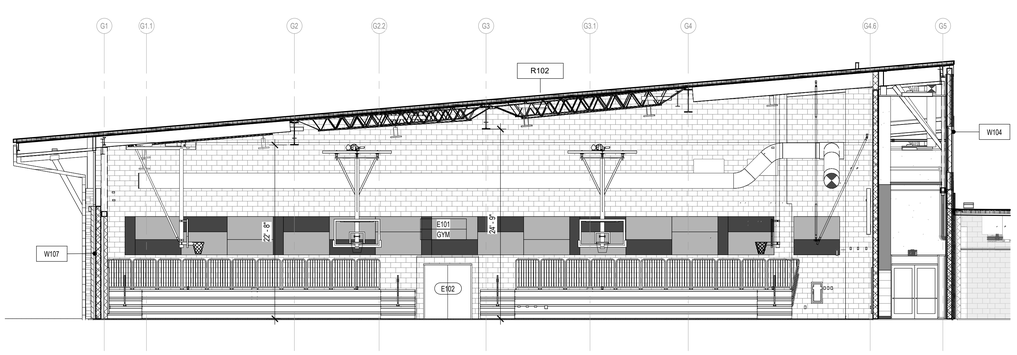


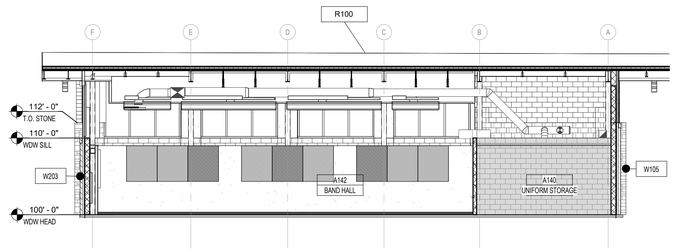
5 BUILDING SECTION - GYM/DANCE
1/8" = 1'-0"



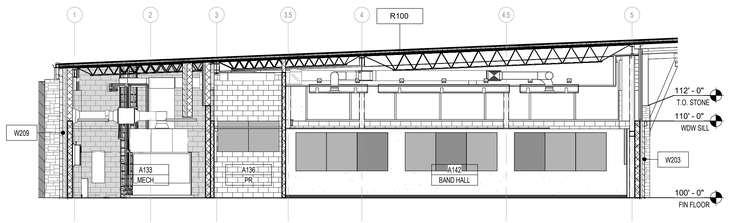
4 BUILDING SECTION - GYM/DANCE
1/8" = 1'-0"



3 BUILDING SECTION - GYM/DANCE
1/8" = 1'-0"



2 BUILDING SECTION - BAND HALL
1/8" = 1'-0"



1 BUILDING SECTION - BAND HALL
1/8" = 1'-0"

1) REFER ALSO TO G3 SHTS FOR WALL CONSTRUCTION DETAILS. TYPICAL DETAILS APPLY, AS NEEDED, TO ALL WALL SECTIONS U.N.O.

2) REINFORCING IN CONCRETE BEAMS, FOOTINGS, & PIERS HAS NOT BEEN INDICATED FOR CLARITY. REFER TO STRUCTURAL DRAWINGS FOR THIS REINFORCING.

3) CONTRACTOR SHALL VERIFY THE DIMENSIONAL CONDITIONS BETWEEN ALL STRUCTURAL ELEMENTS & THE ARCHITECTURAL ELEMENTS FOR CONFLICTS. IF DISCREPANCIES ARE ENCOUNTERED, NOTIFY THE ARCHITECT IMMEDIATELY.

4) AT ALL EXTERIOR WALLS, PLACE WEATHER BARRIER AT THE EXTERIOR FACE OF CMU OR SHEATHING. CONTRACTOR TO VERIFY CHEMICAL COMPATIBILITY OF WEATHER BARRIER & SELF-ADHESIVE FLASHING.

5) PROVIDE 3 STACKED BRICK HEADERS OR ONE SOLID BRICK AT ALL SOLDIER OUTSIDE CORNERS. (4"X4"X3 5/8")

6) PROVIDE A WEATHERED MORTAR JOINT AT ALL EXTERIOR CONDITIONS WHERE THE MASONRY COURSE BELOW THE JOINT PROJECTS BEYOND THE COURSE ABOVE.

7) WHERE CMU IS SHOWN SHADED, FILL CELL SOLID WITH GROUT UNLESS NOTED IN DETAILS AS MORTAR. COORDINATE ALL LOCATIONS WITH STRUCTURAL DRAWINGS.
IN CASES OF APPARENT CONFLICT, STRUCTURAL DRAWINGS SHALL GOVERN DESIGN. GROUT

8) FILL ALL OPEN CELLS OF CMU SOLID WITH FOAM INSULATION. AT ALL EXTERIOR CONDITIONS WHERE RIGID INSULATION IS NOT APPLIED IN THE CAVITY WALL.

9) PROVIDE THERMAL BATT INSULATION AT ALL EXTERIOR STUD WALLS & ACOUSTICAL BATT INSULATION AT INTERIOR STUD WALLS AS DESCRIBED IN SECTION 07 2100 OF THE SPECIFICATIONS.

10) REFER TO STRUCTURAL DRAWINGS FOR VERTICAL WALL REINFORCING.

11) ALL MASONRY WALLS SHALL BE REINFORCED WITH CONTINUOUS HORIZONTAL BED JOINT REINFORCING AS SPECIFIED, AT 16" VERTICAL SPACING. AT VENEER CONDITIONS PROVIDE TIES AS SPECIFIED AT 16" O.C.E.W.

12) INFORMATION SHOWN BEYOND IN WALL SECTIONS IS PROVIDED FOR INFORMATION ONLY & SHALL NOT LIMIT THE SCOPE OF WORK REQUIRED IN THIS PROJECT.

13) SMALLER SCALE DRAWINGS MAY NOT SHOW ALL CONNECTIONS & FINISHES. ALWAYS REFER TO ENLARGED DETAILS, WHERE PROVIDED, FOR ADDITIONAL INFORMATION. IN CASES OF APPARENT CONFLICT, THE LARGER SCALED DETAIL SHALL APPLY.

14) INTERIOR WALL FINISHES ARE NOT SHOWN ON WALL SECTIONS TO AVOID VISUAL CLUTTER. REFER TO A4 SHEETS FINISH SCHED & INTERIOR ELEVATIONS FOR REQUIRED MATERIALS & MATERIAL PATTERNS.

TYPICAL WALL SECTION NOTES

APPLICABLE TO ALL A6 SHEETS

LETTER INDICATES EXTERIOR WALL

W200 — WALL ASSEMBLY IN SECTION VIEW

NUMBER INDICATES BACKUP CONSTRUCTION AS FOLLOWS:
- **100** - CFMF
- **200** - CMU
- **300** - ICF
- **400** - STRUCTURAL CONC. PRECAST PANEL

REF. SHT. G3.01 FOR SPECIFIC WALL TYPES

EXTERIOR WALL TYPE LEGEND

LETTER INDICATES TYPE

NUMBER INDICATES CONSTRUCTION AS FOLLOWS:
- **R100** - BUILT-UP, INSUL., MTL. DECK
- **R101** - BUILT-UP, INSUL., MTL. DECK
- **R102** - SINGLE PLY, INSUL., MTL. DECK
- **R103** - SINGLE PLY, INSUL., MTL. DECK
- **R104** - STANDING SEAM, 3/4" TREATED PW SHEATHING, INSUL., MTL. DECK
- **R105** - STANDING SEAM, 3/4" TREATED PW SHEATHING, INSUL.,MTL. DECK
- **R106** - BUILT-UP, INSUL., CONC. DECK
- **R107** - SINGLE-PLY, INSUL., CONC. DECK

REF. SHT. G3.01 FOR ROOF CONSTRUCTION TYPES

R100 — ROOF ASSEMBLY IN SECTION VIEW

ROOF TYPE LEGEND

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BUILDING SECTIONS

PACKAGE	VOLUME

Job No. 1821-13-02
Drawn By: MK
Date: 01.22.2025
Sheet No. 100% QC A6.01

10/27/2023 3:39:43 PM
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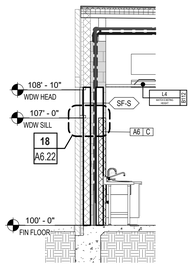
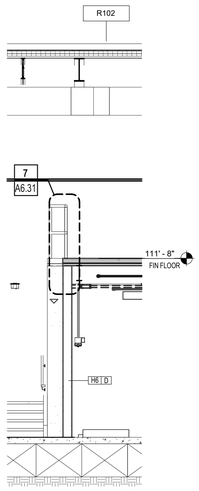
TYPICAL WALL SECTION NOTES (APPLICABLE TO ALL A6 SHEETS)

REFER TO OTHER A6 SHEETS FOR COMPLETE TYPICAL WALL SECTION NOTES.

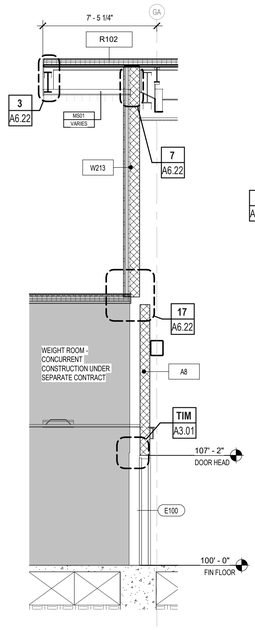
TYPICAL WALL SECTION NOTES APPLY TO ALL WALL SECTIONS UNLESS NOTED OTHERWISE.



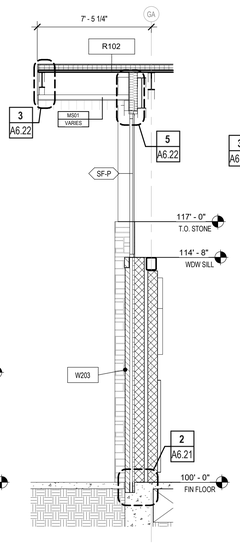
24 WALL SECTION - CULINARY
1/4" = 1'-0"



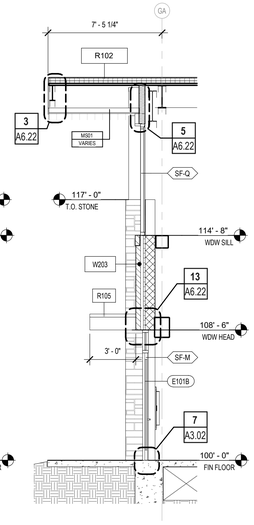
23 WALL SECTION - MECH PLATFORM
1/4" = 1'-0"



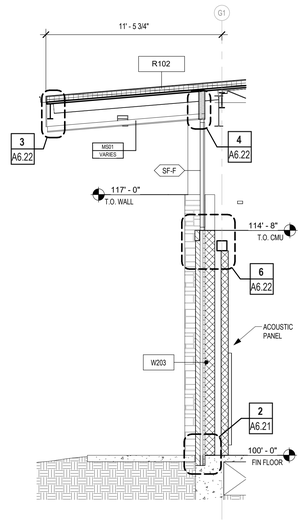
22 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



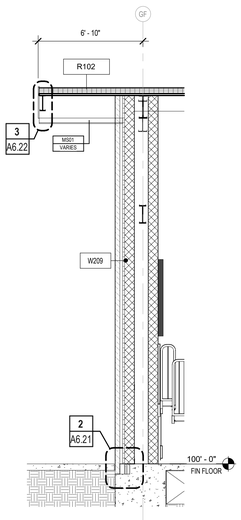
21 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



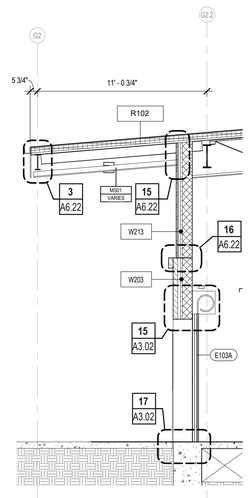
20 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



19 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



18 WALL SECTION - DANCE/GYM
1/4" = 1'-0"



17 WALL SECTION - DANCE/GYM
1/4" = 1'-0"

16 WALL SECTION - DANCE/GYM
1/4" = 1'-0"

15 WALL SECTION - DANCE/GYM
1/4" = 1'-0"

14 WALL SECTION - DANCE/GYM
1/4" = 1'-0"

13 WALL SECTION - DANCE/GYM
1/4" = 1'-0"

12 WALL SECTION - DANCE/GYM
1/4" = 1'-0"

11 WALL SECTION - DANCE/GYM
1/4" = 1'-0"

10 WALL SECTION - BAND HALL
1/4" = 1'-0"

9 WALL SECTION - BAND HALL
1/4" = 1'-0"

8 WALL SECTION - BAND HALL
1/4" = 1'-0"

7 WALL SECTION - BAND HALL
1/4" = 1'-0"

6 WALL SECTION - BAND HALL
1/4" = 1'-0"

5 WALL SECTION - BAND HALL
1/4" = 1'-0"

4 WALL SECTION - BAND HALL
1/4" = 1'-0"

3 WALL SECTION - BAND HALL
1/4" = 1'-0"

2 WALL SECTION - BAND HALL
1/4" = 1'-0"

1 WALL SECTION - BAND HALL
1/4" = 1'-0"

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WALL SECTIONS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A6.11
Drawn By: Author	
Date: 01.22.2025	

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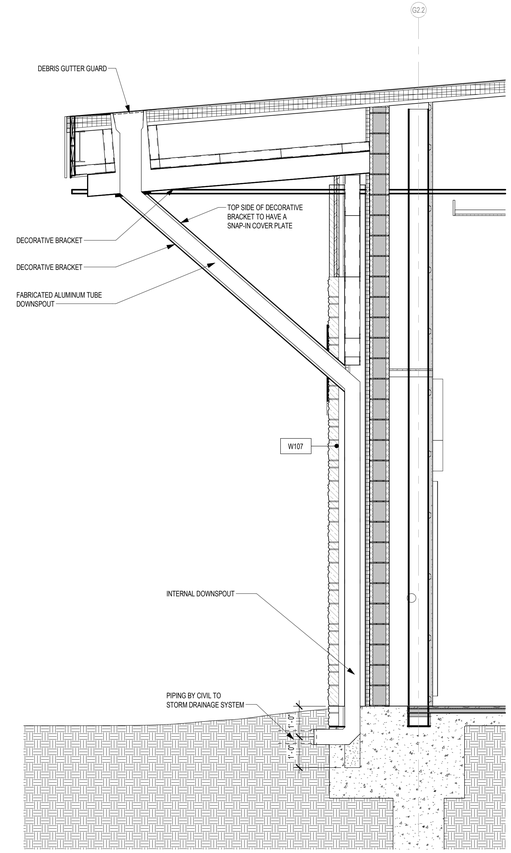
REFER TO OTHER A6 SHEETS FOR COMPLETE TYPICAL WALL SECTION NOTES.

TYPICAL WALL SECTION NOTES APPLY TO ALL WALL SECTIONS UNLESS NOTED OTHERWISE.

TYPICAL WALL SECTION NOTES APPLICABLE TO ALL A6 SHEETS



1 WALL SECTION - DOWNSPOUT/BRACKET
1/2" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

R102

REGISTERED ARCHITECT
SUSAN F. WISE
TX 24614
STATE OF TEXAS
10/24/2025

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WALL SECTIONS

PACKAGE	VOLUME
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Drawn By: Author	
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Revision / Date

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FOUNDATION DETAILS

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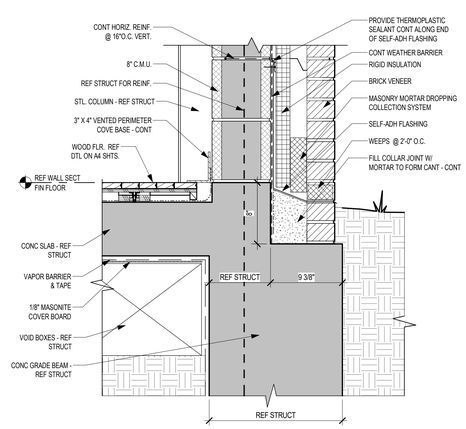
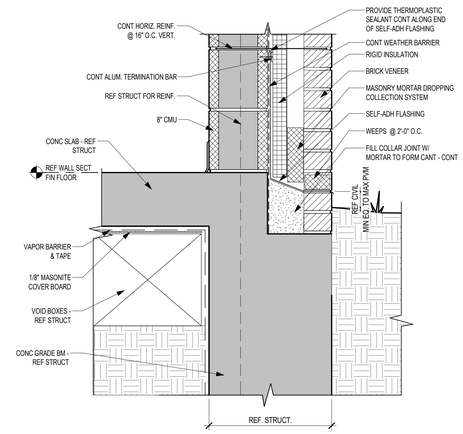
Job No. 1821-13-02	Sheet No. 100% QC A6.21
Drawn By: Author	
Date: 01.22.2025	



2 FOUNDATION DETAIL @ WOOD FLR. @ GROUND FACE CMU LEDGE & CMU WALL
1 1/2" = 1'-0"



1 FOUNDATION DETAIL @ BRICK LEDGE & CMU WALL
1 1/2" = 1'-0"

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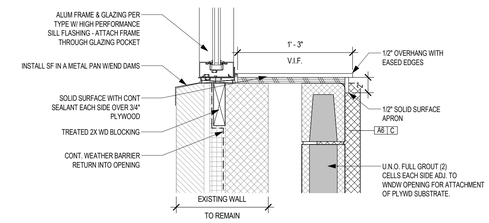
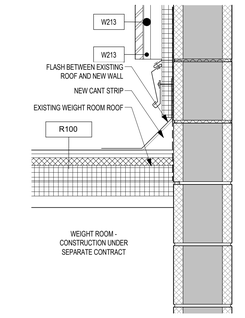
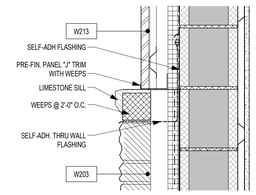


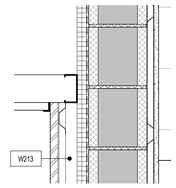
18 WALL SECTION DETAIL - CULINARY SILL
1 1/2" = 1'-0" BACK REF: A6.11



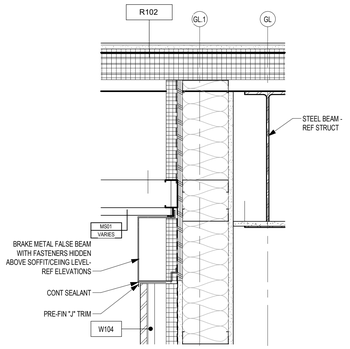
17 WALL SECTION DETAIL - LOW ROOF TO WALL - CMU
1 1/2" = 1'-0" BACK REF: A6.11



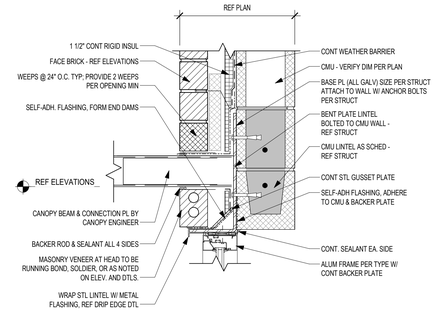
16 WALL SECTION DETAIL - MTL PANEL_STONE @ CFMF
1 1/2" = 1'-0" BACK REF: A6.11



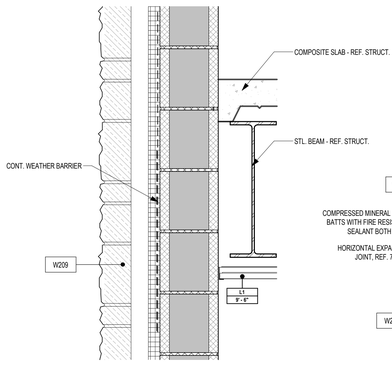
15 WALL SECTION DETAIL - WALL TO SOFFIT - CFMF
1 1/2" = 1'-0" BACK REF: A6.11



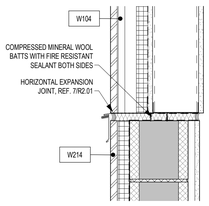
14 WALL SECTION DETAIL - SOFFIT TO WALL FALSE BEAM
1 1/2" = 1'-0" BACK REF: A6.11



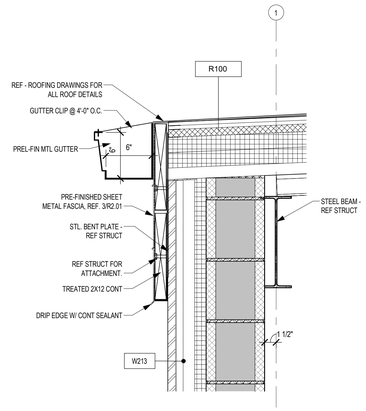
13 CANOPY DETAIL
1 1/2" = 1'-0"



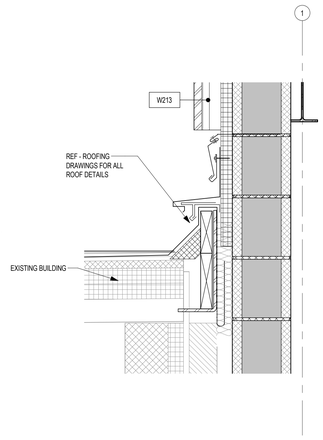
12 WALL SECTION DETAIL - CEILING TO CMU
1 1/2" = 1'-0" BACK REF: A6.11



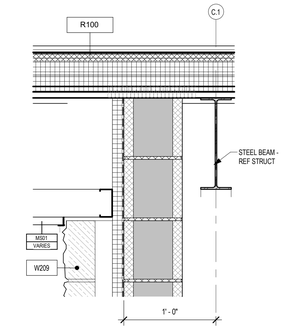
11 WALL SECTION DETAIL - HORIZ. EJ
1 1/2" = 1'-0" BACK REF: A6.11



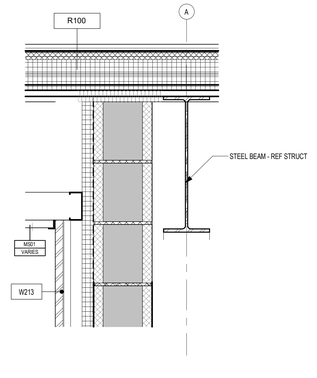
10 WALL SECTION DETAIL - FIREWALL TO ROOF
1 1/2" = 1'-0" BACK REF: A6.11



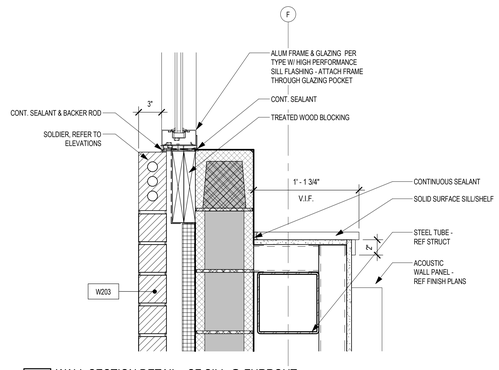
9 WALL SECTION DETAIL - METAL PANEL TO EXIST ROOF
1 1/2" = 1'-0" BACK REF: A6.11



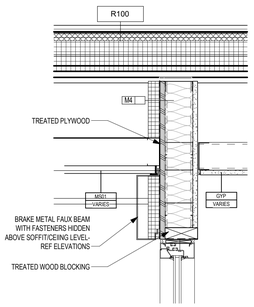
8 WALL SECTION DETAIL - SOFFIT TO STONE
1 1/2" = 1'-0" BACK REF: A6.11



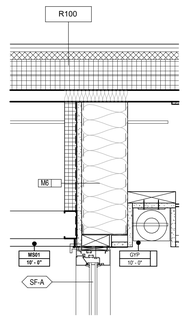
7 WALL SECTION DETAIL - SOFFIT TO WALL - CMU
1 1/2" = 1'-0" BACK REF: A6.11



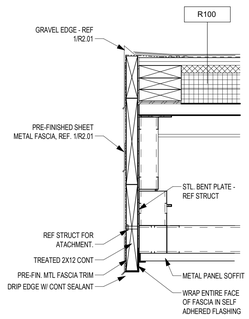
6 WALL SECTION DETAIL - SF SILL @ FURROUT
1 1/2" = 1'-0" BACK REF: A6.11



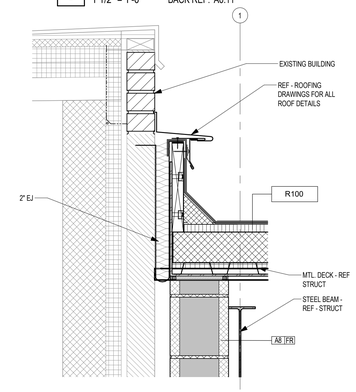
5 WALL SECTION DETAIL - SF HEAD
1 1/2" = 1'-0" BACK REF: A3.03



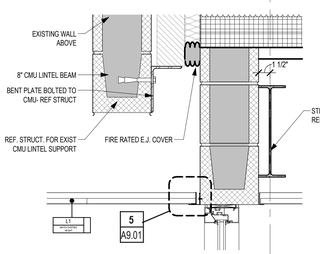
4 WALL SECTION DETAIL - STOREFRONT HEAD
1 1/2" = 1'-0" BACK REF: A3.03



3 WALL SECTION DETAIL - SOFFIT/FASCIA
1 1/2" = 1'-0" BACK REF: A6.11



2 WALL SECTION DETAIL - LOW ROOF @ FIREWALL
1 1/2" = 1'-0" BACK REF: A6.11



1 WALL SECTION DETAIL - WDW HEAD @ FIREWALL
1 1/2" = 1'-0" BACK REF: A3.03

Date

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WALL SECTION DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A6.22
Drawn By: Author	
Date: 01.22.2025	

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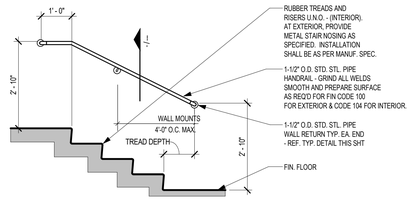
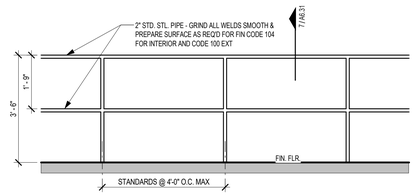
R1 METAL PIPE HANDRAIL - FREE STANDING - 3' - 0" HIGH

R2 METAL PIPE GUARDRAIL - FREE STANDING - 3' - 6" HIGH - NO HANDRAIL.

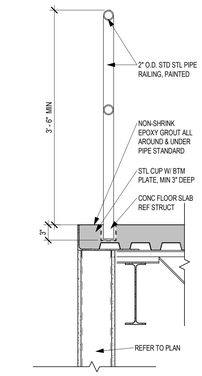
RAILING TYPE LEGEND



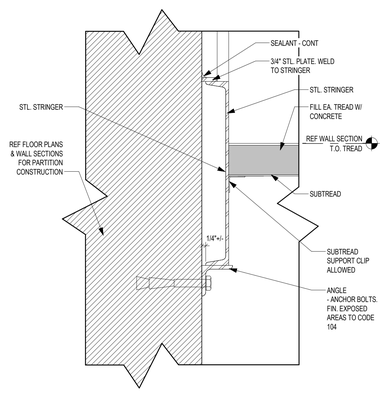
11 R1 - RAIL ELEVATION
1/2" = 1'-0"



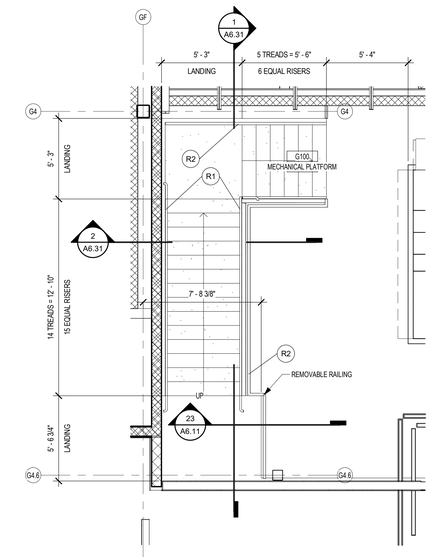
8 RAIL ELEVATION
1/2" = 1'-0"



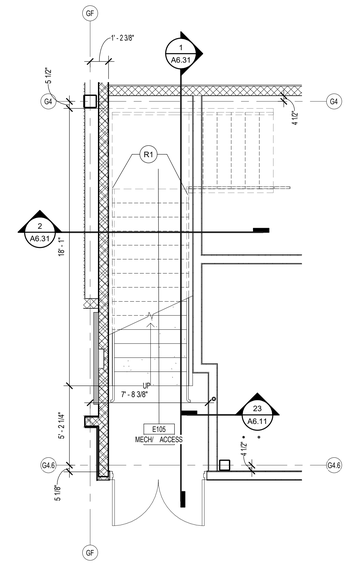
7 EDGE OF MEZZ GUARDRAIL - INSERTS
1" = 1'-0"



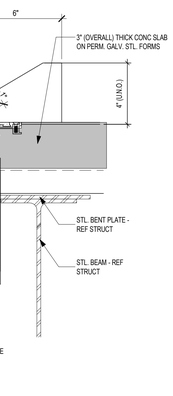
6 TYPICAL STAIR STRINGER DETAIL
3" = 1'-0"



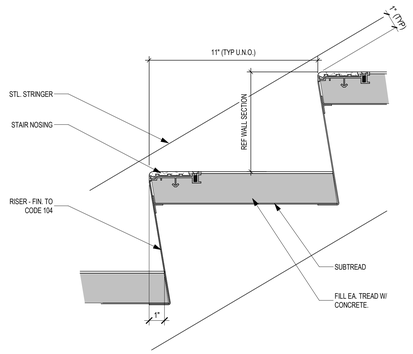
10 ENLARGED STAIR PLAN - SECTION G
1/4" = 1'-0" BACK REF: A1.15



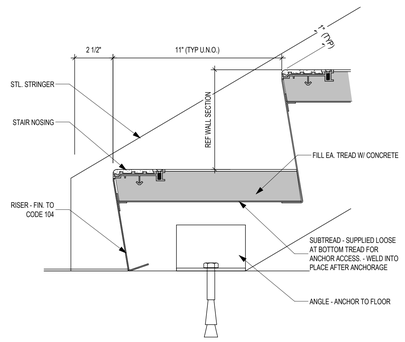
9 ENLARGED STAIR LAN - SECTION E
1/4" = 1'-0" BACK REF: A1.15



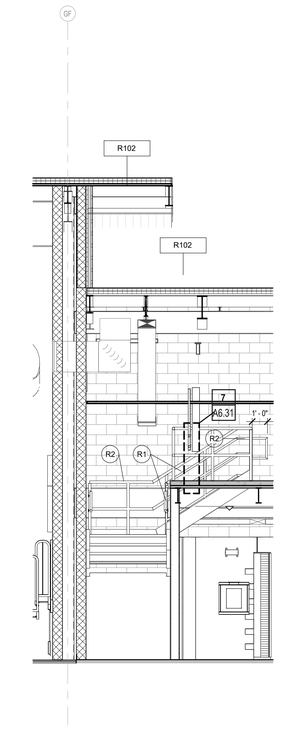
5 TPICAL EGRESS STAIR RISER AND TREAD DETAIL
3" = 1'-0"



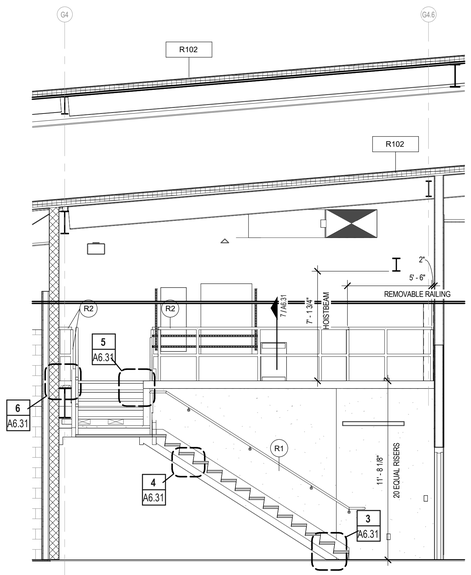
4 TYPICAL RISER AND TREAD DETAIL
3" = 1'-0"



3 TYPICAL BOTTOM RISER AND TREAD DETAIL
3" = 1'-0"



2 STAIR SECTION 02
1/4" = 1'-0"



1 STAIR SECTION 01
1/4" = 1'-0"

Revision / Date

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STAIR SECTIONS, STAIR AND RAILING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. 100% QC A6.31
Drawn By: Author	
Date: 01.22.2025	

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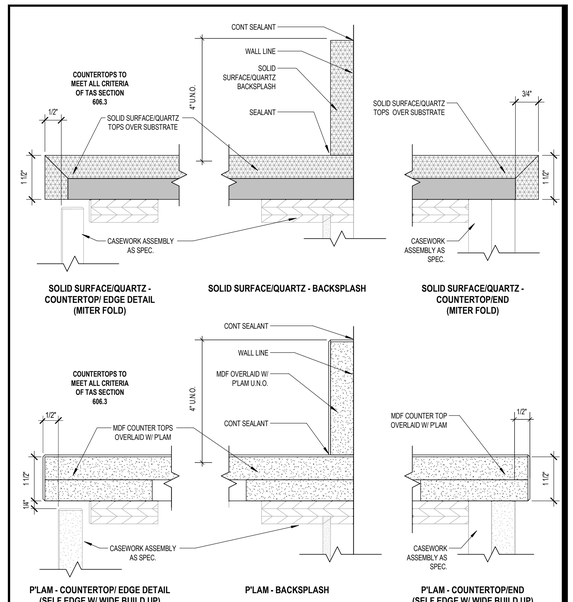
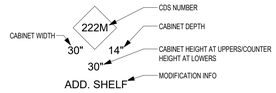


COUNTERTOP DETAILS (6" = 1' - 0")



ALL CASEWORK INDICATED WITH NUMERICAL TAGS REFER TO THE NORTH AMERICAN ARCHITECTURAL WOODWORK STANDARDS 4.0 CABINET DESIGN SERIES, WHICH IS A SET OF DESIGN STANDARDS PROVIDED AS A FREE RESOURCE TO ASSIST ARCHITECTS, DESIGN PROFESSIONALS AND CASEWORK USERS IN DESIGNING CABINETRY. ANY ITEMS DESIGNATED WITH A "M" AT THE END OF THE NUMBER INDICATES A MODIFICATION HAS BEEN MADE TO THAT UNIT AND THE MODIFICATION WILL APPEAR BELOW THE TAG.

CABINET DIMENSIONS INDICATE NOMINAL OUTSIDE DIMENSION (FLOOR TO TOP OF COUNTERTOP FOR HEIGHT AND FACE OF FINISHED WALL TO FACE OF CABINET DOOR FOR DEPTH.) MANUFACTURERS ARE PERMITED A TOLERANCE OF +/- 1/2" IN WIDTH ONLY.

THERE ARE 5 SERIES OF CABINET STYLES:

100 SERIES = BASE CABINETS W/OUT DRAWERS
200 SERIES = BASE CABINETS W/ DRAWERS
300 SERIES = WALL HUNG CABINETS
400 SERIES = TALL STORAGE CABINETS
500 SERIES = TALL WARDROBE CABINETS

CASEWORK TYPE TAGS

1. COORDINATE DIMENSIONS AND CLEARANCE REQUIREMENTS FOR ALL FILE CABINETS, APPLIANCES AND EQUIPMENT PROVIDED BY CONTRACTOR AND/OR OWNER.

2. COORDINATE PLUMBING AND/OR ELECTRICAL REQUIREMENTS FOR APPLIANCES AND EQUIPMENT WITH CASEWORK.

3. PROVIDE TRIM AND FILLER PANELS WHERE EQUIPMENT IS LOCATED WITHIN CABINET UNITS.

4. COUNTERTOPS TO MEET THE CRITERIA PER TAS SECTION 606.3. LAVATORIES AND SINKS SHALL BE INSTALLED WITH THE HIGHER OF THE RIM OR COUNTER SURFACE 34 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND.

5. CONTINUE COUNTERTOP BACKSPLASH TO SIDEWALLS WHERE SUCH CONDITIONS OCCUR, UNLESS NOTED OTHERWISE.

6. PROVIDE CABINET LOCKS AT ALL DOORS AND DRAWERS LOCATED WITHIN RECEPTION, CLINC, AND AT TEACHER CABINETS WITHIN CLASSROOMS.

7. PROVIDE STAMPED NUMBER ON CYLINDER LOCK FACE. COORDINATE NUMBERING REQUIREMENT WITH ARCHITECT.

8. PROVIDE COUNTERTOP SUPPORT BRACKETS AT 36" O.C. MAX. AT KNEE SPACES AND LAVATORY COUNTERS, UNLESS NOTED OTHERWISE.

9. PROVIDE 2" DIA. GROMMETS AT ALL WORKSTATIONS WITH KNEE SPACES AND WHERE ACCESS TO POWER AND/OR LOW VOLTAGE IS NEEDED. COORDINATE FINAL LOCATIONS WITH ARCHITECT PRIOR TO INSTALLATION.

10. PROVIDE BOTTOM CLOSURE FOR FILLER PANELS AT TOE SPACE AND TOP AND BOTTOM OF UPPER WALL CABINETS TO FINISH COMPLETELY.

11. EXPOSED CORNERS AT PLASTIC LAMINATE COUNTERTOPS TO HAVE 1" RADIUS CORNERS. EXPOSED CORNERS AT QUARTZ/SOLID SURFACE COUNTERTOPS TO HAVE 1/2" RADIUS CORNERS. EXCLUDES WATERFALL COUNTERTOP CONDITIONS.

12. PROVIDE WALL BASE FOR RECESSED TOE-KICKS AND BACK OF KNEE SPACE(S) UNLESS NOTED OTHERWISE.

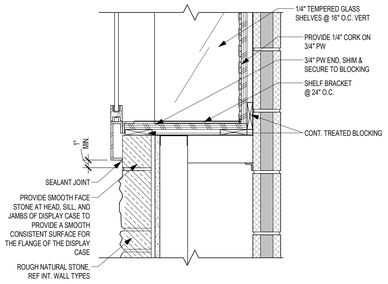
13. MILLWORK SHALL BE CAULKED TO WALLS.

14. CLOSE TOP AND BOTTOM VOIDS BETWEEN CORNER CABINETS AND FILLER PANELS WHERE BLIND CORNERS ARE NOT USED.

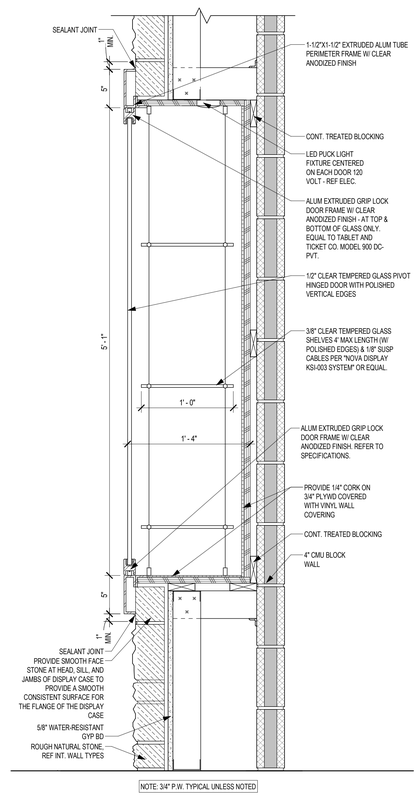
15. SPLICES ARE NOT PERMITTED ON COUNTERTOP LAMINATE MATERIAL LESS THAN 144" LONG.

16. ENSURE FILE DRAWERS ACCOMODATE 8 1/2"x11" PENDAFLEX HANGING FILES WITH TABS FRONT TO REAR, TYP.

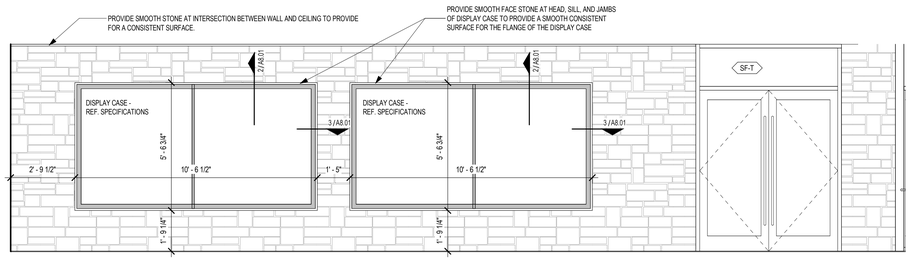
GENERAL CASEWORK NOTES



3 DISPLAY CASE JAMB
1 1/2" = 1'-0"



2 DISPLAY CASE 16" @ GYP WALL
1 1/2" = 1'-0"



1 INTERIOR ELEVATION - LOBBY A132
3/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX



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CASEWORK LEGENDS AND ELEVATIONS

PACKAGE | VOLUME

Job No. 1821-13-02
Drawn By:
Date: 01.22.2025
Sheet No. 100% QC
A8.01

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS - V23.rvt

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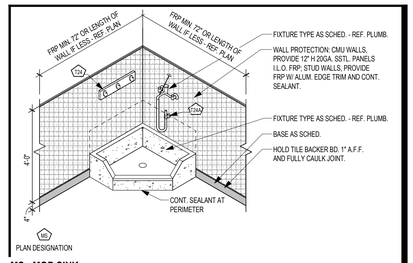
FRP MIN. 72" OR LENGTH OF WALL IF LESS - REF. PLAN
FRP MIN. 72" OR LENGTH OF WALL IF LESS - REF. PLAN
FIXTURE TYPE AS SCHED. - REF. PLUMB.
WALL PROTECTION. CMU WALLS, PROVIDE 12" H 20GA. SS/TL. PANELS I.L.O. FRP. STUD WALLS, PROVIDE FRP W/ ALUM. EDGE TRIM AND CONT. SEALANT.
FIXTURE TYPE AS SCHED. - REF. PLUMB.
BASE AS SCHED.
HOLD TILE BACKER BD. 1" A.F.F. AND FULLY CAULK JOINT.
CONT. SEALANT AT PERIMETER
4'-0"
4"
132
A
B
C
D
E
105
105
105

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REFER TO FOODSERVICE DESIGN PROFESSIONALS SPECIFICATIONS AND SUBSEQUENT SHEETS FOR ADDITIONAL COORDINATION INFORMATION

EXISTING EQUIPMENT NOTES (IF EXISTING EQUIPMENT IS PROVIDED IN THIS PROJECT):

1. EXISTING EQUIPMENT NOT SCHEDULED FOR RE-USE TO BE RELOCATED BY THE K.E.C. COORDINATE WITH OWNER FOR NEW LOCATION.
2. ALL UTILITIES NOT SCHEDULED FOR RE-USE TO BE CAPPED & COVERED BY REQUIRED DISCIPLINE.
3. K.E.C. TO VERIFY ALL EXISTING UTILITY LOCATIONS & COORDINATE WITH ALL EQUIPMENT AS REQUIRED.

8 EXISTING EQUIPMENT NOTES2
NOT TO SCALE

ARCHITECT TO VERIFY/COORDINATE THE AESTHETIC OPTIONS BELOW (FOOD SERVICE COLOR, MATERIAL, OR SIGNAGE SELECTIONS) IF THESE ITEMS ARE PROVIDED IN THIS PROJECT:

1. COUNTERTOPS: STONE (STAINLESS STEEL IS PROVIDED UNLESS OTHERWISE SPECIFIED).
2. TRAY SLIDES: CORIAN OR STONE (STAINLESS STEEL IS PROVIDED UNLESS OTHERWISE SPECIFIED).
3. COUNTER FRONTS: CERAMIC TILE, 3 FORM, OR PLASTIC LAMINATE.
4. SNEEZE GUARDS: STONE INSETS.
5. GENERAL COLOR, MATERIAL AND GRAPHIC SELECTIONS:
   - A. DISPLAY AIR SCREEN MERCHANDISERS - COLOR SELECTION: POWDER COAT OR PLASTIC LAMINATE (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - B. BAKERY DISPLAY CASES - COLOR SELECTION: POWDER COAT OR PLASTIC LAMINATE (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - C. PASS THRU OR REACH IN HOLDING CABINETS - COLOR SELECTION: POWDER COAT (MFG.: TRUE) OR PLASTIC LAMINATE (MFG.: TRAULSEN) (S/S IS PROVIDED UNLESS OTHERWISE SPECIFIED).
   - D. HANGING HEAT LAMPS - TRACK AND FIXTURE COLOR SELECTION.
   - E. HEATED MERCHANDISERS.
   - F. PORTABLE GUIDE RAILS - STANCHION AND BELT COLOR SELECTION.
   - G. POPCORN MACHINE - SIGNAGE SELECTION.
   - H. BOTTLE COOLER - SIGNAGE SELECTION.
   - I. GRAPHICS PACKAGE INFORMATION.
   - J. HOT FOOD WELL COVERS.
6. ARCHITECT TO VERIFY/COORDINATE THE FINISHES BELOW:
   - A. WALLS: CERAMIC TILE, FLAT FRP, OR MOLDED FRP (SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE AS APPROVED BY LOCAL JURISDICTION).
   - B. CEILINGS: REMOVABLE VINYL FACE TILE (SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE AS APPROVED BY LOCAL JURISDICTION).
   - C. FLOORS: TILE, EPOXY, OR RUBBERIZED FLOORING SYSTEM (SMOOTH, IMPERVIOUS, EASILY CLEANABLE AND SLIP RESISTANT AS APPROVED BY LOCAL JURISDICTION) (COORDINATE FLOOR TILE TRANSITION AT SERVING LINES).
   - D. FLOORS: WALK-IN ASSEMBLY - EXTEND KITCHEN FLOOR FLUSH INTO WALK-IN ASSEMBLY WITH COVED BASE.
   - E. FURR DOWNS ABOVE SERVING COUNTERS.

5 ARCHITECTURAL COORDINATION NOTES1
NOT TO SCALE

CRITICAL NOTES:

1. CONTRACTOR MUST COORDINATE AND VERIFY ALL DIMENSIONS WITH FOOD SERVICE EQUIPMENT SHOP DRAWINGS AND MANUFACTURER'S DATA. DIMENSIONS SHOWN ARE FOR DESIGN AND BIDDING PURPOSES ONLY.
2. WALK-IN ASSEMBLY DOORS MUST BE LEFT OPEN WHILE INTERIOR CONCRETE FLOOR CURES.
3. INSTALL PROTECTIVE COVER ON WALK-IN ASSEMBLY WALL PANELS BEFORE INSTALLING CONCRETE FLOORS AND CURBS.
4. REFER TO GENERAL SPECS - DIVISION 27 TO PROVIDE CONDUIT, DATA, AND INTERCONNECT THE PANIC ALARM INSIDE FREEZER TO THE BUILDING AUTOMATION SYSTEM FOR NOTIFICATION TO DISTRICT PERSONNEL IN THE EVENT OF STAFF ENTRAPMENT.
5. PIPING AND DRAINAGE SYSTEMS (SANITARY AND GREASE-LADEN). SYSTEMS MUST BE CLEANED AND FLUSHED BEFORE THE FINAL CONNECTION WITH FOOD SERVICE EQUIPMENT - CRITICAL (DIV. 22).

7 CRITICAL NOTES1
NOT TO SCALE

DIVISION 26 (ELECTRICAL) IS RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE FOLLOWING LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL ELECTRICAL REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. ROUGH-IN AND FINAL CONNECTION OF ELECTRICAL SYSTEMS TO FOOD SERVICE EQUIPMENT, WALK-IN ASSEMBLIES, AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR). ACCESSORIES PROVIDED LOOSE WITH FOOD SERVICE EQUIPMENT BY SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 26.
6. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS REFRIGERANT FOR PIPING TO REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
7. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR INTERCONNECT INTERCONNECT CABLES BETWEEN LAN AND POS TERMINALS, CHANGE-MAKERS, PRE-CHECK UNITS, PRINTERS, CPUS, ETC. DIVISION 26 TO VERIFY WHERE THE CONDUIT IS TO RUN FOR POS SYSTEM (I.E., MANAGER'S OFFICE OR IDF ROOM).
8. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR FIRE SUPPRESSION SYSTEMS. INTERCONNECT FIRE PROTECTION SYSTEM TO PANEL BOX SHUNT TRIPS AND BUILDING ALARM.
9. WALK-IN LIGHT FIXTURE INSTALLATION (PROVIDED LOOSE BY SECTION 11 40 00) (IF WALK-IN IS PROVIDED IN THIS PROJECT).
10. TABLE LIMIT SWITCH (PROVIDED LOOSE BY SECTION 11 40 00) (IF DISHMACHINE IS PROVIDED IN THIS PROJECT) - INSTALL AND INTERCONNECT TO DISHMACHINE .
11. ELECTRICAL MATERIALS AND DEVICES (SHUNT-TRIP BREAKERS, SURGE PROTECTORS, LIGHTING CONTROL DEVICES, CONDUIT, WIRE, ETC.).
12. SWITCHES AND STAINLESS STEEL DISCONNECTS AS REQUIRED (PROVIDE, LOCATE, AND INSTALL – TO BE IN AN ACCESSIBLE LOCATION).
13. CHARGING STATIONS FOR FORKLIFTS, PALLET STACKERS, AND PALLET JACKS (SIZE, PROVIDE, LOCATE, AND INSTALL) (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
14. INTERCONNECTION BETWEEN CONDENSATE FAN AND DISHMACHINE CONTROL PANEL (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
15. INTERCONNECTION BETWEEN EXHAUST HOOD FANS AND SWITCH (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
16. INTERCONNECTION BETWEEN EXHAUST HOOD LIGHTS AND SWITCH (IF EQUIPMENT IS PROVIDED IN THIS PROJECT).
17. DOOR HEATERS, LIGHTS, COILS, AND PRESSURE RELIEF PORTS PRE-WIRED TO JUNCTION BOX AT TOP OF WALK-IN ASSEMBLIES (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) PROVIDED BY SECTION 11 40 00. FINAL CONNECTION BY DIV. 26.
18. IF ANY ELECTRICAL ACCESSORIES, FITTINGS, AND CORD/PLUGS ARE PROVIDED LOOSE WITH EQUIPMENT BY 11 40 00, DIV.26 IS TO ATTACH TO EQUIPMENT AND PROVIDE FINAL CONNECTION.
19. PROVIDE WATERPROOF RECEPTACLES IN WET AREAS.
20. ALL ELECTRICAL LIGHTING, POWER, AND DISTRIBUTION SYSTEMS.
21. ALL ELECTRICAL CONNECTIONS BENEATH EXHAUST HOODS (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) TO EXTEND TO SHUNT TRIP BREAKERS WITH ELECTRICAL PANEL BOX FOR SHUTDOWN DURING FIRE MODE.
22. RECEPTACLES ARE TO BE PRE-WIRED TO THE JUNCTION BOX OR LOAD CENTER FOR FINAL CONNECTION BY DIVISION 26.
23. DO NOT INTERCONNECT MORE THAN THREE (3) CONVENIENCE OUTLETS ON ONE (1) BREAKER.
24. OTHER THAN CONVENIENCE OUTLETS, ALL ELECTRICAL CONNECTIONS SHOWN ON FOOD SERVICE PLANS ARE DEDICATED BREAKERS.
25. DOORBELL AT RECEIVING DOOR (PROVIDE AND INSTALL – TO BE AUDIBLE THROUGHOUT KITCHEN, OFFICE, AND DRY STORAGE ROOM).
26. ADEQUATE LIGHTING AT RECEIVING DOOR.
27. (IF WALK-IN IS PROVIDED IN THIS PROJECT) WALK-IN MANUFACTURER IS TO PROVIDE TWO (2) EDWARDS 860 SERIES (OR EQUAL) RED LENS, SURFACE-MOUNTED XENON EMERGENCY STROBE BEACONS. WALK-IN MANUFACTURER WILL INSTALL ONE(1) LOCATED IN THE KITCHEN ABOVE WALK-IN FREEZER DOOR (OR COOLER DOOR WHEN FREEZER IS WITHIN COOLER IN AN 'INLINE' ASSEMBLY), AND PROVIDE THE SECOND UNIT LOOSE FOR INSTALLATION BY DIVISION 26 LOCATED IN THE CAFETORIUM (DIVISION 26 TO COORDINATE LOCATION WITH OWNERS AND ARCHITECT). DIVISION 26 IS TO PROVIDE ALL CONDUIT AND WIRING REQUIRED AND INTERCONNECT THE ILLUMINATED PUSH BUTTON PANIC ALARM IN THE WALK-IN FREEZER TO BOTH STROBE BEACONS (CRITICAL). COORDINATE WITH DIVISION 27. REFER TO GENERAL SPECIFICATIONS FOR ADDITIONAL DETAILS.
28. DEDICATED CIRCUIT FOR HEATED DRAIN LINE CONNECTION IN WALK-IN FREEZER AT EACH COIL (IF WALK-IN IS PROVIDED IN THIS PROJECT).
29. GFCI BREAKER FOR ALL RECEPTACLES UNDER EXHAUST HOODS (IF HOODS ARE PROVIDED IN THE PROJECT), AND HOLDING CABINETS (IF HOLDING CABINETS ARE PROVIDED IN THIS PROJECT), TO BE LOCATED WITHIN KITCHEN'S ELECTRICAL BREAKER PANEL AND NOT AT THE RECEPTACLES.
30. REMOTE GFCI RESET SWITCHES TO BE ACCESSIBLE TO USER.
31. ALL ELECTRICAL BELOW EXHAUST HOOD (IF HOODS ARE PROVIDED IN THE PROJECT) ARE TO HAVE SHUNT TRIP BREAKERS.
32. INTERCONNECT TEMP SENSOR TO EXHAUST / SUPPLY FANS (IF HOODS ARE PROVIDED IN THE PROJECT).

NOTE: ELECTRICAL CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 26. FOR ADDITIONAL REQUIREMENTS, REFER TO THE ELECTRICAL ENGINEER'S DRAWINGS AND FOOD SERVICE GENERAL SPECS.

6 ELECTRICAL COORDINATION NOTES2
NOT TO SCALE

DIVISION 22 (PLUMBING) RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH-IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL PLUMBING REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. EMPTY PVC CONDUIT WITH WIDE-SWEEP BENDS FOR REFRIGERANT PIPING TO BEVERAGE LINES, CO2 LINES, AND REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
6. ROUGH-IN AND FINAL PLUMBING CONNECTIONS TO FOOD SERVICE EQUIPMENT AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR). ACCESSORIES PROVIDED LOOSE WITH FOOD SERVICE EQUIPMENT BY SECTION 11 40 00 TO BE FIELD INSTALLED BY DIVISION 22. THIS INCLUDES BUT IS NOT LIMITED TO INSTALLATION OF ALL FAUCETS (WATER FILL FAUCETS, PRE-RINSE FAUCETS, ETC.), HOSES, GAS DISCONNECTS, AND DRAINS FROM EQUIPMENT POINT OF CONNECTION TO BUILDING PLUMBING SYSTEMS. ALL DRAIN LINES ARE PROVIDED AND INSTALLED BY DIV. 22.
7. KITCHEN EQUIPMENT CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL FAUCETS (WATER FILL FAUCETS, PRE-RINSE FAUCETS, ETC.), DRAIN FITTINGS, MIXING VALVES, CONTROL VALVES, WATER PRESSURE REGULATORS, VACUUM BREAKERS, AND ALL ACCESSORIES FOR EQUIPMENT SPECIFIED UNDER 11 40 00. DIVISION 22 IS RESPONSIBLE FOR INSTALLATION.
8. INDIRECT DRAIN LINE RUNS FROM EQUIPMENT TO NEAREST DRAIN OR FLOOR SINK. LINES TO BE TYPE 'K' COPPER.
9. IF ANY PLUMBING ACCESSORIES OR FITTINGS ARE PROVIDED LOOSE WITH EQUIPMENT BY 11 40 00, DIV. 22 IS TO ATTACH TO EQUIPMENT AND PROVIDE FINAL CONNECTION.
10. GAS SUPPLY SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM.
11. WATER SUPPLY SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM.
12. COMPRESSED AIR SYSTEMS WITH ALL COMPONENTS AND FITTINGS AS REQUIRED FOR A COMPLETE SYSTEM (IF REQUIRED FOR THIS PROJECT).
13. PIPING AND DRAINAGE SYSTEMS (SANITARY AND GREASE-LADEN). SYSTEMS MUST BE CLEANED AND FLUSHED BEFORE THE FINAL CONNECTION WITH FOOD SERVICE EQUIPMENT - CRITICAL.
14. FLOOR SINKS (PROVIDE AND INSTALL). FLANGE AND GRATES TO BE FLUSH WITH FINISHED FLOOR.
15. FLOOR DRAINS (PROVIDE AND INSTALL). FLANGE AND GRATES TO BE FLUSH WITH FINISHED FLOOR.
16. TRENCH DRAINS (PROVIDE AND INSTALL). TRENCH LINERS PROVIDED BY 11 40 00. FLANGE AND LINERS TO BE FLUSH WITH FINISHED FLOOR.
17. GREASE TRAPS AS REQUIRED. VERIFY WITH LOCAL CODES TO BYPASS OR PIPE THRU GREASE TRAP AND/OR INTERCEPTOR.
18. P-TRAPS AS REQUIRED (INCLUDING ALL DISPOSERS).
19. INTERCONNECT WATER THRU WATER FILTER (FILTER PROVIDED BY 11 40 00 UNLESS OTHERWISE SPECIFIED) TO EQUIPMENT.
20. GAS QUICK DISCONNECT INSTALLATION (QUICK DISCONNECT PROVIDED BY 11 40 00).
21. SAFETY RESTRAINT CABLE INSTALLATION (SAFETY RESTRAINT CABLE PROVIDED BY 11 40 00).
22. SPECIFIED COUPLINGS AND PIPING TO ALL EQUIPMENT FURNISHED BY 11 40 00.
23. AIR COMPRESSORS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
24. WATER SOFTENERS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
25. PRESSURE BOILERS (IF REQUIRED FOR THIS PROJECT) (SIZE, PROVIDE, AND INSTALL, UNLESS OTHERWISE SPECIFIED).
26. HAND SINKS (PROVIDE (UNLESS OTHERWISE SPECIFIED) AND INSTALL). PROVIDE HOT WATER TEMPERING VALVE IF REQUIRED. WATER TEMPERATURE TO BE AT LEAST 100 DEGREES AND FLOW FOR AT LEAST 20 SECONDS.
27. ICE BIN DRAIN INSULATION (IF ICE MACHINE IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
28. UNIONS AT DISPOSER SOLENOID VALVES (IF DISPOSER IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
29. BACK FLOW PREVENTION AS REQUIRED (PROVIDE AND INSTALL - INCLUDING ALL DISPOSERS). BACK- SIPHONAGE SHALL BE INSTALLED AT ALL FIXTURES AND EQUIPMENT WHERE BACKFLOW AND/OR BACK-SIPHONAGE MAY OCCUR AND WHERE A MINIMUM AIR GAP CANNOT BE PROVIDED BETWEEN THE WATER TO THE FIXTURE OR EQUIPMENT AT ITS FLOOD/LEVEL RIM. VACUUM BREAKERS, WHEN FURNISHED WITH EQUIPMENT, SHALL OVERRIDE THE ABOVE, IF ACCEPTABLE WITH APPLICABLE CODES. DIVISION 22 RESPONSIBLE FOR VERIFYING REQUIREMENT WITH LOCAL CODES.
30. JANITOR SINK WITH FAUCET (PROVIDE AND INSTALL).
31. FREEZE PROOF HYDRANT AT EXTERIOR OF BUILDING BY RECEIVING DOOR (PROVIDE AND INSTALL).
32. REVERSE OSMOSIS SYSTEMS (SIZE, PROVIDE (UNLESS OTHERWISE SPECIFIED), LOCATE AND INSTALL).
33. ALL PIPING WITHIN COUNTER BODY OR UNDER FABRICATED COUNTERS TO BE RUN TO A CONNECTION POINT BELOW COUNTER BODY BY SECTION 11 40 00. FINAL CONNECTION BY DIVISION 22.
34. EXHAUST HOOD CONDENSATE DRAIN CONNECTIONS (IF EXHAUST HOOD IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL).
35. INTERCONNECTION OF 1/2" CW TO PRE-RINSE AND DISPOSERS CONE/BODY INLETS PIPED THROUGH SOLENOID AND VACUUM BREAKER (IF DISPOSER IS PROVIDED IN THIS PROJECT).
36. FIRE SYSTEM PIPING. EXPOSED PIPING TO BE CHROME PLATED.
37. PIPE 1/2" COLD WATER TO SWIRL INLETS AT DISPOSERS (IF DISPOSER IS PROVIDED IN THIS PROJECT).
38. WATER TREATMENT FOR ICE BUILDERS (NON-CHLORINATED WATER WITH A PH LEVEL OF 10 OR HIGHER) AND ANY DRAINS AND OVERFLOWS. PIPING FROM ICE BUILDERS TO TUMBLE CHILLERS BY DIV. 23 (IF ICE BUILDERS AND TUMBLE CHILLERS ARE PROVIDED IN THIS PROJECT).

NOTE: WATER AND DRAIN CONNECTIONS INDICATED ARE THOSE REQUIRED FOR THE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 22. FOR ADDITIONAL REQUIREMENTS, REFER TO THE PLUMBING ENGINEER'S DRAWINGS AND FOOD SERVICE GENERAL SPECS.

4 PLUMBING COORDINATION NOTES2
NOT TO SCALE

DIVISION 23 (MECHANICAL) RESPONSIBLE FOR BUT NOT LIMITED TO:

1. **DO NOT ROUGH-IN FROM FDP DRAWINGS. REFER TO THE KITCHEN EQUIPMENT CONTRACTOR'S DIMENSIONED SHOP DRAWINGS. DIMENSIONS INDICATED ARE TO BE VERIFIED BY KITCHEN EQUIPMENT CONTRACTOR AND ADJUSTED AS REQUIRED BY EQUIPMENT AND/OR FIELD CONDITIONS.**
2. SECTION 11 40 00 TO VERIFY UTILITY REQUIREMENTS OF ANY EXISTING EQUIPMENT.
3. ALL CONNECTIONS SHALL BE MADE FOLLOWING LOCAL CODES AND NATIONAL STANDARDS, EXCEPT WHERE PLANS AND SPECIFICATIONS EXCEED THOSE CODES AND STANDARDS.
4. VERIFY ALL MECHANICAL REQUIREMENTS WITH ENGINEERING DRAWINGS.
5. EMPTY EMT CONDUIT WITH PULL-WIRE AND WIDE-SWEEP BENDS FOR REFRIGERANT PIPING TO REMOTE FOOD SERVICE EQUIPMENT REFRIGERATION SYSTEMS.
6. ROUGH-IN AND FINAL CONNECTION OF MECHANICAL SYSTEMS TO FOOD SERVICE EQUIPMENT, WALK-IN ASSEMBLIES, AND BETWEEN COMPONENTS (INCLUDING MATERIALS AND LABOR).
7. TESTING AND BALANCING FOR ROOMS AND EXHAUST HOODS TO BE PERFORMED BY MECHANICAL CONTRACTOR. BALANCE REPORT FOR FOOD SERVICE EXHAUST HOODS TO BE PROVIDED TO FOODSERVICE DESIGN PROFESSIONALS (FDP) IMMEDIATELY UPON COMPLETION (SEND TO HOUSTON.SUBMITTAL@FDP.ORG FOR HOUSTON OFFICE AND DALLAS.SUBMITTAL@FDP.ORG FOR DALLAS OFFICE) AND MUST BE SUBMITTED WITH O&M MANUALS.
8. EXHAUST HOODS, CONDENSATE HOODS, FIRE SUPPRESSION SYSTEMS, CONNECTIONS AND CONTROLS (PROVIDE AND INSTALL – *UNLESS OTHERWISE SPECIFIED*). PROVIDE TEMPERED AIR AT ALL SUPPLY DUCTS.
   - A. IF EXHAUST/CONDENSATE HOODS AND FIRE SUPPRESSION SYSTEMS ARE SPECIFIED UNDER SECTION 11 40 00, DIVISION 23 IS RESPONSIBLE FOR ALL EXHAUST AND CONDENSATE HOOD CONNECTIONS (PROVIDE AND INSTALL).
9. VFD SYSTEM AND CONTROLLERS, WHEN REQUIRED BY CODE (PROVIDE AND INSTALL).
10. PROVIDE AND INSTALL ALL VENTILATION (DIRECT OR INDIRECT), AIR CONDITIONING AND HEATING SYSTEMS (UNLESS OTHERWISE SPECIFIED).
11. COORDINATE SUPPLY AND RETURN DUCTS ABOVE SERVING COUNTERS OR OPEN-AIR REFRIGERATED MERCHANDISERS. NO COLD AIR TO BLOW DIRECTLY ON HOT FOOD COUNTERS.
12. COORDINATE SUPPLY AND RETURN DUCTS AWAY FROM EQUIPMENT WITH TOP MOUNTED REFRIGERATION. NO COLD AIR TO BLOW DIRECTLY ON COMPRESSORS.
13. MECHANICAL CONTRACTOR TO LOCATE TEMPERATURE MONITORS WITHIN RETURN DUCTS.
14. CIRCULATING AIR ABOVE WALK-IN ASSEMBLIES (PROVIDE AND INSTALL).
15. CIRCULATING AIR ABOVE AND IN AIR GAPS AT WAREHOUSE COLD STORAGE ASSEMBLIES (PROVIDE AND INSTALL).
16. WATER CHILLERS AS REQUIRED (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) (PROVIDE, SIZE AND LOCATE).
17. PIPING FROM ICE BUILDERS TO TUMBLE CHILLERS (IF EQUIPMENT IS PROVIDED IN THIS PROJECT) (PROVIDE, SIZE AND LOCATE).

NOTE: MECHANICAL CONNECTIONS INDICATED ARE THOSE REQUIRED FORTHE FOOD SERVICE EQUIPMENT AND THOSE REQUIRED FOR SUPPORT EQUIPMENT FURNISHED BY DIVISION 23. FOR ADDITIONAL REQUIREMENTS, REFER TO THE MECHANICAL ENGINEER'S DRAWINGS AND FOOD SERVICE GENERAL SPECS.

3 MECHANICAL COORDINATION NOTES2
NOT TO SCALE

GENERAL CONTRACTOR RESPONSIBLE FOR BUT NOT LIMITED TO:

1. ANY WALL PENETRATION REQUIRED FOR FOOD SERVICE EQUIPMENT UTILITIES. ESCUTCHEON PLATES OR S/S SLEEVES TO BE PROVIDED AND INSTALLED AS NEEDED.
2. BULK FREEZER VENTILATION PIPE (IF BULK FREEZER IS PROVIDED IN THIS PROJECT) (PROVIDE AND INSTALL, UNLESS OTHERWISE SPECIFIED).
3. CORE DRILLING FOR GUIDE RAILS (IF GUIDE RAILS ARE PROVIDED IN THIS PROJECT).
4. REFRIGERATION ROOF CURBS / ROOF JACK (IF REFRIGERATION SYSTEM IS PROVIDED IN THIS PROJECT AND LOCATED ON ROOF).
5. INTERIOR BOLLARDS (IF REQUIRED FOR THIS PROJECT) – TO BE EPOXY PAINTED PER LOCAL CODES (PROVIDE AND INSTALL).
6. FURNISH AND INSTALL 3/4" PLYWOOD BLOCKING IN THE WALL FOR MOUNTING EQUIPMENT FURNISHED BY SECTION 11 40 00 AS REQUIRED.
7. WALK-IN DEPRESSIONS (TO BE DEAD LEVEL) AND SAND LEVELING BED (IF WALK-IN IS PROVIDED IN THIS PROJECT AND RECESS IS SHOWN).
8. STRUCTURAL BRACING FOR BULK WALK-IN CEILING PANELS IF REQUIRED.
9. MENU SYSTEM VIDEO MONITORS IN SERVERY (UNLESS OTHERWISE SPECIFIED).
10. STRUCTURAL BRACING FOR MENU SYSTEM VIDEO MONITORS IF REQUIRED.
11. INTERIOR/EXTERIOR REFRIGERATION PENETRATIONS AND SLEEVES AT BUILDING PENETRATIONS.
12. DOORSCOPE VIEWER (PEEPHOLE) WITH WIDE VIEWING ANGLE AT RECEIVING DOOR.
13. CANOPY AT RECEIVING DOOR. COORDINATE HEIGHT WITH THE HEIGHT OF RECEIVING DOOR (8') AND THE MOUNTING HEIGHT OF AIR SCREEN ABOVE THE DOOR.
14. SOAP AND TOWEL DISPENSER PROVIDED BY OWNER. G.C. RESPONSIBLE FOR INSTALLATION.
15. WASHER AND DRYER (PROVIDE AND INSTALL, UNLESS OTHERWISE SPECIFIED).
16. DWARF WALL AT EXPOSED FRONT/ENDS OF CAFETERIA SERVING COUNTERS WITH FINISH AS SELECTED BY ARCHITECT (IF REQUIRED IN THIS PROJECT).

2 GENERAL CONTRACTOR COORDINATION NOTES2
NOT TO SCALE

HEALTH DEPARTMENT REQUIREMENTS (VERIFY WITH LOCAL JURISDICTIONS):

1. FLOORS: VERIFY WITH DIVISION 9. FLOORS TO BE SMOOTH, IMPERVIOUS, EASILY CLEANABLE AND SLIP RESISTANT.
2. WALLS: VERIFY WITH ARCHITECTURAL DOCUMENTS. WALLS TO BE SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE.
3. CEILING: LAY-IN TILES. CEILING TILES TO BE SMOOTH, IMPERVIOUS, AND EASILY CLEANABLE.
4. EMPLOYEE TOILET: TO BE LOCATED OFF MAIN CORRIDOR AND ADJACENT TO MAIN KITCHEN. RESTROOM MUST HAVE A VESTIBULE AND NOT OPEN TO KITCHEN / PREP AREAS. TOILETS TO BE WELL VENTILATED.
5. LAVATORIES: WALL HUNG LAVATORIES LOCATED WITHIN ALL FUNCTIONAL WORKING AREAS.
6. UTENSIL CLEANING/SANITIZING: ACCOMPLISHED IN UTENSIL WASH AREA WITH (3) 2'-0" x 2'-2" x 15" MINIMUM DEEP SINKS AND WAREWASH MACHINE.
7. MECHANICAL CLEANING/SANITIZING OF TABLEWARE: ACCOMPLISHED BY WAREWASH MACHINE.
8. STOREROOMS: AMPLE DAILY STORAGE PROVIDED IN ENCLOSED STORE ROOMS. STORE ROOMS TO BE VENTILATED AND MAINTAIN PROPER TEMPERATURE.
9. WATER HEATER: LOCATED IN THE MECHANICAL ROOM ADJACENT TO KITCHEN. TO BE SIZED TO PROVIDE AMPLE WATER TO MAINTAIN PROPER WATER TEMPERATURE THROUGHOUT HOURS OF OPERATION.
10. GREASE TRAP: LOCATED AT EXTERIOR OF BUILDING. REFER TO ENGINEER'S DRAWINGS.
11. FOOD SERVICE EQUIPMENT: ALL FLOOR-MOUNTED EQUIPMENT IS TO BE SEALED TO THE FLOOR TO PROVIDE AN EASILY CLEANABLE SURFACE AND PREVENT SEEPAGE. EQUIPMENT NOT MOUNTED TO THE FLOOR IS TO BE WALL MOUNTED ON WALL CARRIERS, OR ELEVATED ON LEGS TO PROVIDE AT LEAST A SIX-INCH CLEARANCE BETWEEN FLOOR AND EQUIPMENT.
12. MOP SINK: LOCATED IN JANITOR CLOSET OFF MAIN KITCHEN CORRIDOR, AND LOCATED IN CLOSE PROXIMITY TO THE WAREWASH AREA.
13. EXHAUST HOODS: EXHAUST HOODS PROVIDED OVER COOKING EQUIPMENT WITH LIQUID CHEMICAL ANSUL FIRE EXTINGUISHING SYSTEM.
14. LIGHTING AND PROTECTIVE SHIELDING: RECESSED CEILING-MOUNTED FLUORESCENT LIGHT FIXTURES FITTED WITH CLEAR LEXAN DIFFUSERS.
15. GARBAGE AND REFUSE: CENTRAL TRASH COLLECTION PROVIDED FOR BUILDING LOCATED NEAR RECEIVING AREA ON SMOOTH CONCRETE SURFACE.
16. POISONOUS AND TOXIC MATERIAL STORAGE: LOCATED IN RESPECTIVE JANITOR CLOSETS WITH LOCKING HARDWARE.

1 HEALTH DEPARTMENT COORDINATION NOTES1
NOT TO SCALE

FOODSERVICE DESIGN PROFESSIONALS

Revision / Date

Project: RIVERWOOD MS ADDITION & RENOVATIONS FOR HUMBLE ISD HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL — MELISSA MOORE FCSI 48854119 PROFESSIONAL MEMBER
Melissa Moore
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 10/29/2025

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FS GENERAL COORDINATION NOTES

PACKAGE VOLUME

Job No. 1821-13-02
Drawn By: MM
Date: 10/29/2025
Sheet No. ISSUE FOR BID QF1.00

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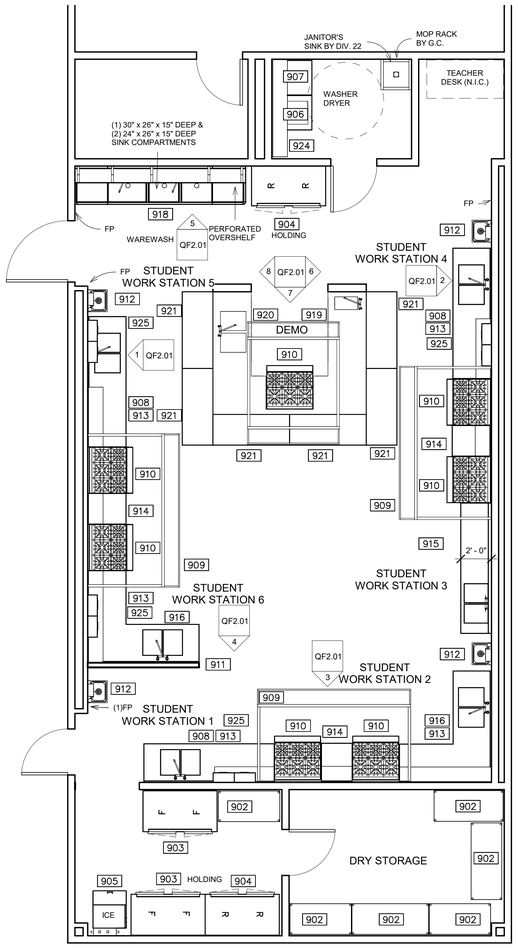
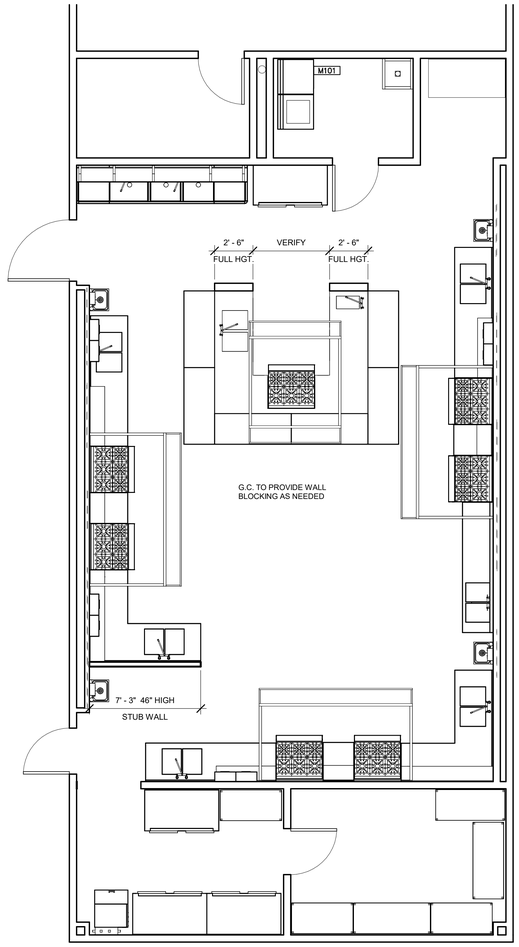
FOODSERVICE DRAWING INDEX	
SHEET NUMBER	SHEET NAME
QF1.00	FS GENERAL COORDINATION NOTES
QF1.01	FS EQUIPMENT PLAN
QF1.02	FS PLUMBING & ELECTRICAL PLANS
QF1.03	FS EXHAUST HOODS
QF1.04	FS EXHAUST HOODS
QF1.05	FS EXHAUST HOODS
QF2.01	FS ELEVATIONS
QF3.01	FS SECTIONS & DETAILS
QF3.02	FS DETAILS



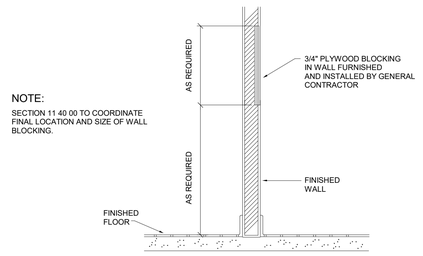
1 FOODSERVICE EQUIPMENT PLAN
1/4" = 1'-0"



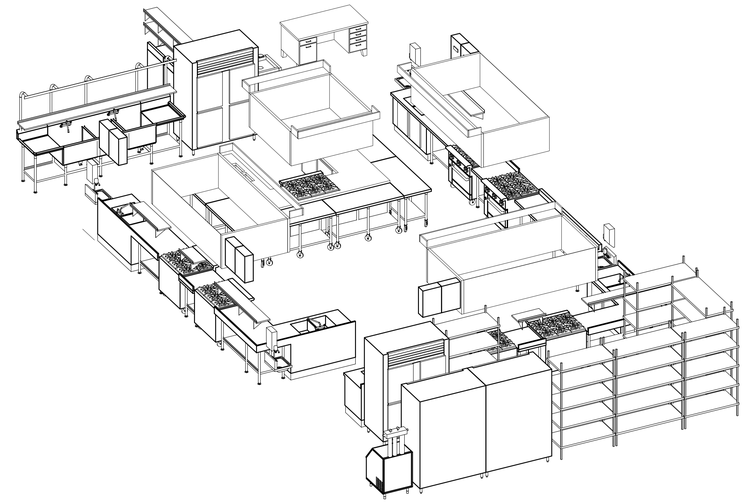
4 FOODSERVICE SPECIAL CONDITIONS PLAN
1/4" = 1'-0"

FOODSERVICE EQUIPMENT SCHEDULE					
FDP ITEM	QTY	FDP DESCRIPTION	FDP REMARKS	Manufacturer	Model
902	6	SHELVING		METRO	METROMAX Q
903	2	REACH-IN FREEZER		TRAUSLEN	ALT-232WUT
904	2	REACH-IN REFRIGERATOR		TRAUSLEN	AHT-232WUT
905	1	ICE MAKER		MANITOWOC	UYF310A
906	1	CLOTHES WASHER	OWNER FURNISHED		
907	1	CLOTHES DRYER	OWNER FURNISHED		
908	3	STUDENT WORK STATION		CUSTOM FABRICATE	
909	3	EXHAUST HOOD	TYPE I; RE: QF1.03	MODUSERVE	W-CPB
910	7	RANGE		WOLF	JBR-2-12GT-2
911	1	S/S WALL CAP		CUSTOM FABRICATE	
912	4	HAND SINK	PROVIDED BY SECTION 11 4000 INSTALLED BY DIV. 22	ADVANCED TABCO	7-PS-50
913	5	WALL SHELVING		TABCO	WCS SERIES
914	3	STUDENT WORK STATION		CUSTOM FABRICATE	
915	1	STUDENT WORK STATION		CUSTOM FABRICATE	
916	2	STUDENT WORK STATION		CUSTOM FABRICATE	
918	1	THREE COMPARTMENT SINK		CUSTOM FABRICATE	
919	1	EXHAUST HOOD	ISLAND HOOD - TYPE I; RE: QF1.03	MODUSERVE	W-CPB
920	1	DEMO COUNTER	CLOSED BASE	CUSTOM FABRICATE	
921	6	STUDENT WORK TABLES		CUSTOM FABRICATE	
924	1	WALL SHELVING		TABCO	WCS SERIES
925	4	FIRE PROTECTION SYSTEM		ANSUL	

FOODSERVICE MECHANICAL SCHEDULE						
NO.	QTY	TYPE	SIZE	LOCATION	CFM	S.P.
M101	1	EXHAUST	4" ROUND	WALL		GRAVITY

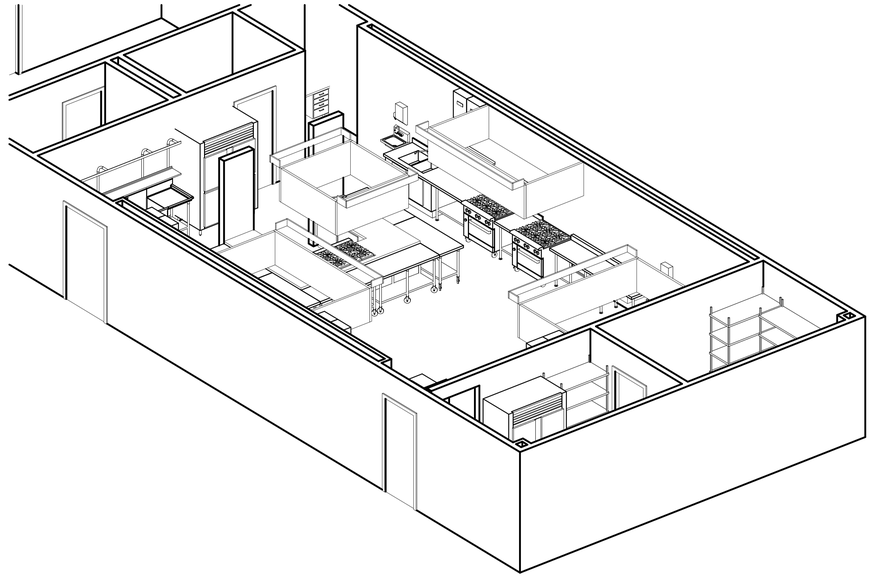


5 WALL BLOCKING DETAIL
NOT TO SCALE



3 FS EQUIPMENT MODEL

ISOMETRIC VIEWS WITHIN THIS DRAWING ARE NOT TO SCALE AND ARE PROVIDED FOR REFERENCE PURPOSES ONLY. ISOMETRIC VIEWS ARE NOT INTENDED FOR REGULATORY APPROVAL, PERMITTING, NOR CONSTRUCTION. REFER TO FLOOR PLANS AND DETAILS FOR SPECIFIC PROJECT INFORMATION.



2 FS FACILITY MODEL

REFER TO SHEET QF1 FOR GENERAL CONTRACTOR AND HEALTH DEPARTMENT COORDINATION NOTES

0' 2' 4' 8' 16'

FDP FOODSERVICE DESIGN PROFESSIONALS

Revision / Date

Project:
RIVERWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

MELISSA MOORE
FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
FCSI 48854119
PROFESSIONAL MEMBER
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FS EQUIPMENT PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. ISSUE FOR BID QF1.01
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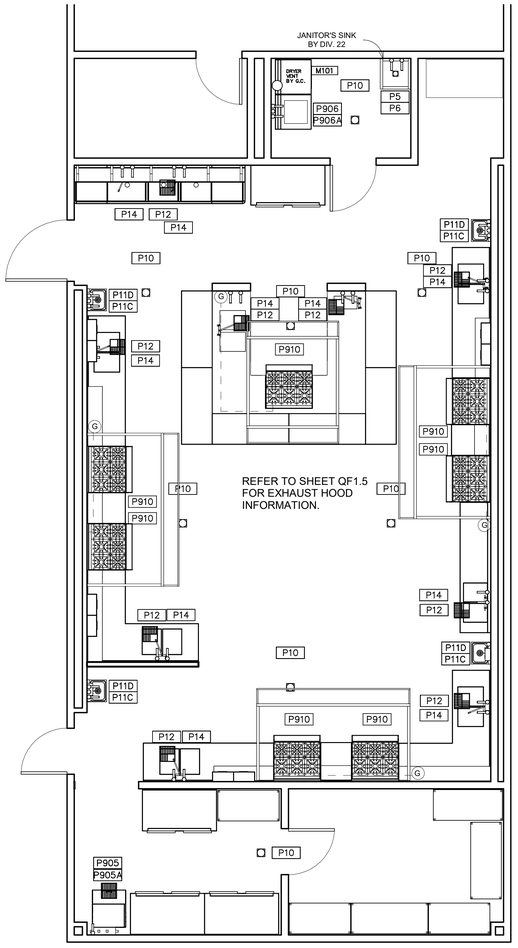
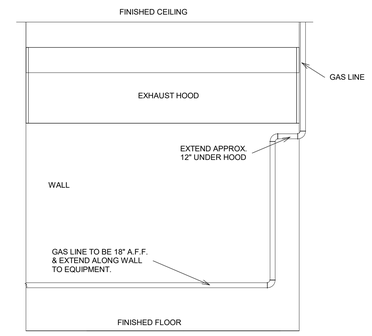
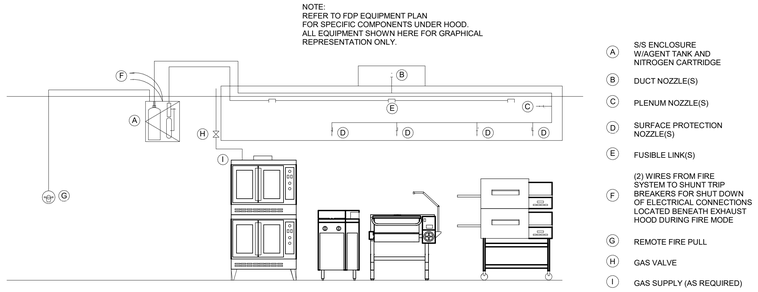


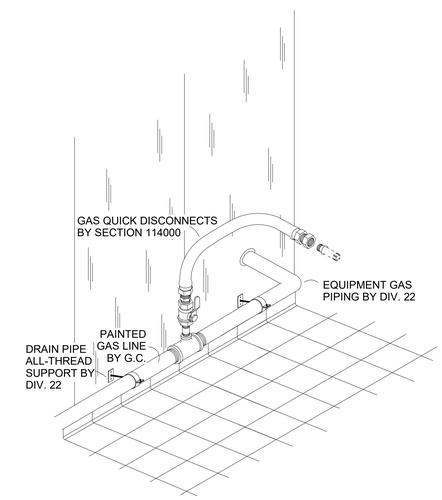
1 FOODSERVICE PLUMBING PLAN
1/4" = 1'-0"



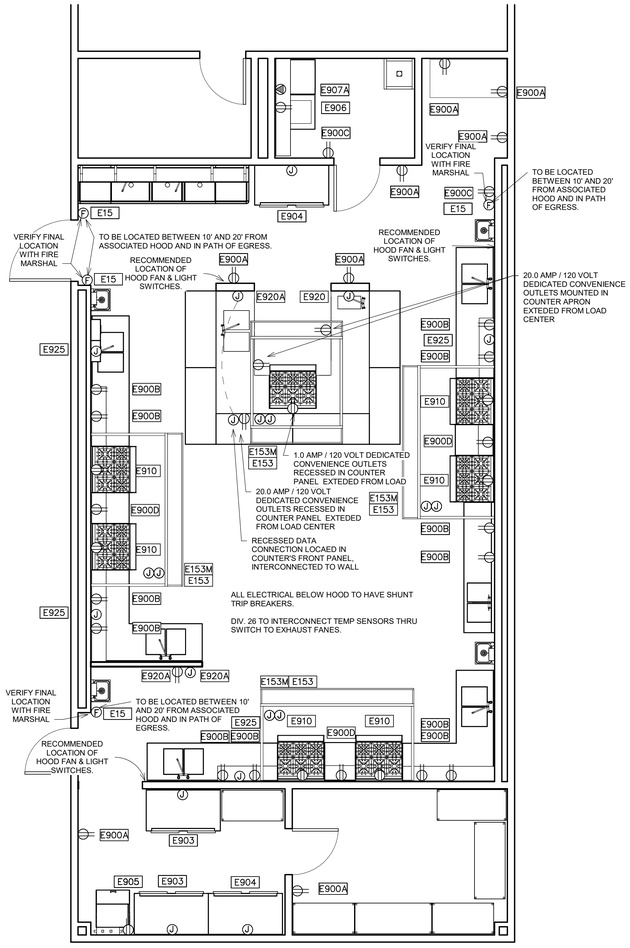
5 EXHAUST HOOD - GAS LINE ROUTING DETAIL
NOT TO SCALE



6 FIRE PROTECTION SYSTEM TYPICAL DETAIL
NOT TO SCALE



7 GAS DISCONNECT DETAIL
NOT TO SCALE



3 FOODSERVICE ELECTRICAL PLAN
1/4" = 1'-0"

FOODSERVICE MECHANICAL SCHEDULE

NO.	QTY	TYPE	SIZE	LOCATION	CFM	S.P.
M101	1	EXHAUST	4" ROUND	WALL		GRAVITY

FOODSERVICE PLUMBING SCHEDULE

FDP PNO	FDP PSIZE	FDP PCONN	FDP PSERVICE TO	FDP PLOC	FDP PAFF	FDP PREMARKS
P5	3/4"	H & C WATER	JANITOR SINK	WALL	48"	JANITOR SINK BY PLUMBER
P6	4"	FLOOR DRAIN	JANITOR SINK	FLOOR	VERIFY	JANITOR SINK BY PLUMBER
P10	VERIFY	FLOOR DRAIN	GENERAL AREA DRAIN	FLOOR	VERIFY	LOCATE PER ENGINEER'S DRAWING
P11C	1/2"	H & C WATER	FAUCET	WALL	18"	FURNISHED & INSTALLED BY DIV. 22
P11D	1 1/2"	DIRECT DRAIN	HAND SINK	WALL	15"	FURNISHED & INSTALLED BY DIV. 22
P12	12"SQ.	FLOOR SINK	EQUIPMENT	FLOOR	0"	3/4 GRATE
P14	3/4"	H & C WATER	FAUCET	WALL	18"	BTC; S/S FLEX HOSE TO MIXING VALVE
P905	3/4"	COLD WATER	WATER/ ICE	WALL	60"	BTC
P905A	12" SQ.	FLOOR SINK	ICE MACHINE	FLOOR	0"	FULL GRATE
P906	3/4"	H & C WATER	CLOTHES WASHER	WALL	48"	BTC; VALVE BOX
P906A	2"	INDIRECT DRAIN	CLOTHES WASHER	WALL	48"	VALVE BOX
P910	3/4"	NATURAL GAS	RANGE	WALL	18"	BTC: 160 MBTU/HR

HW	HOT WATER	IW	INDIRECT WASTE (EXTEND TO F.D.)		
CW	COLD WATER	FFD	FUNNEL FLOOR DRAIN		
HTW	180 F HOT WATER	EVC	EXHAUST VENT CONNECTION		
CWS	CHILLED WATER	SVC	SUPPLY VENT CONNECTION		
G	GAS SUPPLY	FR	DIRECT-CONNECTED FLUE RISER		
SS	STEAM SUPPLY	PS	PIPE SLEEVE		
CR	CONDENSATE RETURN	AFF	ABOVE FINISHED FLOOR		
DR	DRAIN	ST	STUB UP/OUT		
FD	FLOOR DRAIN	BTC	BRANCH TO CONN. ON EQUIP		
FS	FLOOR SINK	DFA	DROP FROM ABOVE		
		CA	COMPRESSED AIR		

2 PLUMBING SYMBOLS
NOT TO SCALE

FOODSERVICE ELECTRICAL SCHEDULE

FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E15	JB	---	---	--	REMOTE FIRE PULL	WALL	48"	RE: NOTE #11 - RECESSED JB - EXTEND TO FIRE SYSTEM FOR HOOD
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC
E153M	JB	10.0A	120	1	HEAT SENSOR	CLG	DFA	BTC
E900A	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	24"	---
E900B	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	47"	---
E900C	WPR	16.0A	120	1	CONVENIENCE OUTLET	WALL	18"	---
E900D	DR	16.0A	120	1	CONVENIENCE	WALL	44"	SHUNT TRIP BREAKER
E903	JB	14.9A	120	1	FREEZER	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E904	JB	8.2A	120	1	REFRIGERATOR	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E905	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E906	DR	16.0A	120	1	CLOTHES WASHER	WALL	48"	--
E907A	SR	30.0A	208	1	CLOTHES DRYER	WALL	48"	VERIFY NEMA PLUG RECEPTACLE
E910	DR	1.0A	120	1	SJUNT TRIP BREAKER	WALL	24"	6 BURNER RANGE
E920	JB	60.0A	240	1	LOAD CENTER	WALL	24"	BTC
E920A	<varies>	<varies>	<varies>	<varies>	MOBILE TEACHING DISPLAY	WALL	24"	<varies>
E925	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC

SCR	CONDUIT STUB BTC ON RECEPT FURNISH WITH EQUIPMENT		CC	CONDUIT FOR COMPUTER CABLES	
CS	CONDUIT STUB UP/OUT FOR DIRECT CONNECTION		BTC	BRANCH TO CONNECTION ON EQUIPMENT	
DR	20 AMP DUPLEX RECEPTACLE (MOUNT HORIZONTAL)		WPR	20 AMP WEATHERPROOF RECEPTACLE (SPRING COVER)	
SR	SINGLE PURPOSE RECEPTACLE-1PH		FPB	FIRE PROTECTION BUZZER	
SR	SINGLE PURPOSE RECPTACLE-3PH		BSC	BEVERAGE SYSTEM CONDUIT	
FR	FLUSH FLOOR RECEPTACLE		DFA	DROP FROM ABOVE	
PMR	PEDESTAL MOUNTED RECEPTACLE		AFF	ABOVE FINISH FLOOR	
DCR	DROP CORD RECEPTACLE		CS/JB	JUNCTION BOX ON PEDESTAL	
JB	JUNCTION BOX ON CEILING		SW	SWITCH	
JB	JUNCTION BOX IN WALL		D	DATA	
JB/DS	JUNCTION BOX WITH DISCONNECT BY DIV.26		JB/DS	CONDUIT STUB-UP WITH DISCONNECTION BY DIV.26	

4 ELECTRICAL SYMBOLS
NOT TO SCALE

REFER TO SHEET QF1 FOR DIVISION 22 COORDINATION NOTES

0' 2' 4' 8' 16'

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Melissa Moore
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FS PLUMBING & ELECTRICAL PLANS

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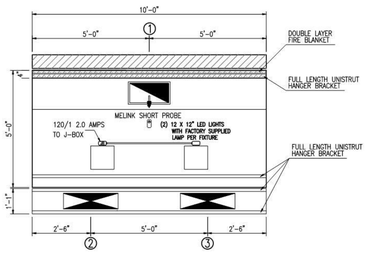
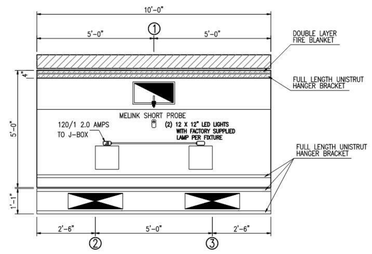


HOOD WGT. – 1050 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 909A
SCALE 3/8"=1'-0"

EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 20"	210	2100	1512	.50"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 28"	189	945	608	.30"
3	8" X 28"	189	945	608	.30"

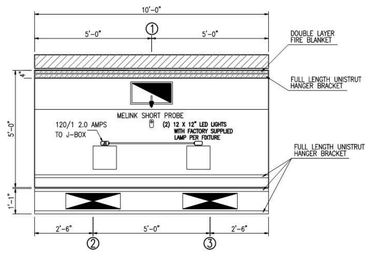


HOOD WGT. – 1050 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 909B
SCALE 3/8"=1'-0"

EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 20"	210	2100	1512	.50"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 28"	189	945	608	.30"
3	8" X 28"	189	945	608	.30"

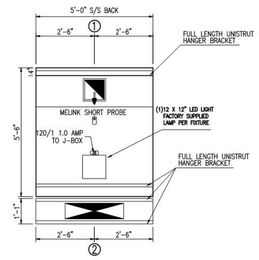


HOOD WGT. – 1050 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 909C
SCALE 3/8"=1'-0"

EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 20"	210	2100	1512	.50"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 28"	189	945	608	.30"
3	8" X 28"	189	945	608	.30"



HOOD WGT. – 525 LBS

Ⓐ PLAN – MODEL W-cpb ITEM 919
SCALE 3/8"=1'-0"

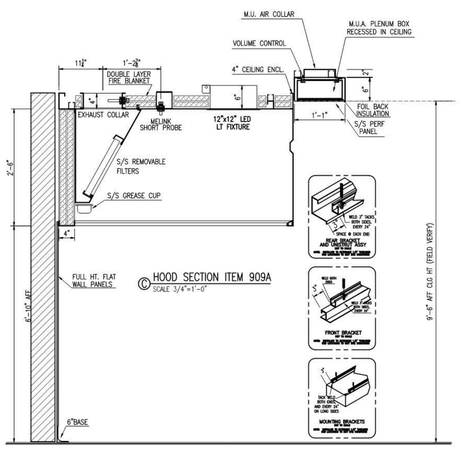
EXHAUST COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
1	10" X 14"	300	1500	1542	.65"

SUPPLY COLLAR CHART					
NO.	SIZE	CFM/FOOT	CFM EACH	FPM	S.P.
2	8" X 30"	270	1350	810	.30"

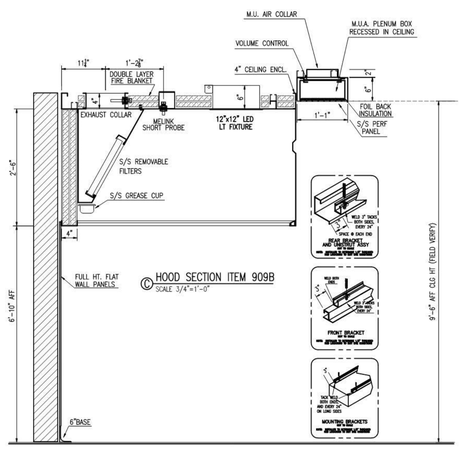
HOODS DESIGNED TO MEET TO THE 2015 IECC C403.2.8 AND 2018 IECC C403.7.5 USING OPTION 2 PROVIDED BY THE CODES.

NOTE TO G.C. AND CEILING GRID INSTALLERS :

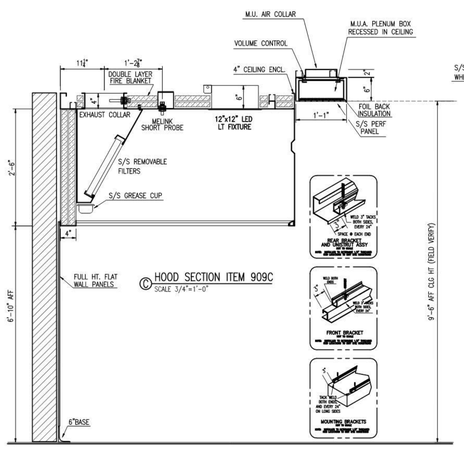
FASTENERS FOR CEILING GRID SURROUNDING KITCHEN HOOD MUST NOT PENETRATE HOOD CAPTURE AREA OR HOOD GREASE PLENUM. IMPROPER PENETRATIONS THROUGH HOOD IN THESE AREAS VIOLATE HOOD U.L. PROCEDURE AND LOCAL MECHANICAL CODE.



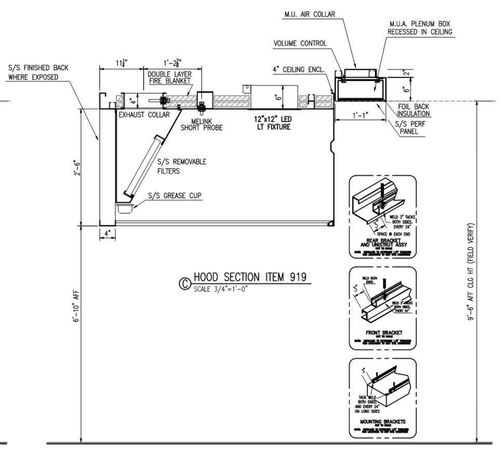
Ⓒ HOOD SECTION ITEM 909A
SCALE 3/4"=1'-0"



Ⓒ HOOD SECTION ITEM 909B
SCALE 3/4"=1'-0"



Ⓒ HOOD SECTION ITEM 909C
SCALE 3/4"=1'-0"



Ⓒ HOOD SECTION ITEM 919
SCALE 3/4"=1'-0"

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UL FILE # MH 30031

MOD U SERVE Air Systems

2320 PEYTON ROAD
HOUSTON, TEXAS 77032
281 442 8001

**HUMBLE ISD-
RIVERWOOD MS**

FDP

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COMMERCIAL KITCHENS INC.

2320 PEYTON ROAD
HOUSTON, TEXAS 77032
281 442 8001

NO.	DATE	REVISION	BY
909	10.30.23	90# MUA Melink system added	ADC
919			

DRAWING # D23-2092-1.909
DRAWN BY ADC
CHECKED BY
DATE June 16, 2023

SHEET 1 of 1 SHEET

Revision / Date

Project: RIVERWOOD MS ADDITION & RENOVATIONS FOR HUMBLE ISD HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
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48854119
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO: 48854119 ON: 10/29/2025

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FS EXHAUST HOODS

PACKAGE VOLUME

Job No. 1821-13-02
Drawn By: MM
Date: 10/29/2025
Sheet No. ISSUE FOR BID QF1.03

FDP
FOODSERVICE DESIGN PROFESSIONALS

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS_FOODSERVICE - V23.rvt

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INSTALLATION REQUIREMENTS

1. THERE SHALL BE NO SUBSTITUTIONS OF ANY COMPONENTS ON MELINK INTELLI-HOOD CONTROLS UNLESS APPROVED BY MELINK.
2. MELINK CERTIFIED STARTUP CONTRACTOR IS NOT RESPONSIBLE FOR HIGH VOLTAGE ELECTRICAL WIRING.
3. MELINK CERTIFIED STARTUP CONTRACTOR IS NOT RESPONSIBLE FOR INSTALLING LOW VOLTAGE CONTROL CABLES LONGER THAN 50'. ONLY MELINK CABLES SHALL BE USED.
4. MELINK CERTIFIED STARTUP CONTRACTOR IS NOT RESPONSIBLE FOR INSTALLING LOW VOLTAGE CABLES IF ACCESS TO THE TOP OF THE HOOD IS LIMITED DUE TO OBSTRUCTIONS (LOW CEILING, DUCTWORK, PIPING, ETC.) CALL MELINK FOR MORE INSTRUCTIONS IF NECESSARY.
5. MELINK CERTIFIED CONTRACTOR IS NOT RESPONSIBLE FOR INSTALLING ANY MELINK CONTROL CABLE IN CONDUIT IF REQUIRED; OR MAKING ANY CEILING, FLOOR OR WALL PENETRATIONS.
6. MELINK INTELLI-HOOD LITERATURE WILL BE INCLUDED IN THE SHIPMENT OF EACH SYSTEM. CALL MELINK WITH ANY QUESTIONS @ 1-(513)-965-7300.
7. ALL MOTORS MUST BE 3 PHASE, INVERTER DUTY RATED AS SPECIFIED IN NEMA STANDARD MG 1 PART 31.
8. DV/DT FILTERS MUST BE USED WHEN THE DISTANCE FROM VFD TO FAN IS OVER 200' FOR 230V, 70' FOR 460V, OR 40' FOR 575V.
9. OPTION: MELINK RECOMMENDS A CERTIFIED AIR BALANCE ON THE KITCHEN VENTILATION SYSTEM FOR OPTIMAL ENERGY SAVINGS.

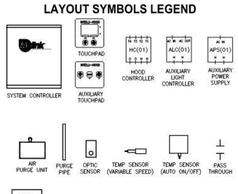
AGENCY APPROVALS

THE MELINK INTELLI-HOOD CONTROLS ARE UL & CUL LISTED, & CONFORM WITH ALL APPLICABLE CODES & STANDARDS INCLUDING:

1. UL710 – STANDARD FOR EXHAUST HOODS FOR COMMERCIAL COOKING EQUIPMENT
2. UL2017– STANDARD FOR GENERAL PURPOSE SIGNALING DEVICES AND SYSTEMS.
3. CE – MEETS REQUIREMENTS OF APPLICABLE EC DIRECTIVES
4. ROHS – MEETS THE RESTRICTION OF HAZARDOUS SUBSTANCES DIRECTIVE 2002/95/EC
5. NFPA 96 – STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS
6. IMC – INTERNATIONAL MECHANICAL CODE
7. BOCA – BUILDING OFFICIALS CODE ADMINISTRATORS
8. SBCCI – SOUTHERN BUILDING CODE CONGRESS INTERNATIONAL
9. ICBO – INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS

ASHRAE 90.1.2013 CERTIFIED

LAYOUT SYMBOLS LEGEND



SHEET INDEX

SHEET #	SHEET DESCRIPTION
1 –#	INTELLI-HOOD DRAWING SHEETS

Melink® Energy solutions for a brighter tomorrow™

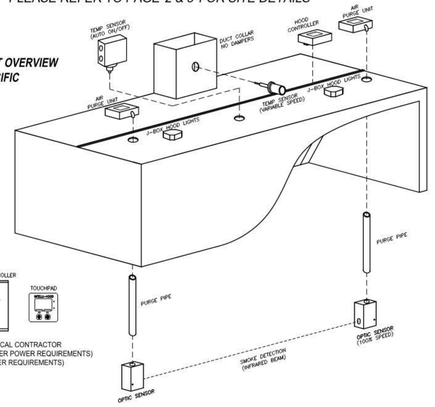
INTELLI-HOOD®

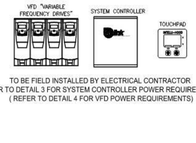
NEW CONSTRUCTION SCOPE OF WORK

PLEASE REFER TO PAGE 2 & 3 FOR SITE DETAILS

FOR REFERENCE ONLY DO NOT USE FOR INSTALL

GENERAL COMPONENT OVERVIEW NOT SITE SPECIFIC





TO BE FIELD INSTALLED BY ELECTRICAL CONTRACTOR
(REFER TO DETAIL 3 FOR SYSTEM CONTROLLER POWER REQUIREMENTS)
(REFER TO DETAIL 4 FOR VFD POWER REQUIREMENTS)

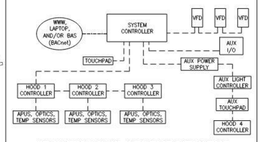
SEQUENCE OF OPERATION

1. PRESS THE FAN SWITCH ON THE TOUCHPAD TO TURN THE FANS ON IN THE AUTO MODE.
   A. SYSTEM CONTROLLER STARTS THE FANS AT MINIMUM SPEED AND AUTOMATICALLY ADJUSTS EXHAUST AIR FLOW BASED ON THE ACTUAL COOKING LOADS AS SENSED BY THE TEMPERATURE AND OPTIC SENSORS MOUNTED IN THE HOODS. (SYSTEM CONTROLLER WILL SEND A RUN COMMAND AND SPEED REFERENCE SIGNAL TO THE VARIABLE FREQUENCY DRIVES (VFD'S).)
   B. SYSTEM CONTROLLER WILL CONTROL MAKE UP AIR FAN VFD(S). SYSTEM CONTROLLER WILL SEND A 2-VDC SIGNAL TO THE MUA UNIT TO ENERGIZE THE CONTROL CIRCUIT. IN THE EVENT THE MUA UNIT GOES INTO HEATING MODE, THE MUA UNIT WILL PROVIDE A DRY CLOSURE SIGNAL TO THE SYSTEM CONTROLLER TO INCREASE THE MINIMUM AIR FLOW ACROSS THE BURNER OR HEAT EXCHANGER.
   B. SYSTEM CONTROLLER WILL PROVIDE A START/STOP AND 0–10VDC OR 4–20MA SIGNAL TO THE BAS TO CONTROL MUA.
2. PRESS THE FAN SWITCH AGAIN TO TURN THE FANS OFF.
3. PRESS THE LIGHT SWITCH ON THE TOUCHPAD TO TURN THE HOOD LIGHTS ON. THE TERMINALS OF THE SYSTEM CONTROLLER OR AUXILIARY LIGHTS CONTROLLERS. (LIGHTS MAY BE OPERATED BY OTHER CONTROLS OR BAS.)
4. IF THE AUTO ON/OFF TEMP SENSOR DETECTS HEAT LEVELS ABOVE 90°F/32°C WHEN THE FANS ARE NOT ON, THE FANS WILL TURN ON AUTOMATICALLY.
5. IN THE EVENT OF FIRE MODE, POWER IS TURNED OFF TO THE SYSTEM CONTROLLER, THE EXHAUST FAN VFD WILL RUN AT FULL SPEED, AND MUA VFD WILL STOP. SEE DETAILS 3 AND 4.

US PATENTS – 6,170,480 ; 7,048,199 ; 9,810,437. CANADA PATENT –2976152

PLUG-N-PLAY CABLE CONNECTIONS

GENERAL WIRING OVERVIEW, NOT SITE SPECIFIC



NOTE: CAN SPECIFY 1–30 HOOD CONTROLLERS PER SYSTEM CONTROLLER

ELECTRICAL SCOPE OF WORK

1. WIRE THE SYSTEM CONTROLLER INSIDE THE INTELLI-HOOD CONTROL CABINET, OR OTHER SPECIFIED LOCATION, WITH AN INPUT OF 90/250VAC FROM A DEDICATED CIRCUIT. THIS CIRCUIT MUST LOSE POWER WHEN THE FIRE SUPPRESSION SYSTEM IS ACTIVATED. PURPOSE IS TO SHUT OFF HOOD LIGHTS AND SEND EXHAUST FANS TO FULL SPEED. THE OUTPUT WIRING TO BE CONNECTED TO THE HOOD LIGHTS (15 AMPS MAX). SEE DETAIL 3.
2. ELECTRICAL CONTRACTOR SHALL WIRE A DEDICATED SINGLE PHASE CIRCUIT TO THE MUA UNIT TO ENERGIZE THE MUA CONTROLS. DO NOT USE VFD OUTPUT TO ENERGIZE THIS CIRCUIT. SEE DETAIL 6.

NOTES:
- THE INSTALLATION OF ANY WIRE, CABLE, OR CONDUIT IF REQUIRED DOES NOT FALL WITHIN MELINK SCOPE OF WORK.

MECHANICAL SCOPE OF WORK

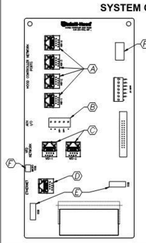
1. CONNECT PLUG-N-PLAY CABLES FROM SYSTEM CONTROLLER TO THE HOOD CONTROLLERS, SENSORS, TOUCHPADS, AUX POWER SUPPLIES, AND AUX LIGHT CONTROLLERS. HOOD MANUFACTURER SHALL LOCATE HOOD SENSOR CABLES IN EITHER INTELLI-HOOD CONTROL CABINET OR ON TOP OF HOOD(S). SEE SYSTEM LAYOUT SHEETS.
2. INSTALL LOW VOLTAGE WIRING FROM SYSTEM CONTROLLER TO KEF-1 AND KEF-2. SEE DETAIL 4. ALSO FROM SYSTEM CONTROLLER TO MUA UNIT (OR BAS). SEE DETAIL 5.
3. START-UP THE SYSTEM BY PRESSING THE LIGHT AND FAN SWITCH ON TOUCHPAD TO VERIFY THE HOOD LIGHTS TURN ON AND THE FANS GO TO MINIMUM SPEED. CORRECT FAN ROTATION IF NECESSARY. SEE SEQUENCE OF OPERATION.
4. INSTALL ETHERNET CABLE FROM BUILDING NETWORK TO THE SYSTEM CONTROLLER. CONFIGURE BUILDING NETWORK TO ENABLE SYSTEM TO COMMUNICATE WITH MELINK HEADQUARTERS' SECURE INTELLI-HOOD SERVER. IF APPLICABLE, CONFIGURE THE BUILDING'S BACnet AUTOMATION SYSTEM TO COMMUNICATE WITH SYSTEM CONTROLLER. SEE DETAIL 1. A CELLULAR MODEM HAS BEEN SUPPLIED AS WELL, IN THE EVENT THE BUILDING NETWORK WILL NOT ALLOW THE SYSTEM CONTROLLER ACCESS TO THE MELINK HEADQUARTERS' SERVER. SEE DETAIL 7
5. PRESS THE 100X SWITCH ON TOUCHPAD TO OPERATE THE VFDS AT FULL SPEED FOR 10 MINUTES. VERIFY THAT THE DRIVES DO NOT TRIP OUT ON OVER CURRENT. CORRECT DRIVE FULL LOAD AMPS IF NECESSARY. SEE VFD QUICK START GUIDE.

NOTES:
- THE INSTALLATION OF ANY WIRE, CABLE, OR CONDUIT IF REQUIRED DOES NOT FALL WITHIN MELINK SCOPE OF WORK.

MELINK SCOPE OF WORK

1. MAKE FINAL CABLE CONNECTIONS AT THE SYSTEM CONTROLLER.
2. VERIFY CONTROL WIRING TO MUA UNIT, BAS, OR OTHER CONTROL PANELS.
3. VERIFY SYSTEM CONTROLLER AND VFD PROGRAMMING. (IF VFD'S ARE PROVIDED BY MELINK)
4. VERIFY SYSTEM FUNCTIONALITY PER SEQUENCE OF OPERATION.
5. TRAIN OPERATORS AND/OR FACILITIES PERSONNEL FOR EACH SYSTEM.
6. SUBMIT INTELLI-HOOD START-UP REPORT TO CUSTOMERS. PLEASE CALL MELINK WITH ANY QUESTIONS @ 1-(513)-965-7300.

DETAIL 1: SYSTEM CONTROLLER BASE BOARD



A) 4 HOOD NETWORK PORTS ARE INTERCHANGEABLE. ANY OF THEM CAN BE USED TO CONNECT HOOD CONTROLLERS OR TOUCHPADS IN A SERIES CHAIN. CABLE LENGTH LIMITATIONS DO APPLY. REFER TO THE INSTALLATION MANUAL. PORTS ARE POWER–LIMITED.

B) AUXILIARY I/O PORT FOR FUTURE EXPANSION. CURRENTLY NOT USED.

C) 2 VFD PORTS ARE USED TO CONNECT AND COMMUNICATE WITH VFDS VIA SERIAL MODBUS PROTOCOL. THE VFD PORTS ARE INTERCHANGEABLE, HOWEVER, ONLY ONE VFD TYPE CAN BE CONNECTED TO EACH PORT. IF AN INSTALLATION IS TO USE 2 DIFFERENT BRANDS OF VFDS, THEN ONE PORT SHOULD BE DEDICATED TO EACH BRAND.

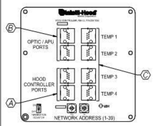
D) ETHERNET PORT IS USED TO CONNECT THE SYSTEM CONTROLLER TO THE GLOBAL NETWORK SO THAT THE INTELLI-HOOD SYSTEM CAN COMMUNICATE WITH MELINK HEADQUARTERS. ALSO, THIS PORT CAN BE USED BY THE BUILDING AUTOMATION SYSTEM TO COMMUNICATE VIA BACnet PROTOCOL.

E) USB PORTS. ONE USED FOR DATALOG THUMB DRIVE; OTHER FOR FUTURE EXPANSION.

F) NOT FOR USER CONNECTION

IMPORTANT:
USE THE CORRECT PORTS ON THE SYSTEM CONTROLLER BASE BOARD

DETAIL 2: HOOD CONTROLLER BOARD



A) 2 HOOD NETWORK PORTS ARE USED TO WIRE THE HOOD CONTROLLERS, AND OTHER HOOD NETWORK DEVICES IN SERIES FROM THE SYSTEM CONTROLLER.

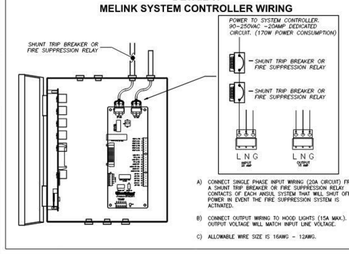
B) CABLES FROM THE OPTIC APUS ARE CONNECTED TO THE OPTIC APU PORTS. THESE PORTS ARE INTERCHANGEABLE. EMITTER OR RECEIVER CAN BE PLUGGED INTO EITHER ONE.

C) 4 TEMPERATURE PORTS ARE USED TO CONNECT THE TEMPERATURE SENSORS. PORTS MAY BE USED FOR VARIOUS PURPOSES (SUCH AS EXHAUST DUCT, EXHAUST CANOPY, OR SUPPLY AIR. FOR CORRECT OPERATION, THE CORRECT PROBE MUST BE CONNECTED TO THE CORRECT PORT AS DEFINED BY THE SYSTEM CONTROLLER PROGRAMMING CONFIGURATION.

D) ROTARY DIAL AND DIP SWITCHES ARE USED TO DEFINE THE HOOD CONTROLLER'S ADDRESS (1 TO 30). THE TERMINATION RESISTOR SHOULD BE SWITCHED ON FOR THE LAST HOOD NETWORK DEVICES IN A SERIES CHAIN.

IMPORTANT:
USE THE CORRECT PORTS ON THE HOOD CONTROLLER BOARDS

DETAIL 3: MELINK SYSTEM CONTROLLER WIRING



A) CONNECT SINGLE PHASE INPUT WIRING (20A CIRCUIT) FROM A SHUNT TRIP BREAKER OR FIRE SUPPRESSION RELAY CONTACTS OF EACH ANSUL SYSTEM THAT WILL SHUT OFF POWER IN THE EVENT THE FIRE SUPPRESSION SYSTEM IS ACTIVATED.

B) CONNECT OUTPUT WIRING TO HOOD LIGHTS (15A MAX.). OUTPUT VOLTAGE WILL MATCH INPUT LINE VOLTAGE.

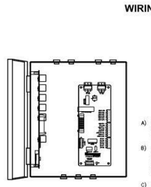
C) ALLOWABLE WIRE SIZE IS 16AWG ~ 12AWG.

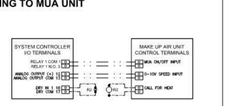
DETAIL 4:

SEE DETAIL SHEET 2.1
(ELECTRICIANS SOW)

SEE SHEET 2.1

DETAIL 5: WIRING TO MUA UNIT





A) WHEN THE FANS ARE TURNED ON, THE SYSTEM CONTROLLER (TERMINALS 1 AND 3) WILL CLOSE. THE N.O. RELAY CONTACTS SHOULD BE WIRED TO THE MUA UNIT TO START THE UNIT.

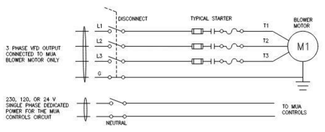
B) WHEN IN HEAT MODE, THE MUA UNIT WILL ENERGIZE A RELAY TO PROVIDE A DRY CONTACT CLOSURE TO THE SYSTEM CONTROLLER (TERMINALS 16 AND 17). THIS INPUT WILL SIGNAL THE SYSTEM CONTROLLER TO INCREASE THE MINIMUM FAN SPEED AND MAINTAIN THE PROPER AIRFLOW ACROSS THE BURNER OR HEAT EXCHANGER.

C) MUA CONTROL RELAYS ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR IF NOT PROVIDED BY MUA OEM.

D) 18AWG SHIELDED, PLENUM–RATED CABLE IS TYPICALLY RECOMMENDED. TERMINALS WILL ACCEPT 12–20AWG WIRING.

E) NOTE: RELAY TERMINALS HAVE A MAXIMUM CAPACITY OF 5A AT EITHER 120 OR 230VAC.

DETAIL 6: SEPARATION OF MUA UNIT MOTOR AND CONTROLS



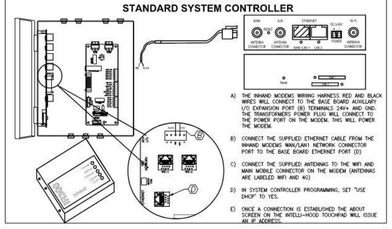
A) WIRE THREE–PHASE OUTPUT POWER FROM THE MUA VFD TO THE MUA UNIT TO POWER THE BLOWER MOTOR.

B) WIRE A DEDICATED SINGLE PHASE CIRCUIT TO THE MUA UNIT TO ENERGIZE THE MUA CONTROLS. DO NOT USE THE VFD OUTPUT TO ENERGIZE THIS CIRCUIT.

C) ENSURE 115V CIRCUIT IS IN A SEPARATE CONDUIT FROM THE OUTPUT VOLTAGE OF THE VFD.

D) IF A MOTOR STARTER IS PRESENT IN THE MUA UNIT, IT MAY BE REMOVED COMPLETELY IN SOME CASES DEPENDING ON THE CONTROLS SEQUENCE OF OPERATIONS. IF IT IS DESIRABLE TO LEAVE THE CONTRACTOR IN PLACE, THEN THE OVERLOADS SHOULD BE REMOVED. MOST OVERLOADS ARE NOT COMPATIBLE WITH VFDS.

DETAIL 7: WIRING FOR INHAND WIRELESS MODEM STANDARD SYSTEM CONTROLLER



A) THE INHAND MODEMS WIRING HARNESS RED AND BLACK WIRES WILL CONNECT TO THE BASE BOARD AUXILLARY I/O EXPANSION PORT (8) TERMINALS 24V+ AND GND. THE TRANSFORMERS POWER PLUG WILL CONNECT TO THE POWER PORT ON THE MODEM. THIS WILL POWER THE MODEM.

B) CONNECT THE SUPPLIED ETHERNET CABLE FROM THE INHAND MODEMS WAN/LAN1 NETWORK CONNECTOR PORT TO THE BASE BOARD ETHERNET PORT (D)

C) CONNECT THE SUPPLIED ANTENNAS TO THE WIFI AND MAIN MOBILE CONNECTOR ON THE MODEM (ANTENNAS ARE LABELLED WIFI AND 4G)

D) IN SYSTEM CONTROLLER PROGRAMMING, SET "USE DHCP" TO YES.

E) ONCE A CONNECTION IS ESTABLISHED THE ABOUT SCREEN ON THE INTELLI-HOOD TOUCHPAD WILL ISSUE AN IP ADDRESS.

DETAIL 8: NOT USED

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PROJECT: RIVERWOOD MIDDLE SCHOOL KINGWOOD, TX HUMBLE ISD

DIGITAL DRAWING DATE:10-06-25 DRAWN BY:DJS
DRAWING RELEASE DATE:09-XX-XX RELEASED BY: XXX
DRAWING APPROVAL DATE:09-XX-XX APPROVED BY:XXX

REVISIONS:

REV.#	DATE	REV. BY

SCALE: NOT TO SCALE

MELINK PROJECT SO.#: 3542273
SERIAL NUMBER: SUBMITTAL

SHEET: 1 – 1

MELINK PROJECT SO.#: 3542273
SERIAL NUMBER: SUBMITTAL

SHEET: 1 – 2

Revision / Date

Project: RIVERWOOD MS ADDITION & RENOVATIONS FOR HUMBLE ISD HUMBLE, TX

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PROFESSIONAL MEMBER
Melissa Moore
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FS EXHAUST HOODS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. ISSUE FOR BID
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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS_FOODSERVICE - V23.rvt

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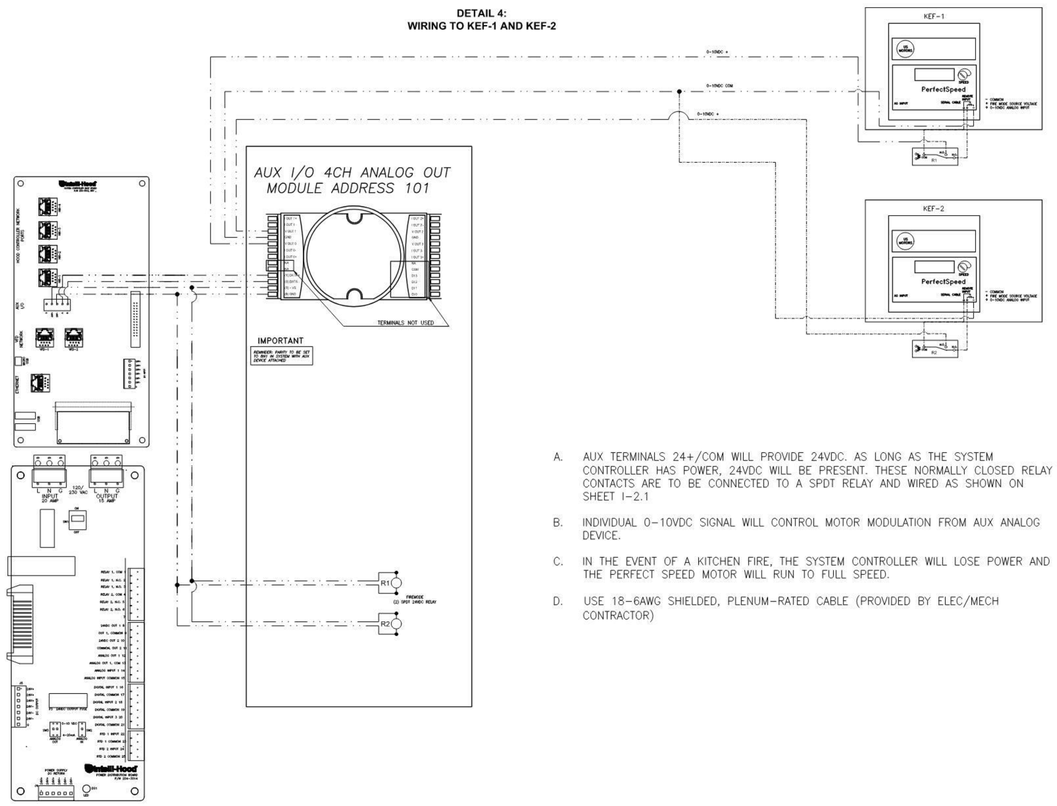
DETAIL 4:
WIRING TO KEF-1 AND KEF-2



A. AUX TERMINALS 24+/COM WILL PROVIDE 24VDC. AS LONG AS THE SYSTEM CONTROLLER HAS POWER, 24VDC WILL BE PRESENT. THESE NORMALLY CLOSED RELAY CONTACTS ARE TO BE CONNECTED TO A SPDT RELAY AND WIRED AS SHOWN ON SHEET 1-2.1

B. INDIVIDUAL 0-10VDC SIGNAL WILL CONTROL MOTOR MODULATION FROM AUX ANALOG DEVICE.

C. IN THE EVENT OF A KITCHEN FIRE, THE SYSTEM CONTROLLER WILL LOSE POWER AND THE PERFECT SPEED MOTOR WILL RUN TO FULL SPEED.

D. USE 18-6AWG SHIELDED, PLENUM-RATED CABLE (PROVIDED BY ELEC/MECH CONTRACTOR)

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PROJECT:
RIVERWOOD MIDDLE SCHOOL
KINGWOOD, TX
HUMBLE ISD
SUBMITTAL DRAWING DATE: **10-30-25** DRAWN BY: **BJS**
DRAWING RELEASE DATE/QR-XX-XX RELEASED BY: **XXX**
DRAWING APPROVAL DATE/QR-XX-XX APPROVED BY: **XXXX**

REVISIONS:

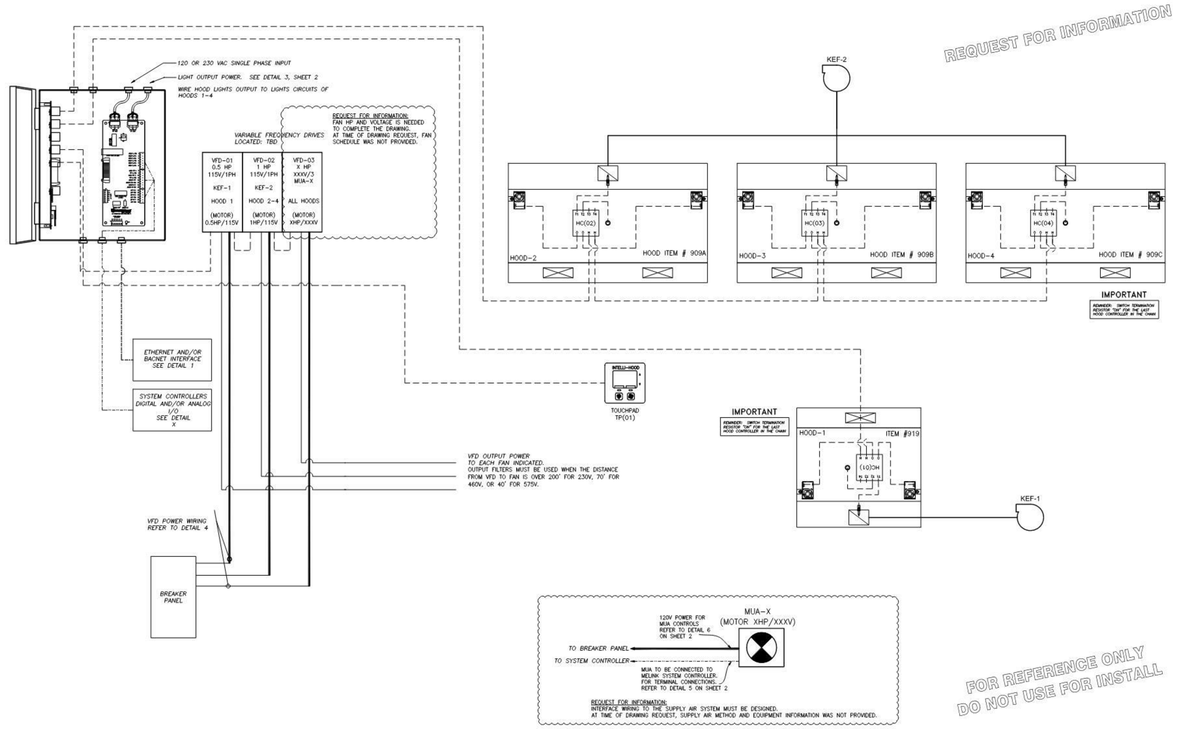
REV.#	DATE	REV. BY

SCALE: NOT TO SCALE

MELINK PROJECT SO#: 3542273
SERIAL NUMBER: SUBMITTAL

SHEET: I-2.1

SHEET 3
CONTROL WIRING SCHEMATIC
FOR SYSTEM CONTROLLER #1



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PROJECT:
RIVERWOOD MIDDLE SCHOOL
KINGWOOD, TX
HUMBLE ISD
SUBMITTAL DRAWING DATE: **10-30-25** DRAWN BY: **BJS**
DRAWING RELEASE DATE/QR-XX-XX RELEASED BY: **XXX**
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REVISIONS:

REV.#	DATE	REV. BY

SCALE: NOT TO SCALE

MELINK PROJECT SO#: 3542273
SERIAL NUMBER: SUBMITTAL

SHEET: I-3

Revision / Date

RIVERWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

Project:

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
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THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO: 48854119 ON: 10/29/2025

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FS EXHAUST HOODS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. ISSUE FOR BID QF1.05
Drawn By: Author	
Date: 10/29/2025	

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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO#1821-13-02_RIVERWOOD MS ADDITION & RENOVATIONS_FOODSERVICE - V23.rvt

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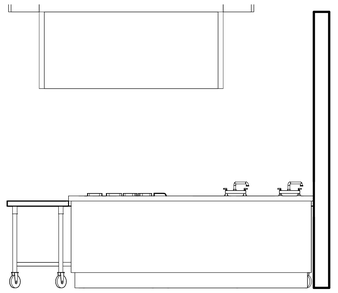
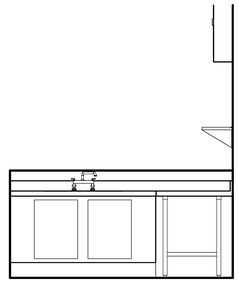
REFER TO QF1.01 FOR ITEM NUMBERS AND QF3.01 & QF3.02 FOR SECTIONS AND DETAILS



8 ELEVATION @ DEMO AREA (RIGHT)
1/2" = 1'-0"



4 ELEVATION @ STUDENT PREP SINK
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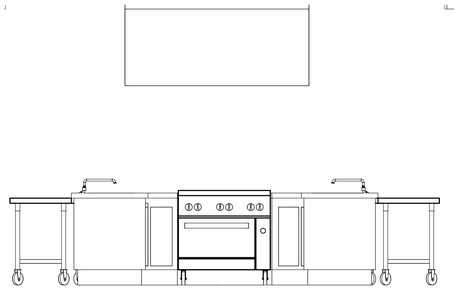

7 ELEVATION @ DEMO AREA (CENTER)
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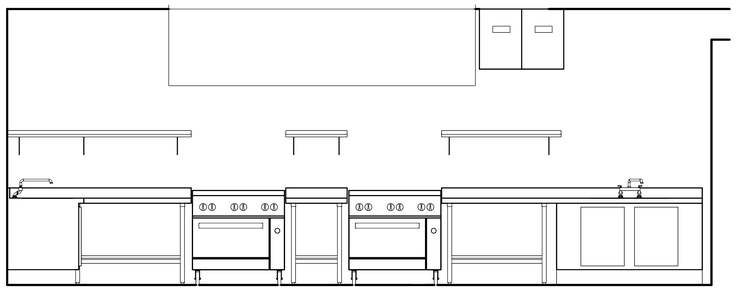
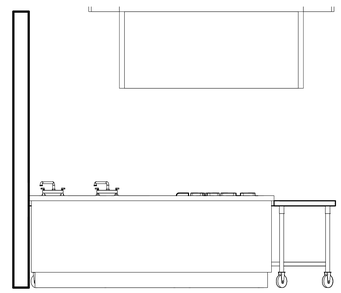


3 ELEVATION @ STUDENT WORK STATIONS C
1/2" = 1'-0"



6 ELEVATION @ DEMO AREA (LEFT)
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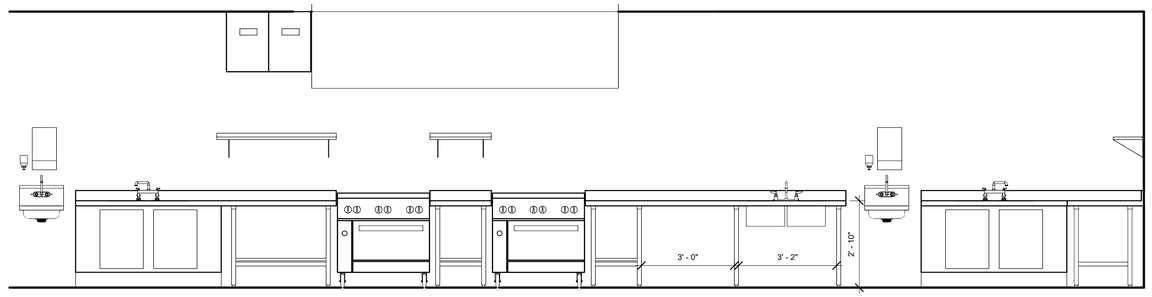

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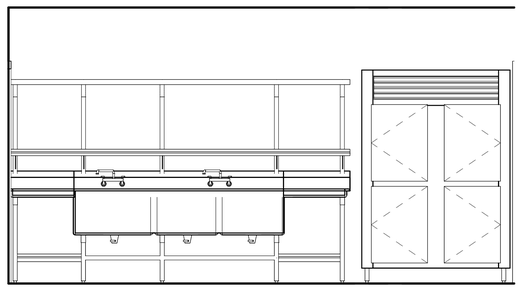
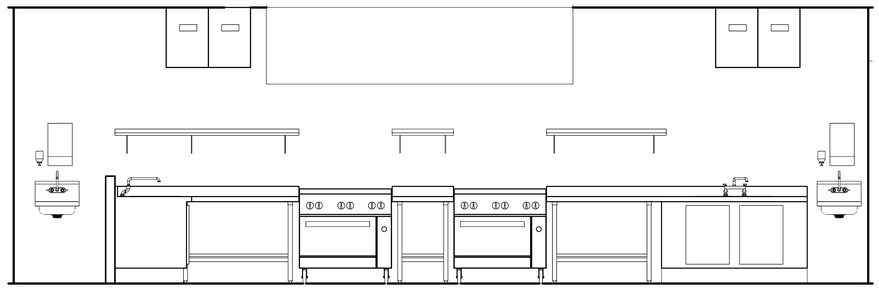


5 ELEVATION @ UTENSIL WASH AREA
1/2" = 1'-0"



1 ELEVATION @ STUDENT WORK STATIONS A
1/2" = 1'-0"

Revision / Date

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FOR
HUMBLE ISD
HUMBLE, TX

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FS ELEVATIONS

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Job No. 1821-13-02	Sheet No. QF2.01
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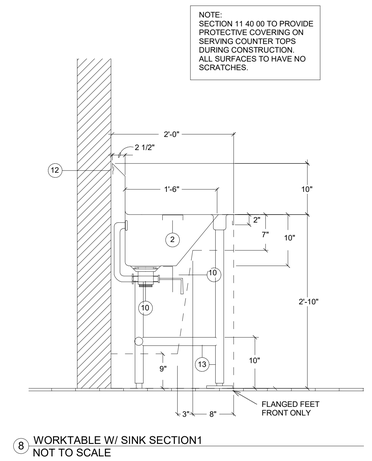
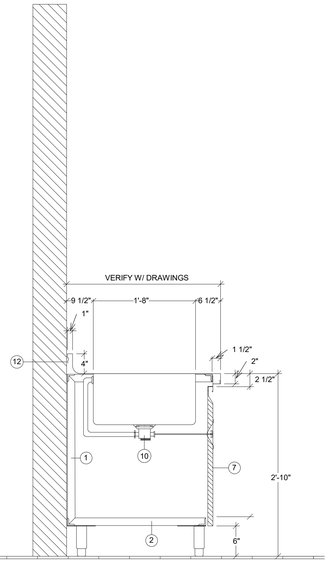


8 WORKTABLE W/ SINK SECTION1
NOT TO SCALE



7 COUNTER - BACK CLOSED BASE W/ SINK SECTION
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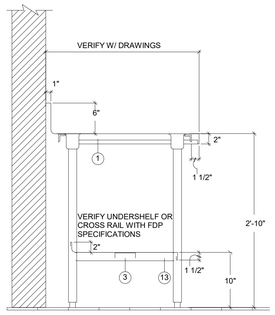

6 WORKTABLE W/O OVER SHELF SECTION
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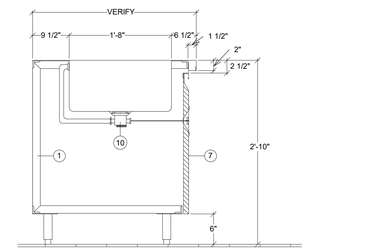

5 COUNTER - DEMO W/ SINK SECTION
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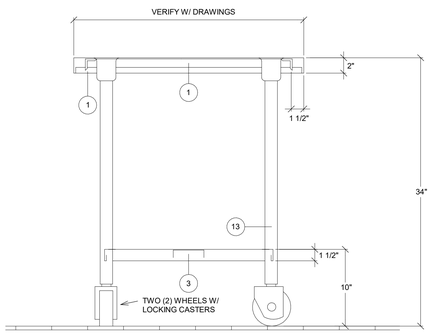

4 WORKTABLE - MOBILE SECTION
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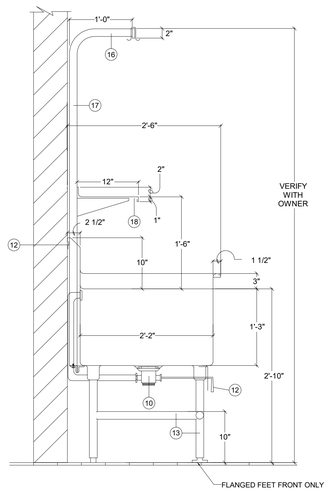
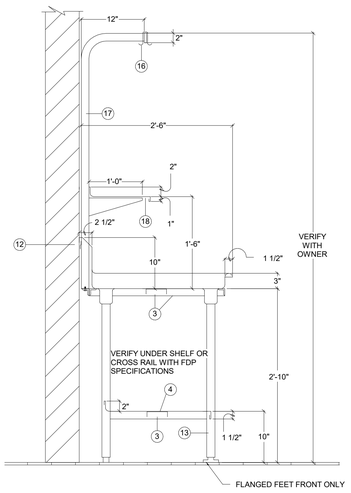


3 SINK - UTENSIL WASH SECTION
NOT TO SCALE



2 DRAINBOARD - UTENSIL WASH SECTION
NOT TO SCALE

SECTION DETAIL NOTES:

1. 1 1/2" X 1 1/2" X 1/8" GALVANIZED ANGLE IRON.
2. 1" X 4" 14 GAUGE STAINLESS STEEL HAT CHANNEL.
3. 16 GAUGE STAINLESS STEEL C-CHANNEL.
4. 16 GAUGE STAINLESS STEEL UNDER SHELF, COVE UP REAR 2", TURN DOWN FRONT 1 1/2".
5. 1/2" CEMENT BACKERBOARD WITH TILE FRONT BY TRADE CONTRACTOR OR COUNTER MANUFACTURER. VERIFY FINISH WITH ARCHITECTURAL DRAWINGS.
6. COLD PAN - 2" RIGID INSULATION WITH 1" C.P. DRAIN - 16 GAUGE STAINLESS STEEL SECTION FALSE BOTTOM. PERFORATE FALSE BOTTOM WITH 1/4" DIA. HOLES AT 3" O.C.
7. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN DOOR WITH RECESSED PULL.
8. MANIFOLD DRAINS AT HOT FOOD UNITS WITH 1" TYPE 'K' COPPER AND EXTEND TO VALVE IN PLUMBING COMPARTMENT.
9. FINISHED TRUE AND LEVEL MASONRY BASE BY DIVISION 09. CLOSE COUNTER BODY AT BASE AND SEAL BY SECTION 11 40 00.
10. FISHER #22314 DRAIN WITH TAILPIECE AND OVERFLOW.
11. 14 GAUGE STAINLESS STEEL BRACKET WITH DRAIN HANDLE BUSHING.
12. 16 GAUGE STAINLESS STEEL 'Z' CLIP TO WALL AND SEAL.
13. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL LEGS AND CROSS RAILS.
14. 1/2" S/S TUBING DRAIN LINE - STRAP TO SHELF AND WALL - EXTEND DOWN TO TOP OF SPLASH.
15. 1 5/8" DIA. 16 GAUGE STAINLESS STEEL TUBING - SUPPORT FRONT OF SHELF WITH 1/2" ALL-THREAD INSIDE TUBING EXTENDING TO STRUCTURE ABOVE.
16. 1/4" S/S BAR STOCK WELDED TO TOP OF EACH POST - POT HOOKS TO BE COMPONENT HARDWARE #J77-4401 SPACED 8" O.C.
17. 1 5/8" 16 GAUGE STAINLESS STEEL TUBING - BOLT TO ANGLE IRON AND EXTEND UP THRU SPLASH TO 7'-0" A.F.F.
18. OVER SHELF - 16 GAUGE STAINLESS STEEL, COVE UP REAR 2", TURN FRONT AND ENDS DOWN 1", ENDS TO BE CAPPED WITH EASED CORNERS WHERE ADJACENT TO WALL / FIXTURE.
19. 18 GAUGE STAINLESS STEEL LOUVERED PANEL.
20. 18 GAUGE STAINLESS STEEL LOUVERED DOUBLE PAN DOOR WITH RECESSED PULL.
21. NUMBER NOT USED.
22. 18 GAUGE STAINLESS STEEL INSULATED DOUBLE PAN SLIDING DOOR WITH COMPONENT HARDWARE COMPONENTS
    - A. #B57 - (VERIFY LENGTH) EXTRUDED ALUMINUM TRACK.
    - B. #B58-5511 & #B58-5521 FRONT & REAR DOOR SHEAVES.
    - C. #B62-1093 DOOR GUIDE.
    - D. #B60-1086 DOOR STOPS WHERE NEEDED.
    - E. #P62-1010 RECESS PULLS.

1 SECTION DETAIL NOTES
NOT TO SCALE

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FS SECTIONS & DETAILS

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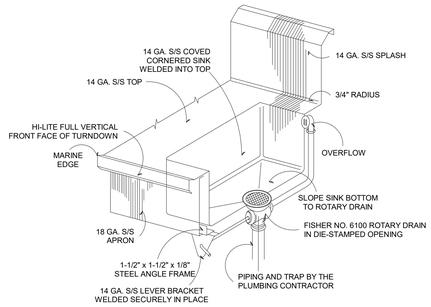

3 SINK ASSEMBLY DETAIL
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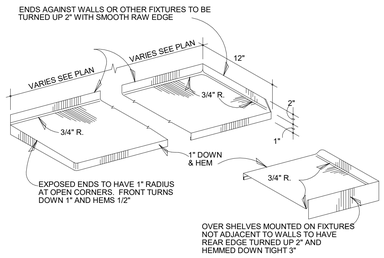

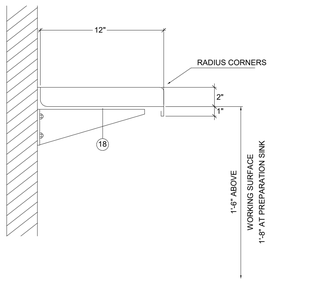

2 SHELF - WALL MTD SECTION
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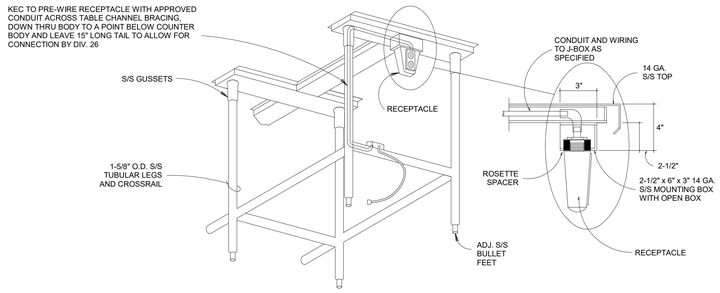
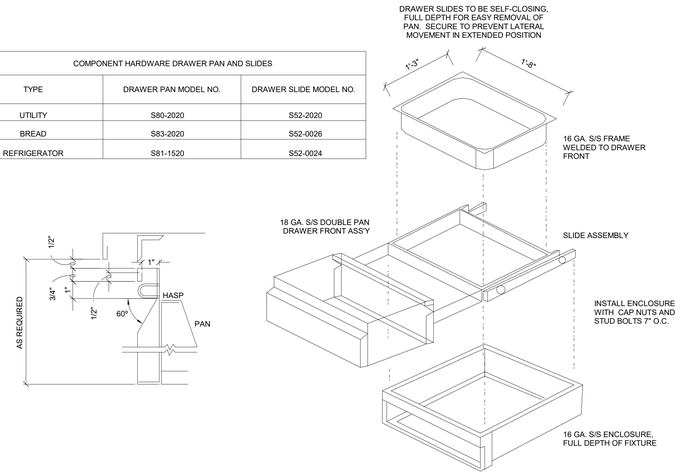


5 WORKTABLE - ELECTRICAL RECEPTACLE MOUNTED UNDER TOP DETAIL
NOT TO SCALE

COMPONENT HARDWARE DRAWER PAN AND SLIDES		
TYPE	DRAWER PAN MODEL NO.	DRAWER SLIDE MODEL NO.
UTILITY	S80-2020	S52-2020
BREAD	S83-2020	S52-0026
REFRIGERATOR	S81-1520	S52-0024



6 DRAWER ASSEMBLY DETAIL
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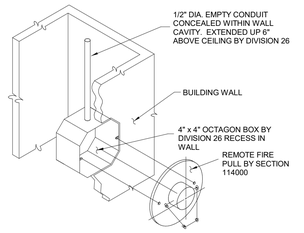
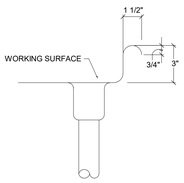
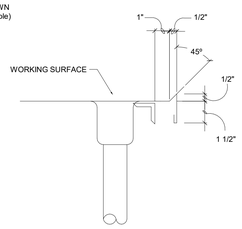


12 FIRE PROTECTION SYSTEM FIRE PULL DETAIL
NOT TO SCALE

SQUARE TURNDOWN
(worktable, set-up table)

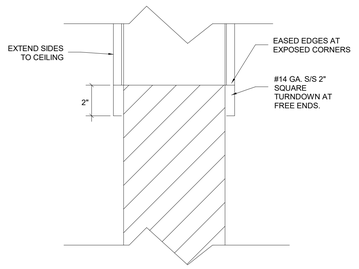


1 1/2" ROLLED RIM
(3 compartment sink)

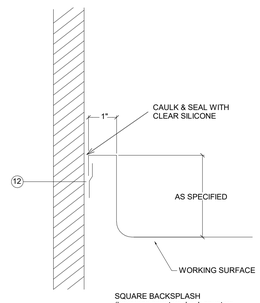


MARINE EDGE
(prep sink)

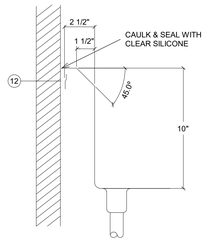
8 EDGE DETAILS
NOT TO SCALE



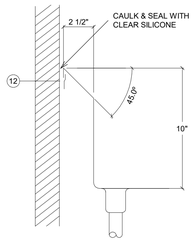
4 S/S WALL CAP DETAIL
NOT TO SCALE



SQUARE BACKSPLASH
(beverage counters, back counters, snack bar counters, concession counters)

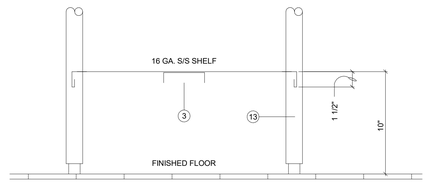


CHAMFERED 45° ANGLE BACKSPLASH
(with post mounted over shelf)

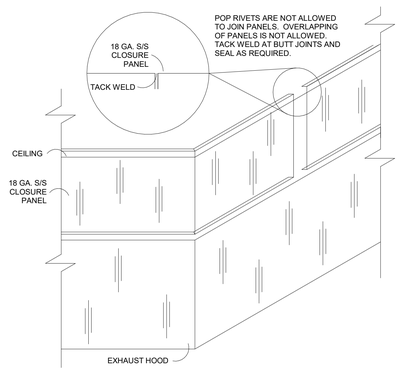


45° ANGLE BACKSPLASH
(without post mounted over shelf)

7 BACKSPLASH DETAILS
NOT TO SCALE



11 UNDER SHELF DETAIL
NOT TO SCALE



13 EXHAUST HOOD CLOSURE PANEL DETAIL
NOT TO SCALE

CUSTOM FABRICATION NOTES:

A. WORK SHALL BE DONE IN AN APPROVED WORKMANLIKE MANNER, TO COMPLETE SATISFACTION OF THE FOODSERVICE DESIGN PROFESSIONALS (FDP).

B. STAINLESS STEEL SHALL BE U.S. STANDARD GAUGES AS CALLED FOR. 18-8, TYPE 304, NOT OVER .012% MAXIMUM CARBON, NO. 4 FINISH.

C. GALVANIZED IRON SHALL BE ARMCO OR EQUAL. FRAMEWORK OF GALVANIZED IRON SHALL BE WELDED CONSTRUCTION, HAVING WELDS SMOOTH, AND WHERE GALVANIZING HAS BURNED OFF, TOUCHED UP WITH HIGH-GRADE ALUMINUM BRONZE.

D. LEGS AND CROSSRAILS SHALL BE CONTINUOUSLY WELDED, UNLESS OTHERWISE NOTED, AND GROUND SMOOTH.

E. BOTTOM OF LEGS AT FLOOR SHALL BE FITTED WITH SANITARY STAINLESS STEEL BULLET-TYPE FOOT, WITH NO LESS THAN 1/2" ADJUSTMENT.

F. LEGS SHALL BE FASTENED TO EQUIPMENT AS FOLLOWS:

01. TO SINKS BY MEANS OF CLOSED GUSSETS. GUSSETS SHALL BE S/S, REINFORCED WITH BUSHING, HAVING SET SCREWS FOR SECURING LEGS.

02. TO TABLES AND DRAINBOARDS WITH CLOSED GUSSETS WHICH SHALL BE WELDED TO GALVANIZED HAT SECTIONS OR CHANNELS, 14 GAUGE OR HEAVIER, EXPOSED HAT SECTIONS HAVING CLOSED ENDS. BRACING SHALL BE UNDERSIDE OF TOPS.

G. CLOSED GUSSETS SHALL BE 3" MINIMUM DIAMETER AT TOP, WELDED TO FRAME MEMBERS OR TO SINK BOTTOM.

H. ROLLS SHALL BE 1 1/2" DIAMETER, EXCEPT AS DETAILED TO THE CONTRARY, WITH CORNERS BULLNOSED, GROUND, AND POLISHED.

I. SEAMS AND JOINTS SHALL BE SHOP-WELDED WHERE POSSIBLE. WELDS TO BE GROUND AND POLISHED TO MATCH ORIGINAL FINISH. MATERIALS 18 GAUGE OR HEAVIER SHALL BE WELDED.

J. METAL TOPS SHALL BE ONE-PIECE WELDED CONSTRUCTION UNLESS SPECIFIED OTHERWISE, REINFORCED ON UNDERSIDE WITH GALVANIZED HAT SECTIONS OR CHANNELS WELDED IN PLACE. CROSSBRACE TO BE NOT MORE THAN 30" ON CENTERS.

K. HARDWARE SHALL BE SOLID MATERIALS AND EXCEPT WHERE EXPOSED OR SPECIFIED TO THE CONTRARY, OF CAST BRASS, CHROME-PLATED. IDENTIFY ALL HARDWARE WITH MANUFACTURER'S NAME AND NUMBER SO THAT BROKEN OR WORN PARTS MAY BE ORDERED AND REPLACED.

L. FABRICATE SINK COMPARTMENTS WITH 3/4" COVED VERTICAL AND HORIZONTAL CORNERS. MULTIPLE- COMPARTMENT PARTITIONS TO BE DOUBLE THICKNESS, CONTINUOUSLY WELDED WHERE SHEETS JOIN AT TOP. FRONT OF MULTIPLE-COMPARTMENT PARTITIONS TO BE CONTINUOUS ON EXTERIOR. BOTTOMS SHALL BE CREASED TO DRAIN.

M. ENDS OF FIXTURES, SPLASHBACKS, SHELVES, ETC., SHALL BE FINISHED FLUSH TO WALLS OR ADJOINING FIXTURES.

N. DISHTABLES, DRAINBOARDS, SPLASHBACKS, AND TURN-UP EDGES SHALL HAVE RADIUS BENDS IN ALL HORIZONTAL AND VERTICAL CORNERS, COVED AT INTERSECTIONS.

O. ROUNDED AND COVED CORNERS OR RADIUS BENDS SHALL BE 1/2" RADIUS OR LONGER.

P. UNDERSIDES OF TOPS TO BE COATED WITH HEAVY-BODIED RESINOUS MATERIAL COMPOUND FOR PERMANENT, NON-FLAKING ADHESION TO METAL, 1/8" THICK, APPLIED AFTER REINFORCING MEMBERS HAVE BEEN INSTALLED, DRYING WITHOUT DIRT-CATCHING CREVICES.

Q. SHELVES ARE TO BE TURNED UP 2" ON THE BACK EDGE. TURN OTHER EDGES DOWN 1 1/2" TO FORM OPEN CHANNELS. REINFORCE SHELF UNITS TO SUPPORT 40 LBS. PER SQUARE FOOT LOADING, PLUS 100% IMPACT LOADING.

R. TRIMWORK AND FRAMING AT MASONRY OPENINGS SHALL BE 18 GAUGE STAINLESS STEEL AND FORMED SO AS TO FIT SNUG TO WALLS AND ADJACENT SURFACES. FRAMING SHALL EXTEND A MINIMUM OF 2" ON EACH SURFACE. SEAL TRIMWORK TO WALLS. REFER TO DRAWINGS.

S. METAL COMPONENTS, UNLESS SPECIFIED OR NOTED OTHERWISE, TO BE THE FOLLOWING GAUGES:

TABLETOPS	14 GAUGE STAINLESS STEEL
WALL SHELVES	16 GAUGE STAINLESS STEEL
UNDER SHELVES	16 GAUGE STAINLESS STEEL
SINKS & DRAINBOARDS	14 GAUGE STAINLESS STEEL
EXHAUST DUCTS	18 GAUGE STAINLESS STEEL
LEGS - 1 5/8" DIA.	16 GAUGE STAINLESS STEEL

1 CUSTOM FAB NOTES
NOT TO SCALE

Revision / Date

Project:
RIVERWOOD MS ADDITION & RENOVATIONS
FOR
HUMBLE ISD
HUMBLE, TX

FOODSERVICE CONSULTANTS SOCIETY INTERNATIONAL
MELISSA MOORE
FCS 48854119
PROFESSIONAL MEMBER
THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY MELISSA MOORE, FCSI NO. 48854119 ON: 10/29/2025

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FS DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. QF3.02
Drawn By: MM	ISSUE FOR BID
Date: 10/29/2025	

FDP
FOODSERVICE DESIGN PROFESSIONALS

10/29/2025 3:41:02 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-02 - RIVERWOOD MS ADDITION & RENOVATIONS - FOODSERVICE - V23.rvt

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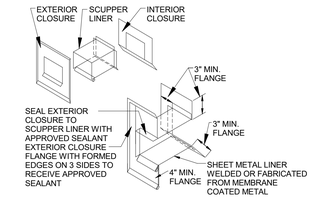
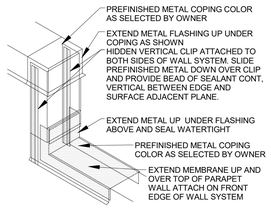
GENERAL ROOF NOTES:

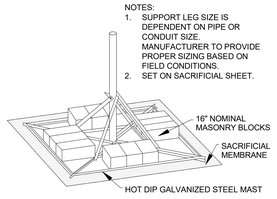
A. PROVIDE ALL REQUIRED UTILITY / STRUCTURAL COMPONENTS AND/OR CONNECTIONS FOR THE FUNCTIONAL USE OF ALL CONTRACTOR SUPPLIED EQUIPMENT OR APPLIANCES, REGARDLESS OF ANY OMISSIONS OR INCONSISTENCIES ENCOUNTERED IN THE CONSTRUCTION DOCUMENTS.
B. THE WORD 'PROVIDE' SHALL MEAN 'FURNISH AND INSTALL' COMPLETE AND READY TO USE.
C. IF DISCREPANCIES APPEAR BETWEEN THE DRAWINGS AND THE SPECIFICATIONS, THE HIGHER QUALITY, QUANTITY, AND PRICE SHALL SUPERSEDE.
D. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL BECOME FAMILIAR WITH THE PROJECT AND THE ON-SITE / OFF-SITE CONDITIONS PRIOR TO BIDDING OR COMMENCING WORK.
E. PROVIDE METAL END CLOSURE ON EXPANSION JOINTS WHERE THEY OCCUR AT THE EDGE OF THE ROOF.
F. ROOF SLOPES SHOWN ON DRAWINGS ARE GENERAL AND CONCEPTUAL ONLY. TAPER INSULATION IS SHOWN CONCEPTUALLY AND FOR INTENT ONLY; NOT TO SCALE AND SHOWN AS GRAPHIC REPRESENTATION ONLY TO SHOW SLOPE. INTENT IS TO PROVIDE POSITIVE DRAINAGE TO ALL ROOF DRAINS, SCUPPERS, AND GUTTERS. VERIFY INSULATION AND TAPER IN SHOP DRAWINGS AS REQUIRED TO MAINTAIN SLOPE PRIOR TO INSTALLATION. REFER TO STRUCTURAL (IF APPLIES) FOR EXACT TOS/BOD ELEVATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
G. PROVIDE TAPERED INSULATION CRICKETS (1/2"/FT. MIN. SLOPE) AT HIGH SIDE OF ALL MECHANICAL UNITS, SMOKE VENTS, ROOF HATCHES, AND OTHER MISC. ROOF PENETRATIONS, TO SHED WATER AROUND AND TO ENSURE POSITIVE ROOF DRAINAGE.
H. PROVIDE ADDITIONAL MANUFACTURER'S WALK PADS AS PROTECTION AT "SERVICE SIDE" OF ALL MECHANICAL EQUIPMENT - FIELD VERIFY LOCATIONS. AS WELL AS PROTECTION AT "ACCESS SIDE" OF ALL ROOF HATCHES AND ROOF ACCESS LADDERS - FIELD VERIFY LOCATIONS, AND AT DOWNSPOUT LOCATIONS.
I. ALL WOOD BLOCKING AT ROOF EDGES ARE TO BE FABRICATED FROM CONT. 2X6 FR-WD BOARDS. PROVIDE LARGER 2X FR-WD AS REQUIRED PER DIMENSIONED DETAILS OR AS FIELD CONDITIONS DICTATE. ALL COPING TO BE SLOPED TOWARD THE INTERIOR.
J. ALL EXPOSED FLASHING, COPING (IF APPLICABLE), AND THEIR ACCESSORIES SHALL BE AS SPECIFIED. PAINT ALL METAL FLASHING THAT IS NOT PREFINISHED (TYPICAL) AND VISIBLE FROM THE GROUND.
K. HEIGHT OF ALL NAILERS SHALL BE FLUSH WITH NEW INSULATION THICKNESS.
L. ALL THROUGH WALL FLASHING SYSTEMS TO ACCOMMODATE 8" MINIMUM FLASHING HEIGHT FROM FINISHED ROOF SURFACE. PROVIDE END DAMS AS CONDITIONS ALLOW. ALL FLASHING TO HAVE 4" LAP MINIMUM AND OR STEP.
M. ALL PITCH PANS SHALL BE DOUBLE SOLDERED STAINLESS STEEL AND RECEIVE EITHER MECHANICALLY ATTACHED GOOSENECKS OR METAL BONNETS. METAL BONNETS SHALL BE SECURED WITH CLAMPING RING AND SEALANT. SPECIAL CARE GIVEN TO WASH ALL METAL PRIOR TO INSTALLATION.
N. ALL INFIELD EXPANSION JOINTS SHALL HAVE LOW SLOPED STANDING SEAM JOINTS AND SHALL BE CHAMFERED AT TERMINATION AT ROOF EDGE TO MEET PROFILE OF PERIMETER.
O. ANY CRACKS OR VOIDS IN RISE WALLS ABOVE COUNTER FLASHING SHALL BE REPAIRED WITH COMPATIBLE SEALANT.
P. ALL VERTICAL MEMBRANE FLASHING SHALL BE MECHANICALLY FASTENED AND INSTALLED WITH NEW METAL COUNTER FLASHING UTILIZING A CONTINUOUS CLEAT. SLIDE METAL COVER PLATE DOWN OVER VERTICAL CLEAT AND SEAL.
Q. PROVIDE NEW CONCRETE SPLASH BLOCKS ON ROOF ELEVATION ON TOP OF A WALK PAD WHERE DOWNSPOUTS OCCUR.
R. ALL PIPES AND CONDUIT SHALL RECEIVE PIPE SUPPORTS AND RELATED SHIMS AND SHALL BE PLACED ON AN ADDITIONAL ADHERED ROOF MEMBRANE UNDER SPECIFIED WALK PAD PRIOR TO SURFACE APPLICATION. SUPPORTS TO OCCUR AT 10'-0" O.C. AND WITHIN 2'-0" OF ALL SLOPES, TEES AND CORNERS. ALL PIPES TO BE PAINTED PER BUILDING CODE REQUIREMENTS.
S. ALL METAL FLASHING SHALL EXTEND BEYOND ROOF EDGE MIN. 8" WHERE FLASHING ABUTS VERTICAL WALL SURFACE AS DETAILED. ALL FLASHING SHALL BE INSTALLED IN SHINGLE FASHION.
T. AT ALL LOCATIONS WHERE CONVERGENCE OF MULTIPLE PLANES OF ROOFING TO WALL OCCUR, FIELD FABRICATE THERMOPLASTIC BOOT TO BE INSTALLED OVER NEW ROOFING, COMPLETELY OVERLYING THE TRANSITIONS OF ALL ROOF TO WALL ELEVATIONS, INSIDE AND OUTSIDE 90 DEGREE CORNERS, ETC. PRIOR TO METAL INSTALLATION.
U. ALL EQUIPMENT CURBS TO BE RAISED AS NECESSARY TO MAINTAIN 10" MINIMUM HEIGHT ABOVE FINISHED ROOF SURFACE.
V. MECHANICAL, ELECTRICAL, AND PLUMBING ROOF EQUIPMENT SHOWN ON THIS PLAN IS FOR GENERAL ARCHITECTURAL INFORMATION ONLY. REFER TO MEP DOCUMENTS (IF APPLIES) FOR ROOFTOP EQUIPMENT NOT SHOWN, AND FOR ADDITIONAL REQUIREMENTS AND COORDINATION.
W. FLASHING AND STRIPPING MATERIALS, BASE PLY SHEETS, MEMBRANES, INSULATION, AND ACCESSORIES SHOULD BE AS RECOMMENDED BY THE ROOFING SYSTEM MANUFACTURER FOR INTENDED USE AND COMPATIBILITY WITH THE MEMBRANE ROOFING SYSTEM.
X. WHERE WOOD BLOCKING EXCEEDS 6" IN VERTICAL THICKNESS AT TAPERED INSULATION, PROVIDE STEM WALL CONSTRUCTED OF 6" GALVANIZED COLD FORMED METAL FRAMING AT 16" O.C. WITH CONT. TRACK AT TOP AND BOTTOM AND WITH 3/4" FR-EXT GRADE PLYWOOD AT EACH SIDE, TOP TO SLOPE WITH TAPERED INSULATION.
Y. REFER TO MEP DOCUMENTS (IF APPLIES) FOR PIPE SUPPORT LOCATIONS, TYPE, AND DETAILS. PAD SHALL BE MIN 2" WIDER THAN SUPPORT IN ALL DIRECTIONS.
Z. PROVIDE STEP FLASHING AND COVER PLATE AT SLOPED ROOF HIGH/LOW CONDITIONS.
AA. GUTTERS SHALL BE PREFINISHED GALVANIZED STEEL, SIZE PER DRAWINGS, UNO. PROVIDE PREFINISHED 1/4"x1 1/2" GALVANIZED STEEL BENT PLATE BRACKETS AND PREFINISHED 1" GALVANIZED STEEL SPACERS AT 36" O.C. MAX, STAGGER WITH EACH OTHER AT 18" O.C.
BB. PROVIDE PREFINISHED GUTTER EXPANSION JOINTS 30'-0" O.C. MAX.
CC. DOWNSPOUTS SHALL BE 5"x6" PREFINISHED GALVANIZED STEEL UNO WHERE LOCATED ON ROOF PLAN. PROVIDE PREFINISHED 2" GALVANIZED STEEL HANGERS AT 36" O.C. COORDINATE LOCATION WITH ARCHITECT PRIOR TO INSTALLATION.
DD. PROVIDE CAST IRON BOOT (TYPICAL) AT ALL DOWNSPOUTS THAT ARE TO GRADE, CONNECT TO STORM SEWER.
EE. PROVIDE SPLASH BLOCKS AT ALL ROOF LEADER NOZZLES THAT SPILL ONTO GROUND.
FF. VERIFY ELEVATION OF ROOF DRAIN RELATIVE TO OVERFLOW SCUPPER PRIOR TO INSTALLATION OF SCUPPERS.
GG. LOCATE SCUPPERS AS INDICATED ON ELEVATIONS, EITHER CENTERED OVER WINDOWS/OPENINGS, OR CENTERED BETWEEN WINDOWS/OPENINGS, UNO. ADJUST PLACEMENT TO MEET MASONRY COURSING MODULES.



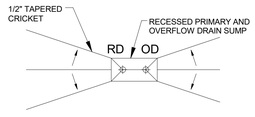
15 SCUPPER SHEET METAL
NOT TO SCALE



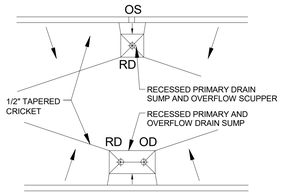
14 COPING END CAP
NOT TO SCALE



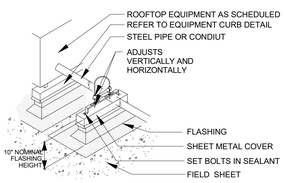
13 ANTENNA SUPPORT
NOT TO SCALE



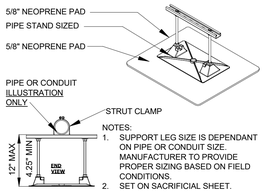
12 TAPERED SADDLES
NOT TO SCALE



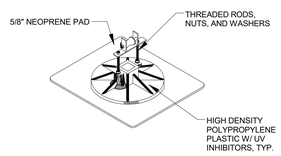
11 TAPERED CRICKET
NOT TO SCALE



10 PIPE STAND
NOT TO SCALE

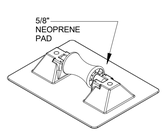


9 LARGE PIPE - PIPE STAND
NOT TO SCALE



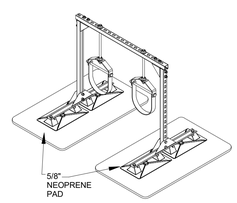
ROLLER AND SUPPORT LEG SIZE IS DEPENDENT ON PIPE OR CONDUIT SIZE. MANUFACTURER TO PROVIDE PROPER SIZING BASED ON FIELD CONDITIONS.

8 ROLLER PIPE SUPPORT
NOT TO SCALE

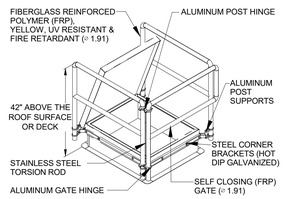


ROLLER AND SUPPORT LEG SIZE IS DEPENDENT ON PIPE OR CONDUIT SIZE. MANUFACTURER TO PROVIDE PROPER SIZING BASED ON FIELD CONDITIONS.

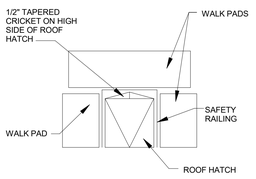
7 ROLLER PIPE SUPPORT
NOT TO SCALE



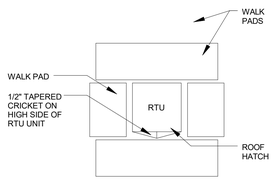
6 PIPE HANGER
NOT TO SCALE



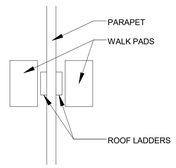
5 ROOF HATCH SAFETY RAILING
NOT TO SCALE



4 ROOF HATCH WALK PAD LAYOUT
NOT TO SCALE



3 ROOF TOP UNIT - WALK PAD LAYOUT
NOT TO SCALE



2 ROOF TO ROOF LADDER WITH WALK PADS
NOT TO SCALE

DO NOT MAKE REPAIRS OR ALTERATIONS TO THIS ROOF WITHOUT APPROVAL FROM THE DIRECTOR OF OPERATIONS AND MAINTENANCE OFFICE

PROJECT: *PROJECT NAME*
PROJECT ADDRESS
STATE

THIS ROOF IS GUARANTEED FROM *XX/XX/XX* UNTIL *XX/XX/XX*

PRIMARY ROOFING MATERIAL MANUFACTURER
MATERIAL MANUFACTURER NAME

MANUFACTURER: *MANUFACTURER NAME*
ADDRESS
STATE
NUMBER

ROOFING CONTRACTOR
CONTRACTOR NAME
ADDRESS
STATE
NUMBER

1 ROOF PLAQUE
NOT TO SCALE

CH CHILLER LINE
G GAS LINE
SST SPLASH PAN / SUPPORT PAD
RPH ROOF PENETRATION HOUSING
GUY WIRE
ANTENNA
SOIL / PLUMBING VENT
FLANGE MOUNTED EQUIPMENT
EDP ELECTRICAL DISTRIBUTION PANEL
HS HOT STACK
CURB MOUNTED VENT
RTU ROOF TOP UNIT
CURB MOUNTED EQUIPMENT
MISC. EQUIP. ON EQUIP. CURBS
RD PRIMARY ROOF DRAIN
OD OVERFLOW ROOF DRAIN
RD OD PRIMARY AND OVERFLOW ROOF DRAIN
DS/SB DOWNSPOUT/ SPLASHBLOCK
EJ EXPANSION JOINT
ME/G METAL EDGE W/GUTTER
ME METAL EDGE
RW RISE WALL
RME RAISED METAL EDGE
RW/EJ RISE WALL W/EXPANSION JOINT
CD CONDENSATE LINE
TEL / FO TELE / FIBER OPTICS
E ELECTRIC LINE
A ANCHOR STANCHION
V VENT STACK
W WATER HYDRANT
E ELECTRIC DISCONNECT PEDESTAL
SC SECURITY CAMERA
PITCH PAN
PROCESS VENT STACK
FLANGE MOUNTED VENT
SATELLITE DISH
MISC. EQUIPMENT
ROOF HATCH
SC THROUGH WALL SCUPPER
OS OVERFLOW SCUPPER
SC EDGE SCUPPER
DS/CH DOWNSPOUT/ COLLECTOR HEAD
DS DOWNSPOUT
ROOF ACCESS LADDER
P PARAPET
P/EJ EXPANSION JOINT AT PARAPET
SLOPE DIRECTION
SL SKYLIGHT

ROOF LEGEND

LOW SLOPE ROOF SYSTEM
NOT IN CONTRACT

Project: RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345

Revision / Date

REGISTERED PROFESSIONAL ENGINEER
PAUL R. RINGER
16711
STATE OF TEXAS
10/29/2025

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GENERAL INFORMATION

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R1.00
Drawn By: BG,RM	
Date: 10/29/2025	

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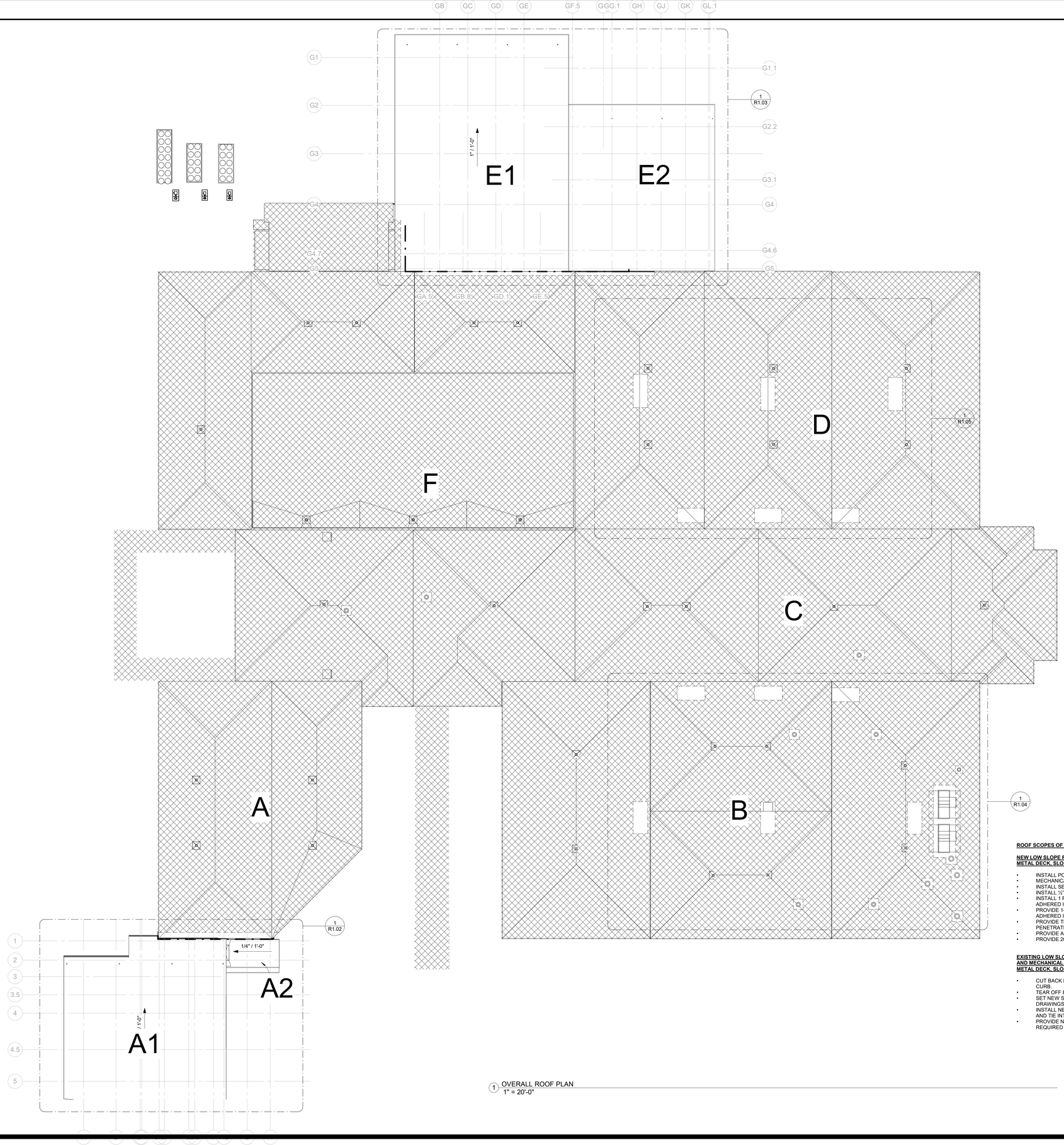

1 OVERALL ROOF PLAN
1" = 20'-0"

ROOF SCOPES OF WORK:

NEW LOW SLOPE ROOF ASSEMBLY SCOPE OF WORK AT ADDITIONS
METAL DECK, SLOPE IN STRUCTURE

- INSTALL POLYISOCYANURATE INSULATION, EQUAL TO R25.
- MECHANICALLY FASTEN FIRST LAYER OF POLYISOCYANURATE TO DECK
- INSTALL SECOND LAYER OF POLYISOCYANURATE IN HOT ASPHALT
- INSTALL ½" GYPSUM COVERBOARD SET IN HOT ASPHALT
- INSTALL 1 PLY 80 MIL MODIFIED BITUMINOUS MEMBRANE BASE PLY ADHERED IN HOT ASPHALT
- PROVIDE 1-PLY 80 MIL THERMOPLASTIC FLEECEBACK CAP SHEET ADHERED IN HOT ASPHALT
- PROVIDE TREATED WOOD NAILERS AROUND THE PERIMETER AND ALL PENETRATIONS TO MATCH ROOF THICKNESS.
- PROVIDE ALL ASSOCIATED METAL TRIM, AND COPING
- PROVIDE 20 YEAR NDL WARRANTY

EXISTING LOW SLOPE ROOF ASSEMBLY SCOPE OF WORK AT NEW SKYLIGHTS AND MECHANICAL EQUIPMENT - PVC ROOF SYSTEM
METAL DECK, SLOPE IN STRUCTURE

- CUT BACK EXISTING ROOF A MINIMUM OF 36" AWAY FROM NEW ROOF CURB.
- TEAR OFF EXISTING ROOF COVERBOARD AND INSULATION TO DECK.
- SET NEW SKYLIGHT CURBS ON DECK AND REFER TO STRUTURAL DRAWINGS FOR SUPPORTS AND ATTACHMENT.
- INSTALL NEW RIGID INSULATION, COVERBOARD AND ROOF MEMBRANES AND TIE INTO EXISTING ROOF SYSTEM AS DETAILED.
- PROVIDE NEW 1/2" TAPERED CRICKETS ON HIGH SIDE OF NEW CURBS AS REQUIRED TO PROVIDE POSITIVE DRAINAGE TO EXISTING ROOF DRAINS.

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Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345

REGISTERED ARCHITECT
RAY STRINGER
16711
STATE OF TEXAS
10/29/2025

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OVERALL ROOF PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No.
Drawn By: BG,RM	R1.01
Date: 10/29/2025	

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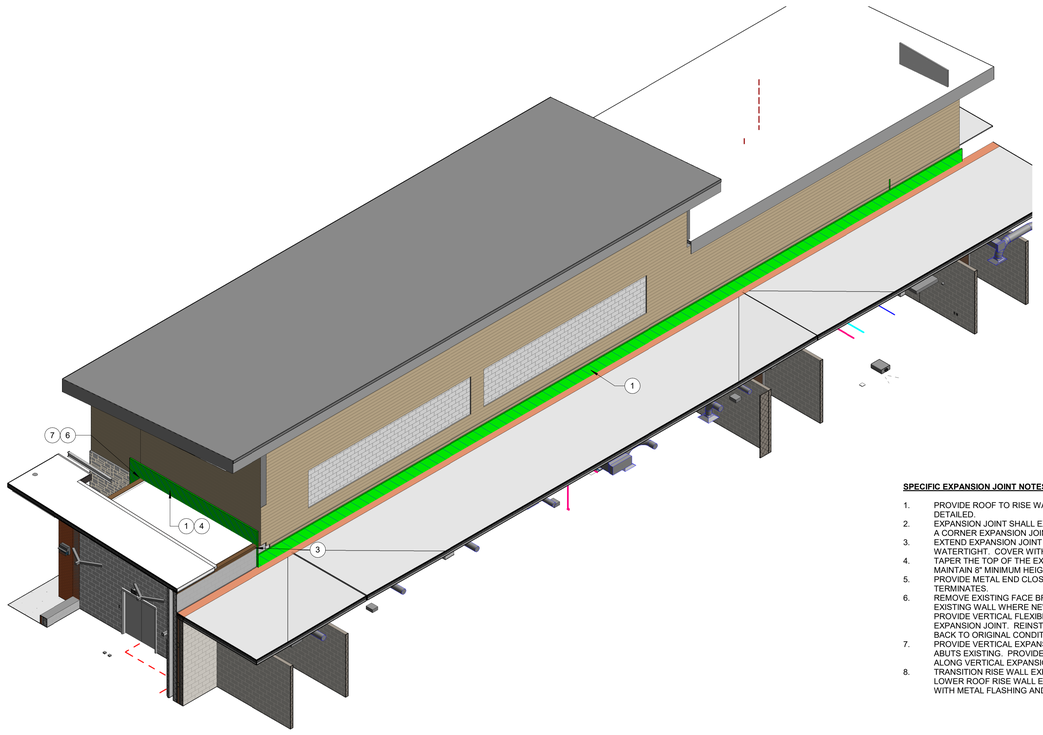
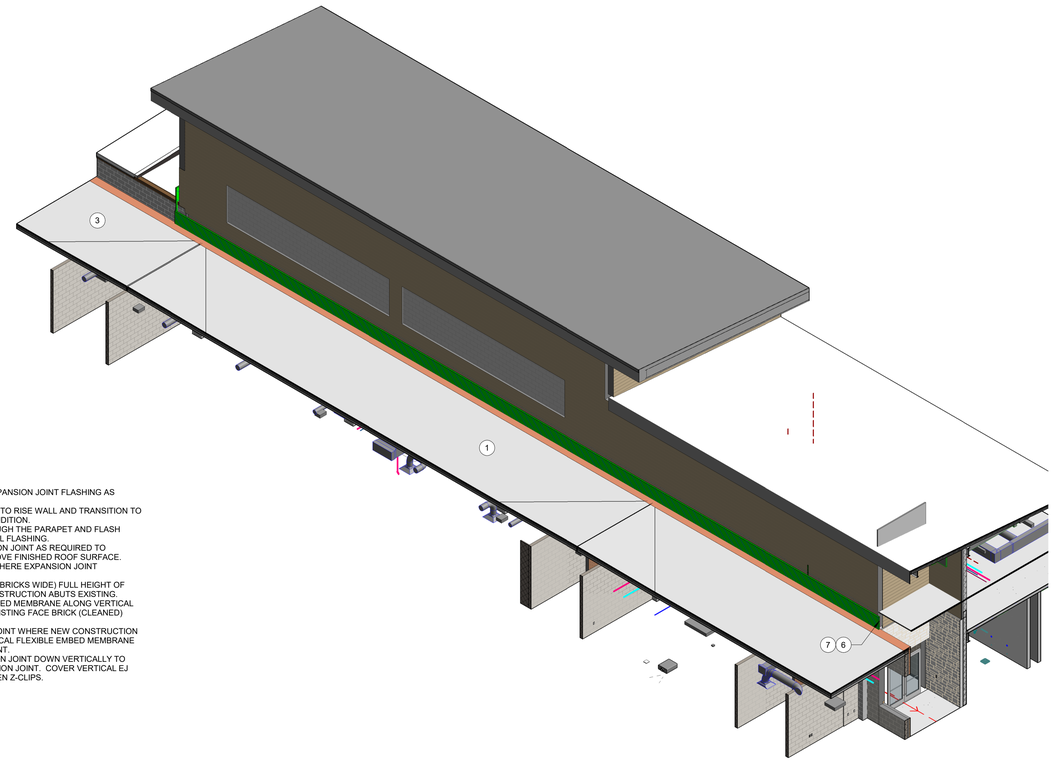


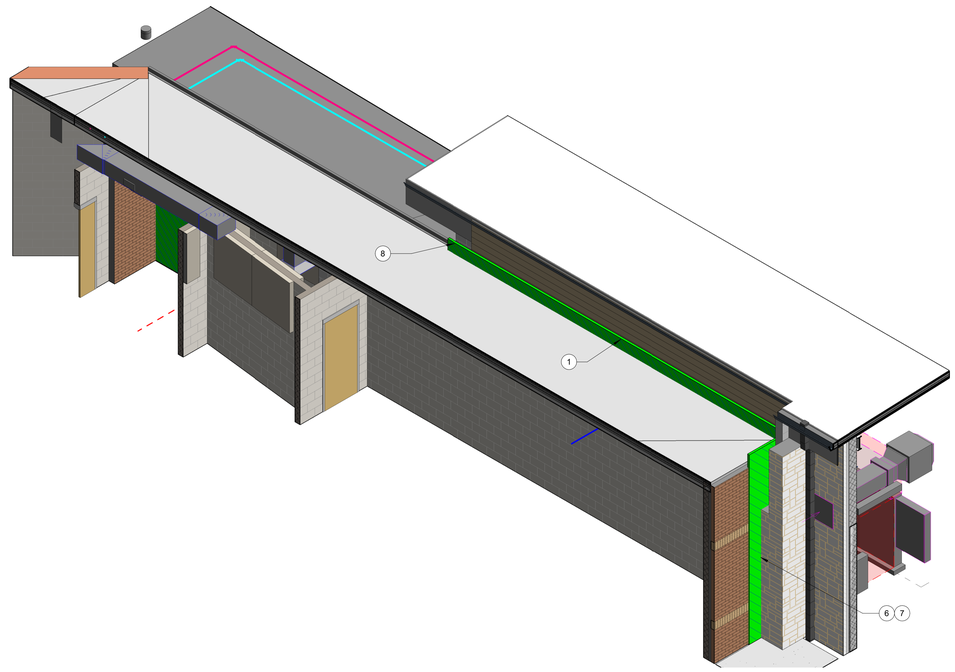
4 ENLARGED EXPANSION JOINT - AREA E - W

SPECIFIC EXPANSION JOINT NOTES:

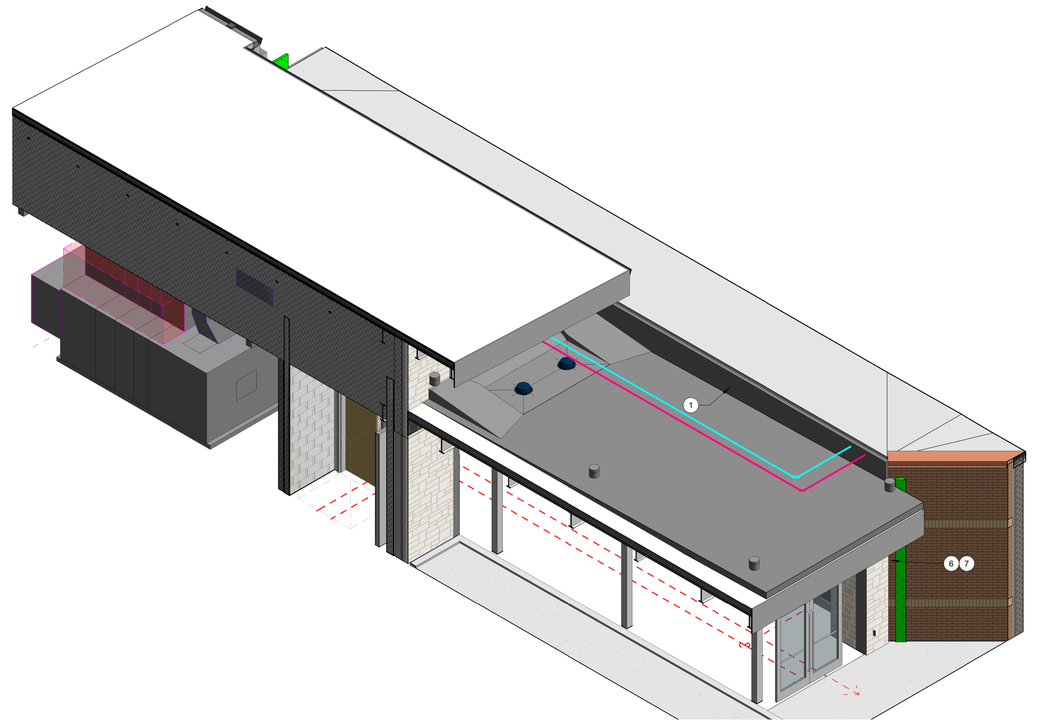
1. PROVIDE ROOF TO RISE WALL EXPANSION JOINT FLASHING AS DETAILED.
2. EXPANSION JOINT SHALL EXTEND TO RISE WALL AND TRANSITION TO A CORNER EXPANSION JOINT CONDITION.
3. EXTEND EXPANSION JOINT THROUGH THE PARAPET AND FLASH WATERTIGHT. COVER WITH METAL FLASHING.
4. TAPER THE TOP OF THE EXPANSION JOINT AS REQUIRED TO MAINTAIN 8" MINIMUM HEIGHT ABOVE FINISHED ROOF SURFACE.
5. PROVIDE METAL END CLOSURE WHERE EXPANSION JOINT TERMINATES.
6. REMOVE EXISTING FACE BRICK (2 BRICKS WIDE) FULL HEIGHT OF EXISTING WALL WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT. REINSTALL EXISTING FACE BRICK (CLEANED) BACK TO ORIGINAL CONDITION.
7. PROVIDE VERTICAL EXPANSION JOINT WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT.
8. TRANSITION RISE WALL EXPANSION JOINT DOWN VERTICALLY TO LOWER ROOF RISE WALL EXPANSION JOINT. COVER VERTICAL EJ WITH METAL FLASHING AND HIDDEN Z-CLIPS.



3 ENLARGED EXPANSION JOINT - AREA E - S



2 ENLARGED EXPANSION JOINT - AREA A - N



1 ENLARGED EXPANSION JOINT - AREA A - S

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345

REGISTERED ARCHITECT
RAY B. RINGER
16711
STATE OF TEXAS
10/29/2025

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ENLARGED EXPANSION JOINTS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R1.01A
Drawn By: BG,RM	
Date: 10/29/2025	

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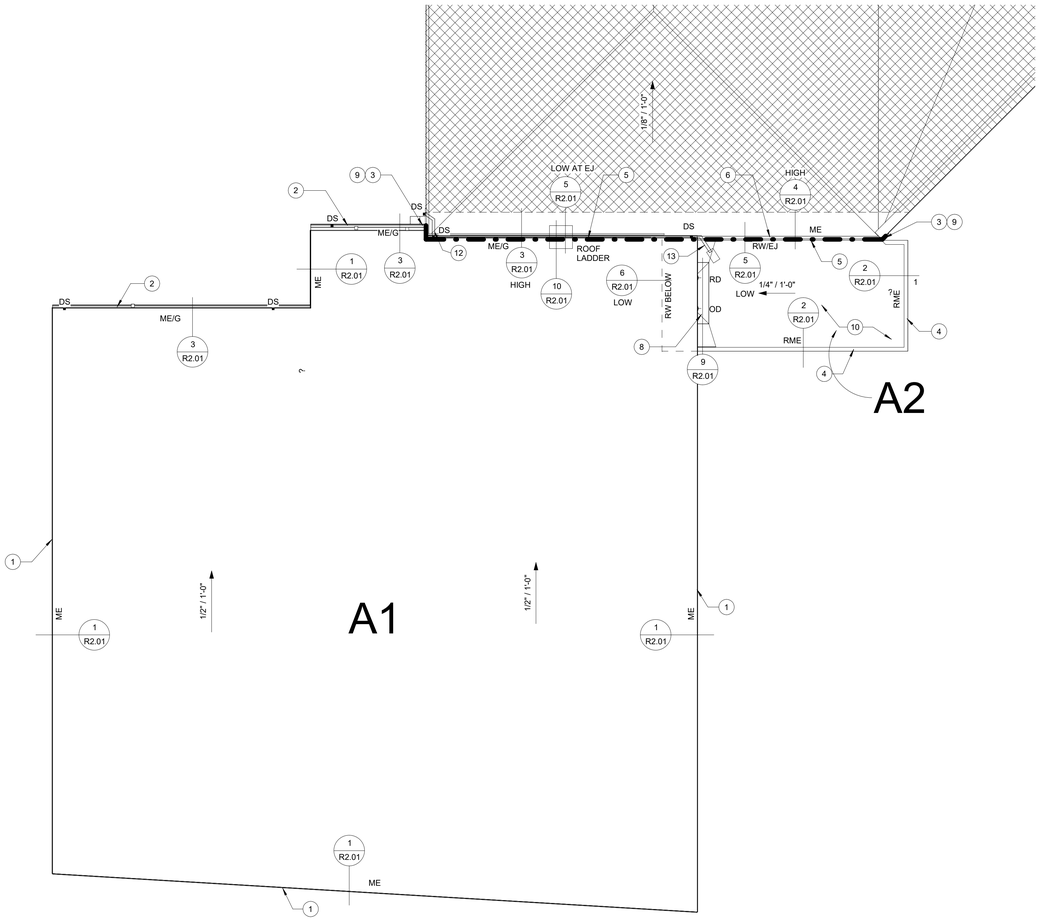
SPECIFIC ROOF NOTES:

1. PREFINISHED METAL EDGE FLASHING.
2. PREFINISHED METAL EDGE GUTTER WITH DOWNSPOUTS.
3. PROVIDE NEW THERMOPLASTIC BOOT AT METAL EDGE TO RISE WALL TRANSITION.
4. RAISED METAL EDGE FLASHING.
5. PROVIDE ROOF TO RISE WALL EXPANSION JOINT WHERE NEW CONSTRUCTION ABUTS EXISTING.
6. REMOVE EXISTING METAL EDGE FLASHING AND SPUD BACK EXISTING ROOFING 36" FROM EDGE. INSTALL NEW VENEER METAL PANELS OVER EXISTING AND FLASH IN NEW METAL EDGE FLASHING TO EXISTING ROOF SYSTEM.
7. PROVIDE CONCRETE SPLASH BLOCK ON ROOF AT EACH DOWNSPOUT.
8. ROOF DRAIN AND OVERFLOW DRAIN (RD/OD TYP.) REFER TO PLUMBING DRAWINGS FOR SIZE AND LEADER INFORMATION. REFER TO DETAIL FOR INSTALLATION.
9. REMOVE EXISTING FACE BRICK (2 BRICKS WIDE) FULL HEIGHT OF EXISTING WALL WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT. REINSTALL EXISTING FACE BRICK (CLEANED) BACK TO ORIGINAL CONDITION.
10. PROVIDE 1/4" TAPERED INSULATION ON FLAT DECK AT ROOF AREA A2.
11. PROVIDE ROOF TO ROOF LADDER WITH WALK PADS AT HIGH AND LOW ROOF SURFACE.
12. ROUTE NEW DOWNSPOUT TO EXISTING LOWER ROOF AND TO DOWN FACE OF BUILDING. TIE INTO STORM.
13. ROUTE NEW DOWNSPOUT TO NEW LOWER ROOF. DISCHARGE TO NEW CONCRETE SPLASHBLOCK.



1 PARTIAL ROOF PLAN - AREA A
1/8" = 1'-0"

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345

Revision / Date

REGISTERED ARCHITECT
RYAN S. RINGER
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ENLARGED ROOF PLAN - AREA A

PACKAGE	VOLUME
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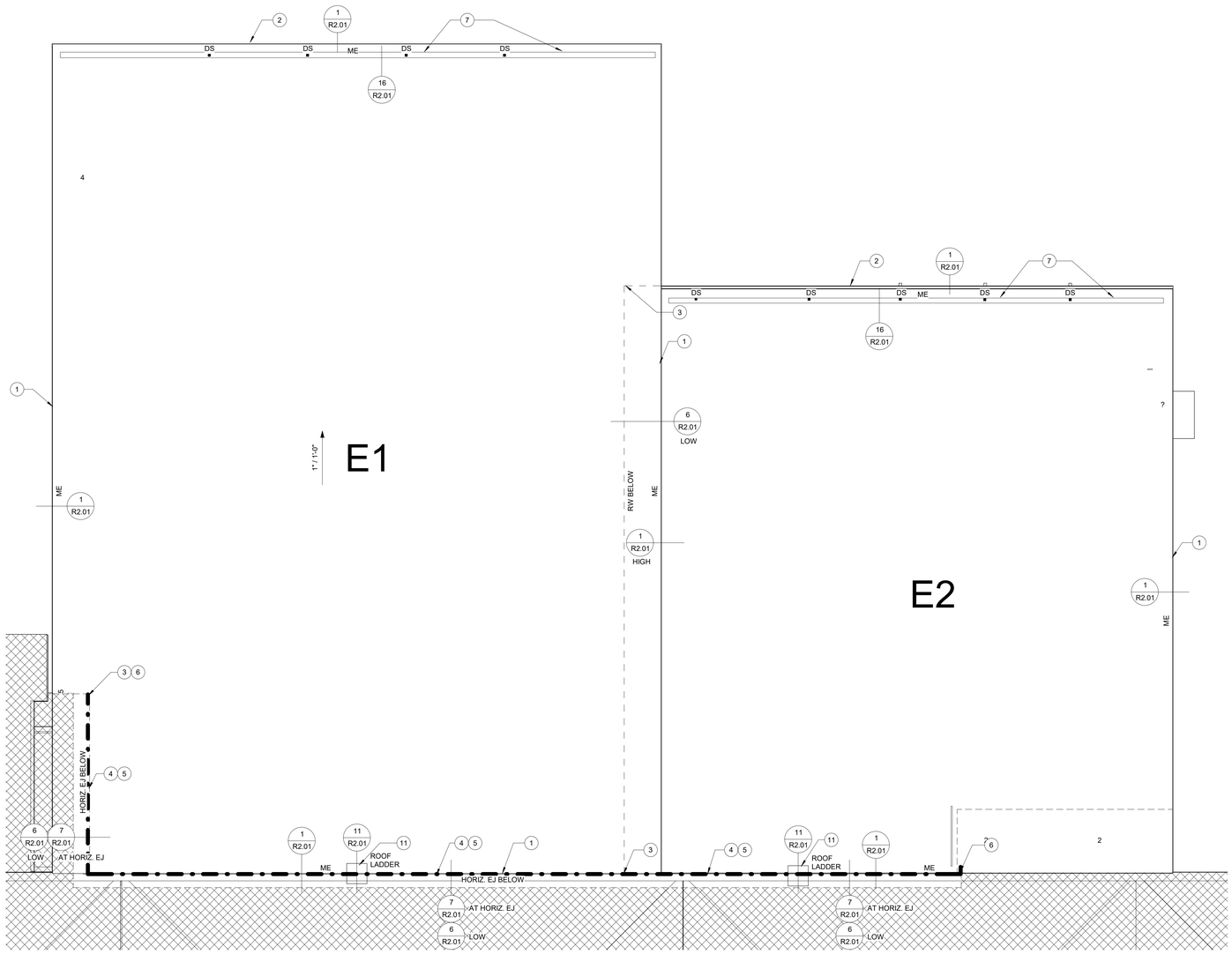
SPECIFIC ROOF NOTES:

1. PREFINISHED METAL EDGE FLASHING.
2. PREFINISHED METAL EDGE GUTTER WITH DOWNSPOUTS.
3. PROVIDE THERMOPLASTIC BOOT AT METAL EDGE TO RISE WALL TRANSITION.
4. PROVIDE HORIZONTAL EXPANSION JOINT WHERE NEW CONSTRUCTION ABUTS EXISTING.
5. REMOVE EXISTING METAL EDGE FLASHING AND SPUD BACK EXISTING ROOFING 36" FROM EDGE AND PROVIDE FLASHING TO RISE WALL CONDITION.
6. REMOVE EXISTING FACE BRICK (2 BRICKS WIDE) FULL HEIGHT OF EXISTING WALL WHERE NEW CONSTRUCTION ABUTS EXISTING. PROVIDE VERTICAL FLEXIBLE EMBED MEMBRANE ALONG VERTICAL EXPANSION JOINT. REINSTALL EXISTING FACE BRICK (CLEANED) BACK TO ORIGINAL CONDITION.
7. INTERNAL GUTTER WITH DOWNSPOUTS. ROUTE DOWNSPOUT DOWN INTO STEEL TUBE BELOW AND STUB INTO INTERNAL PVC PIPING.
8. PROVIDE ROOF TO ROOF LADDER WITH WALK PADS AT HIGH AND LOW ROOF SURFACE.



1 PARTIAL ROOF PLAN - AREA E
1/8" = 1'-0"

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ENLARGED ROOF PLAN - AREA E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R1.03
Drawn By: BG,RM	
Date: 10/29/2025	

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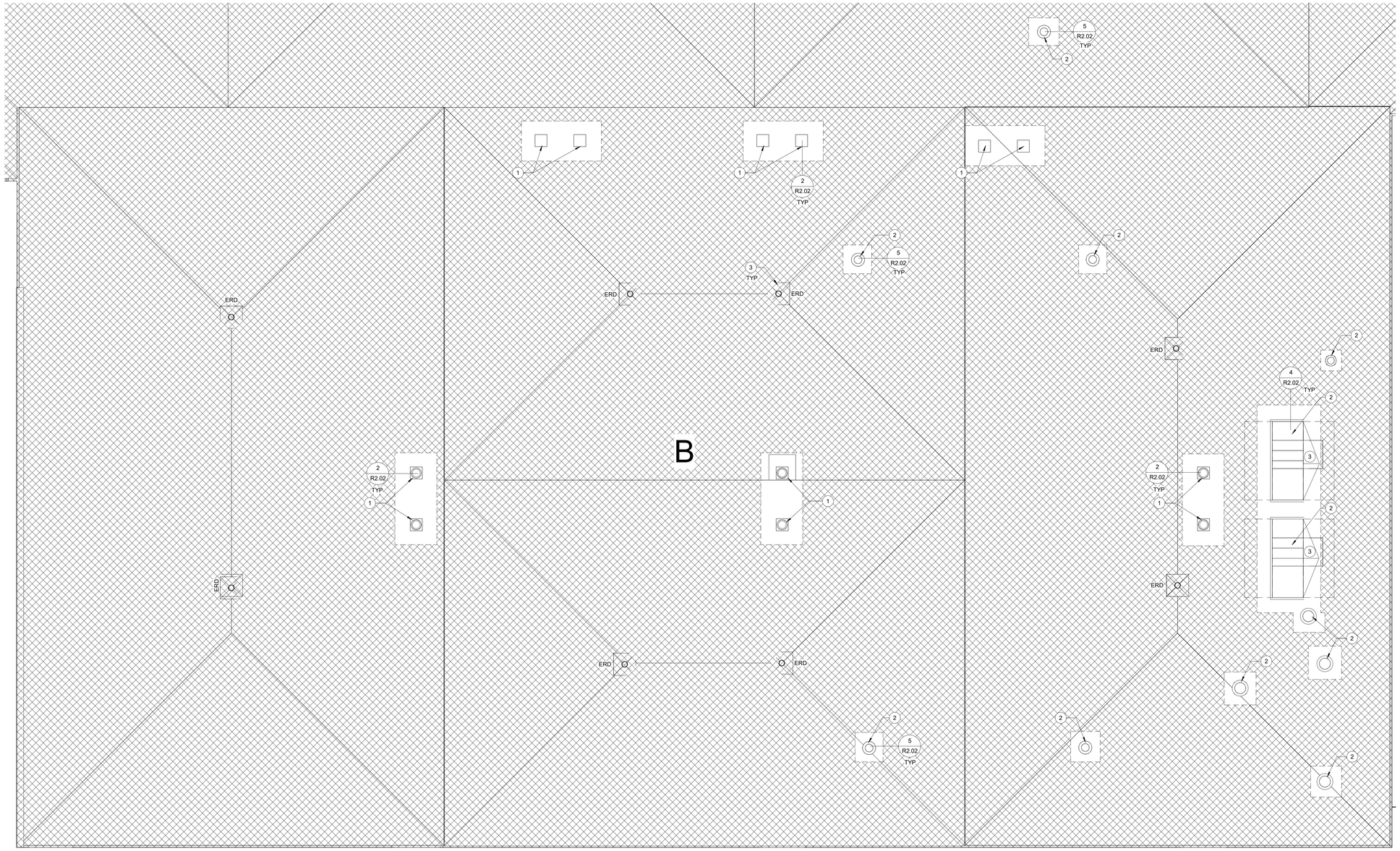
SPECIFIC ROOF NOTES:

1. NEW SOLATUBE SKYLIGHT AND MANUFACTURED CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.
2. NEW MECHANICAL EQUIPMENT AND CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.
3. EXISTING ROOF DRAIN TO REMAIN.



1 PARTIAL ROOF PLAN - AREA B
1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
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2910 High Valley Dr, Humble, TX 77345

REGISTERED ARCHITECT
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ENLARGED ROOF PLAN - AREA B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R1.04
Drawn By: BG,RM	
Date: 10/29/2025	

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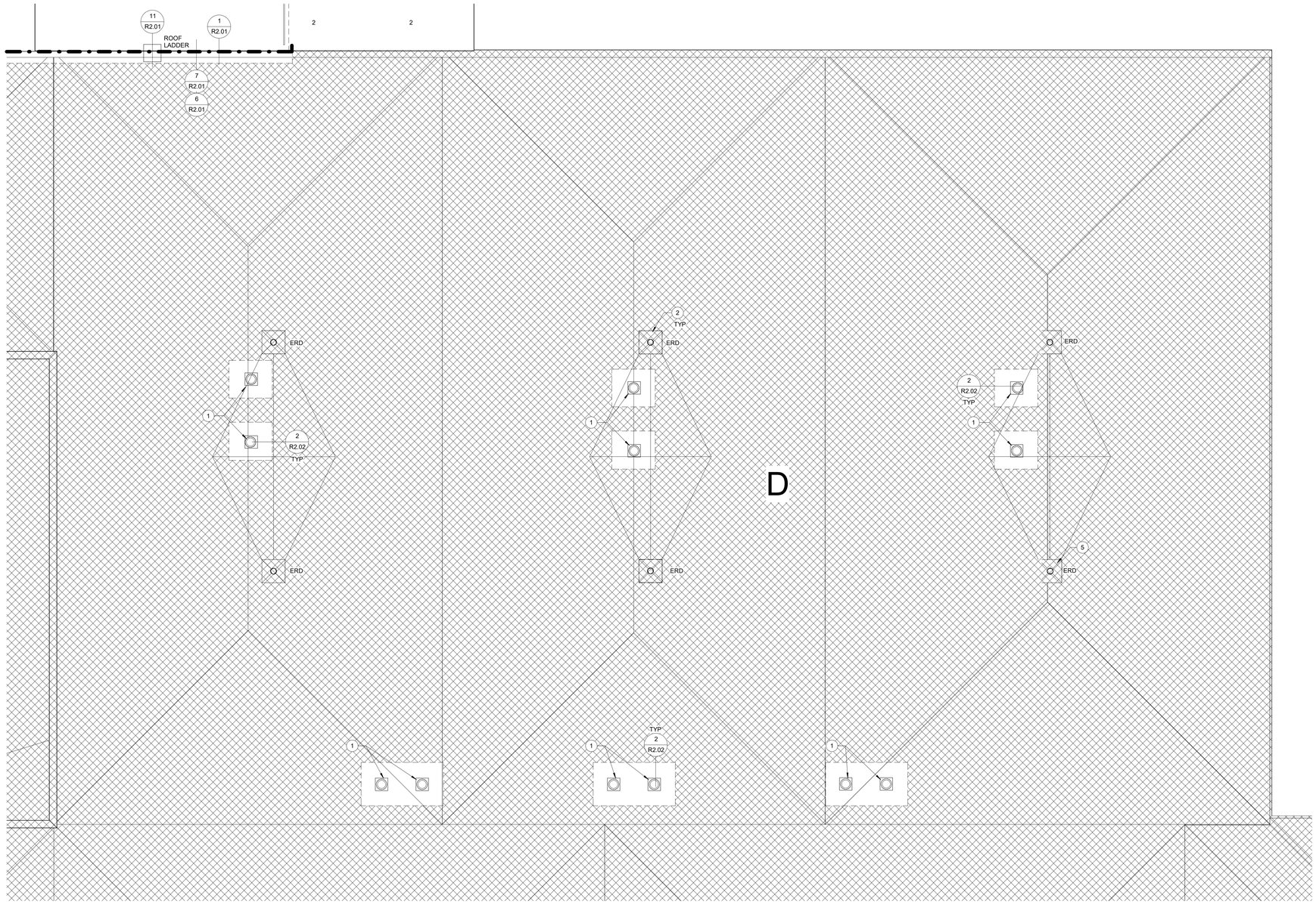
SPECIFIC ROOF NOTES:

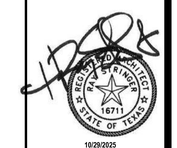
1. NEW SOLATUBE SKYLIGHT AND MANUFACTURED CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.
2. EXISTING ROOF DRAIN TO REMAIN.



1 PARTIAL ROOF PLAN - AREA D
1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345



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ENLARGED ROOF PLAN - AREA D

PACKAGE	VOLUME
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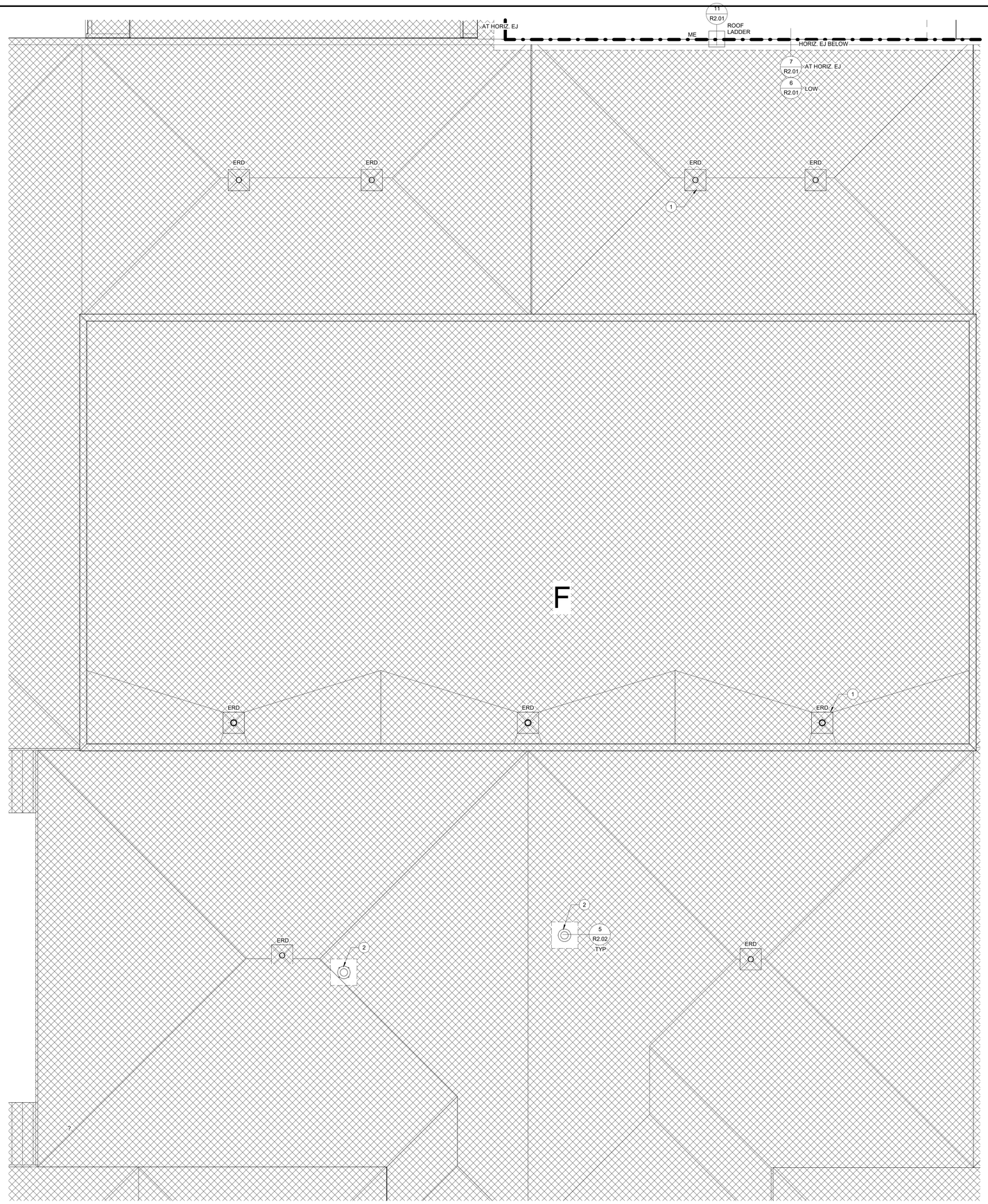

1 PARTIAL ROOF PLAN - AREA F
1/8" = 1'-0"

SPECIFIC ROOF NOTES:

1. EXISTING ROOF DRAIN TO REMAIN.
2. NEW MECHANICAL EQUIPMENT AND CURB INSTALLED ON EXISTING ROOF. PROVIDE ROOF TIE-IN AS DETAILED.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
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REGISTERED ARCHITECT
RAY S. RINGER
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ENLARGED ROOF PLAN - AREA F

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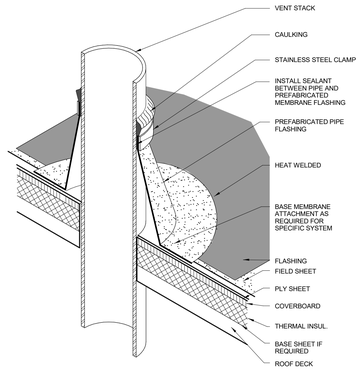
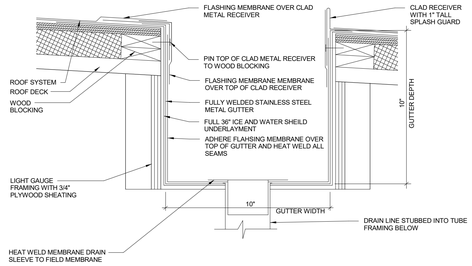
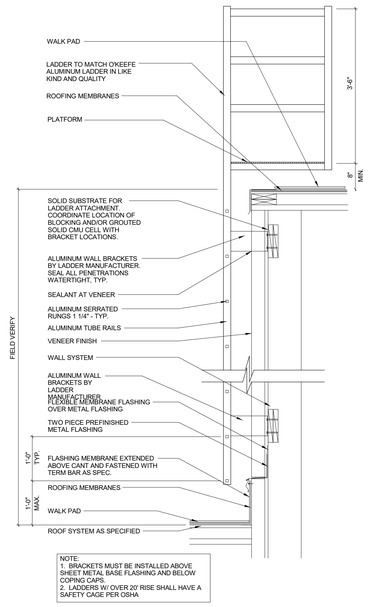


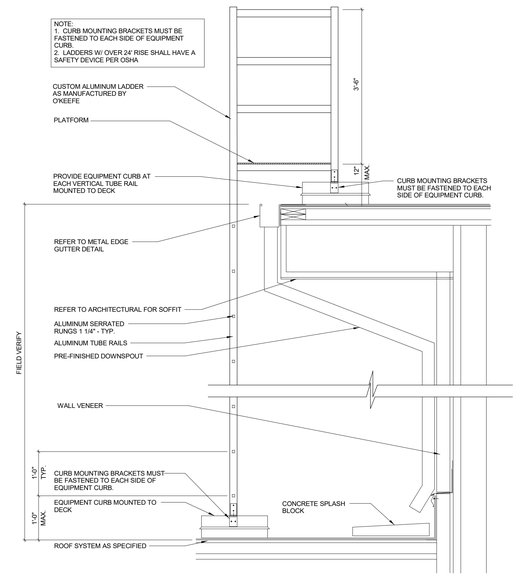
17 PIPE PENETRATION
NOT TO SCALE



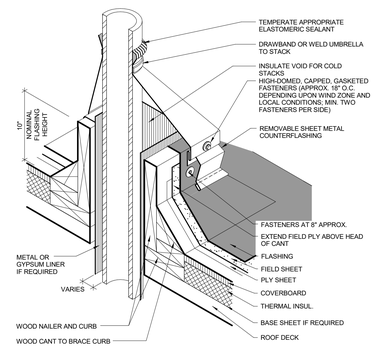
16 INTERNAL GUTTER
NOT TO SCALE



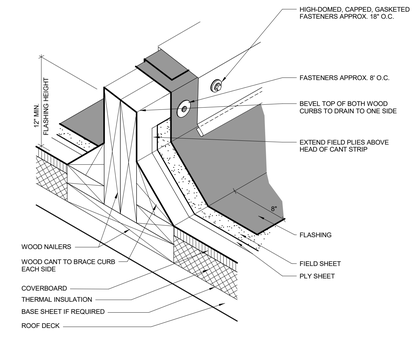
11 ROOF LADDER OVER METAL EDGE
NOT TO SCALE



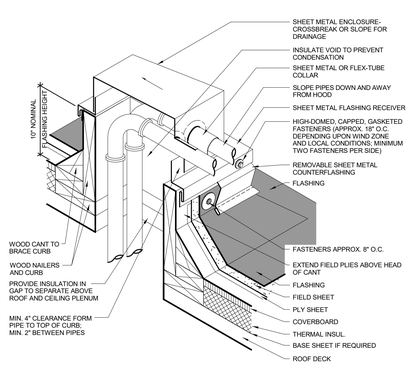
10 ROOF MOUNTED LADDER OVER METAL EDGE GUTTER
NOT TO SCALE



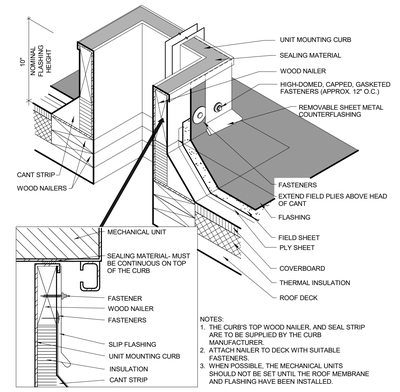
14 HOT STACK
NOT TO SCALE



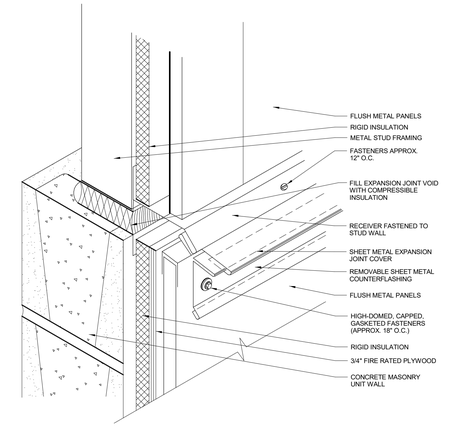
13 EQUIPMENT CURB
NOT TO SCALE



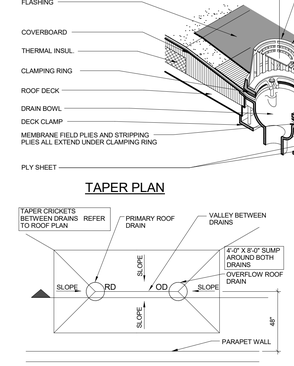
12 PIPE BOX
NOT TO SCALE



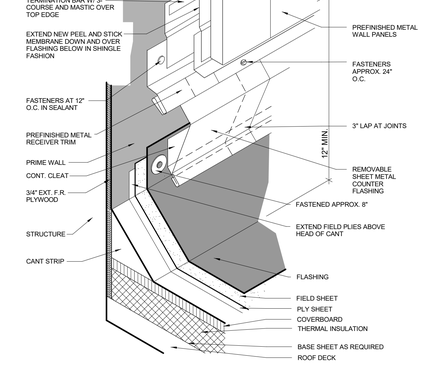
8 MECHANICAL CURB
NOT TO SCALE



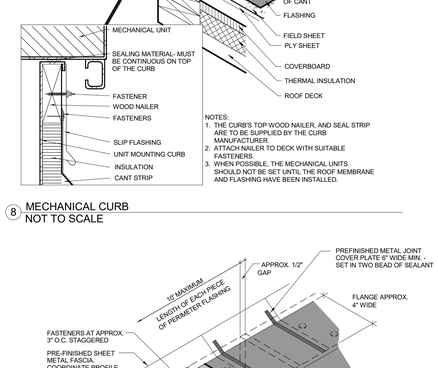
7 HORIZONTAL EXPANSION JOINT AT METAL PANELS
NOT TO SCALE



9 PRIMARY AND SECONDARY DRAINS
NOT TO SCALE

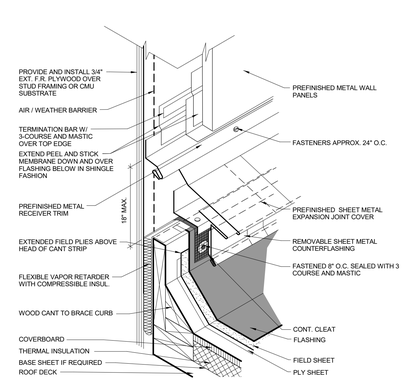


6 ROOF TO RISE WALL METAL PANEL
NOT TO SCALE

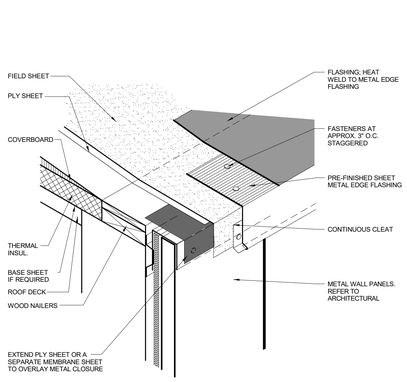


2 WIDE RAISED METAL EDGE
NOT TO SCALE

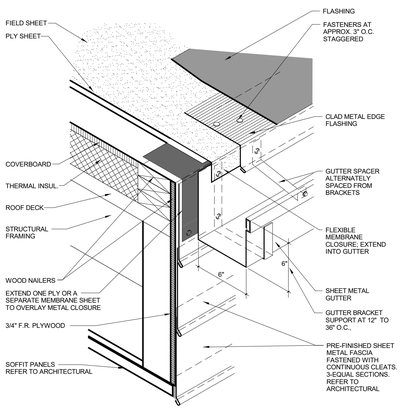
1 METAL EDGE
NOT TO SCALE



5 RISE WALL EXPANSION JOINT WITH METAL PANELS
NOT TO SCALE



4 METAL EDGE
NOT TO SCALE



3 METAL EDGE GUTTER
NOT TO SCALE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345

REGISTERED PROFESSIONAL ENGINEER
RAY STRINGER
16711
STATE OF TEXAS
10/28/2025

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NEW CONSTRUCTION ROOF DETAILS - PVC

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R2.01
Drawn By: BG,RM	
Date: 10/29/2025	

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THESE MODIFIED BITUMEN DETAILS ONLY APPLY TO THE EXISTING ROOF AREAS WHERE NEW SKYLIGHTS AND MECHANICAL CURBS ARE BEING INSTALLED.

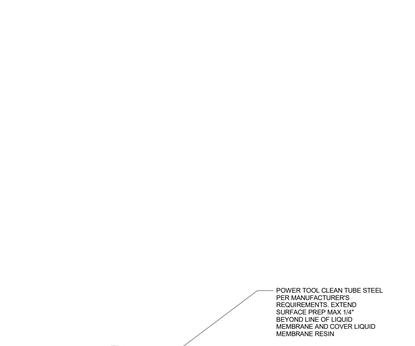
5 PROCESS VENT CURB TIE-IN
NOT TO SCALE

4 MECHANICAL CURB TIE-IN
NOT TO SCALE

NOTES:
1. THE CURB'S TOP WOOD NAILER, AND SEAL STRIP ARE TO BE SUPPLIED BY THE CURB MANUFACTURER.
2. ATTACH NAILER TO DECK WITH SUITABLE FASTENERS.
3. WHEN POSSIBLE, THE MECHANICAL UNITS SHOULD NOT BE SET UNTIL THE ROOF MEMBRANE AND FLASHING HAVE BEEN INSTALLED.

3 MECHANICAL CURB
NOT TO SCALE

2 SKYLIGHT CURB TIE-IN
NOT TO SCALE



1 SOLATUBE SKYLIGHT CURB
NOT TO SCALE

6 LIQUID APPLIED FLASHING
NOT TO SCALE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
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2910 High Valley Dr, Humble, TX 77345

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EXISTING ROOF DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R2.02
Drawn By: BG,RM	
Date: 10/29/2025	

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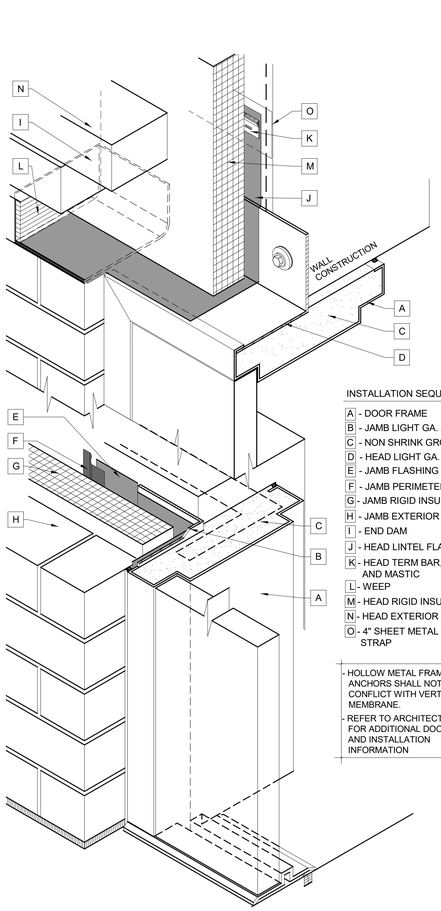
GENERAL NOTES - ENVELOPE FLASHING

1. FLASHING CONTOURATION IS SHOWN GENERICALLY TO DEPICT FLASHING APPLICATION AND LOCATION AROUND OPENINGS.
2. ALL ROOF DRAIN OUTLETS TO GRADE SHALL BE SEALED WITH SEALANT & FLEXIBLE BACKER ROD AND FLEXIBLE MEMBRANE.
3. COORDINATE FLASHING APPLICATION & LOCATIONS WITH ARCHITECTURAL ELEMENTS LOCATED AND IDENTIFIED IN ARCHITECTURAL DETAILS. REFER TO ARCHITECTURAL SHEETS FOR FURTHER INFORMATION.
4. THE BASIS OF DESIGN IS FOR THE WINDOWS, DOORS AND OTHER WALL PENETRATIONS TO BE INSTALLED.FLASHED AND WATER TESTED PRIOR TO VENEER INSTALATION.
5. FLEXIBLE MEMBRANE FLASHING COLOR TO MATCH MORTAR COLOR.
6. ALL ALUMINIUM FRAMES SHALL CONTAIN THERMALLY BROKEN BACKER PLATE IN OPEN THROAT OF FRAME.
7. PROVIDE ALUMINIUM CAP FILLER AT TOP/BOTTOM OPENINGS OR ALL ALUMINUM FRAME MULLIONS.
8. PROVIDE WOOD NAILERS AS REQUIRED AND DETAILED AROUND PERIMETER OF OPENING FOR FRAME ASTENING AS REQUIRED BY MANUFACTURER.
9. CONTRACTOR SHALL COORDINATE LOCATION OF WINDOW/DOOR IN OPENING AS REQUIRED TO PROVIDE AND MAINTAIN PROPER FLASHING COVERAGE TO ACHIEVE AND MAINTAIN THE SPECIFIED WARRANTY.
10. CONTRACTOR SHALL COORDINATE AND CONFIRM COMPATIBILITY OF ALL ENVELOPE PRODUCTS THAT WILL COME INTO CONTACT WITH ADJACENT MATIERIALS. PROVIDE A COMPATIBLITY MATRIX FOR REVIEW FORALL PARTIES PRIOR TO INSTALLATION OF WATERPROOFING MATERIAL.
11. PROVIDE CONTINUOUS VERTICAL FLEXIBLE FLASHING AT ALL INSIDE/OUTSIDE BUILDING SUBSTRATE CORNERS, CHANGES IN VENEER MATERIALS AND ALL WALL EXPANSION JOINTS AS SHOWN ON DRAWINGS.
12. ISOMETRIC FLASHING ASSEMBLIES ARE FOR FLASHING INFORMATION ONLY. PLEASE REFER TO ARCHITECTRUAL/STRUCTRUAL DRAWINGS FOR ADDITIONAL WALL, WINDOW, DOOR AND LINTEL CONSTRUCTION INFORMATION.

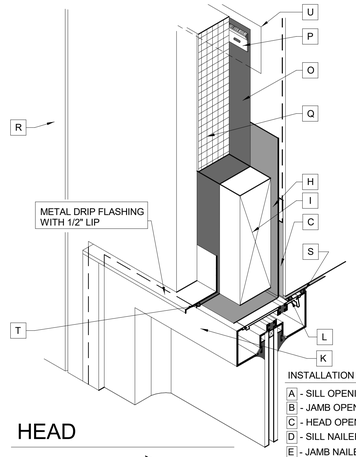


INSTALLATION SEQUENCE:

- A - DOOR FRAME
- B - JAMB LIGHT GA. ANGLE
- C - NON SHRINK GROUT
- D - HEAD LIGHT GA. ANGLE
- E - JAMB FLASHING
- F - JAMB PERIMETER FLASHING
- G - JAMB RIGID INSULATION
- H - JAMB EXTERIOR VENEER
- I - END DAM
- J - HEAD LINTEL FLASHING
- K - HEAD TERM BAR, 3 COURSE AND MASTIC
- L - WEEP
- M - HEAD RIGID INSULATION
- N - HEAD EXTERIOR VENEER
- O - 4" SHEET METAL 16 GA STRAP

- HOLLOW METAL FRAME ANCHORS SHALL NOT BE IN CONFLICT WITH VERTICAL MEMBRANE.
- REFER TO ARCHITECTURAL FOR ADDITIONAL DOOR, JAMB AND INSTALLATION INFORMATION

3 ENVELOPE FLASHING - HOLLOW METAL ASSEMBLY AT CMU
NOT TO SCALE



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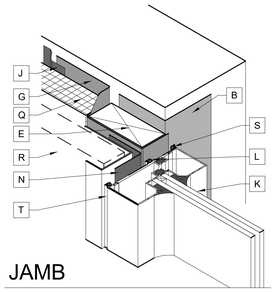
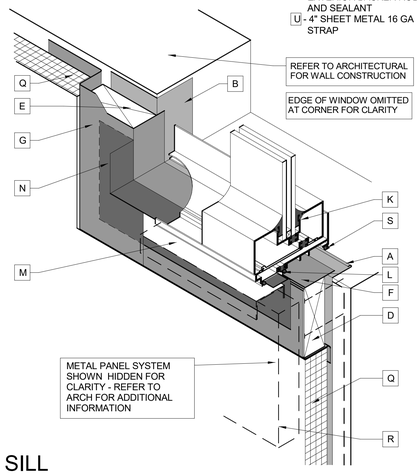


JAMB

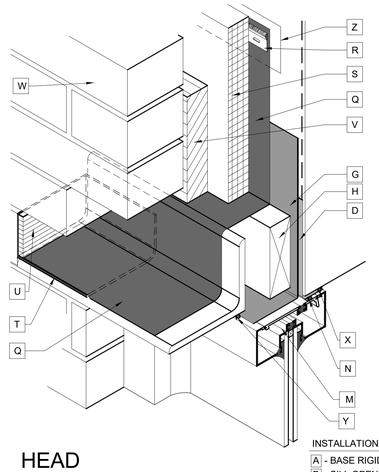


SILL

INSTALLATION SEQUENCE:

- A - SILL OPENING FLASHING
- B - JAMB OPENING FLASHING
- C - HEAD OPENING FLASHING
- D - SILL NAILER
- E - JAMB NAILER
- F - SILL FLASHING
- G - JAMB FLASHING
- H - HEAD FLASHING
- I - HEAD NAILER
- J - JAMB FLASHING EDGE SEAL
- K - WINDOW UNIT FRAME
- L - HEAD, JAMB, SILL MID SEALANT AND BACKER ROD
- M - SILL PERIMETER FLASHING
- N - JAMB PERIMETER FLASHING
- O - HEAD LINTEL FLASHING
- P - HEAD TERM BAR, 3 COURSE AND MASTIC
- Q - HEAD JAMB AND SILL RIGID INSULATION
- R - HEAD JAMB AND SILL EXTERIOR VENEER
- S - HEAD JAMB AND SILL INTERIOR BACKER ROD AND SEALANT
- T - HEAD JAMB AND SILL EXTERIOR BACKER ROD AND SEALANT
- U - 4" SHEET METAL 16 GA STRAP

2 WINDOW ASSEMBLY - METAL PANEL OVER CFMF
NOT TO SCALE



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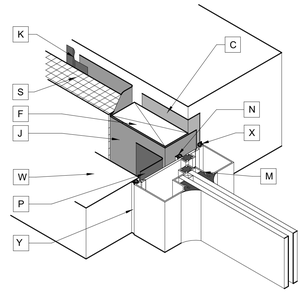

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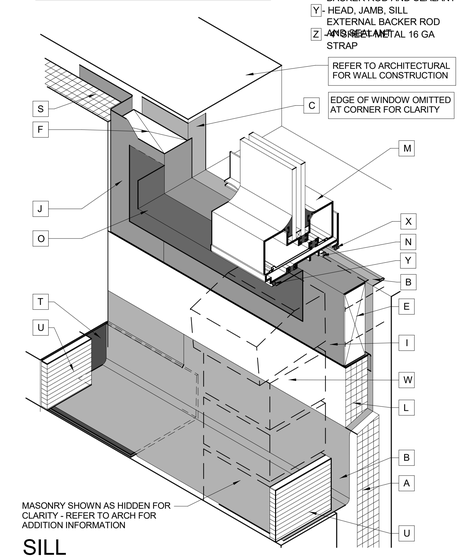

SILL

INSTALLATION SEQUENCE:

- A - BASE RIGID INSULATION
- B - SILL OPENING FLASHING
- C - JAMB OPENING FLASHING
- D - HEAD OPENING FLASHING
- E - SILL NAILER
- F - JAMB NAILER
- G - HEAD FLASHING
- H - HEAD NAILER
- I - SILL FLASHING
- J - JAMB FLASHING
- K - JAMB FLASHING EDGE SEAL
- L - SILL INSULATION
- M - WINDOW UNIT FRAME
- N - HEAD, JAMB, SILL MID SEALANT AND BACKER ROD
- O - SILL PERIMETER FLASHING
- P - JAMB PERIMETER FLASHING
- Q - HEAD LINTEL FLASHING
- R - HEAD TERM BAR, 3 COURSE AND MASTIC
- S - HEAD, JAMB RIGID INSULATION
- T - HEAD AND SILL END DAMS
- U - HEAD AND SILL WEEPS
- V - HEAD MORTAR NET
- W - EXTERIOR VENEER
- X - HEAD, JAMB, SILL INTERNAL BACKER ROD AND SEALANT
- Y - HEAD, JAMB, SILL EXTERNAL BACKER ROD AND SEALANT
- Z - 4" SHEET METAL 16 GA STRAP

1 WINDOW ASSEMBLY - BRICK OVER CFMF
NOT TO SCALE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345

REGISTERED ARCHITECT RAY S. RINGER 16711 STATE OF TEXAS
10/29/2025

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HOUSTON • SAN ANTONIO • WACO
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ENVELOPE FLASHING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R3-01
Drawn By: BG,RM	
Date: 10/29/2025	

10/29/2025 10:41:51 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/ROOF_RIVERWOOD MS ADDITION & RENOVATIONS_v22.rvt

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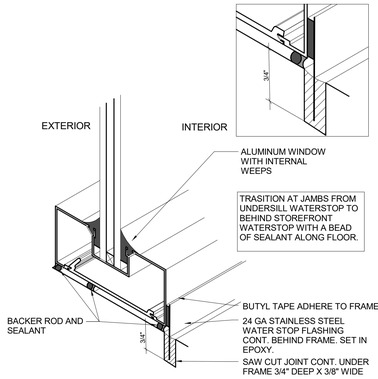
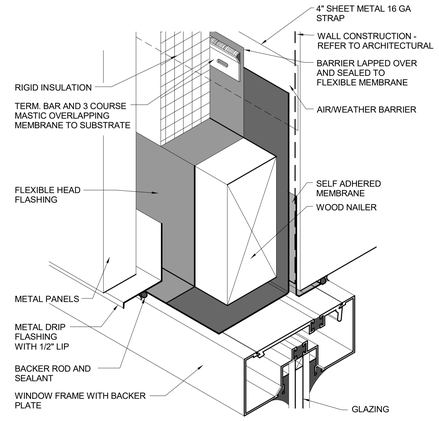
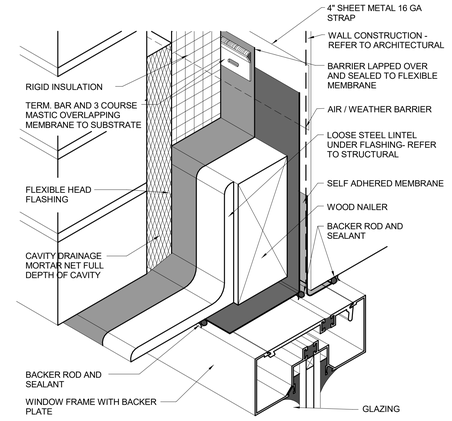


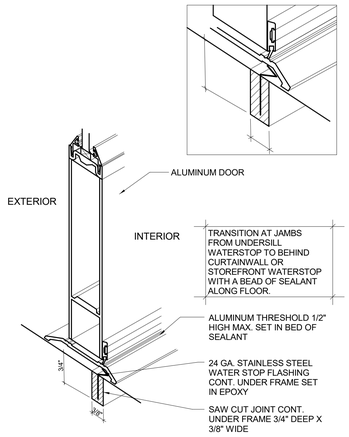
9 WINDOW SILL SAWCUT WATER STOP AT FLOOR
NOT TO SCALE



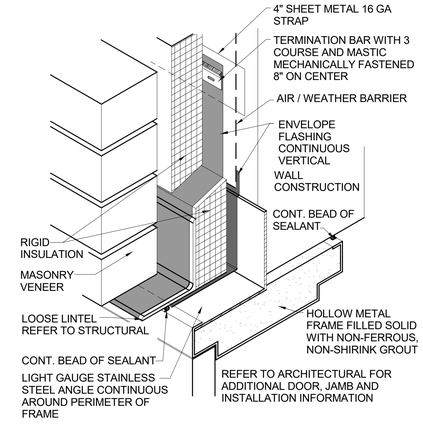
6 ENVELOPE FLASHING - WINDOW HEAD AT METAL PANEL
NOT TO SCALE



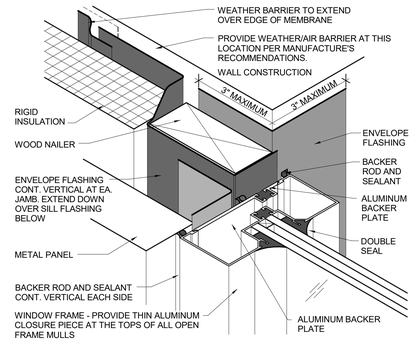
3 ENVELOPE FLASHING - WINDOW HEAD AT BRICK
NOT TO SCALE



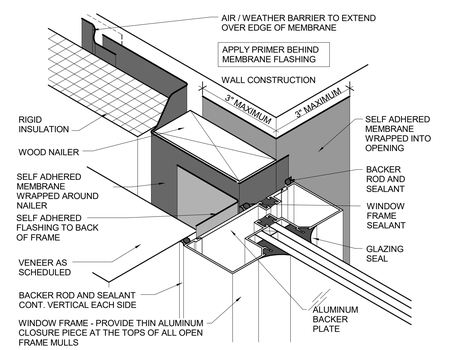
11 DOOR THRESHOLD WATER STOP AT FLOOR
NOT TO SCALE



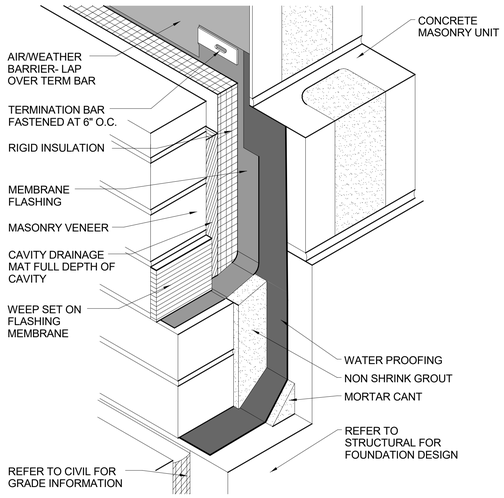
8 ENVELOPE FLASHING - DOOR HEAD AT BRICK
NOT TO SCALE



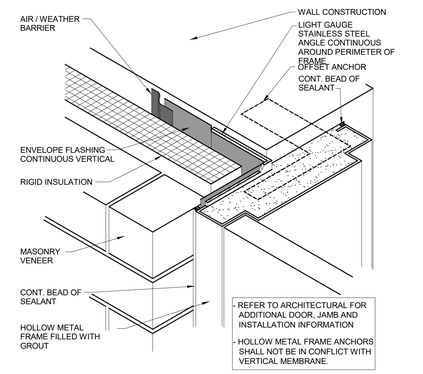
5 ENVELOPE FLASHING - WINDOW JAMB AT METAL PANEL
NOT TO SCALE



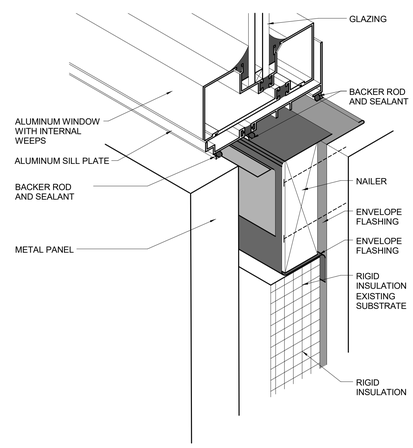
2 ENVELOPE FLASHING - WINDOW JAMB AT BRICK
NOT TO SCALE



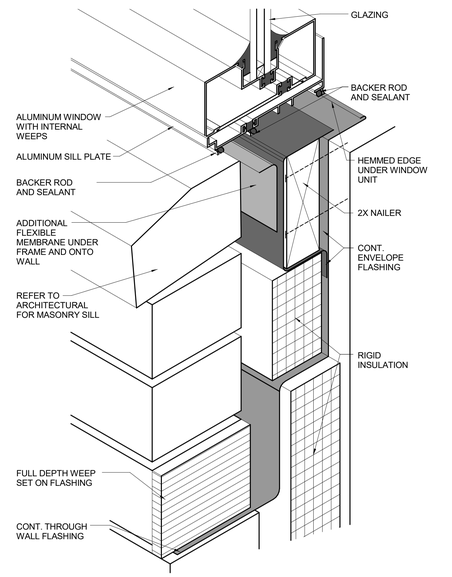
10 ENVELOPE FLASHING - BASE FLASHING - CMU
NOT TO SCALE



7 ENVELOPE FLASHING - DOOR JAMB AT BRICK
NOT TO SCALE



4 ENVELOPE FLASHING - WINDOW SILL AT METAL PANEL
NOT TO SCALE



1 ENVELOPE FLASHING - WINDOW SILL AT BRICK
NOT TO SCALE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345

REGISTERED ARCHITECT
RAY STRINGER
16711
STATE OF TEXAS
10/29/2025

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ENVELOPE FLASHING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R3.02
Drawn By: BG,RM	
Date: 10/29/2025	

10/29/2025 10:41:51 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOROOF_RIVERWOOD MS ADDITION & RENOVATIONS_v23.rvt

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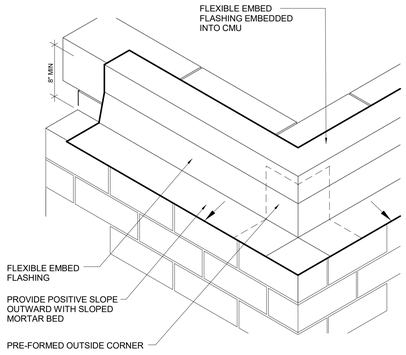
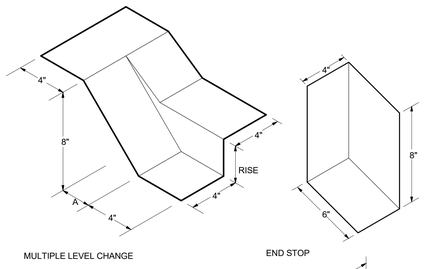


OPTION C. FULL EMBED WITHOUT TERMINATION BAR

OPTION B. TERMINATION BAR ON MASONRY

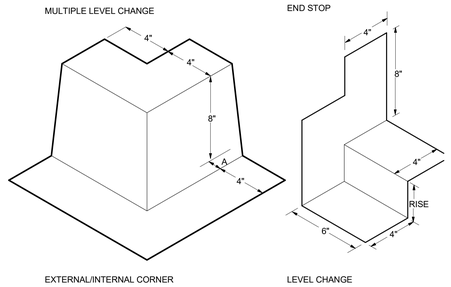
OPTION A. FULL EMBED WITH TERMINATION BAR

10 TERMINATION OF FLASHING AT MASONRY
NOT TO SCALE



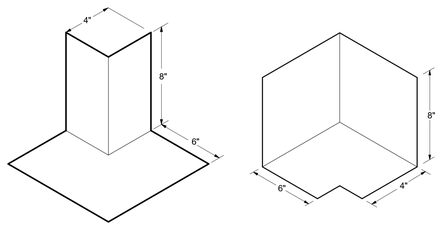
MULTIPLE LEVEL CHANGE

END STOP



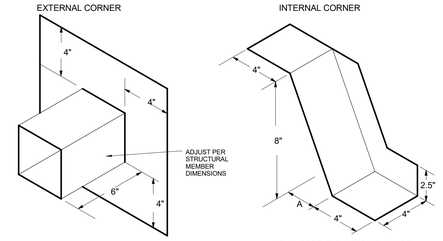
EXTERNAL/INTERNAL CORNER

LEVEL CHANGE



EXTERNAL CORNER

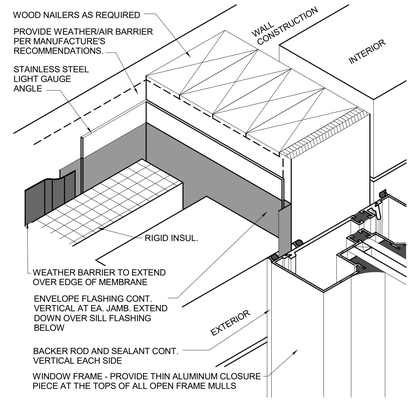
INTERNAL CORNER



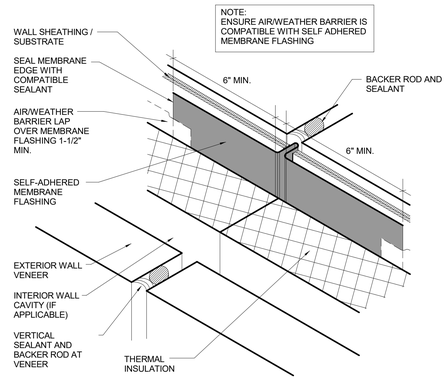
STRUCTURAL BOOT

END STOP ELEVATION CHANGE

9 FLASHING BOOTS
NOT TO SCALE

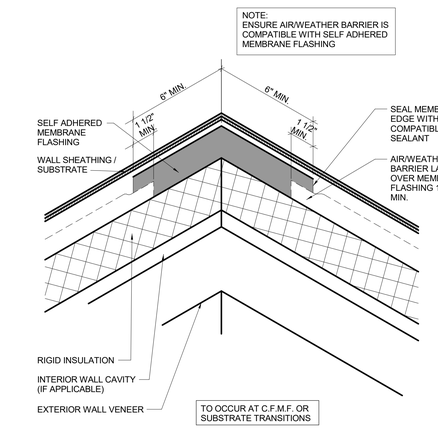


6 ENVELOPE FLASHING AT VESTIBULE BRICK JAMB
NOT TO SCALE

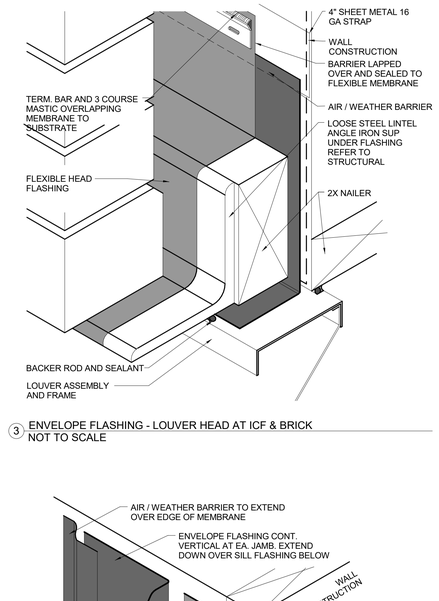


5 EXTERIOR VERTICAL EXPANSION JOINT
NOT TO SCALE

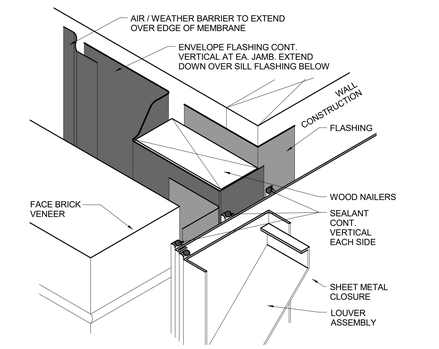
8 VERTICAL EXTERIOR CORNER MEMBRANE FLASHING
NOT TO SCALE



7 VERTICAL INTERIOR CORNER MEMBRANE FLAHSING
NOT TO SCALE



3 ENVELOPE FLASHING - LOUVER HEAD AT ICF & BRICK
NOT TO SCALE



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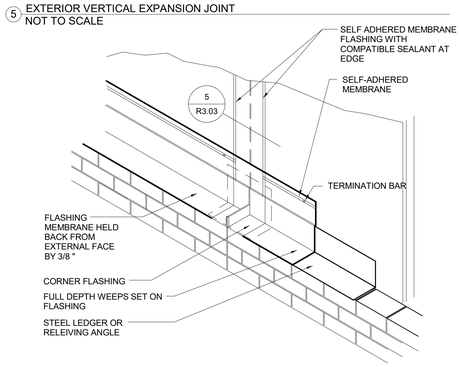
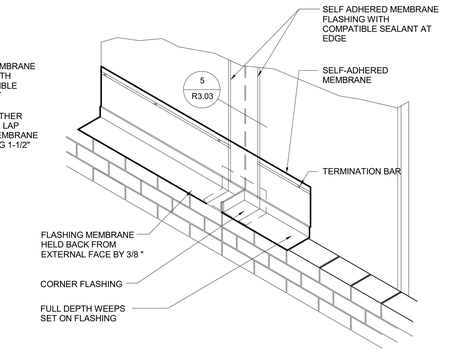
NOT TO SCALE

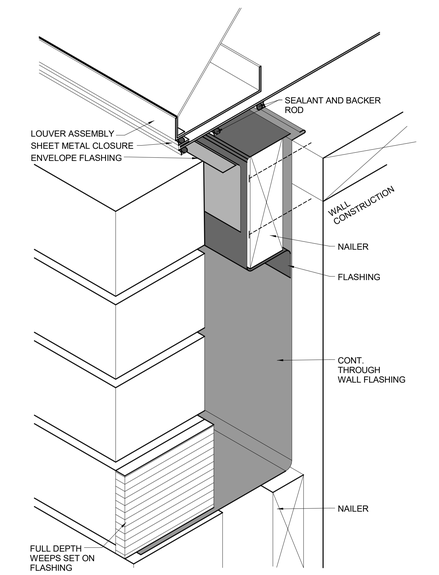


OPTION B. FLASHING AT RELEIVING ANGLE



OPTION A. FLASHING AT BASE OF WALL

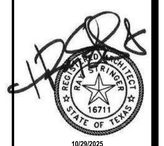
4 FLASHING AT CONTROL JOINT AND EXPANSION JOINT
NOT TO SCALE



1 ENVELOPE FLASHING - LOUVER SILL AT ICF & BRICK
NOT TO SCALE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITION & RENOVATION
FOR
HUMBLE ISD
2910 High Valley Dr, Humble, TX 77345



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ENVELOPE FLASHING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. R3.03
Drawn By: BG,RM	
Date: 10/29/2025	

10/29/2025 10:41:51 AM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOROOF_RIVERWOOD MS ADDITION & RENOVATIONS_v23.rvt

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N

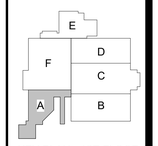
1 PLUMBING DEMOLITION FLOOR PLAN - SECTION A

Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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PLUMBING DEMOLITION FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P0.11
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

10/28/2025 2:19:19 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_02 RIVERWOOD MS ADD & RENO_MEP7.rvt

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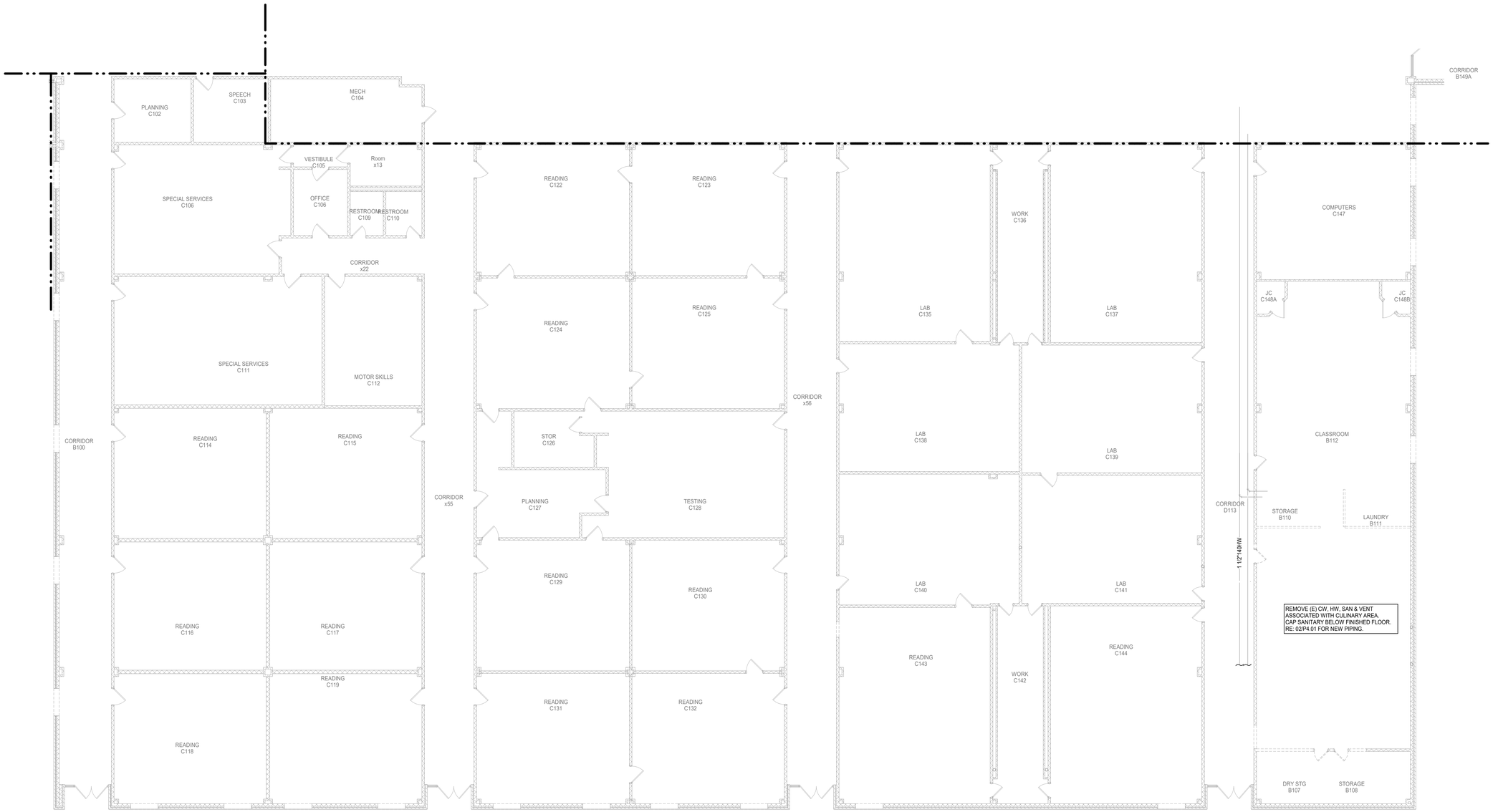
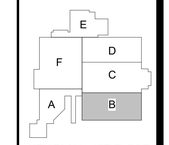


N 1 **PLUMBING DEMOLITION FLOOR PLAN - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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800.687.1229

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING DEMOLITION FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P0.12
Drawn By: PG	
Date: 10.29.2025	

10/28/2025 2:15:20 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01_02 RIVERWOOD MS ADD & RENO_MEP.rvt

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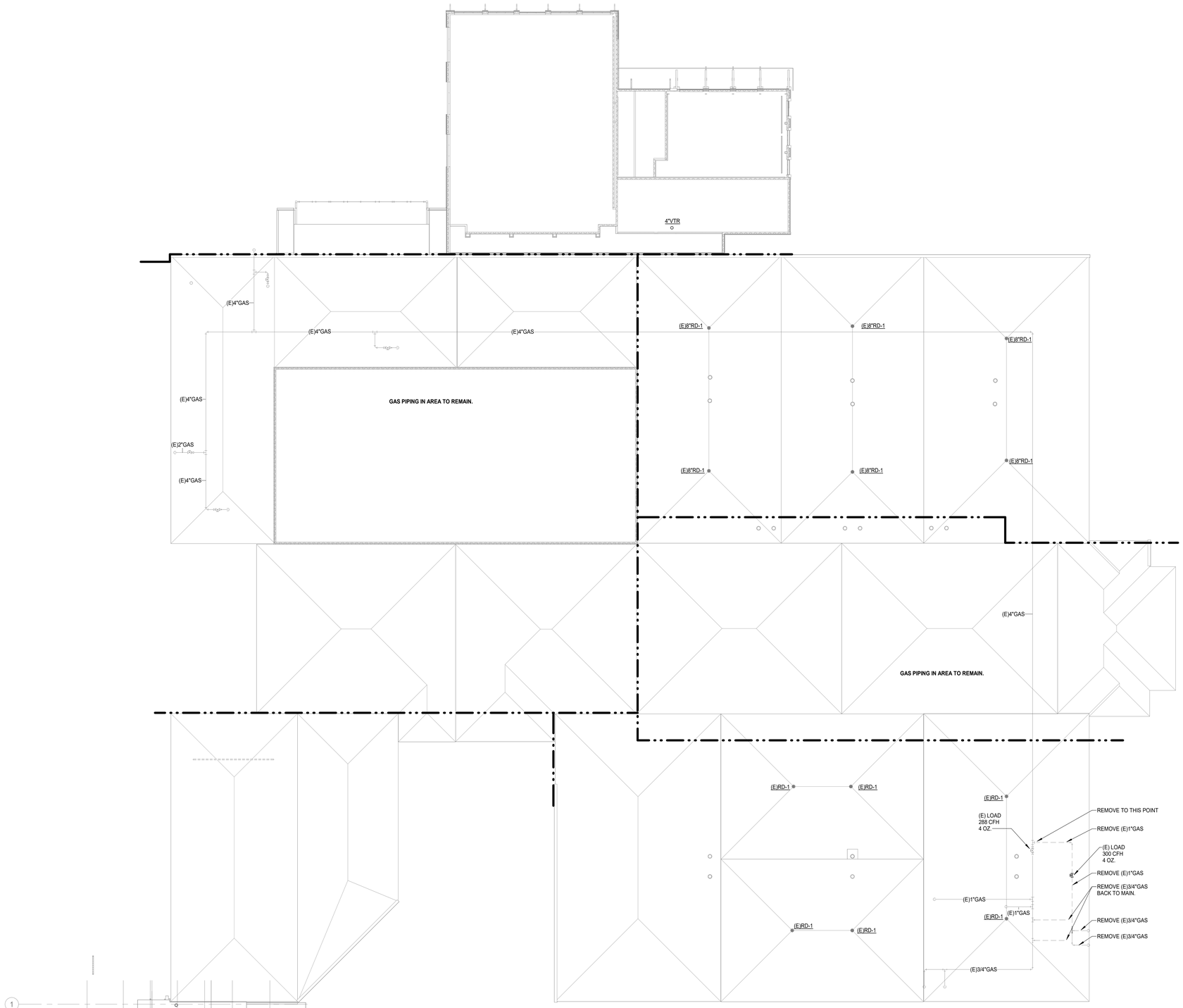
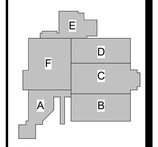


N 1 **PLUMBING DEMOLITION ROOF PLAN**
Scale: 1" = 20'-0"

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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PLUMBING DEMOLITION ROOF PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P0.16
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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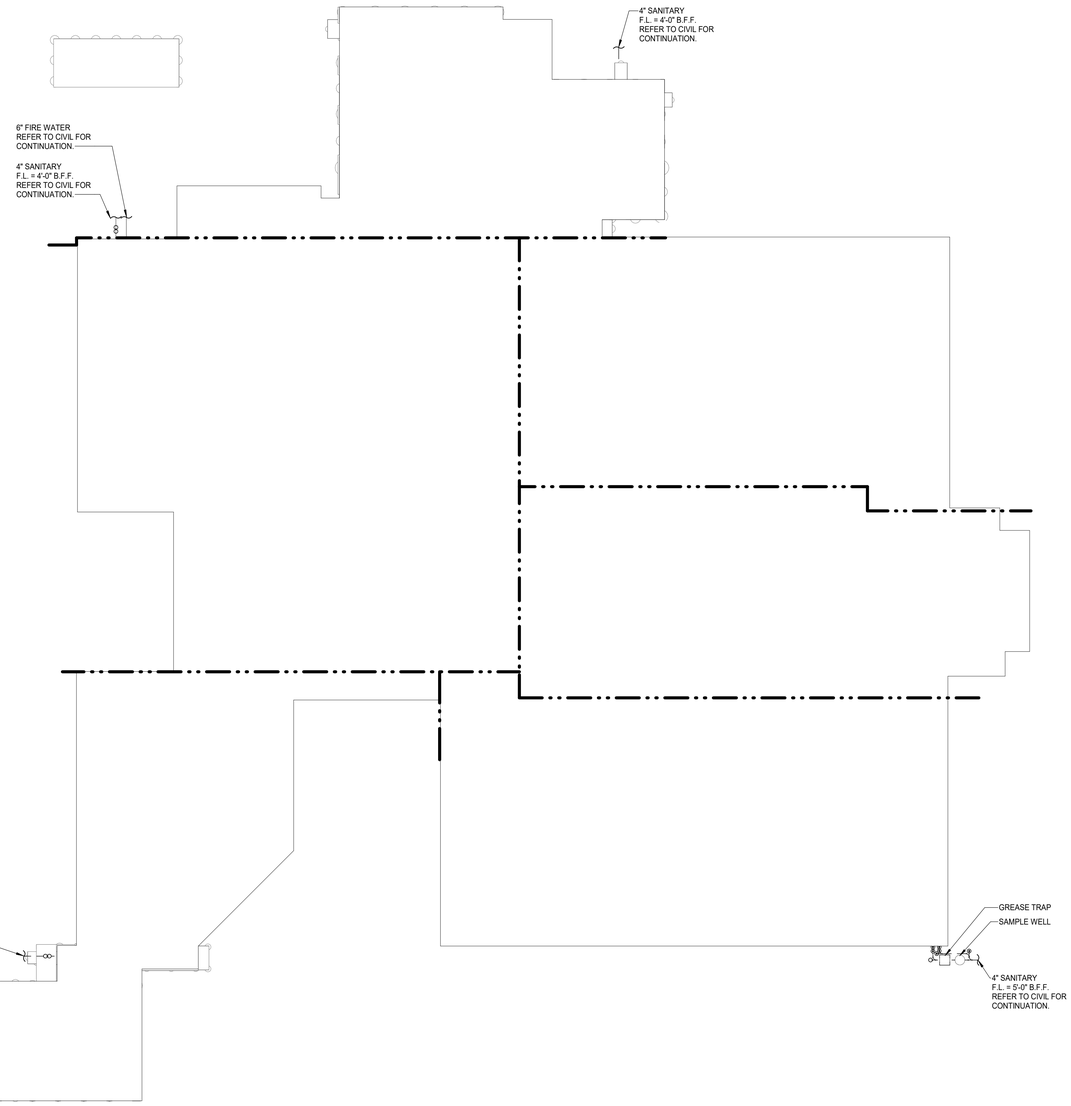
PLUMBING KEYED NOTES



1 **PLUMBING COMPOSITE PLAN**
Scale: 1" = 30'-0"

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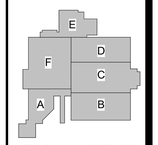
Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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PLUMBING SITE PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P1.01
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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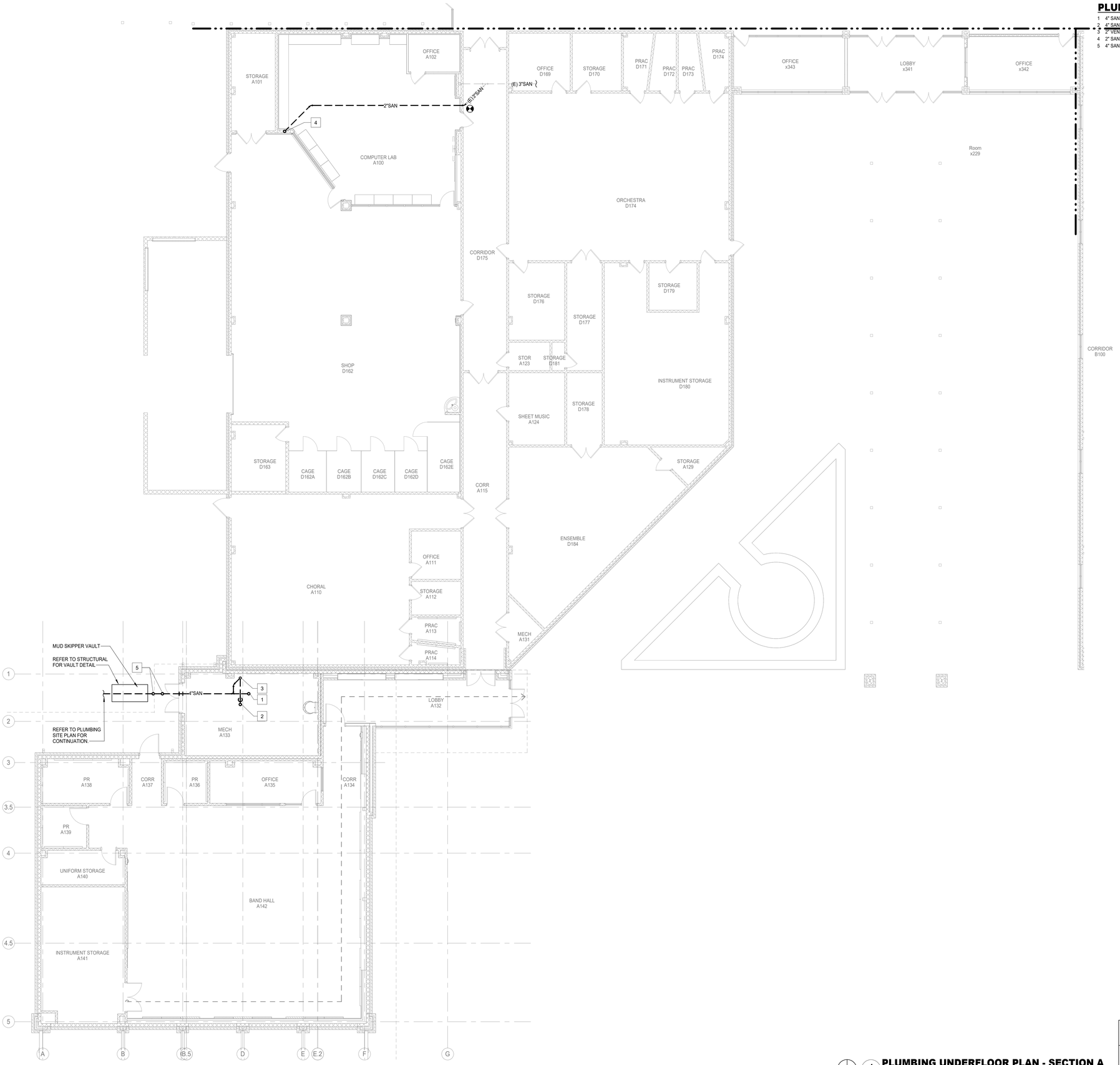
PLUMBING KEYED NOTES

1 4" SANITARY FROM CLEANOUT ABOVE.
2 4" SANITARY FROM FLOOR SINK ABOVE.
3 2" VENT UP.
4 2" SANITARY FROM SINK ABOVE.
5 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.



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1 **PLUMBING UNDERFLOOR PLAN - SECTION A**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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KINGWOOD, TX

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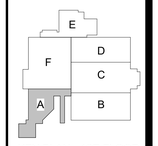

KEY PLAN - 1ST FLOOR
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PLUMBING UNDERFLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P2.11
Drawn By: PG	
Date: 10.29.2025	

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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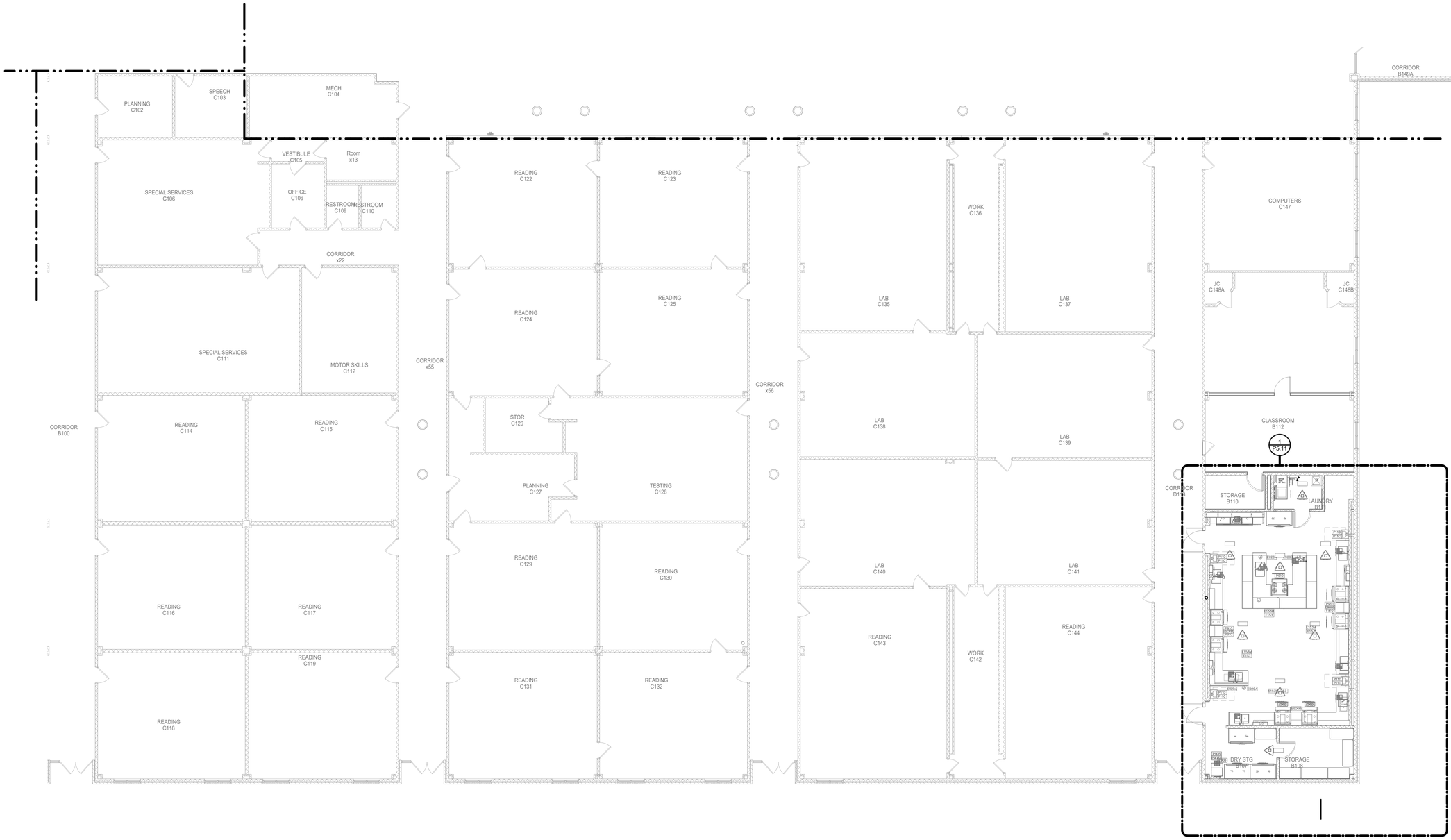
PLUMBING KEYED NOTES



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1 PLUMBING UNDERFLOOR PLAN - SECTION B
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
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KINGWOOD, TX

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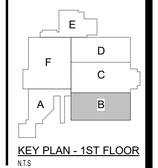

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PLUMBING UNDERFLOOR PLAN - SECTION B

PACKAGE	VOLUME

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No.	Sheet No.
1821-13-02	P2.12
Drawn By: PG	
Date: 10.29.2025	

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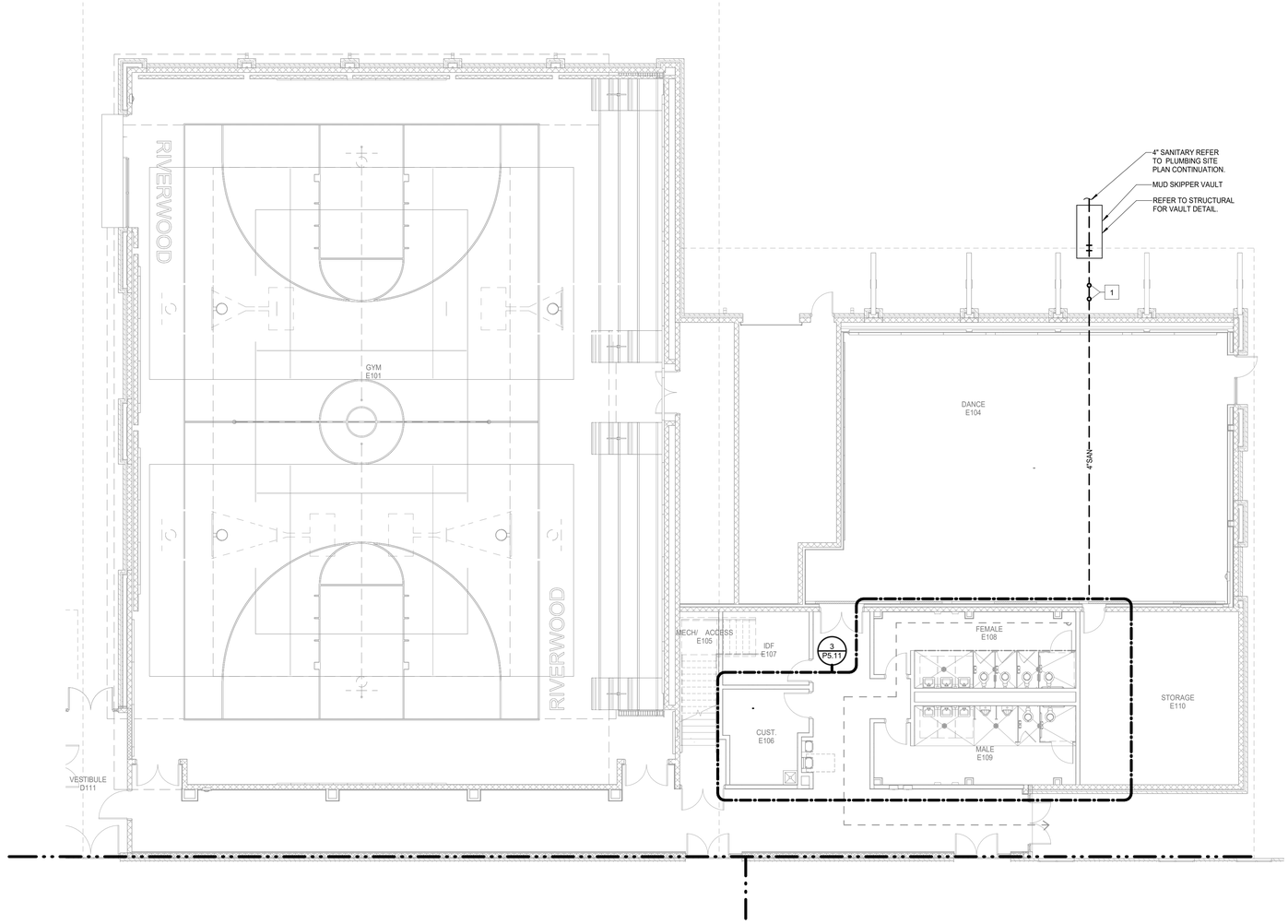
PLUMBING KEYED NOTES

1 4" SANITARY FROM TWO-WAY CLEANOUT ABOVE.



N 1 **PLUMBING UNDERFLOOR PLAN - SECTION E**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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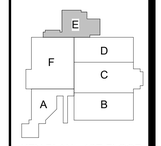
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING UNDERFLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P2.15
Drawn By: PG	
Date: 10.29.2025	

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Salas O'Brien Project Number: 2022-05088-00

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N 1 **PLUMBING UNDERFLOOR PLAN - SECTION F**
Scale: 1/8" = 1'-0"

Date
Revision /

Project:
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HUMBLE ISD
KINGWOOD, TX

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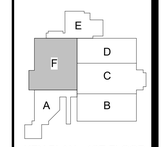
10-29-2025



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PLUMBING UNDERFLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P2.16
Drawn By: PG	
Date: 10.29.2025	

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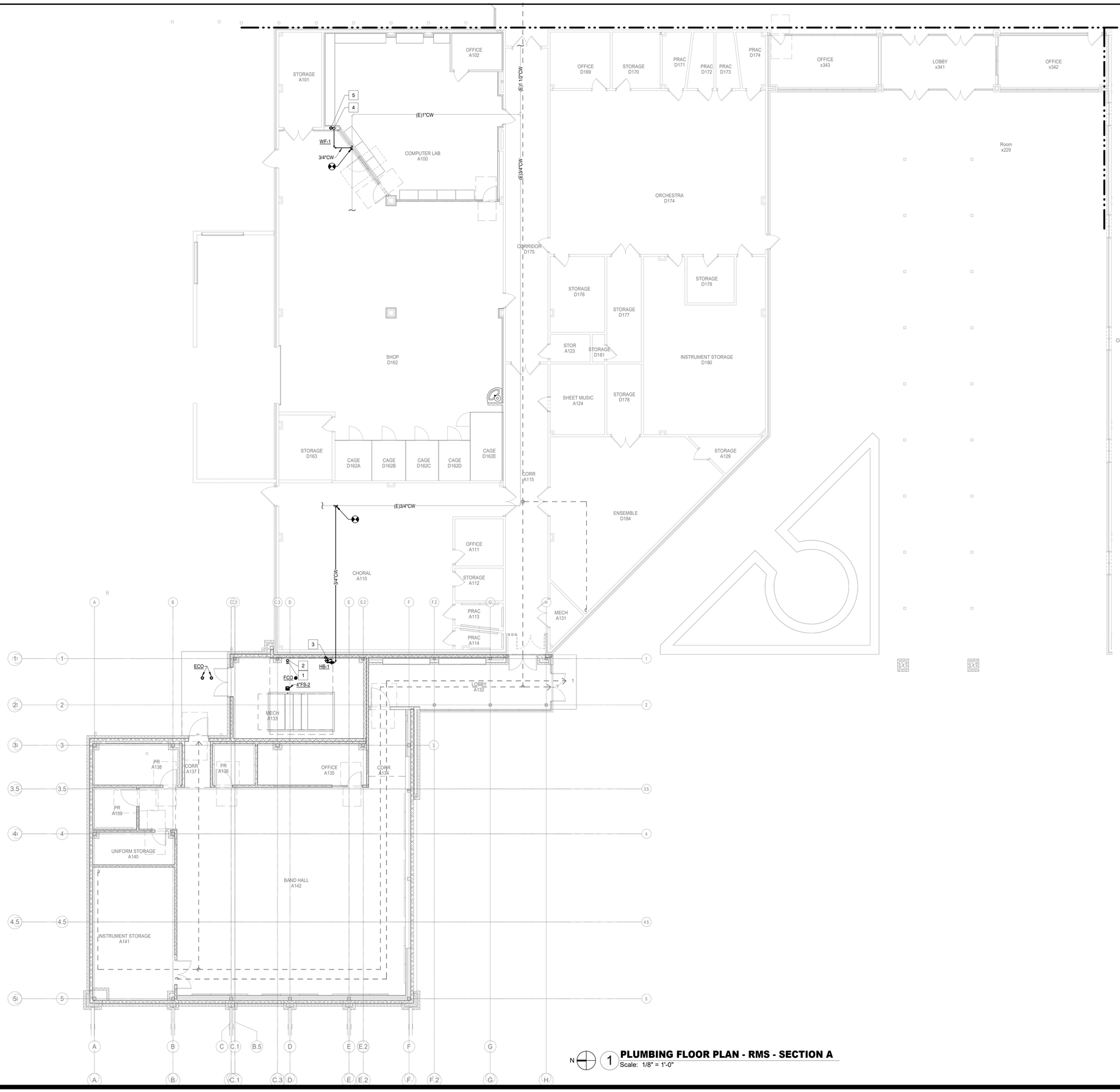
PLUMBING KEYED NOTES

1 2" VENT FROM BELOW.
2 2" VENT UP TO 2" VTR.
3 3/4" CW DOWN.
4 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
5 2" SANITARY DOWN, 2" VENT UP.



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1 **PLUMBING FLOOR PLAN - RMS - SECTION A**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
HUMBLE ISD
KINGWOOD, TX

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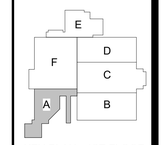
10-29-2025



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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P3.11
Drawn By: PG	
Date: 10.29.2025	

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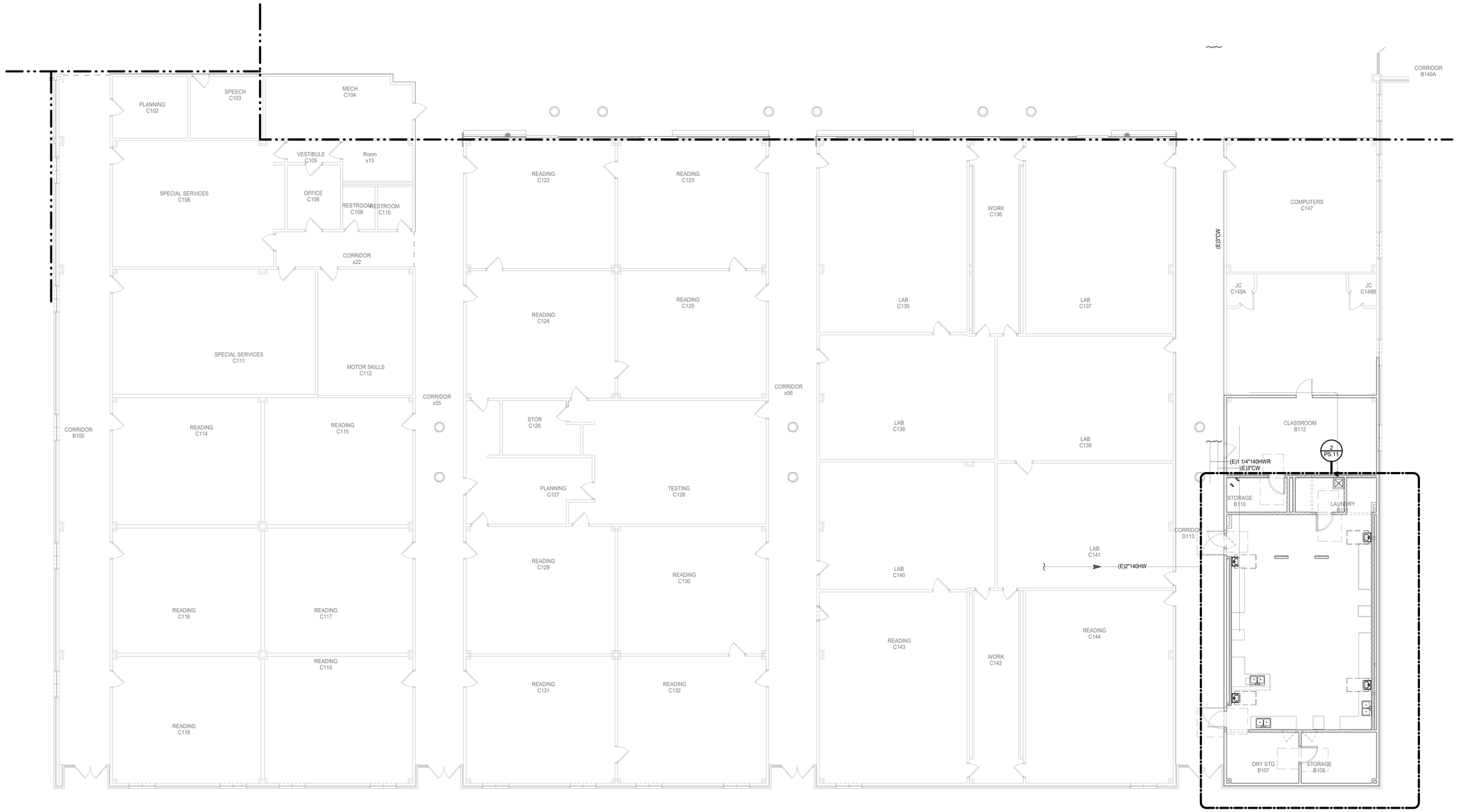
PLUMBING KEYED NOTES



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1 **PLUMBING FLOOR PLAN - RMS - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

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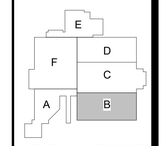

KEY PLAN - 1ST FLOOR
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P3.12
Drawn By: PG	
Date: 10.29.2025	

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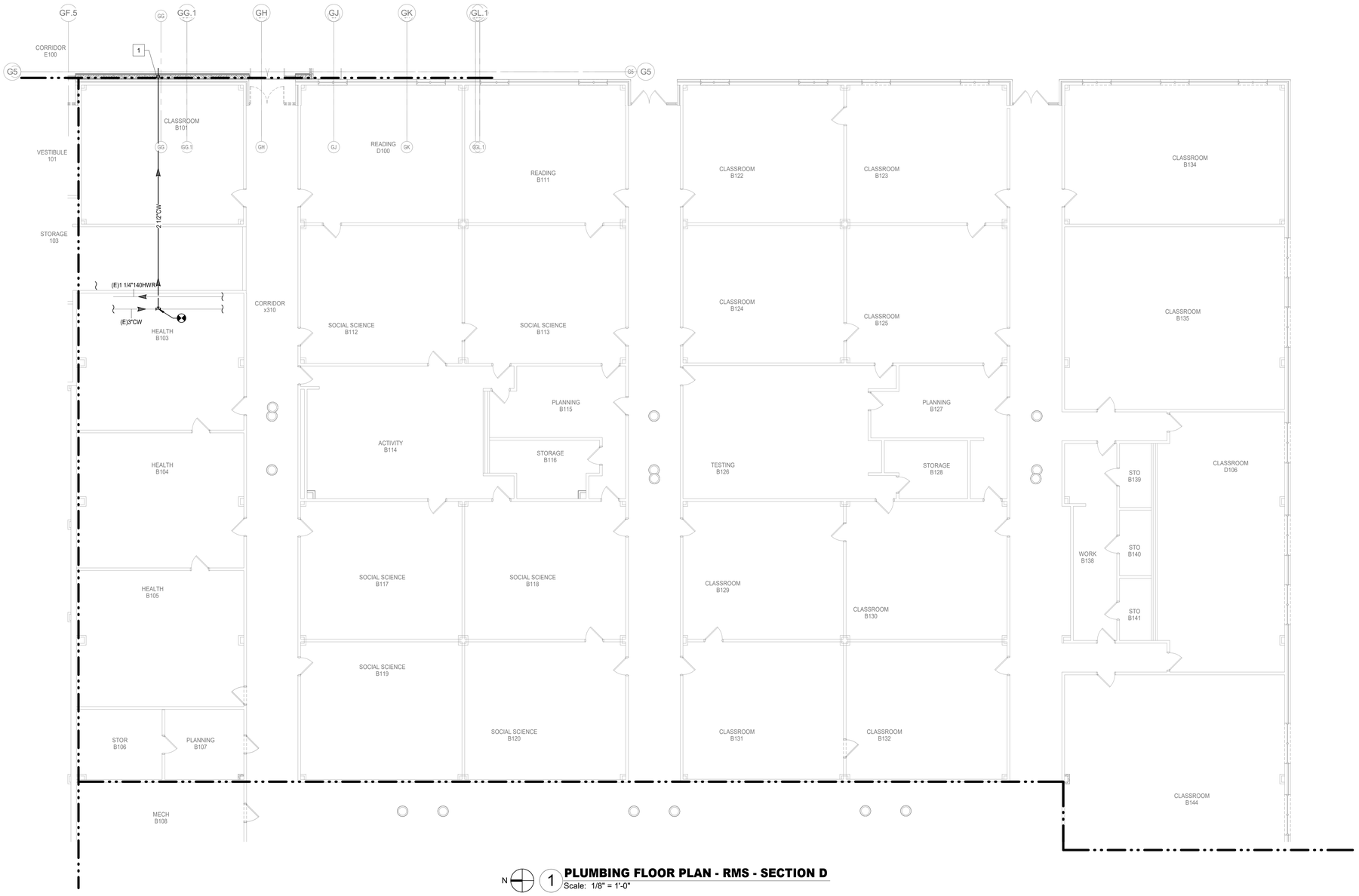
PLUMBING KEYED NOTES

1 2-1/2" CW UP.



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1 PLUMBING FLOOR PLAN - RMS - SECTION D

Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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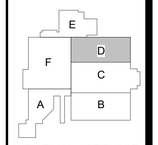
10-29-2025



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PLUMBING FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P3.14
Drawn By: PC	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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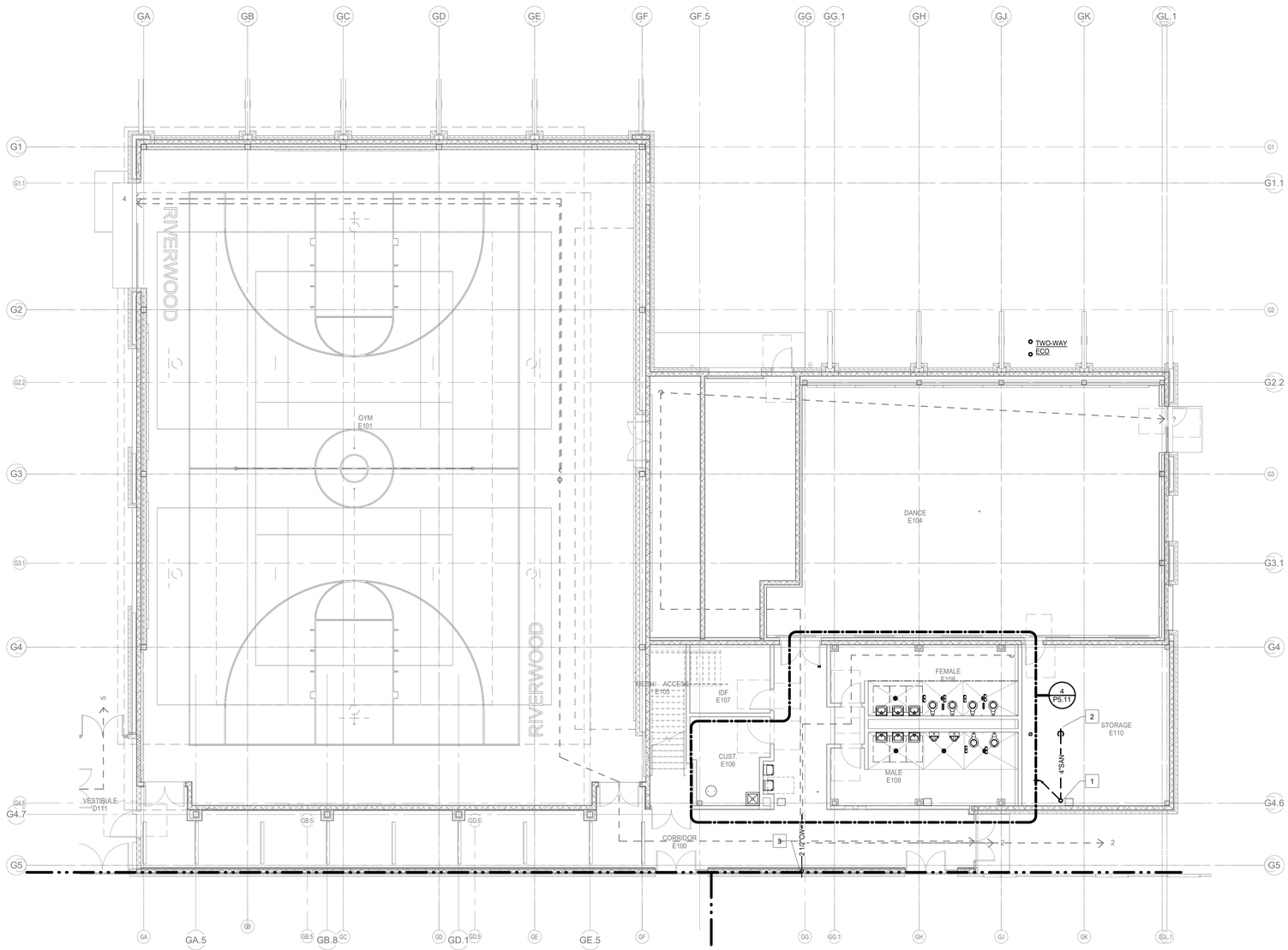
PLUMBING KEYED NOTES

1 2" VENT UP.
2 4" SANITARY FROM FLOOR SINK ABOVE.
3 2-1/2" CW UP.



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1 **PLUMBING FLOOR PLAN - RMS - SECTION E**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
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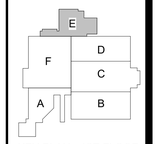
10-29-2025



KEY PLAN - 1ST FLOOR
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PLUMBING FLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P3.15
Drawn By: PS	
Date: 10.29.2025	

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Salas O'Brien Project Number: 2022-05088-00

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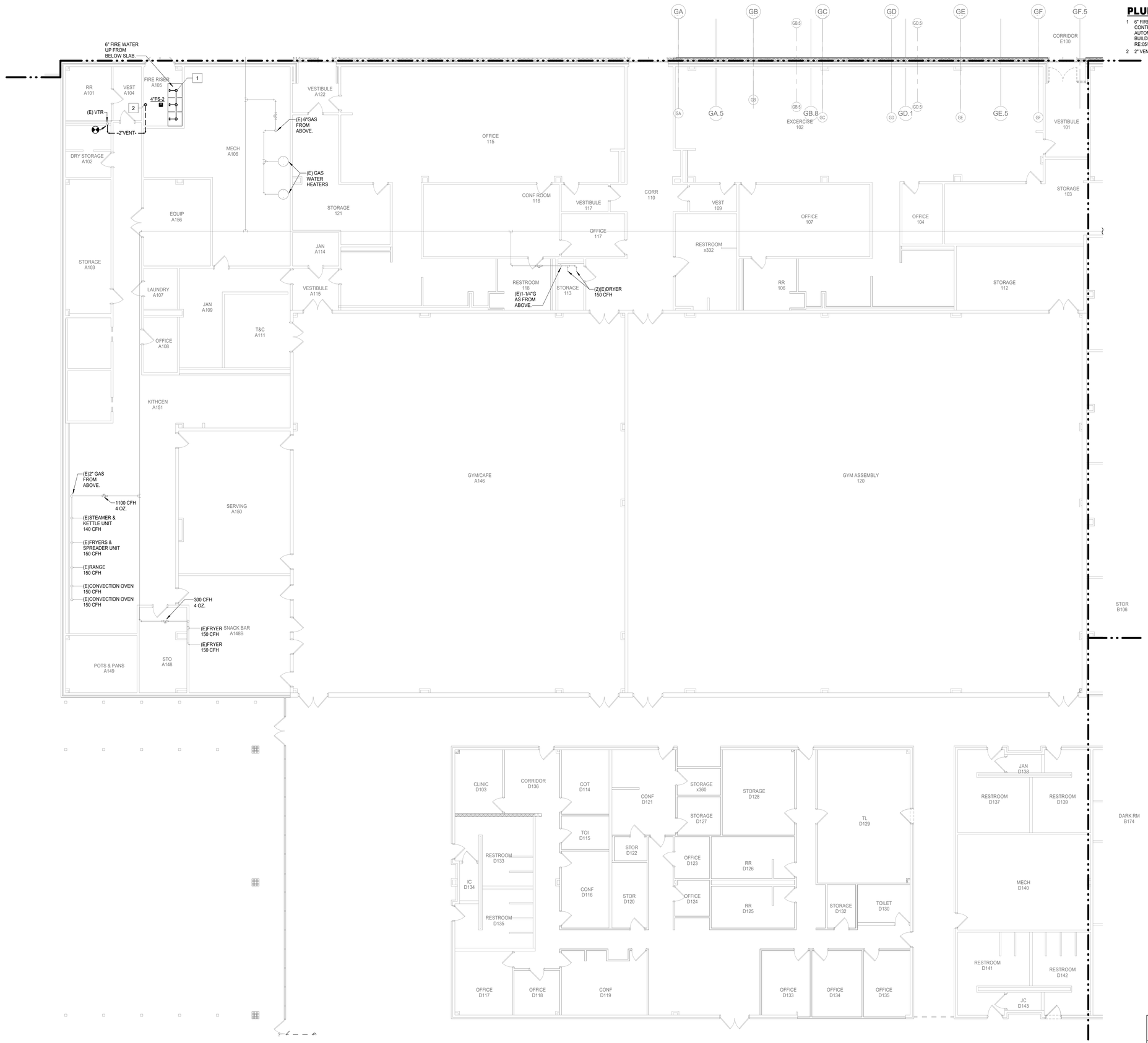
PLUMBING KEYED NOTES

1 6" FIRE ENTRY INTO BUILDING. FIRE SPRINKLER CONTRACTOR TO PROVIDE AND INSTALL A COMPLETE AUTOMATIC FIRE SPRINKLER SYSTEM WITH THE BUILDING. REFER TO FIRE SPRINKLER ENTRY DETAIL RE:05/P7.12.

2 2" VENT FROM BELOW.



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1 **PLUMBING FLOOR PLAN - RMS - SECTION F**

Scale: 1/8" = 1'-0"

Revision / Date

Project:

RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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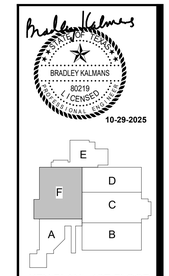

KEY PLAN - 1ST FLOOR

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PLUMBING FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P3.16
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111

Salas O'Brien Project Number: 2022-05088-00

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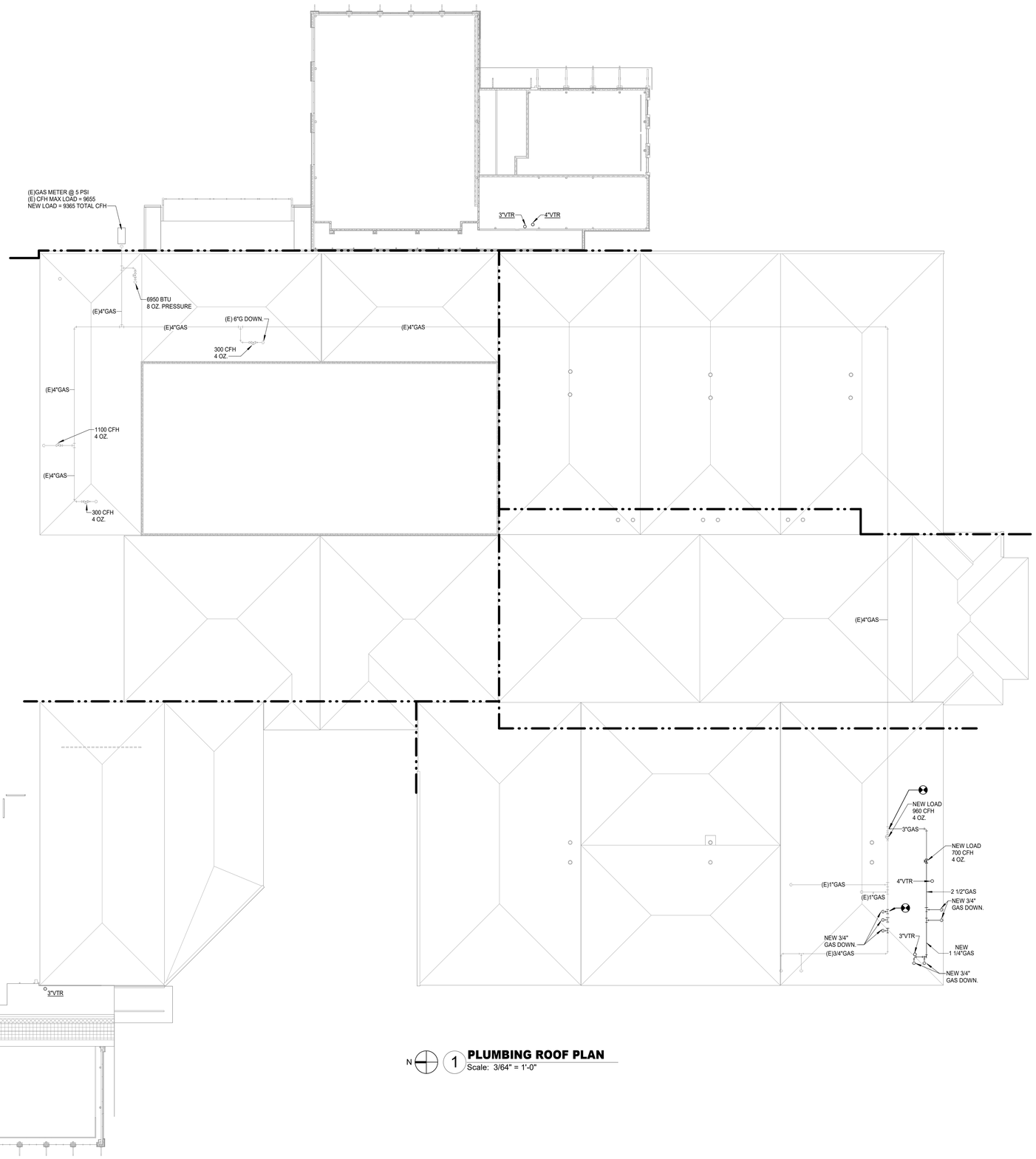
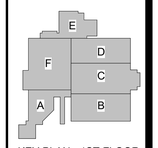


N 1 **PLUMBING ROOF PLAN**
Scale: 3/64" = 1'-0"

Revision /	Date	
1	02-28-24	CITY COMMENTS 1
2	04-04-24	CITY COMMENTS 2

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
83219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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PLUMBING ROOF PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P3.17
Drawn By: PG	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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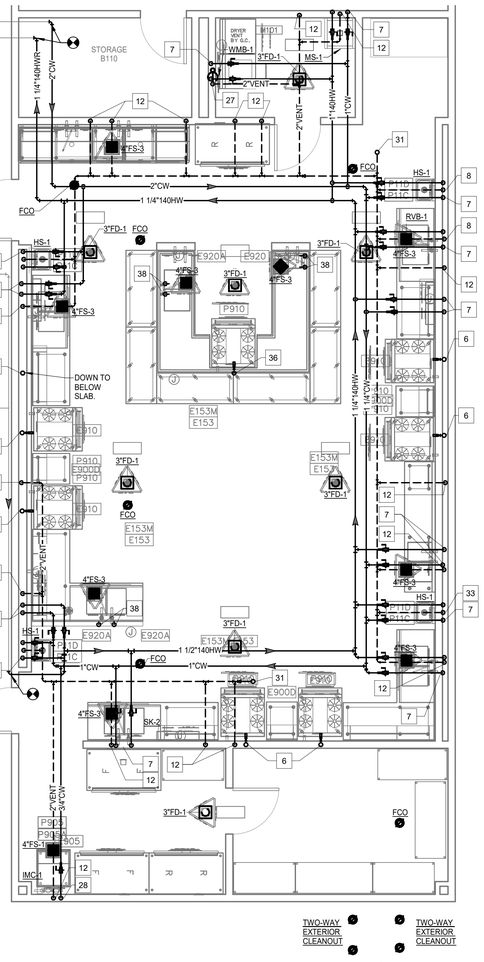
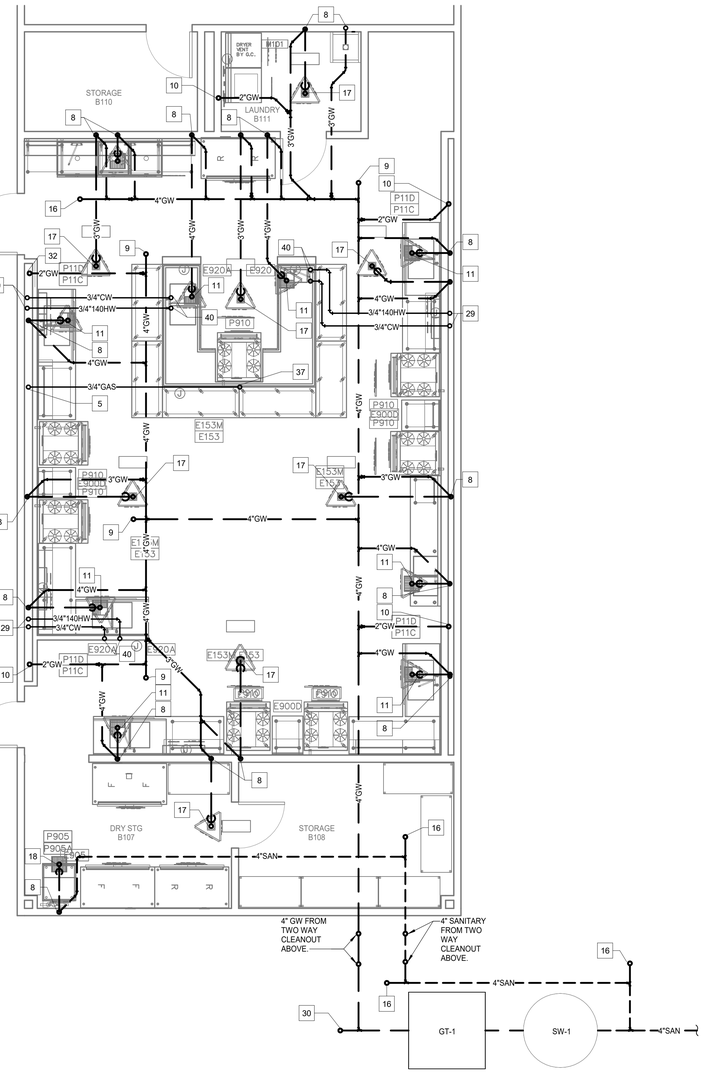
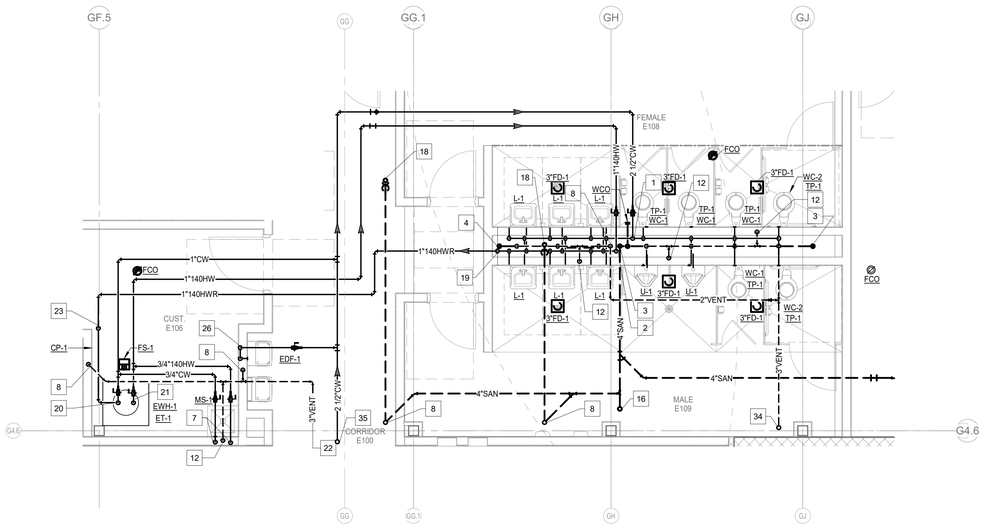


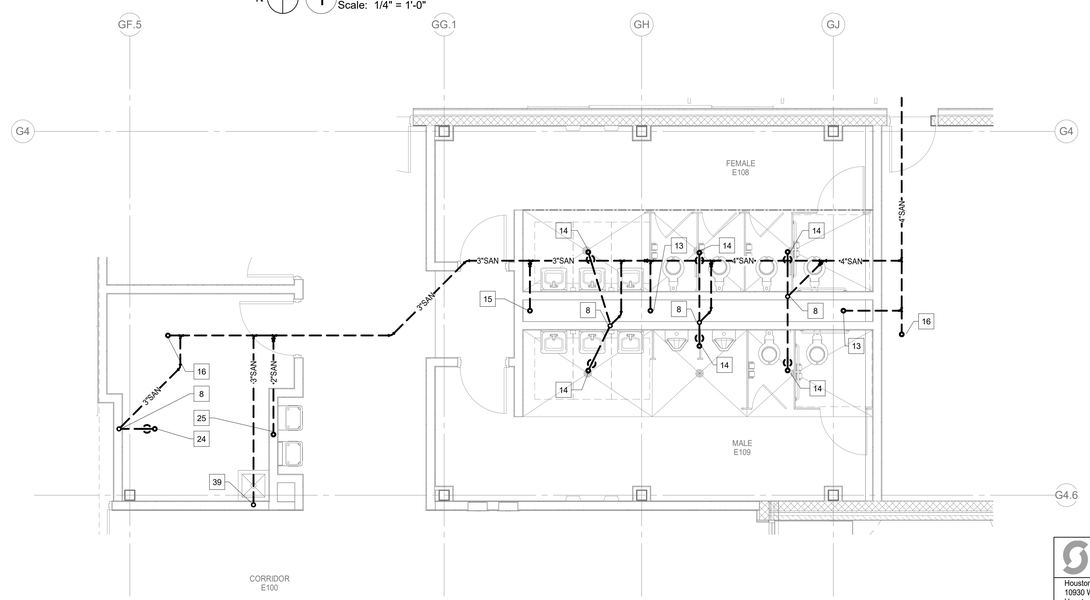
N 2 **PLUMBING FLOOR PLAN - CULINARY**
Scale: 1/4" = 1'-0"



N 1 **PLUMBING UNDERFLOOR PLAN - CULINARY**
Scale: 1/4" = 1'-0"



N 4 **PLUMBING FLOOR PLAN - NORTH RESTROOM**
Scale: 1/4" = 1'-0"



N 3 **PLUMBING UNDERFLOOR PLAN - NORTH RESTROOM**
Scale: 1/4" = 1'-0"

PLUMBING KEYED NOTES

1 2" CW DOWN TO SERVE PLUMBING FIXTURE/S.
2 1" HW DOWN TO SERVE PLUMBING FIXTURE/S.
3 4" SANITARY DOWN.
4 2" SANITARY DOWN.
5 3/4" GAS FROM FROM ABOVE
6 3/4" GAS DOWN FROM ROOF IN SLEEVE EXTEND TO RANGE & PROVIDE 3/4" STOP COCK, UNION & CONNECT TO EACH RANGE.
7 3/4" CW AND HW DOWN.
8 2" VENT UP.
9 4" GREASE WASTE FROM FLOOR CLEANOUT ABOVE.
10 2" GREASE WASTE FROM ABOVE.
11 4" GREASE WASTE FROM FLOOR SINK ABOVE.
12 2" VENT FROM BELOW.
13 4" SANITARY FROM ABOVE.
14 3" SANITARY FROM FLOOR DRAIN ABOVE.
15 2" SANITARY FROM ABOVE.
16 4" SANITARY FROM CLEANOUT ABOVE.
17 3" GREASE WASTE FROM FLOOR DRAIN ABOVE.
18 4" SANITARY FROM FLOOR SINK ABOVE.
19 1" HWR UP.
20 1" CW DOWN.
21 1" HW DOWN.
22 3" VENT UP TO 3" VTR.
23 3/4" HWR DOWN.
24 3" SANITARY FROM FLOOR SINK ABOVE.
25 2" SANITARY FROM ELECTRONIC DRINKING FOUNTAIN ABOVE.
26 3/4" CW DOWN.
27 3" GREASE WASTE DOWN, 2" VENT UP.
28 3/4" CW DOWN TO SERVE PLUMBING FIXTURE/S.
29 3/4" CW AND HW FROM ABOVE.
30 4" GREASE WASTE FROM EXTERIOR CLEANOUT.
31 3" VENT UP TO 4" VTR.
32 2" GREASE WASTE FROM HAND SINK ABOVE.
33 3/4" CW AND HW DOWN, 2" GREASE WASTE DOWN, 2" VENT UP.
34 3" VENT UP.
35 2-1/2" CW FROM ABOVE.
36 3/4" GAS FROM BELOW
37 3/4" GAS UP
38 3/4" CW AND HW FROM BELOW.
39 3" SANITARY DOWN, 2" VENT UP.
40 3/4" CW AND HW UP.

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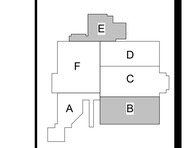
Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX



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PLUMBING ENLARGED PLANS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P5.11
Drawn By: PG	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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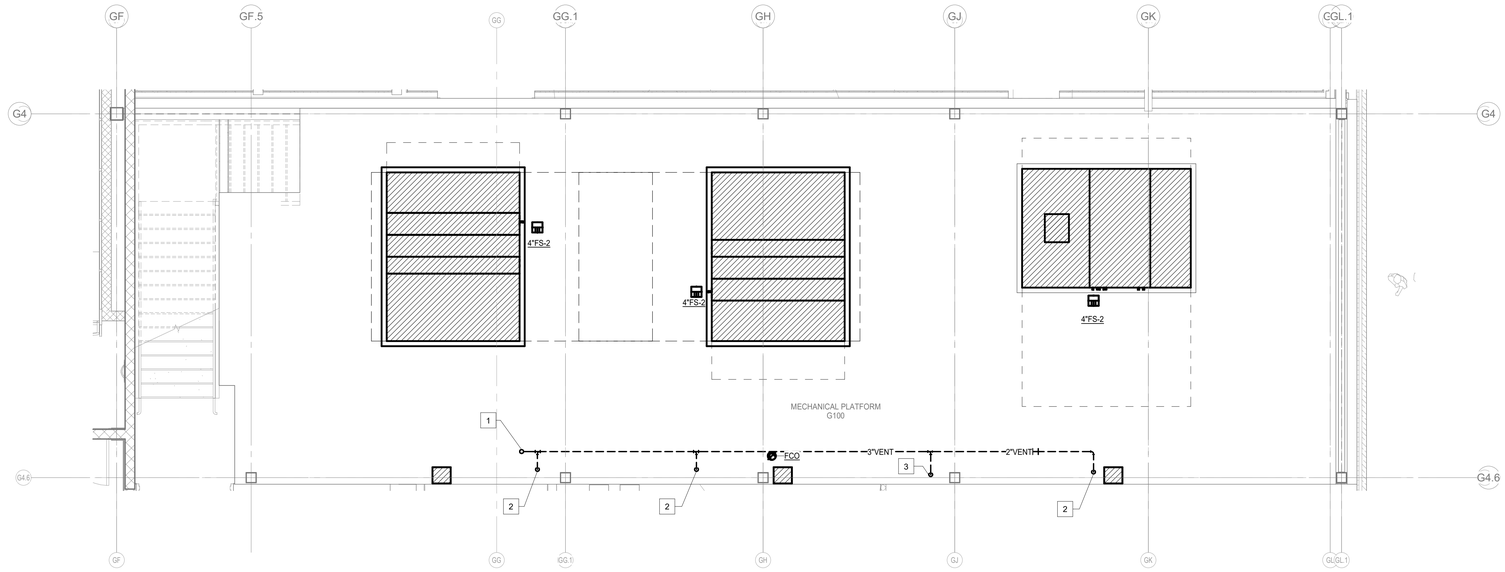
PLUMBING KEYED NOTES

1 3" VENT UP TO 4" VTR.
2 2" VENT UP.
3 3" VENT FROM BELOW.



N 1 **PLUMBING MEZZANINE PLAN**
Scale: 1/4" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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HUMBLE ISD
KINGWOOD, TX

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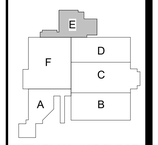
10-29-2025



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PLUMBING ENLARGED PLANS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P5.12
Drawn By: PG	
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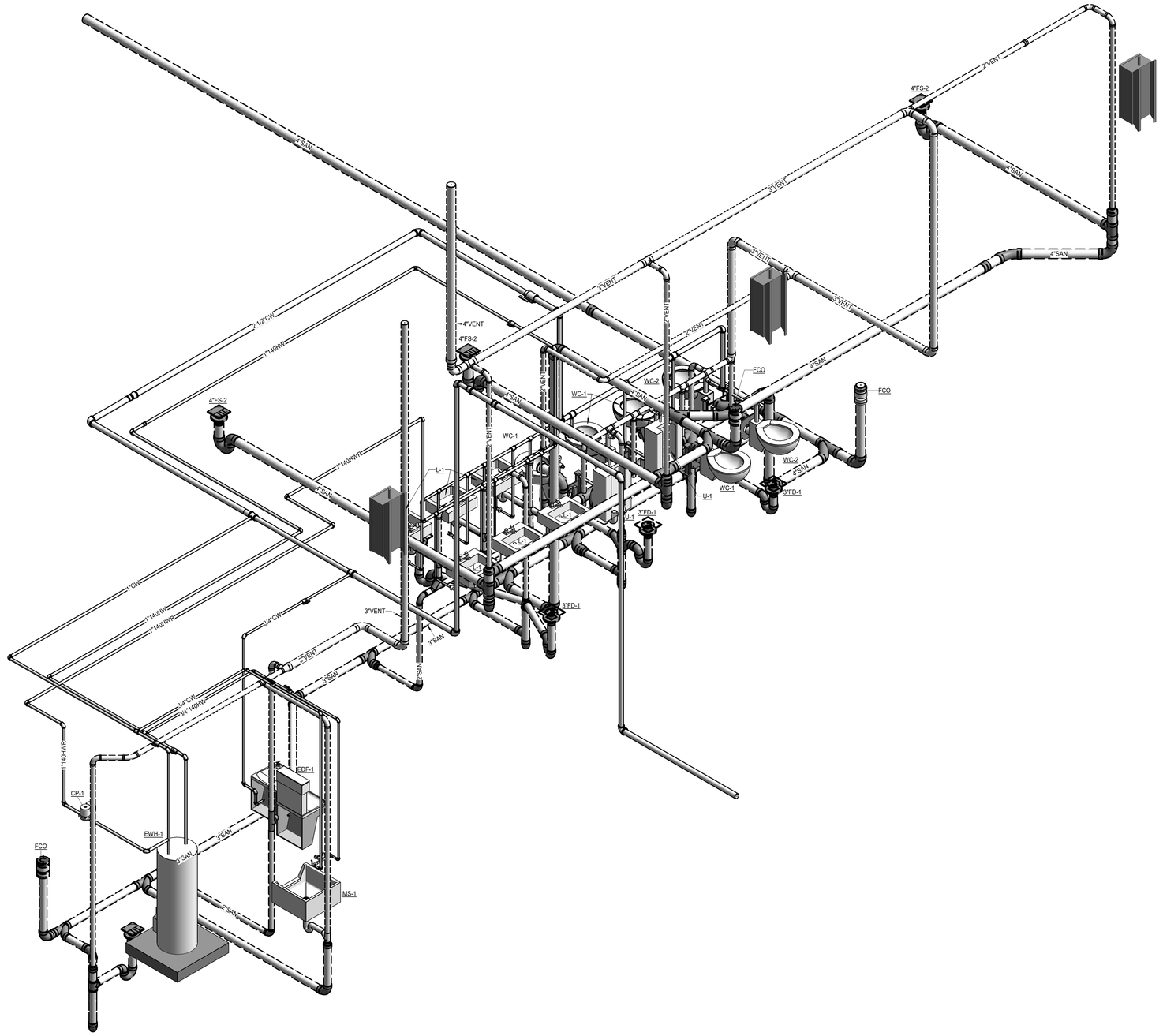

1 PLUMBING RISER DIAGRAM - RESTROOM

Scale:

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project: RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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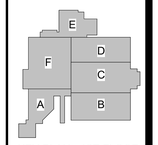

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PLUMBING RISER DIAGRAM - RESTROOM

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P6.00
Drawn By: Author	
Date: 10.29.2025	

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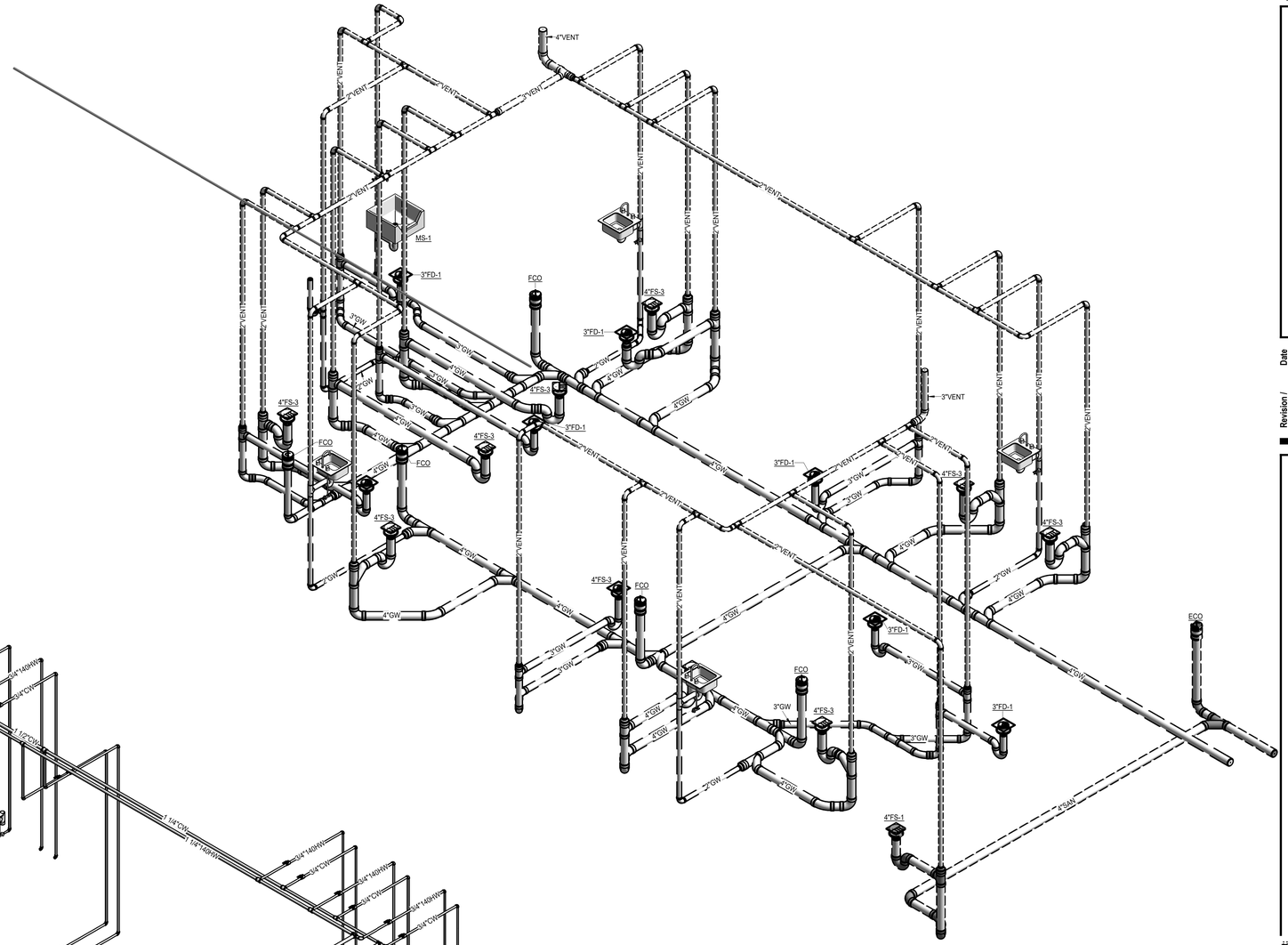
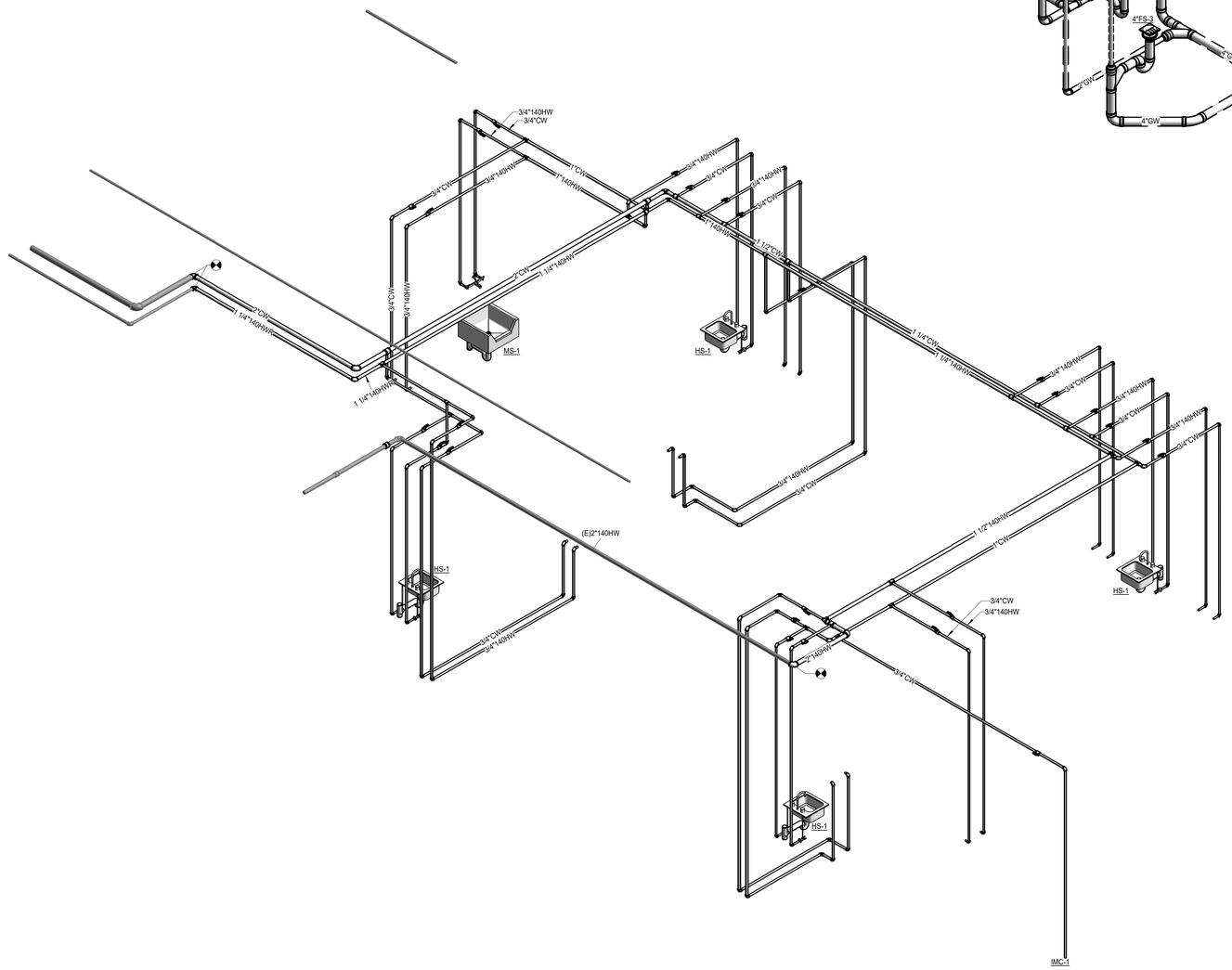


1 PLUMBING CULINARY RISER DIAGRAM - GREASE WASTE & VENT

Scale:



2 PLUMBING CULINARY RISER DIAGRAM - DOMESTIC WATER

Scale:

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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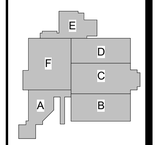

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PLUMBING RISER DIAGRAM - CULINARY

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Job No. 1821-13-02	Sheet No. P6.01
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NATURAL GAS CALCULATION

5 PSI

LONGEST MEASURED LENGTH = 697'
20% ALLOWED FOR FRICTION AND FITTINGS = 139'

TOTAL DEVELOPED LENGTH = 836'

GAS SIZED ON 850' COLUMN
UPC TABLE 1216.2(6)

NATURAL GAS CALCULATION

LESS THAN 2 PSI

LONGEST MEASURED LENGTH = 125'
20% ALLOWED FOR FRICTION AND FITTINGS = 25'

TOTAL DEVELOPED LENGTH = 150'

GAS SIZED ON 200' COLUMN
UPC TABLE 1216.2(1)



1 **PLUMBING GAS RISER DIAGRAM**
Scale:

Revision /	Date	
1	02-28-24	CITY COMMENTS 1
2	04-04-24	CITY COMMENTS 2

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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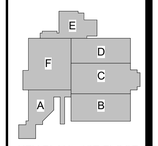

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PLUMBING GAS RISER DIAGRAM

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P6.02
Drawn By: Author	
Date: 10.29.2025	

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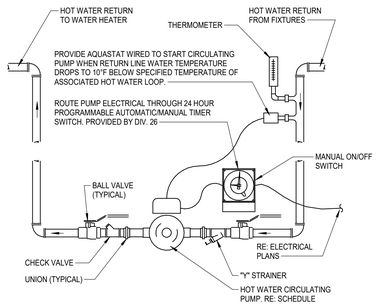
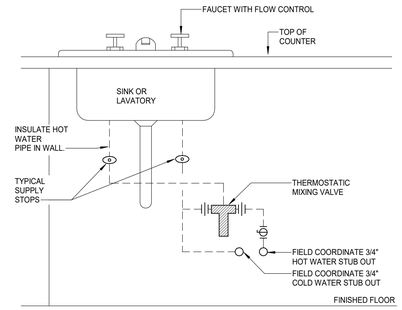
PHW04 - 09/10/18



NOTE: MOUNT AT 54"-60" A.F.F. UNLESS NOTED OTHERWISE ON PLANS.

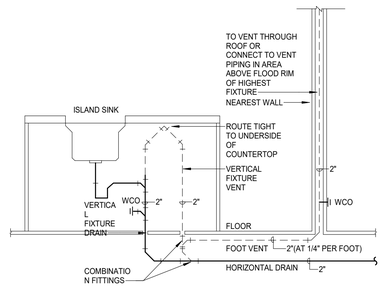
16 HOT WATER CIRCULATING PUMP
SCALE: NONE

PHW04 - 09/10/18



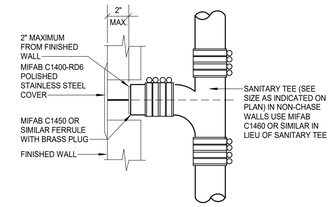
12 THERMOSTATIC MIXING VALVE PIPING AT SINK OR LAVATORY
SCALE: NONE

PSAN13- XX/XX/XX



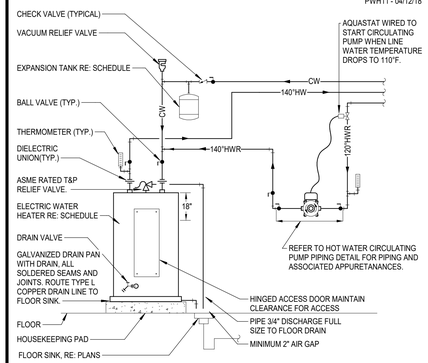
8 TYPICAL ISLAND SINK PIPING
SCALE: NONE

PSAN03- XX/XX/XX



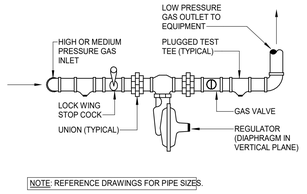
4 WALL CLEANOUT
SCALE: NONE

PWH11 - 04/12/18



15 ELECTRIC WATER HEATER PIPING
SCALE: NONE

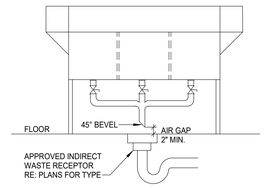
PNG02 - XX/XX/XX



NOTE: REFERENCE DRAWINGS FOR PIPE SIZES.

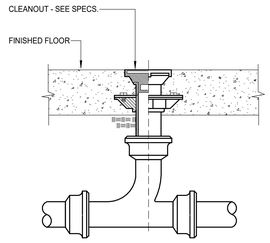
11 GAS PRESSURE REGULATOR PIPING
SCALE: NONE

PSAN16- XX/XX/XX



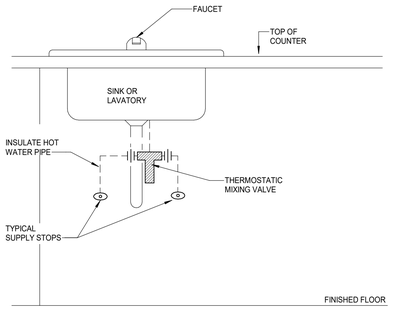
7 THREE COMPARTMENT SINK
SCALE: NONE

PSAN01- XX/XX/XX

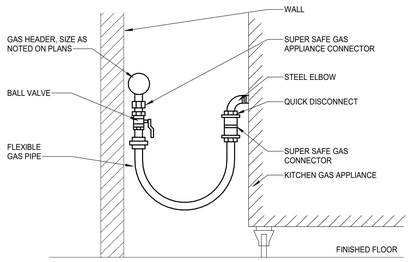


3 FLOOR CLEANOUT
SCALE: NONE

PHW04 - 08/10/20

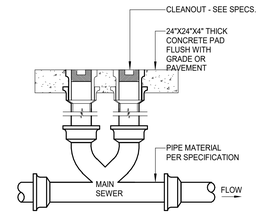


14 THERMOSTATIC MIXING VALVE AT SINK/LAVATORY SINGLE TEMPERATURE
SCALE: NONE



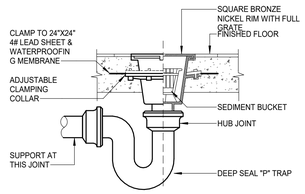
10 KITCHEN EQUIPMENT GAS PIPING
SCALE: NONE

PSAN05- XX/XX/XX



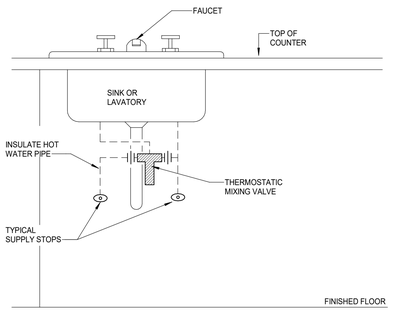
6 TWO-WAY EXTERIOR CLEANOUT
SCALE: NONE

PSAN08- XX/XX/XX



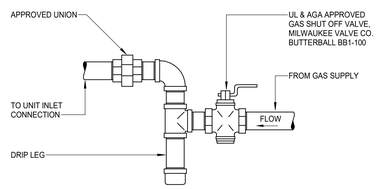
2 FLOOR SINK
SCALE: NONE

PHW04 - 08/10/20



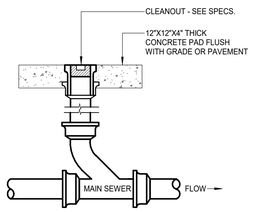
13 THERMOSTATIC MIXING VALVE AT SINK/LAVATORY DUAL TEMPERATURE
SCALE: NONE

PNG03 - XX/XX/XX



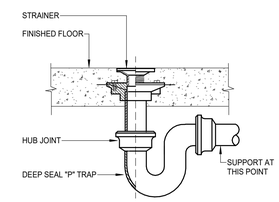
9 GAS CONNECTION
SCALE: NONE

PSAN04- XX/XX/XX



5 EXTERIOR CLEANOUT
SCALE: NONE

PSAN07- XX/XX/XX



1 FLOOR DRAIN
SCALE: NONE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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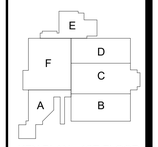

KEY PLAN - 1ST FLOOR
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PLUMBING DETAILS

PACKAGE | VOLUME

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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02
Drawn By: PC
Date: 10.29.2025

Sheet No. P7.11

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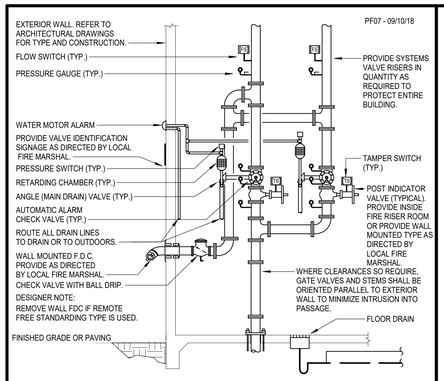
PF07 - 09/10/18



4 FIRE ENTRY PIPING
SCALE: NONE

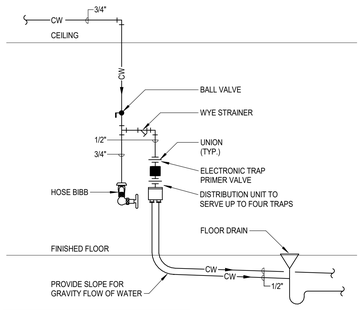
PSAN21- XX/XX/XX

GREASE INTERCEPTOR SIZING (DFU METHOD)				
FIXTURE TYPE:	TRAP ARM SIZE	FIXTURE UNITS	QUANITY	SUM
FLOOR DRAINS, ETC.	3"	5	1	4
FLOOR SINKS, ETC.	4"	6	2	4
LAVATORIES	2"	1	17	68
CLOTHES WASHER (RESIDENTIAL)	2"	2	1	6
MOP SINK	3"	2	1	2
MULTIPLY 125 GPM BY TOTAL DFU'S 4" PIPE @ 1/4" SLOPE FULL = 125 GPM CALCULATION: 125 x 108 =				82
DIVIDE 13,500 BY 216 DFU MAX DFU CAPACITY OF 4" PIPE @ 1/4" SLOPE = 216 CALCULATION: 13,500 x 216 =				62.5
MULTIPLY BY 30 MIN. RETENTION TIME CAPACITY (GALLONS)				1875

GREASE INTERCEPTOR SCHEDULE								
MODEL NO.	CAPACITY USGal	GREASE CAP. (LBS)	EMPTY WT (LBS)	LENGTH L	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2
GT-2000	2,000	4,600	21,250	9'-0"	6'-0"	8'-0"	6'-9"	6'-6"

2 GREASE TRAP SIZING CALCULATION (GT-1)
SCALE: NONE

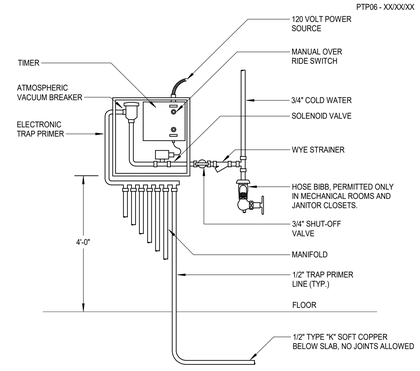
PTP05 - XX/XX/XX



NOTE: OMIT HOSE BIBB WHEN IN JANITOR'S CLOSET

6 ELECTRONIC TRAP PRIMER IN MECHANICAL ROOM/JANITOR CLOSET
SCALE: NONE

PTP06 - XX/XX/XX



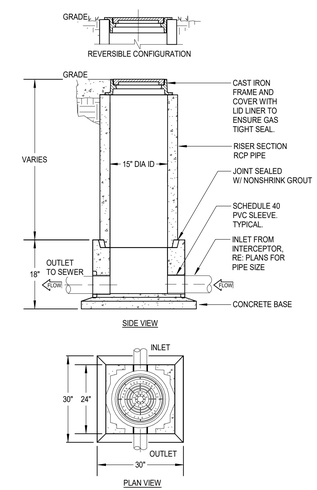
5 ELECTRONIC TRAP PRIMER
SCALE: NONE

PSAN30 - XX/XX/XX

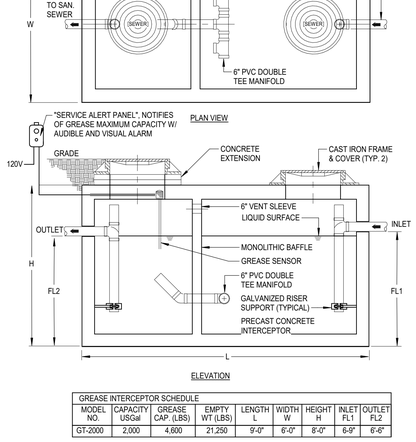
NOTES AND SPECIFICATIONS:

1. USE 15" T&G R.C.P. FOR INSTALLATION FOR INSTALLATION 6'-0" DEEP AND LESS.
2. USE 24" T&G R.C.P. FOR INSTALLATION GREATER THAN 6'-0" DEEP. (STANDARD RING AND M.H. COVER REQUIRED)
3. SAMPLING WELL MUST BE SET IN A CIRCULAR OR SQUARE CONCRETE PAD (1'-0" GREATER THAN OUTSIDE DIAMETER OF PIPE.)
4. LAWN INSTALLATION MUST BE 4" ABOVE FINISHED GRADE.
5. DRIVE & SIDEWALK INSTALLATION MUST BE BROUGHT TO FINISHED GRADE
6. CONCRETE SHALL BE CLASS 1 WITH A DESIGN STRENGTH OF 4500 PSI AT 28 DAYS. UNIT SHALL BE OF MONOLITHIC CONSTRUCTION AT FLOOR AND FIRST STAGE OF WALL WITH SECTIONAL RISER TO REQUIRED DEPTH.
7. CAST IRON FRAMES AND GRATES SHALL BE MANUFACTURED OF GREY CAST IRON CONFORMING TO ASTM A48-76 CLASS 30, HEAVY DUTY AASHTO H-20.

MANUFACTURER/ MODEL
PARK EQUIPMENT SWB-15



3 SAMPLE WELL
SCALE: NONE



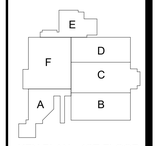
GREASE INTERCEPTOR SCHEDULE								
MODEL NO.	CAPACITY USGal	GREASE CAP. (LBS)	EMPTY WT (LBS)	LENGTH L	WIDTH W	HEIGHT H	INLET FL1	OUTLET FL2
GT-2000	2,000	4,600	21,250	9'-0"	6'-0"	8'-0"	6'-9"	6'-6"

1 GREASE TRAP WITH MONITOR
SCALE: NONE

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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HOUSTON • SAN ANTONIO • WACO
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Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

PLUMBING DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. P7.12
Drawn By: PG	
Date: 10.29.2025	

10/28/2025 2:20:02 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01_02 RIVERWOOD MS ADD & RENO_MEP.rvt

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GAS EQUIPMENT SCHEDULE

EQUIPMENT NUMBER	DESCRIPTION	BTU PER HOUR LOAD	TOTAL BTU PER HOUR	TOTAL CFH
(E)GWH-1	(E)GAS WATER HEATER	1,600,000 BTUH	1,600,000 BTUH	1600 CFH
(E)GWH-2	(E)GAS WATER HEATER	1,600,000 BTUH	1,600,000 BTUH	1600 CFH
(E)B-1	(E)BOILER	3,000,000 BTUH	3,000,000 BTUH	3000 CFH
(E)EMER. GEN.	(E)EMERGENCY GENERATOR	500,000 BTUH	500,000 BTUH	500 CFH
(E)OVEN	(E)CONVECTION OVEN	150,000 BTUH	150,000 BTUH	150 CFH
(E)OVEN	(E)CONVECTION OVEN	150,000 BTUH	150,000 BTUH	150 CFH
(E)RAN. BATT.	(E)RANGE BATTERY	150,000 BTUH	150,000 BTUH	150 CFH
(E)FRY. & SPRE.	(E)FRYERS & SPREADER	150,000 BTUH	150,000 BTUH	55 CFH
(E)STEAM. & KET.	(E)STEAMER & KETTLE UNIT	140,000 BTUH	140,000 BTUH	140 CFH
(E)FRYER	(E)FRYER	150,000 BTUH	150,000 BTUH	150 CFH
(E)FRYER	(E)FRYER	150,000 BTUH	150,000 BTUH	150 CFH
(E)DRYER	(E)DRYER	150,000 BTUH	150,000 BTUH	150 CFH
(E)DRYER	(E)DRYER	150,000 BTUH	150,000 BTUH	150 CFH
(E)TURRET	(E)LAB TURRET	55,000 BTUH	55,000 BTUH	55 CFH
(E)TURRET	(E)LAB TURRET	55,000 BTUH	55,000 BTUH	55 CFH
(E)TURRET	(E)LAB TURRET	55,000 BTUH	55,000 BTUH	55 CFH
(E)TURRET	(E)LAB TURRET	55,000 BTUH	55,000 BTUH	55 CFH
(E)RAN. BATT.	(E)RANGE BATTERY	150,000 BTUH	150,000 BTUH	150 CFH
RANGE	RANGE	160,000 BTUH	160,000 BTUH	160 CFH
RANGE	RANGE	160,000 BTUH	160,000 BTUH	160 CFH
RANGE	RANGE	160,000 BTUH	160,000 BTUH	160 CFH
RANGE	RANGE	160,000 BTUH	160,000 BTUH	160 CFH
RANGE	RANGE	160,000 BTUH	160,000 BTUH	160 CFH
RANGE	RANGE	160,000 BTUH	160,000 BTUH	160 CFH
RANGE	RANGE	160,000 BTUH	160,000 BTUH	160 CFH
TOTALS:			9,365,000 BTUH	9365 CFH

PLUMBING PIPING LEGEND

SYMBOLS	DESCRIPTION
SAN	SANITARY OR WASTE PIPING ABOVE GRADE (SAN)
SAN	SANITARY OR WASTE PIPING BELOW GRADE (SAN)
GW	GREASE WASTE PIPING (GW)
GW	GREASE WASTE PIPING BELOW GRADE (GW)
SD	STORM DRAIN PIPING (SD)
SD	STORM DRAIN PIPING BELOW GRADE (GW)
SSD	SUB-SOIL DRAIN OR FOOTING DRAIN (SSD)
AW	ACID WASTE PIPING (AW)
AW	ACID WASTE PIPING BELOW GRADE (AW)
PD	PUMPED DISCHARGE (PD)
CD	CONDENSTATE DRAIN PIPING (CD)
D	CONDENSTATE - INDIRECT DRAIN PIPING (D)
	VENT PIPING (V)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
HWR	HOT WATER RETURN PIPING (HWR)
SCW	SOFT COLD WATER PIPING (SCW)
CDW	CHILLED DRINKING WATER PIPING (CDW)
TP	TRAP PRIMER LINE (TP)
F	FIRE PROTECTION PIPING (F)
AS	AUTOMATIC SPRINKLER PIPING (AS)
GAS	NATURAL GAS PIPING (G)
GV	GAS VENT PIPING (GV)
AIR	COMPRESSED AIR PIPING (A)
	FLOW DIRECTIONAL ARROW
	SHUT-OFF VALVE
	BALANCING VALVE (BV)
	SOLENOID VALVE (SV)
	BALL VALVE (BV)
	BUTTERFLY VALVE
	LUBRICATED PACKED PLUG STOP STOP COCK (PC)
	HORIZONTAL SWING CHECK
	UNION
	HORIZONTAL SWING CHECK
	REDUCER OR INCREASER
	ECCENTRIC REDUCER
	REDUCED PRESSURE BACKFLOW PREVENTER (RPBFP)
	PIPING DOWN
	RISE OR DROP PIPING
	PIPING UP -OR- PIPING UP & DOWN
	CAP ON END OF PIPE
	CLEANOUT (WALL OR CEILING) (CO)
	FLOOR CLEANOUT (FCO)
	EXTERIOR CLEANOUT WITH 18"x18"x4" CONCRETE PAD (ECO)
	TWO-WAY CLEANOUT (PROVIDE 18"x24"x4" CONCRETE PAD OUTSIDE)
	FIRE DEPARTMENT VALVE AT RISER
	FIRE HYDRANT
	FIRE DEPARTMENT CONNECTION
	PRESSURE REDUCING VALVE (PRV)
	BRANCH CONNECTION OUT OF TOP
	BRANCH CONNECTION OUT OF BOTTOM
	BRANCH CONNECTION OUT OF SIDE
	WYE & 1/8TH BEND BRANCH CONNECTION
	WYE BRANCH CONNECTION
	HOSE BIBB
	PRESSURE GAUGE WITH COCK
	THERMOMETER
	GAS PRESSURE REGULATOR
	TEST COCK
	GAS METER
	WALL HYDRANT
	VALVE IN RISE
	ASME TEMPERATURE & PRESSURE RELIEF VALVE
	VACUUM RELIEF VALVE
	ANGLE VALVE
	OS&Y VALVE
	ROOF DRAIN
1	REFER TO KEYED NOTE
FS	FLOW SWITCH
	FLOOR SINK (FS)
	FLOOR DRAIN (FD)
	FLOOR DRAIN WITH P-TRAP (FD)
	FLOOR DRAIN WITH P-TRAP AT 45° ANGLE (FD)
	HUB DRAIN (HD)
	ACCESS PANEL FOR TRAP PRIMER OR SHOCK ABSORBER
AP	ACCESS PANEL LOCATION SYMBOL
A	SHOCK ABSORBER
	AIR CHAMBER
(E)	EXISTING
(N)	NEW
VTR	VENT THRU ROOF
B.F.F.	BELOW FINISHED FLOOR
A.F.F.	ABOVE FINISHED FLOOR
	NEW CONNECTION
IE=100.00'	INVERT ELEVATION
1	DELTA CHANGE SYMBOL
P 1	4" VTR RISER FLAG

PLUMBING GENERAL NOTES

1. WITHIN THE EXISTING BUILDING, EXISTING WATER, WASTE AND VENT SERVICES ARE TO BE MODIFIED AS REQUIRED AND REUSED FOR THE INSTALLATION OF NEW AND/OR RELOCATED PLUMBING FIXTURES. REFER TO PLUMBING FLOOR PLANS FOR POINTS OF CONNECTION.
2. WITHIN THE EXISTING BUILDING, SAWCUT AND REMOVE EXISTING FLOOR SLAB AS REQUIRED TO PROVIDE NEW AND/OR RELOCATED PLUMBING FIXTURES, CLEANOUTS, AND UNDERSLAB WASTE AND VENT PIPING. PATCH AND REFINISH FLOOR TO MATCH EXISTING.
3. IN AREAS WHERE THE FLOOR SLAB IS REMOVED, CONTRACTOR SHALL ALSO REMOVE UNDERSLAB WASTE AND VENT PIPING WHICH SERVES FIXTURES DESIGNATED FOR REMOVAL. PRIOR TO ANY REMOVAL, FIELD VERIFY THAT LINES TO BE REMOVED DO NOT SERVE ANY EXISTING FIXTURES TO REMAIN OR NEW FIXTURES TO BE INSTALLED.
4. IN AREAS WHERE THE FLOOR SLAB IS NOT REMOVED, CONTRACTOR SHALL ABANDON IN PLACE ANY UNDERSLAB WASTE AND VENT PIPING NO LONGER NEEDED, UNLESS THE PIPING MUST BE REMOVED TO ACCOMMODATE NEW CONSTRUCTION. IF NEW WORK DOES NOT NECESSITATE THEIR REMOVAL, CUT AND PLUG SUCH LINES BELOW SLAB, AND PATCH FLOOR TO MATCH EXISTING.
5. FIELD VERIFY EXACT LOCATION, SIZE, DEPTH, DIRECTION OF FLOW, CAPACITY, PIPE MATERIAL AND CONDITION OF EXISTING WASTE PIPING PRIOR TO BEGINNING CONSTRUCTION. ENSURE THAT PROPER CONNECTIONS TO AND EXTENSION OF SUCH UTILITIES CAN BE MADE.
6. WASTE LINES TO BE RE-USED OR RECONNECTED TO SHALL BE THOROUGHLY RODDED OUT AND FLUSHED TO ENSURE THEY ARE FREE FROM BLOCKAGES.
7. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING BELOW SLAB WITH COLUMN FOOTINGS, GRADE BEAMS, UNDERGROUND PLUMBING AND ELECTRICAL UTILITIES, AND OTHER SUB-SURFACE BUILDING ELEMENTS.
8. CONTRACTOR SHALL COORDINATE ROUTING OF PIPING IN CEILING SPACES WITH MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND CONDUIT. SHOULD A CONFLICT OCCUR THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO INSTALLING AN ALTERNATE PIPING PLAN.
9. CONTRACTOR TO COORDINATE ALL REMODEL WORK WITH THE WORK OF OTHER TRADES TO AVOID CONFLICTS AND TO MINIMIZE INTERRUPTION OF SERVICES.
10. COORDINATE ALL FIXTURE AND EQUIPMENT LOCATIONS AND CONNECTION REQUIREMENTS WITH LATEST ARCHITECTURAL DRAWINGS AND SPECIFICATIONS PRIOR TO ANY ROUGH-INS.
11. DO NOT ROUGH-IN FROM THESE DRAWINGS. REFER TO LATEST ARCHITECTURAL DRAWINGS FOR DIMENSIONED LOCATIONS.
12. CONTRACTOR TO FIELD VERIFY AS NECESSARY THE EXACT ROUTING AND SIZES OF ALL PIPING.
13. ALL WORK, METHODS AND INSTALLATIONS INVOLVED IN THE PLUMBING DESIGN SHALL BE IN ACCORDANCE WITH THE CITY BUILDING CODE, INSPECTION REGULATIONS AND ALL OTHER OFFICIALS HAVING JURISDICTION.
14. THE PROPER INSTALLATION OF NEW FIXTURES AND THE PROPER CONTINUED OPERATION OF EXISTING FIXTURES TO REMAIN SHALL DETERMINE THE EXTENT AND NATURE OF PLUMBING REMODEL WORK.
15. EACH VENT SHALL TERMINATE VERTICALLY NOT LESS THAN 6" ABOVE ROOF, MAINTAIN MINIMUM 10'-0" DISTANCE BETWEEN VENT TERMINALS THROUGH ROOF AND ALL FRESH AIR INTAKES, AND A MINIMUM 5'-0" FROM ANY EXTERIOR WALL.
16. PRIOR TO BEGINNING CONSTRUCTION, COORDINATE BUILDING BACKFLOW PREVENTION REQUIREMENTS WITH THE LOCAL AUTHORITY HAVING JURISDICTION AND PROVIDE AS DIRECTED.

SHOCK ARRESTOR SCHEDULE

P.D.I. SYMBOLS:	FIXTURE UNITS:	THREADED CONNECTION	CERTIFICATION
A	1 - 11	1/2"	ASSE 1010
B	12 - 32	3/4"	ASSE 1010
C	33 - 60	1"	ASSE 1010
D	61 - 113	1"	ASSE 1010
E	114 - 154	1"	ASSE 1010
F	155 - 330	1"	ASSE 1010

PLUMBING MATERIAL LIST

ABOVE GRADE, INSIDE BUILDING

SANITARY WASTE AND VENT PIPING SHALL BE

NO-HUB CAST IRON SYSTEM CONFORMING TO CISPI. STANDARD NO. 301-75. NEOPRENE GASKETS SHALL CONFORM TO ASTM STANDARD C564-75, OR,

STORM PIPING SHALL BE

SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPE AND FITTINGS WITH ELASTOMERIC GASKETS JOINTS.

DOMESTIC WATER PIPING SHALL BE

DRAWN (HARD) COPPER WATER TUBE, TYPE "L", ASTM B88, WITH WROUGHT COPPER FITTINGS, ANSI B16.22 AND 95-5 SOLDER JOINTS.

BELOW GRADE, INSIDE BUILDING

SANITARY WASTE AND VENT PIPING SHALL BE

SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS. DO NOT USE IN AIR SUPPLY OR RETURN PLENUMS, AND OR WHERE FIRE RATED WALLS, PARTITIONS, OR FLOORS ARE PENETRATED.

STORM PIPING SHALL BE

SCHEDULE 40 DWV POLYVINYL CHLORIDE PIPE AND FITTINGS CONFORMING TO ASTM-2665 WITH SOLVENT WELDED JOINTS.

DOMESTIC WATER PIPING SHALL BE

ANNEALED (SOFT) COPPER WATER TUBE, TYPE "K", ASTM B88, WITH NO JOINTS OR FITTINGS BELOW SLAB.

GAS PIPING SHALL BE

PIPE 2" AND SMALLER. PROVIDE SCHEDULE 40 ASTM A 53 BLACK STEEL WITH FACTORY FABRICATED SOCKET WELD FITTINGS.

PIPE LARGER THAN 2", USE SCHEDULE 40 ASTM A 53 BLACK STEEL PIPE WITH LONG RADIUS WELD FITTINGS.

ELECTRIC WATER HEATER SCHEDULE

ITEM NO.	KW INPUT	GALS. PER HR. RECOVERY RATE 100°F RISE	STORAGE CAPACITY	ELECTRICAL REQUIRED	STORED WATER TEMP.	MANUFACTURER / COMMENTS
EWH-1	6	25	40	208V/1PH.	140 F	A.O. SMITH DSE-40A

NOTES:
1. ALL ELECTRIC WATER HEATERS SHALL BE ASME.

DOMESTIC HW EXPANSION TANK SCHED.

ITEM NO.	DESCRIPTION	MAX. WORK PRESSURE	TANK VOL. GALLONS	MAX. ACCEPT. GALLONS	DIAMETER INCHES	MANUFACTURER AND MODEL
ET-1	HOT WATER EXPANSION TANK	150 PSI	6.4	3.2	12"	AMTROL THERM-X-TROL #ST-12C-DD

NOTES:
1. ALL EXPANSION TANKS SHALL BE ASME RATED.
2. ET-1 SHALL BE PIPE IN CONJUNCTION WITH EWH-1.

CIRCULATING PUMP SCHEDULE

ITEM NO.	DESCRIPTION	TYPE	GPM	HEAD FEET	H.P. MIN.	VOLT/ PHASE	MAX. RPM	MANUFACTURER AND MODEL
CP-1	CIRCULATION PUMP 110 F HOT WATER	IN-LINE STAINLESS STEEL	5	3.35	1/12	120/1	2400	GRUNDFOS #ALPHA HWR 15-29

PLUMBING FIXTURE SCHEDULE

TYPE: WC-1 (STANDARD HEIGHT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH ANTIMICROBIAL SURFACE, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1- 1/2" TOP SPUD AND BOLT COVERS. AMERICAN STANDARD AFWALL #3351.101
SEAT: ELONGATED OPEN FRONT SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. REFER TO ARCHITECTURAL DRAWINGS FOR SEAT COLOR. BEMIS #1955SSCT.
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. SLOAN ROYAL II #111-1.28.
CARRIER: WADE 311 (HORIZONTAL) AND 330 (VERTICAL) SERIES WITH 500 LB WEIGHT CAPACITY AND FLUSH VALVE SUPPORT (-AM1).
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT REQUIREMENTS.

TYPE: WC-2 (T.A.S. / ADA COMPLIANT)
DESCRIPTION: WATER CLOSET, WALL HUNG, WHITE VITREOUS CHINA WITH ANTIMICROBIAL SURFACE, 1.28 GALLON PER FLUSH SIPHON JET ACTION, ELONGATED CLOSET BOWL WITH 1- 1/2" TOP SPUD AND BOLT COVERS. AMERICAN STANDARD AFWALL #3351.101
SEAT: ELONGATED OPEN FRONT SEAT WITH SELF SUSTAINING CONCEALED CHECK HINGES. REFER TO ARCHITECTURAL DRAWINGS FOR SEAT COLOR. BEMIS #1955SSCT.
FLUSH VALVE: 1.28 GALLON FLUSH CYCLE, EXPOSED, DIAPHRAGM TYPE, CHROME PLATED CLOSET FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 1-1/2" TOP SPUD. SLOAN ROYAL II #111-1.28.
CARRIER: WADE 311 (HORIZONTAL) AND 330 (VERTICAL) SERIES WITH 500 LB WEIGHT CAPACITY AND FLUSH VALVE SUPPORT (-AM1).
ROUGH-IN: 4" WASTE, 2" VENT, 1" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHT REQUIREMENTS.

TYPE: U-1 (T.A.S. / ADA COMPLIANT)
DESCRIPTION: URINAL, WALL HUNG, WHITE VITREOUS CHINA, 0.5 GALLON PER FLUSH, WASHOUT FLUSH ACTION, INTEGRAL TRAP, REMOVABLE DOMED STRAINER. AMERICAN STANDARD "WASHBROOK" 6590.001
FLUSH VALVE: 0.5 GALLON FLUSH CYCLE. EXPOSED, DIAPHRAGM TYPE, CHROME PLATED URINAL FLUSHOMETER. VACUUM BREAKER, SPUD COUPLING FOR 3/4" TOP SPUD. SLOAN ROYAL II #186-0.5.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, UPPER AND LOWER BEARING PLATES WITH THREADED STUDS. WADE 401-AM1-M36.
ROUGH-IN: 2" WASTE, 2" VENT, 3/4" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: L-1 (T.A.S. COMPLIANT) - METERED - TEMPERED WATER FOR STUDENTS
DESCRIPTION: LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, 4" CENTERSET FAUCET HOLES. AMERICAN STANDARD LUCERNE #0355.012.
FAUCET: CHROME PLATED BRASS DECK MOUNTED LAVATORY FAUCET WITH COVER PLATE, 4-1/8" SPOUT, AND PUSH BUTTON HANDLE INDEXED "PUSH". SELF-CLOSING METERING CARTRIDGE, VANDAL RESISTANT 0.5 GPM NON-AERATING LAMINAR FLOW OUTLET. CHICAGO MODEL #857-E66VP-665PSHABCP
STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #152MN.
MIXING VALVE: ASSE 1070 POINT OF USE THERMOSTATIC MIXING VALVE WITH WAX FILLED THERMOSTAT, CHECK VALVES ON INLETS AND MOUNTING BRACKET. BRADLEY #S59-4007 AND #S45-2976 BRACKET. CONTROL WAX FILLED THERMOSTAT AND MOUNTING BRACKET. (105 F)
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE #8872C.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE #LPH2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE 520-08.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER ONLY. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: MS-1
DESCRIPTION: MOP SINK BASIN, 36" X 36" X 12" HIGH CORNER TYPE, PRECAST TERRAZZO WITH 6" DROPPED FRONT, STAINLESS STEEL THRESHOLD CAP, AND DOUBLE STAINLESS STEEL WALL GUARDS.STERN-WILLIAMS "CORLOW" SBC-1750.
FAUCET: CHROME PLATED BRASS WALL MOUNTED FITTING WITH CHECK IN STOPS, ADJUSTABLE SUPPLY ARMS, VACUUM BREAKER SPOUT WITH PAIL HOOK AND WALL BRACE, 2-1/2" INDEXED LEVER HANDLES ON 8" CENTERS. QUARTER TURN CARTRIDGES, 3/4" MALE HOSE THREAD OUTLET. CHICAGO 445-897-CP.
ROUGH-IN: 3" WASTE, 2" VENT, 1/2" HOT AND COLD WATER.

TYPE: EDF-1 (T.A.S. COMPLIANT)
DESCRIPTION: WALL HUNG, BARRIER FREE, ELECTRIC DRINK FOUNTAIN, ALL STAINLESS STEEL, CHROME-PLATED TWO-STREAM MOUND BUILDING TYPE BUBBLER. 8 GPH OF 50 DEGREE WATER AT 90 DEGREE AMBIENT AND 80 DEGREE INLET WATER. PROVIDE CANE TOUCH APRON IN ALL STAINLESS STEEL ON ALL UNITS MOUNTED WITH A CLEAR KNEE SPACE GREATER THAN 27" HIGH. HALSEY TAYLOR HAC8FS-Q WITH APRON 42522.
P-TRAP: 1-1/4" CHROME PLATED CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON. MCGUIRE 8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 3" X 4-1/2" BASE ANCHORED TO CONCRETE SLAB WITH (4) 1/2" BOLTS. ADJUSTABLE SLEEVE FOR CONNECTION TO HANGER PLATE PROVIDED BY FIXTURE MANUFACTURER. WADE 400.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

TYPE: TG-1
SERVICE: TRAP GUARD FOR FLOOR DRAINS AND FLOOR SINKS
DESCRIPTION: INSTALL PROSET TRAP GUARDS AT ALL FLOOR DRAINS AND FLOOR SINKS FOR TRAP SEAL PROTECTION. SERIES TO MATCH DRAIN AND PIPING TYPE.

TYPE: FD-1
SERVICE: TOILET ROOMS AND GENERAL USE
DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, ADJUSTABLE 6" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET. WADE 1100-MR6.
TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL DRAWINGS / FLOOR CONSTRUCTION.

TYPE: FD-4
SERVICE: KITCHEN AREA CLEANUP
DESCRIPTION: FLOOR DRAIN, CAST IRON BODY, 8" DIAMETER STAINLESS STEEL STRAINER, 6" DEEP SUMP, A.R.E. INTERIOR, SEDIMENT BUCKET. WADE 9010-27-SS.
TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL / KITCHEN CONSULTANT DRAWINGS.

TYPE: FD-5
SERVICE: KITCHEN REFRIGERATION EQUIPMENT CONDENSATE
DESCRIPTION: FLOOR DRAIN, CAST IRON BODY WITH A.R.E., ADJUSTABLE 6" DIAMETER STAINLESS STEEL STRAINER WITH VANDAL PROOF SCREWS, INTEGRAL CLAMPING DEVICE, BOTTOM OUTLET, 6" DIAMETER STAINLESS STEEL FUNNEL ATTACHMENT. WADE 1100-MR6-EF6-SS.
TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION AND INSTALLATION WITH ARCHITECTURAL / KITCHEN CONSULTANT DRAWINGS.

TYPE: HS-1 (T.A.S. COMPLIANT) - KITCHEN HAND WASH
DESCRIPTION: LAVATORY, WALL HUNG, WHITE VITREOUS CHINA, 20-1/2" X 18-1/4" WITH FRONT OVERFLOW AND CONCEALED ARM SUPPORTS, SINGLE CENTERED FAUCET HOLE. AMERICAN STANDARD "LUCERNE" 0355.421.
FAUCET: CHROME PLATED BRASS INFRARED SENSOR GOOSENECK FAUCET DUAL BEAM INFRARED SENSOR, CONCEALED INTERNAL TEMP CONTROL MIXER, 5-3/8" CHROME PLATED BRASS SPOUT. CHICAGO "HYTRONIC" GOOSENECK AC116.113.AB.1. PROVIDE AND INSTALL WITH CHICAGO 240.631.00.1 120 VOLT TO 12 VOLT TRANSFORMER.
STRAINER: 1-1/4" 17 GAUGE CHROME PLATED BRASS GRID STRAINER WITH TAILPIECE. MCGUIRE #155A.
P-TRAP: 1-1/4" 17 GAUGE CHROME PLATED HEAVY CAST BRASS TRAP WITH CLEANOUT AND EXTENSION TO WALL WITH ESCUTCHEON PLATE. MCGUIRE 8872.
SUPPLIES: 1/2" I.P.S. X 3/8" O.D.CHROME PLATED LOOSE KEY STOP VALVE WITH ESCUTCHEON AND 3/8" COMPRESSION CHROME PLATED FLEXIBLE RISERS. MCGUIRE 2165LK.
CARRIER: RECTANGULAR STEEL TUBING UPRIGHTS WITH WELDED 4" SQUARE BASE ANCHORED TO CONCRETE WITH (4) 1/2" BOLTS, ADJUSTABLE SLEEVE, THREADED CONCEALED ARMS, ALIGNMENT BAR, LOCKING DEVICE, AND LEVELING SCREWS. WADE 520-08.
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER. REFER TO ARCHITECTURAL DRAWINGS FOR HEIGHT REQUIREMENTS.

DISREGARD FIXTURES LISTED THAT ARE NOT ON THIS JOB.

TYPE: IMC-1
DESCRIPTION: ICE MACHINE CONNECTION, WATER SUPPLY VALVED AT WALL. PROVIDE DOUBLE CHECK VALVE TYPE BACKFLOW PREVENTER AND WATER FILTER. WATTS 1/2" 007-S BACKFLOW PREVENTER AND AQUA-PURE #CE 140-S FILTER. ROUTE BACKFLOW PREVENTER DISCHARGE TO FLOOR SINK SERVING ICE MACHINE.
ROUGH-IN: 3/4" COLD WATER. COORDINATE ROUGH-IN LOCATION/HEIGHT, FINAL CONNECTION WITH EQUIPMENT BEING INSTALLED AND WITH ARCHITECTURAL/CASEWORK DRAWINGS.

TYPE: FS-1
SERVICE: ICE MACHINE DRAIN / BACKFLOW PREVENTER DISCHARGE
DESCRIPTION: CAST IRON 8" SQUARE FLOOR SINK WITH 6" DEEP SUMP, A.R.E. INTERIOR, ALUMINUM DOME BOTTOM STRAINER, 1/2 STAINLESS STEEL TOP, CLAMPING DEVICE. WADE 9110-15026-27-SS.
TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR DRAIN BY SIZE, MODEL, AND MANUFACTURER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL DRAWINGS / EQUIPMENT PLACEMENT.

TYPE: FS-2
SERVICE: MECHANICAL ROOM
DESCRIPTION: A.R.E. COATED CAST IRON BODY 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, BOTTOM OUTLET, LOOSE SET CAST IRON SECONDARY STRAINER, CLAMPING DEVICE, AND HALF TOP GRATE. WADE 9140-8-15-26-64.
TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR SINK BY SIZE, MODEL, AND MANUFACTURER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH EQUIPMENT PLACEMENT.

TYPE: FS-3
SERVICE: KITCHEN INDIRECT WASTE
DESCRIPTION: CAST IRON 12" SQUARE FLOOR SINK WITH 8" DEEP SUMP, A.R.E. INTERIOR, ALUMINUM DOME BOTTOM STRAINER, STAINLESS STEEL TOP, AND CLAMPING DEVICE. WADE 9140-15-27-26-SS.
TRAP SEAL: PROVIDE PRO-SET SYSTEMS, INC. TRAP GUARD FACTORY FITTED TO MATCH EACH FLOOR SINK BY SIZE, MODEL, AND MANUFACTURER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES. COORDINATE FINAL LOCATION WITH ARCHITECTURAL / KITCHEN CONSULTANT DRAWINGS.

TYPE: RD-1
DESCRIPTION: ROOF DRAIN, CAST IRON BODY WITH FLANGE, FLASHING RING WITH GRAVEL STOP, ALUMINUM DOME, UNDERDECK CLAMP AND ADJUSTABLE EXTENSION AS REQUIRED FOR ROOF CONSTRUCTION. WADE 3000-46-52-53 FOR 6" AND SMALLER, WADE 3001-46-52-53 FOR 8" AND LARGER.
ROUGH-IN: REFER TO FLOOR PLANS FOR SIZES.

TYPE: HB-1 - COLD WATER
DESCRIPTION: HOSE BIBB. EXPOSED TYPE, MILD CLIMATE, WALL-MOUNTED FAUCET WITH 3/4" F.P.T. INLET, 3/4" MALE HOSE THREAD OUTLET AND SELF-DRAINING ANTI-SIPHON VACUUM BREAKER. CHROME PLATED BRASS FINISH WITH REMOVABLE TEE HANDLE. CHICAGO 952-CP.
ROUGH-IN: 3/4" COLD WATER. INSTALL WITH OUTLET AT 18" A.F.F. OR AS DIRECTED BY ARCHITECT/OWNER.

TYPE: RVB-1
DESCRIPTION: RECESSED VALVE BOX, 7" X 7", 18 GAUGE STEEL WITH WHITE POWDER COAT FINISH, 1/2" THREADED CONNECTION DOMESTIC VALVE. PROVIDE FILTER WHEN MAKING FINAL CONNECTION. GUY GRAY BIM-875 WITH AQUA-PURE AP717 FILTER.
ROUGH-IN: 1/2" COLD WATER

TYPE: WMB-1
DESCRIPTION: WASHING MACHINE DRAIN BOX, 20 GAUGE STEEL BOX WITH WHITE POWDER COAT FINISH, MALE IRON PIPE WATER SUPPLY CONNECTIONS AND DRAIN FITTING. PROVIDE HAMMER ARRESTOR AT BOTH HOT AND COLD WATER HOSE THREADS. GUY GRAY T-200 (36" - 42" AFF).
ROUGH-IN: 2" WASTE, 2" VENT, 1/2" HOT AND COLD WATER

TYPE: WH-1
DESCRIPTION: WALL HYDRANT IN S.S. BOX, 3/4" NON FREEZE, HALF TURN CERAMIC DISC CARTRIDGE, STAINLESS STEEL FINISH WITH ANTI SIPHON VACUUM BREAKER AND LOOSE TEE KEY. INSTALL WITH BOTTOM OF HYDRANT 18" A.F.F. WADE 8601-MT-175.
ROUGH-IN: 3/4" COLD WATER

TYPE: ECO
DESCRIPTION: EXTERIOR CLEANOUT TO GRADE, CAST IRON BODY WITH ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED VANDAL RESISTANT DUCTILE IRON TRACTOR TYPE COVER. IF LOCATED IN ASPHALT OR DIRT PROVIDE 18"X18"X12" CONCRETE PAD. WADE 6000-Z.

TYPE: FCO
DESCRIPTION: FLOOR CLEANOUT, CAST IRON BODY AND ADJUSTABLE TOP ASSEMBLY WITH GASKET SEAL, AND ROUND SCORIATED STAINLESS STEEL COVER. WADE 6000-153. FOR CARPETED FLOORS PROVIDE WADE 6000-CM.

TYPE: WCO
DESCRIPTION: WALL CLEANOUT. CAST IRON CLEANOUT FERRULE WITH DUCTILE IRON COMBINED COVER/PLUG AND ROUND STAINLESS COVER PLATE WITH CENTER SECURING SCREW. WADE 8550 WITH 8480-R6. PROVIDE WADE 8560 CAST IRON CLEANOUT TEE IN LIEU OF FERRULE AS REQUIRED FOR WALL CONSTRU

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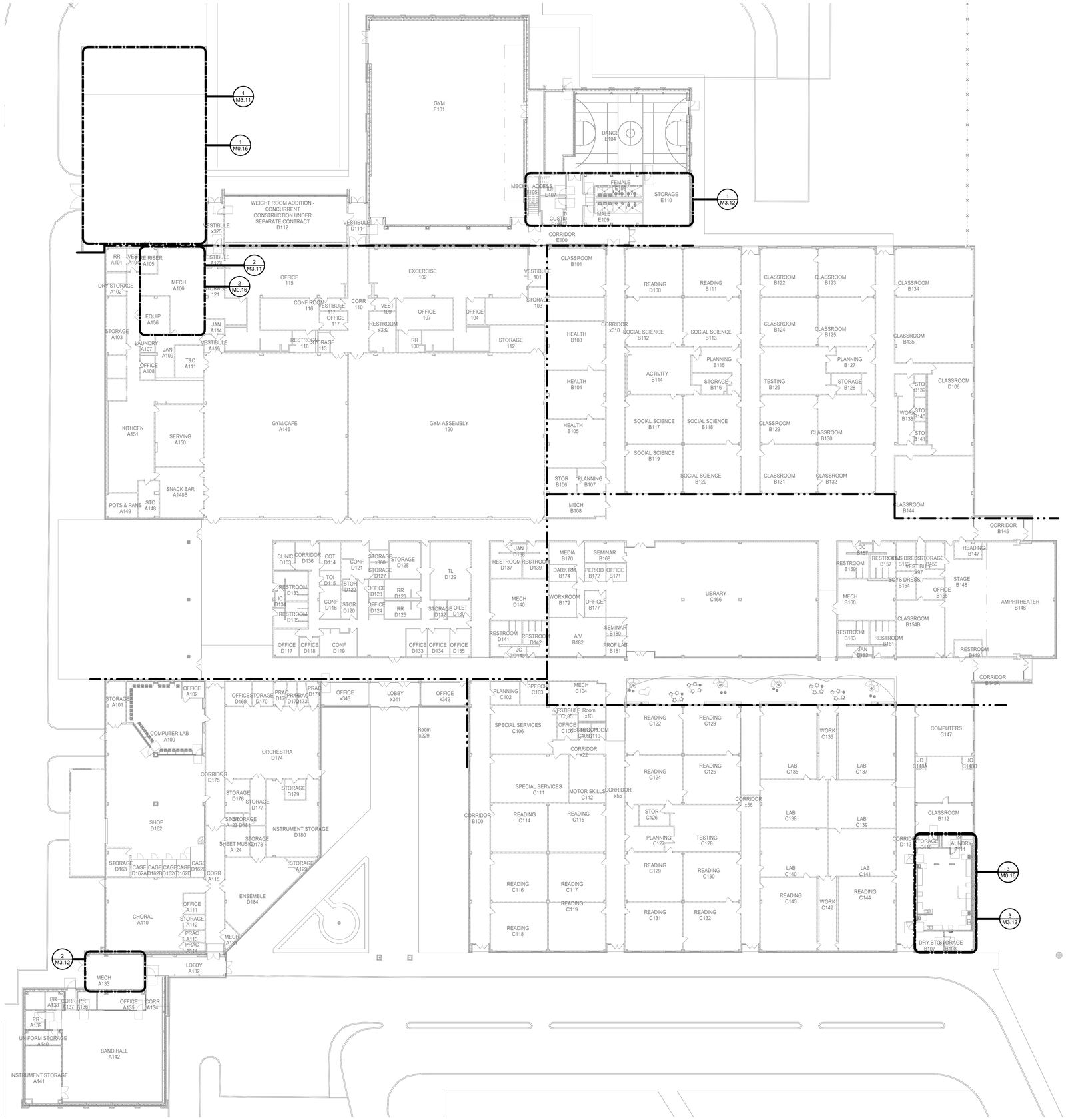

1 **MECHANICAL COMPOSITE FLOOR PLAN - RMS**
Scale: 1" = 20'-0"

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

BRADLEY KALMANS
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10-29-2025

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MECHANICAL COMPOSITE FLOOR PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M0.01
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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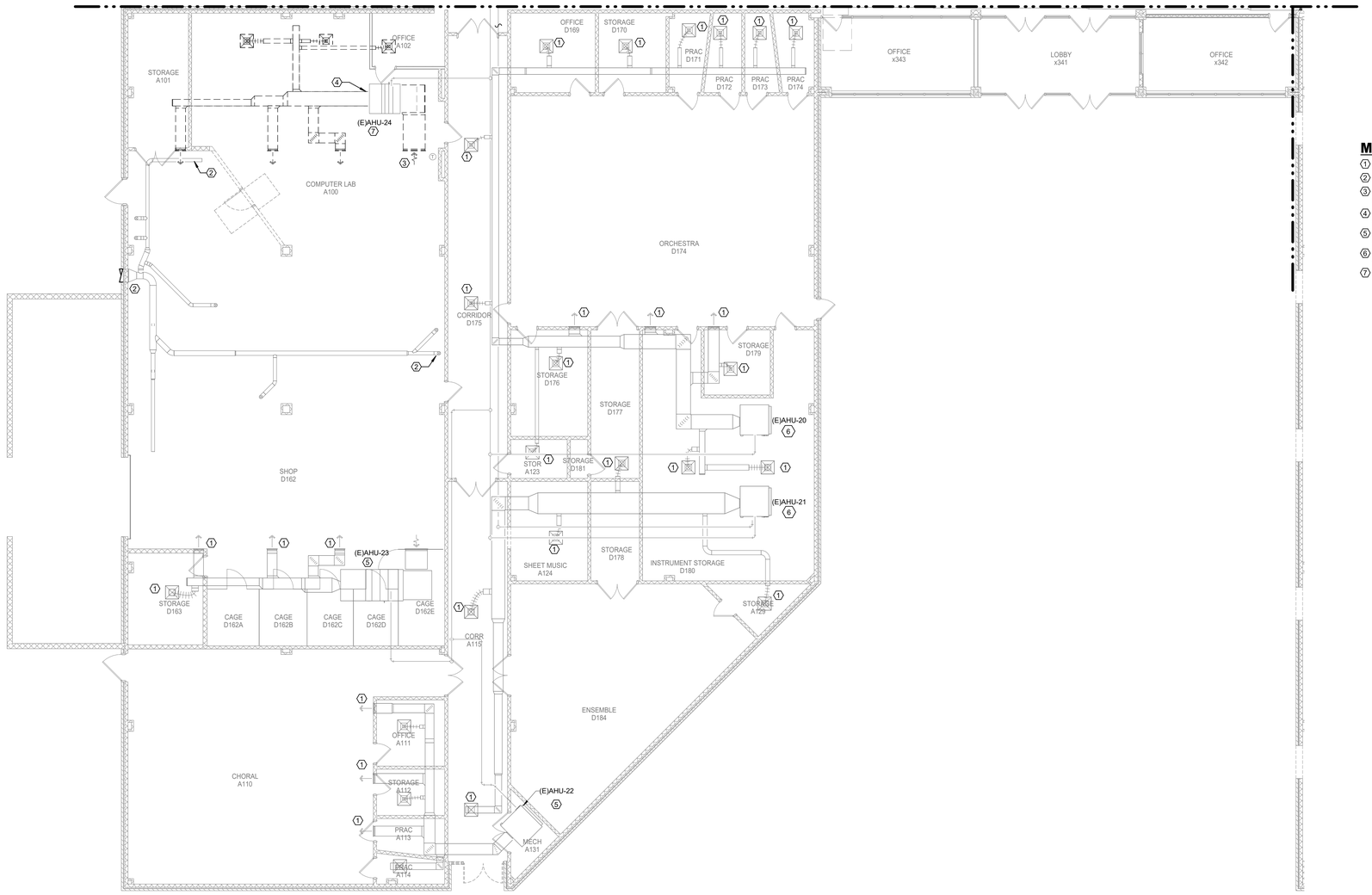
1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, AIR HANDLERS AND CONTROLS.
5. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

1. EXISTING SUPPLY GRILLE TO REMAIN.
2. EXISTING DUST COLLECTOR DUCTWORK TO REMAIN.
3. REMOVE EXISTING RETURN AIR GRILLES AND ASSOCIATED DUCTWORK.
4. REMOVE EXISTING SUPPLY DUCTWORK AND ASSOCIATED SUPPLY GRILLES.
5. EXISTING AIR HANDLER UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
6. EXISTING FAN COIL UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
7. EXISTING AIR HANDLER UNIT AND CONTROLS TO REMAIN.



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1 MECHANICAL DEMOLITION FLOOR PLAN - RMS - SECTION A

Scale: 1/8" = 1'-0"

SYMBOL LEGEND	
	POINT OF CONNECTION TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

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80219
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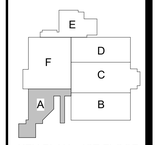
STATE OF TEXAS
10-29-2025



KEY PLAN - 1ST FLOOR
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MECHANICAL DEMOLITION FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M0.11
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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	ITEM TO REMAIN
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2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO VAV UNITS, EXHAUST FANS, AIR HANDLERS AND CONTROLS.
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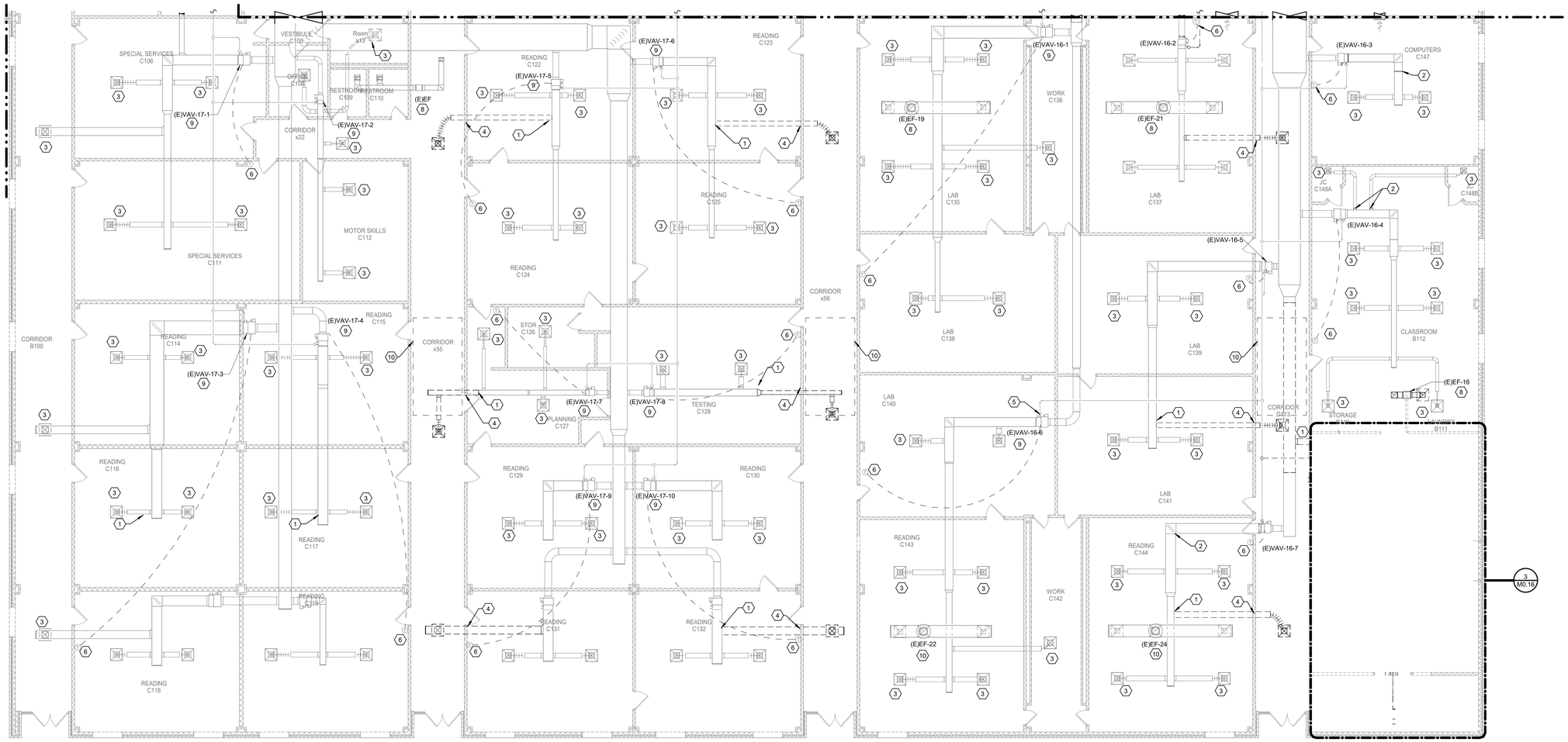
MECHANICAL DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY GRILLE AND ASSOCIATED DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
2. REMOVE EXISTING DUCTWORK TO POIINT INDICATED.
3. EXISITNG SUPPLY GRILLE TO REMAIN.
4. REMOVE EXISTING FIRE DAMPER.
5. REMOVE EXISTING HOT WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
6. EXISTING TEMPERATURE SENSOR TO REMAIN.
7. REMOVE EXISTING VAV UNIT. SET ASIDE AND PROTECT VAV UNIT SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.12 FOR NEW LOCATION.
8. EXISTING EXHAUST FAN, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
9. EXISTING VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
10. ALL MECHANICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO TERMINAL UNITS, DUCTWORK, PIPING, CONTROL DEVICES AND ASSOCIATED WIRING INSIDE THIS AREA SHALL BE REMOVED AND/OR REROUTED TO NOT OBSTRUCT NEW ARCHITECTURAL SOLAR TUBE. REFER TO NEW FLOOR PLANS FOR MORE ADDITIONAL INFORMATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SOLAR TUBE LOCATIONS AND DIMENSION.



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1 **MECHANICAL DEMOLITION FLOOR PLAN - RMS - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

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MECHANICAL DEMOLITION FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M0.12
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX. 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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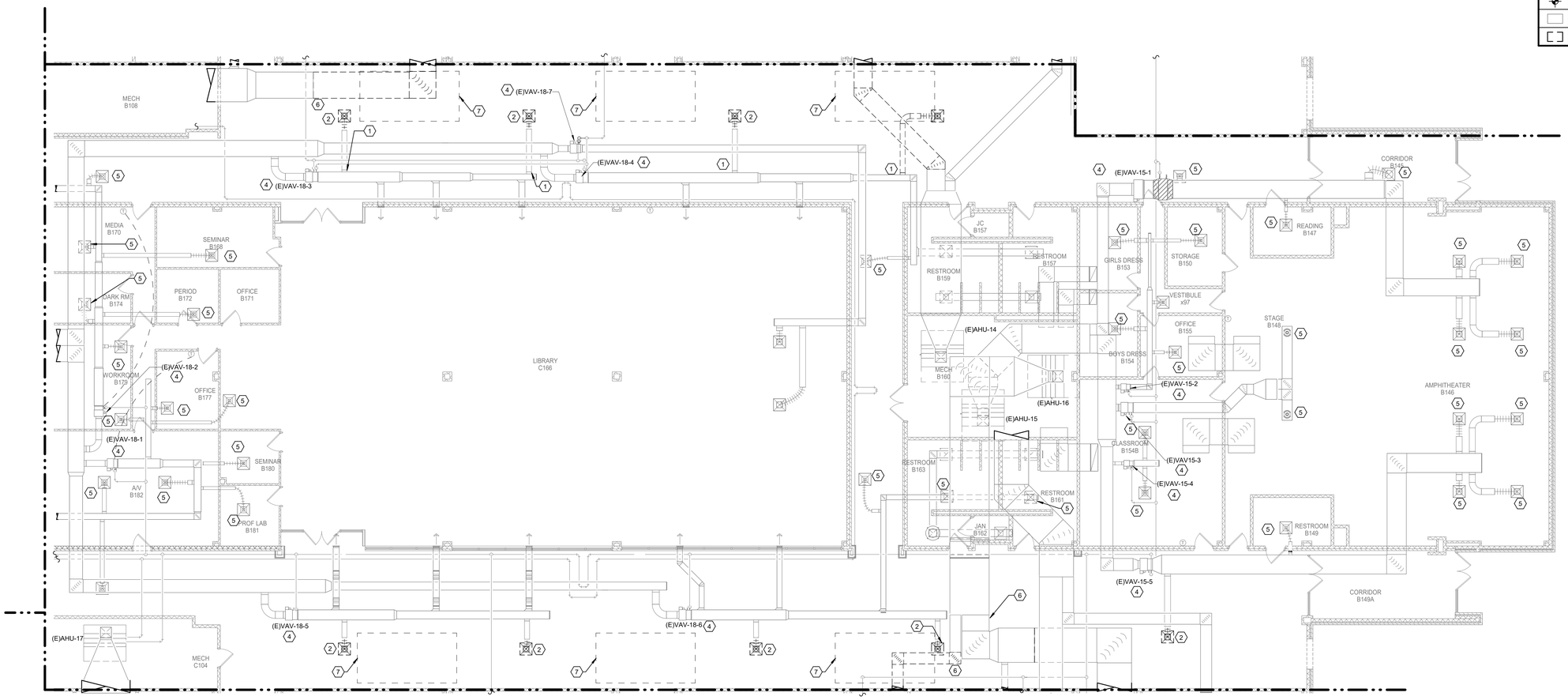
MECHANICAL DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY DIFUSER AND ASSOCIATED DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
2. REMOVE EXISITNG SUPPLY GRILLE.
3. REMOVE EXISTING HOT WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
4. EXISTING VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
5. EXISTING SUPPLY GRILLE TO REMAIN.
6. REMOVE EXISTING DUCTWORK TO POINT INDICATED.
7. ALL MECHANICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO TERMINAL UNITS, DUCTWORK, PIPING, CONTROL DEVICES AND ASSOCIATED WIRING INSIDE THIS AREA SHALL BE REMOVED AND/OR REROUTED TO NOT OBSTRUCT NEW ARCHITECTURAL SOLAR TUBE. REFER TO NEW FLOOR PLANS FOR MORE ADDITIONAL INFORMATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SOLAR TUBE LOCATIONS AND DIMENSION.

SYMBOL LEGEND	
⌖	POINT OF CONNECTION TO EXISTING
▭	ITEM TO REMAIN
[ ]	ITEM TO BE REMOVED



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1 **MECHANICAL DEMOLITION FLOOR PLAN - RMS - SECTION C**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
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KINGWOOD, TX

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MECHANICAL DEMOLITION FLOOR PLAN - SECTION C

PACKAGE | VOLUME

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02
Drawn By: AA
Date: 10.29.2025
Sheet No. M0.13

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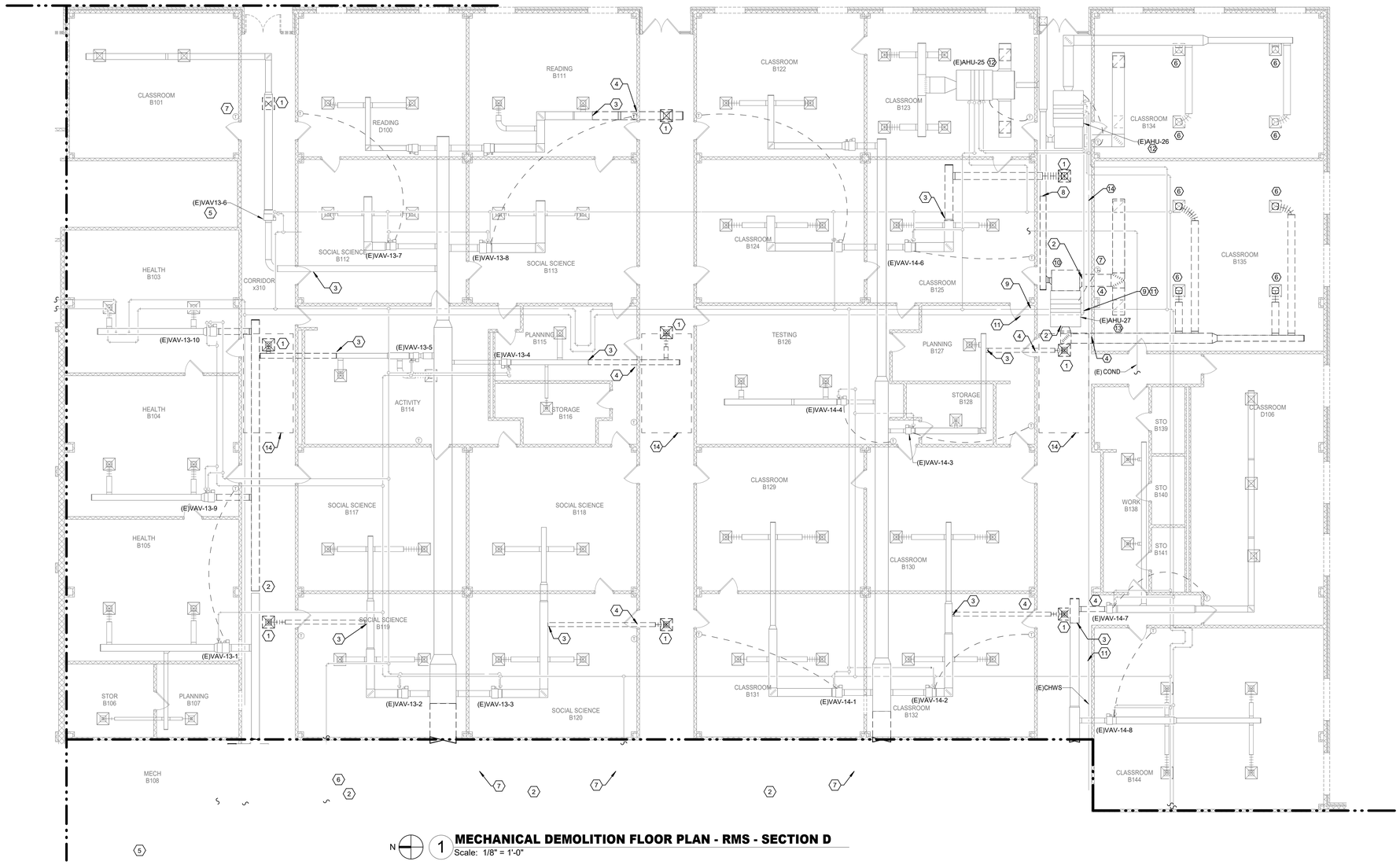
MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

MECHANICAL DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY GRILLE. SET ASIDE AND PROTECT SUPPLY GRILLE SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.14 FOR NEW LOCATION.
2. REMOVE EXISTING DUCTWORK TO POINT INDICATED.
3. REMOVE EXISTING DUCTWORK TO POINT INDICATED. PATCH EXISTING TRUNK AIR TIGHT AND REINSULATE TPO MATCH EXISTING.
4. REMOVE EXISTING FIRE DAMPER.
5. REMOVE EXISTING VAV UNIT. SET ASIDE AND PROTECT VAV UNIT SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.14 FOR NEW LOCATION.
6. EXISTING SUPPLY GRILLE TO REMAIN.
7. EXISTING TEMPERATURE SENSOR TO REMAIN. EXISTING CONTROL WIRING TO BE REUSED.
8. REMOVE OUTSIDE AIR DUCTWORK TO POINT INDICATED.
9. REMOVE EXISTING HOT WATER RETURN AND SUPPLY PIPING TO POINT INDICATED.
10. REMOVE EXISTING RETURN PLENUMN AND SMOKE DETECTOR.
11. REMOVE EXISTING CHILLED WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
12. EXISTING AIR HANDLER UNIT, ASSOCIATED DUCTWORK, AND CONTROLS TO REMAIN.
13. REMOVE EXISTING AIR HANDELING UNIT, SET ASIDE AND PROTECT AIR HANDELING UNIT SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.14 FOR NEW LOCATION.
14. ALL MECHANICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO TERMINAL UNITS, DUCTWORK, PIPING, CONTROL DEVICES AND ASSOCIATED WIRING INSIDE THIS AREA SHALL BE REMOVED AND/OR REROUTED TO NOT OBSTRUCT NEW ARCHITECTURAL SOLAR TUBE. REFER TO NEW FLOOR PLANS FOR MORE ADDITIONAL INFORMATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT SOLAR TUBE LOCATIONS AND DIMENSION.

SYMBOL LEGEND	
⌖	POINT OF CONNECTION TO EXISTING
▭	ITEM TO REMAIN
[ ]	ITEM TO BE REMOVED



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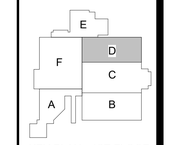
1 **MECHANICAL DEMOLITION FLOOR PLAN - RMS - SECTION D**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
CALIFORNIA
10-29-2025



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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

MECHANICAL DEMOLITION FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M0.14
Drawn By: AA	
Date: 10.29.2025	

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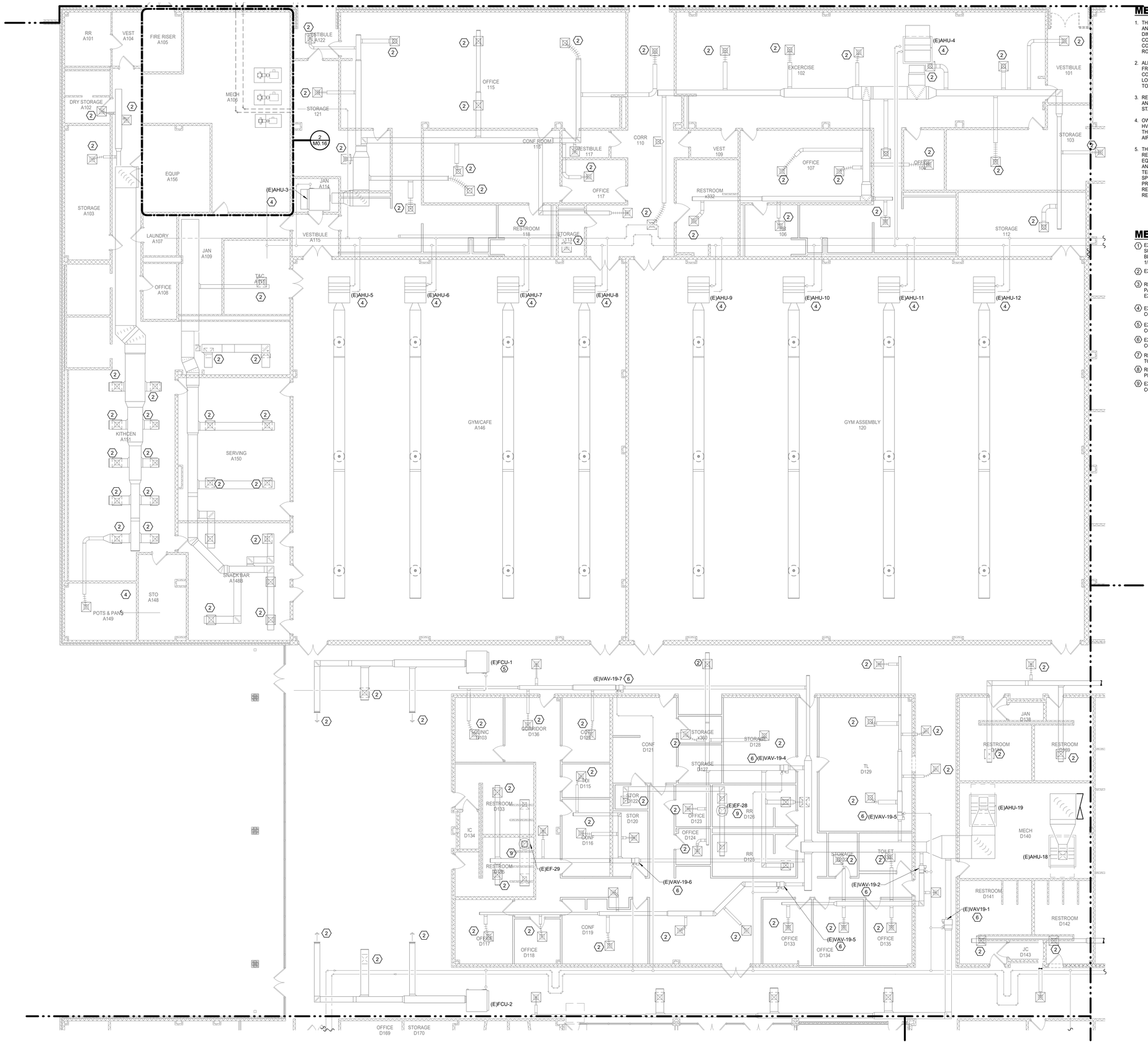

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1 **MECHANICAL DEMOLITION FLOOR PLAN - RMS - SECTION F**

Scale: 1/8" = 1'-0"

MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.
5. THROUGHOUT CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR ALL TEMPORARY AND RENTAL EQUIPMENT, INCLUDING POWER FOR SUCH EQUIPMENT, AND TO PROVIDE PHASING TO ENSURE SPACE TEMPERATURE AND HUMIDITY IS MAINTAINED. REFER TO SPECIFICATION 23 05 11 MECHANICAL ALTERATIONS PROJECT PROCEDURES, ARTICLE 3.8 FOR ADDITIONAL REQUIREMENTS. CONTRACTOR SHALL REVIEW ALL REQUIREMENTS PRIOR TO BID.

MECHANICAL DEMOLITION KEYED NOTES:

1. EXISITNG SUPPLY GRILLE TO BE RELOCATED. REMOVE EXISTING SUPPLY GRILLE, SET ASIDE AND PROTECT SUPPLY GRILLE SO IT CAN BE TO BE RELOCATED DURING NEW CONSTRUCTION. REFERENCE 1/M2.16 FOR NEW LOCATION.
2. EXISITNG SUPPLY GRILLE TO REMAIN.
3. REMOVE EXISTING DUCTWORK TO POINT INDICATED. PATCH EXISTING DUCT AIR TIGHT AND REINSULATE TO MATCH EXISTING.
4. EXISITNG AIR HANDLER, ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.
5. EXISITNG FAN COIL UNIT ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.
6. EXISITNG VAV UNIT, ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.
7. REMOVE EXISTING HOT WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
8. REMOVE EXISTING CHILLED WATER SUPPLY AND RETURN PIPING TO POINT INDICATED.
9. EXISITNG EXHAUST FAN, ASSOCIATED DUCTWORK, AND CONTROLLS TO REMAIN.

SYMBOL LEGEND	
⊕	POINT OF CONNECTION TO EXISTING
▭	ITEM TO REMAIN
[ ]	ITEM TO BE REMOVED

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
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KINGWOOD, TX

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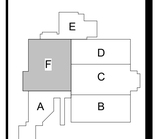

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MECHANICAL DEMOLITION FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M0.15
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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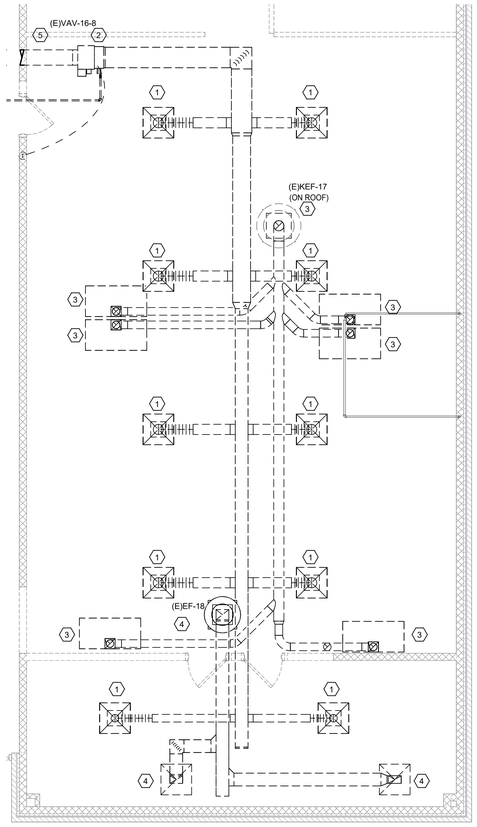
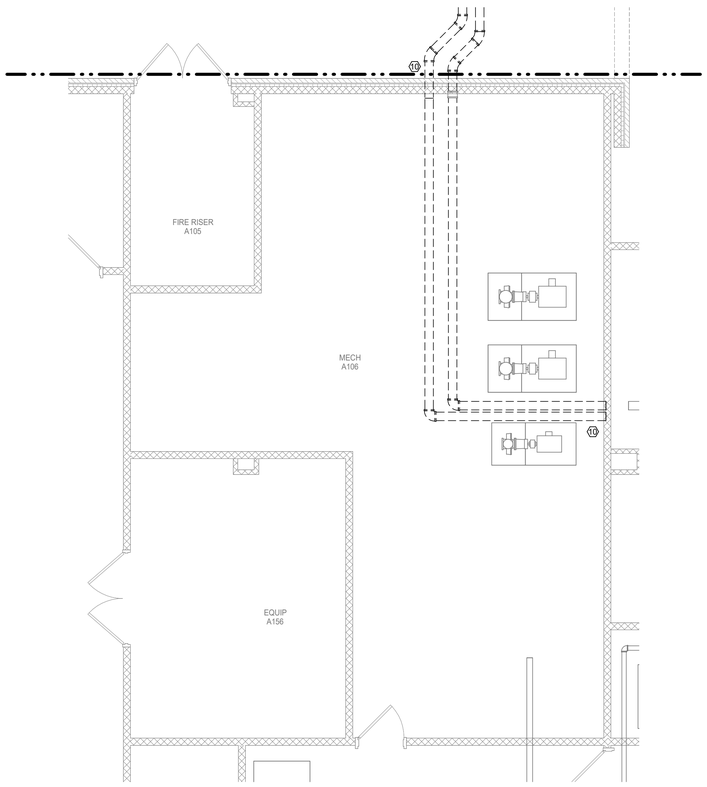
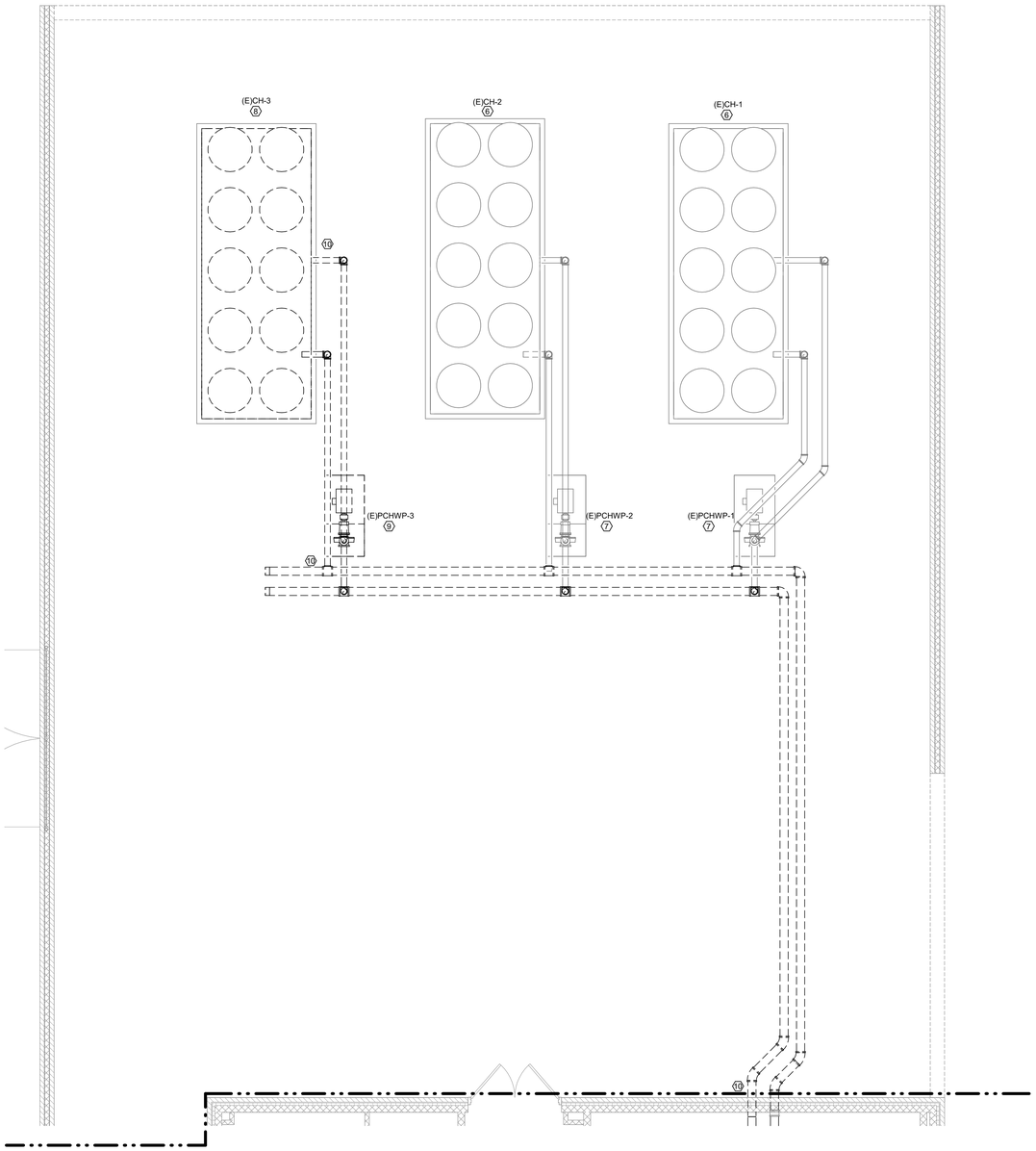


3 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CULLINARY LAB
Scale: 1/4" = 1'-0"



2 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - CENTRAL PLANT
Scale: 1/4" = 1'-0"



1 MECHANICAL DEMOLITION ENLARGED FLOOR PLAN - SERVICE YARD
Scale: 1/4" = 1'-0"

SYMBOL LEGEND	
	POINT OF CONNECTION TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

MECHANICAL DEMOLITION GENERAL NOTES:

1. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC, AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR DUCT SYSTEMS.
2. ALL MECHANICAL SYSTEMS SHOWN ON THIS PLAN ARE FROM EXISTING PRELIMINARY FIELD WORK. CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING ALL LOCATIONS AND SIZES OF MECHANICAL SYSTEMS PRIOR TO THE START OF WORK.
3. REMOVE ALL EXISTING SPACE MOUNTED TEMPERATURE AND HUMIDITY SENSORS NOT BEING REUSED. PROVIDE STAINLESS STEEL COVER PLATES.
4. OWNER SHALL HAVE FIRST RIGHT OF REFUSAL ON ALL HVAC EQUIPMENT BEING REMOVED FROM THIS PROJECT. THIS INCLUDES BUT NOT LIMITED TO CONDENSING UNITS, AIR HANDLING UNITS, AND CONTROLS.

MECHANICAL DEMOLITION KEYED NOTES:

1. REMOVE EXISTING SUPPLY GRILLE.
2. REMOVE EXISTING VAV UNIT AND ASSOCIATED HOT WATER SUPPLY AND RETURN PIPING AND DUCTWORK.
3. REMOVE EXISTING EXHAUST FAN, ASSOCIATED DUCT AND EXHAUST GRILLE. AND KITCHEN HOODS.
4. REMOVE EXISTING EXHAUST FAN AND ASSOCIATED DUCT AND EXHAUST GRILLE.
5. REMOVE EXISTING FIRE DAMPER.
6. EXISTING AIR COOLED CHILLER SHALL REMAIN.
7. EXISTING PUMP SHALL REMAIN.
8. REMOVE EXISTING AIR COOLED CHILLER AND RELOCATE TO ANOTHER CAMPUS. COORDINATE RELOCATING THE CHILLER TO CREEKWOOD MIDDLE SCHOOL WITH THE OWNER.
9. REMOVE EXISTING PUMP AND RELOCATE TO ANOTHER CAMPUS. COORDINATE RELOCATING THE PUMP TO CREEKWOOD MIDDLE SCHOOL WITH THE OWNER.
10. EXISTING PIPING SHALL REMOVED BACK TO THIS POINT.

Revision / Date

Project:
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MECHANICAL DEMOILITION ENLARGED FLOOR PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M0.16
Drawn By: AA	
Date: 10.29.2025	

Salas O'Brien
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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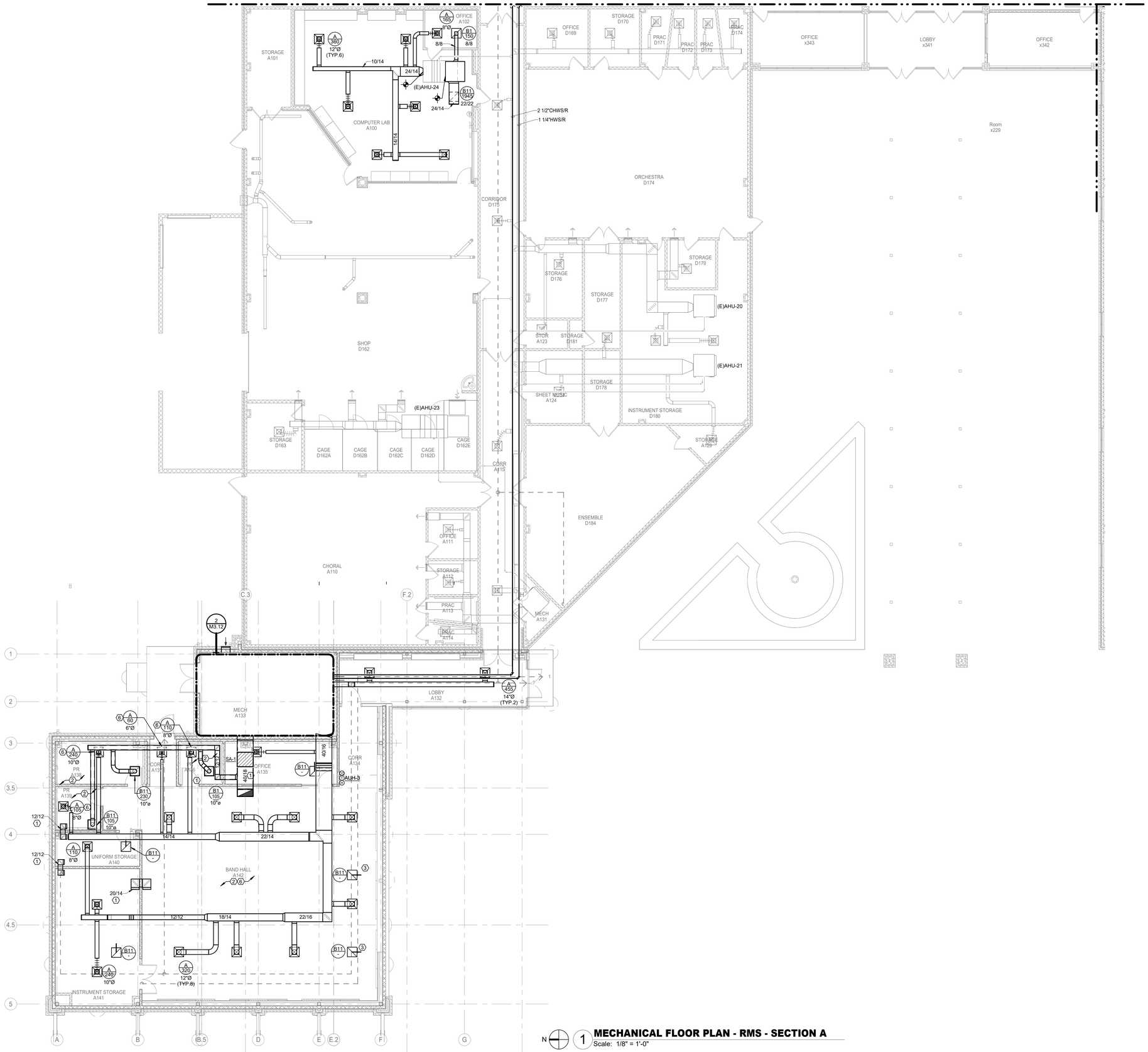

N

1 MECHANICAL FLOOR PLAN - RMS - SECTION A

Scale: 1/8" = 1'-0"

MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. PROVIDE INTERNALLY LINED RETURN AIR BOOT.
2. PROVIDE 1" INTERNALLY LINED DUCTWORK AS SPECIFIED.
3. RETURN AIR BOOT SHALL PENETRATE INTO PLENUM ABOVE THE DOUBLE ACOUSTICAL CEILING.
4. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
5. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING, CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
6. FLEX DUCT CAN NOT BE ROUTED ABOVE SOUND ISOLATION CEILING. (TYP.).

Revision / Date

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MECHANICAL FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M2.11
Drawn By: AA	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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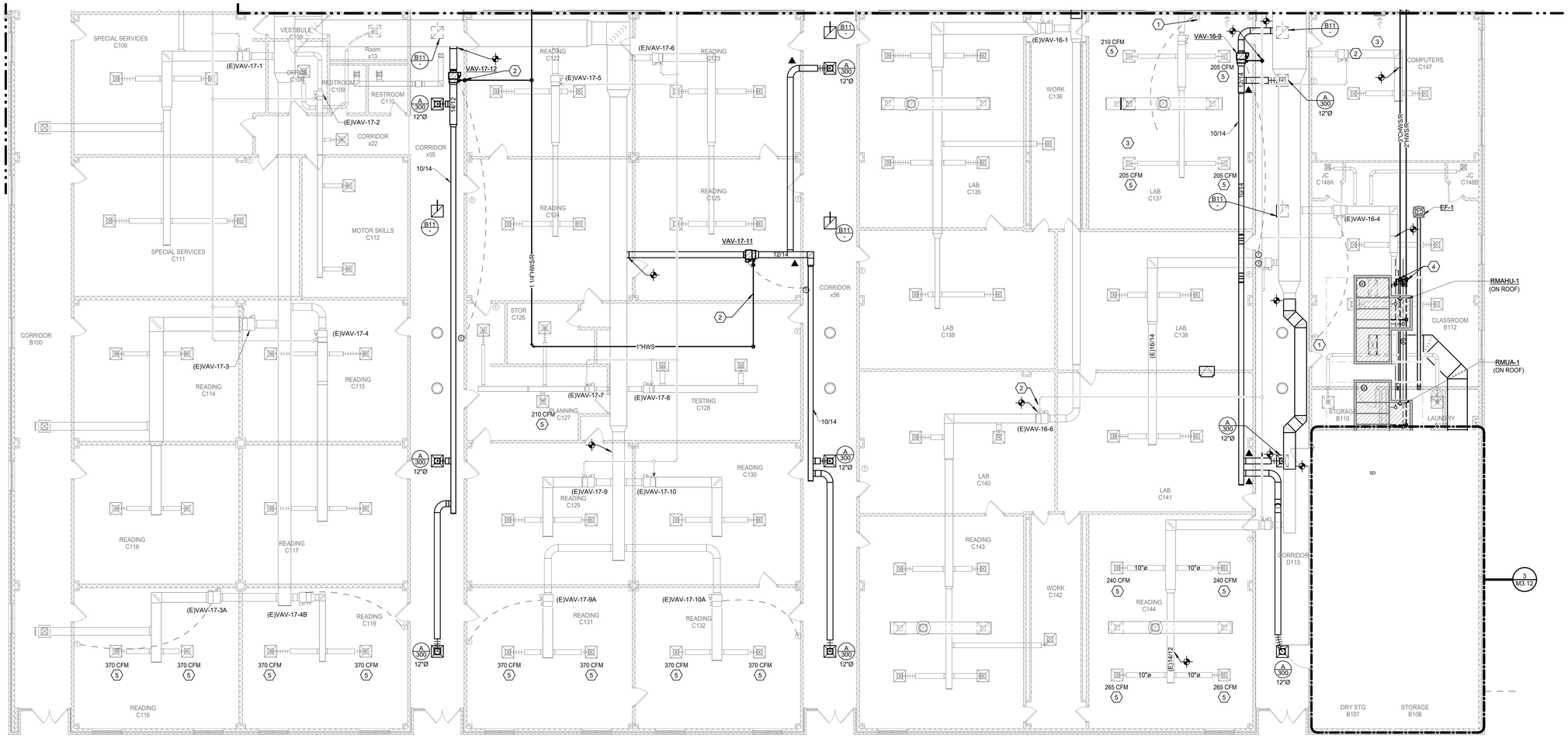
MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. EXTEND EXISTING CONTROL WIRES FROM TEMPERATURE SENSOR TO VAV TERMINAL BOX NEW LOCATION TO MAKE FINAL CONNECTION.
2. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
3. RELOCATE EXISTING VAV TERMINAL BOX TO NEW LOCATION.
4. PROVIDE ISOLATION VALVE.
5. REBALANCE EXISTING SUPPLY DIFFUSER TO CFM INDICATED.



N 1 **MECHANICAL FLOOR PLAN - RMS - SECTION B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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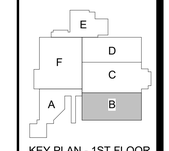

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MECHANICAL FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M2.12
Drawn By: AA	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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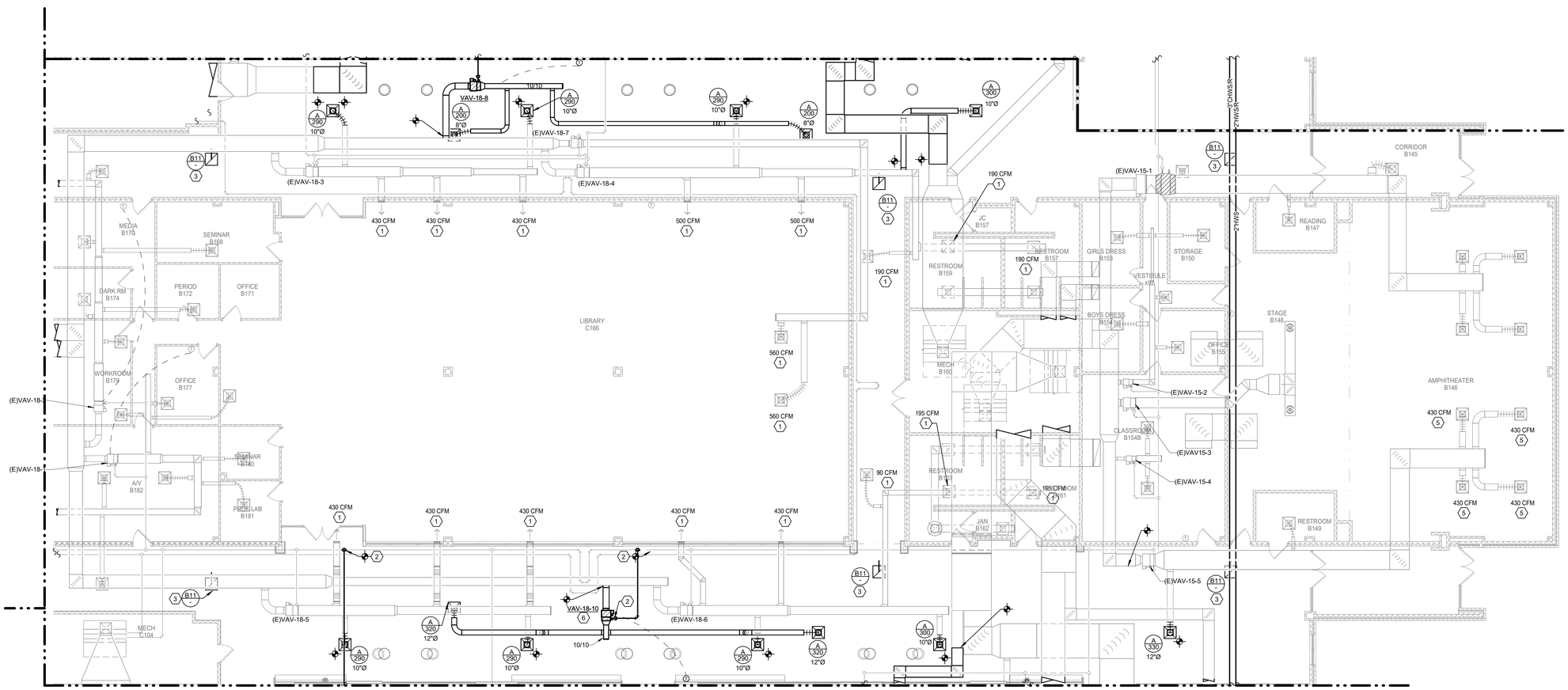
MECHANICAL KEYED NOTES:

1. REBALANCE EXISTING SUPPLY AIR DIFFUSER TO CFM INDICATED.
2. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
3. RETURN AIR BOOT SHALL PENETRATE INTO PLENUM ABOVE THE DOUBLE ACOUSTICAL CEILING.

MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.



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1 MECHANICAL FLOOR PLAN - RMS - SECTION C

Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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MECHANICAL FLOOR PLAN - SECTION C

PACKAGE | VOLUME

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Houston
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02
Drawn By: AA
Date: 10.29.2025
Sheet No. M2.13

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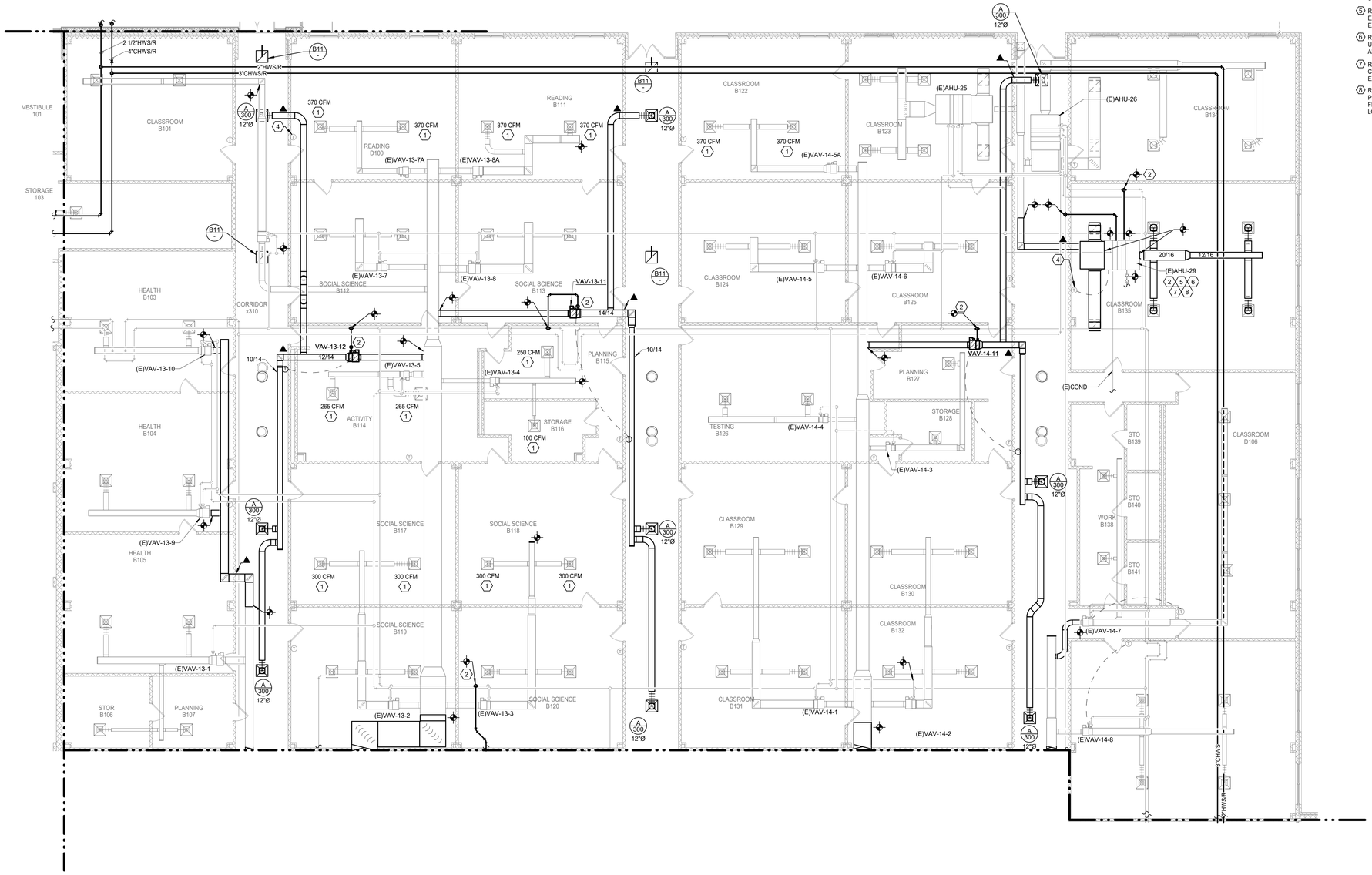
MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. REBALANCE EXISTING SUPPLY AIR DIFFUSER TO CFM INDICATED.
2. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
3. RELOCATE EXISTING VAV TERMINAL BOX TO NEW LOCATION. INSULATE AND MATCH SIZE OF EXISTING SUPPLY AND RETURN PIPING AND CONNECT TO POINT INDICATED.
4. EXTEND EXISTING CONTROL WIRES FROM TEMPERATURE SENSOR TO MAKE FINAL CONNECTION.
5. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
6. RELOCATE EXISTING CEILING MOUNTED AIR HANDLING UNIT TO NEW LOCATION. COORDINATE LOCATION WITH ALL OTHER EXISTING TRADES NOT TO OBSTRUCT.
7. ROUTE FULL SIZE CONDENSATE PIPE TO EXISTING MAIN CONDENSATE PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
8. ROUTE CHILLED AND HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.



1 **MECHANICAL FLOOR PLAN - RMS - SECTION D**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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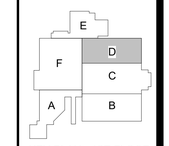

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MECHANICAL FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M2.14
Drawn By: AA	
Date: 10.29.2025	

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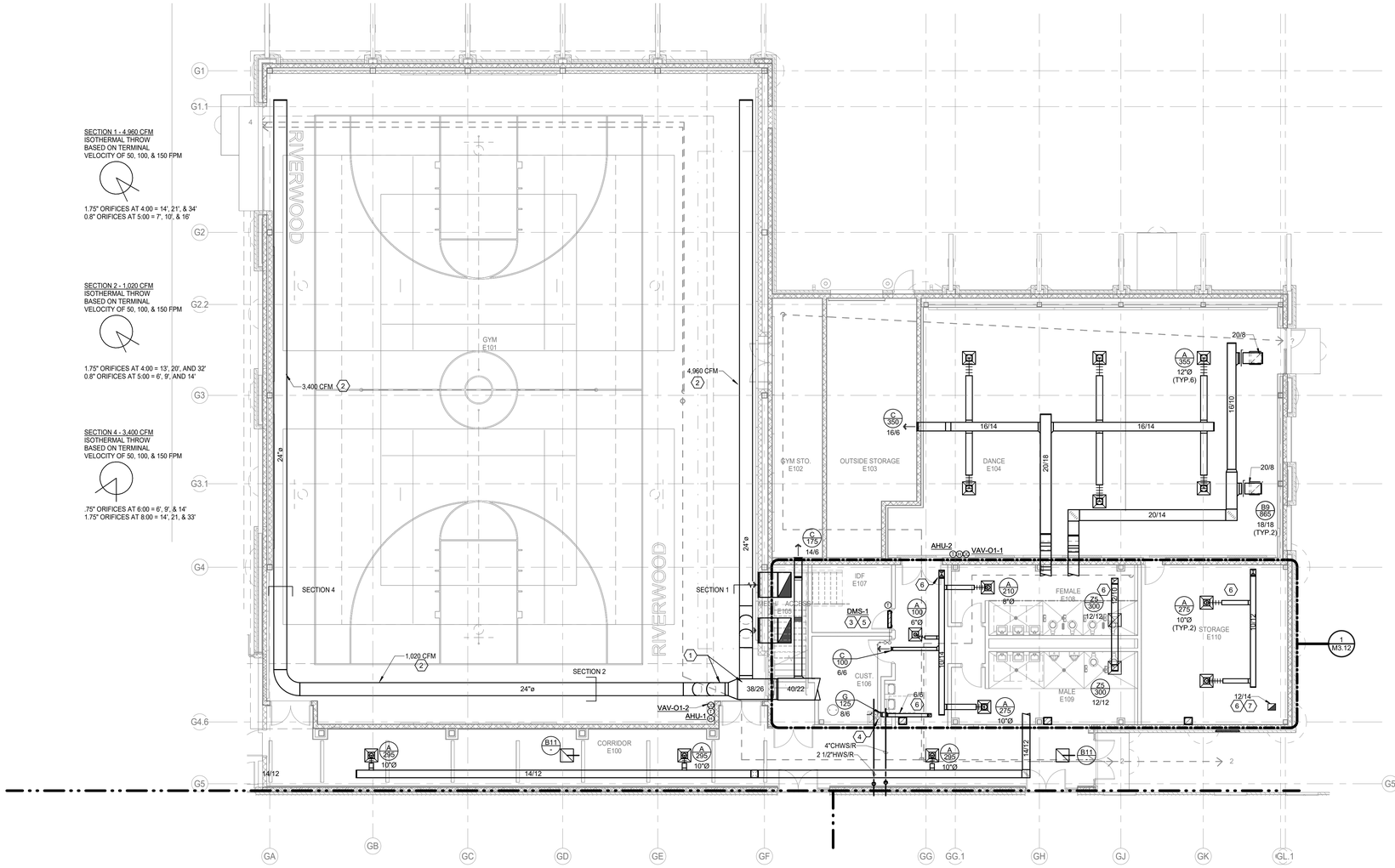
MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. TRANSITION TO FABRIC DUCT.
2. PROVIDE AN ENGINEERED FABRIC AIR DISTRIBUTION SYSTEM PER SPECIFICATIONS TO INCLUDE DISCHARGE ORIFICES AS REQUIRED. COORDINATE COLOR WITH ARCHITECT.
3. VERIFY SERVICE CLEARANCES WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
4. ROUTE FUUL SIZE CONDENSATE PIPE TO PLUMBING DRAIN. REFER TO PLUMBING FRAWING FOR EXACT LOCATION.
5. ROUTE REFRIGERANT LINES TO ASSOCIATED CONDENSING UNIT. SIZE LINES PER MANUFACTURER'S RECOMENDATION.
6. ROUTE DUCTWORK BETWEEN STRUCTURE.
7. ROUTE DUCT UP THROUGH MEZZANINE FLOOR AT SIZE INDICATED AND PROVIDE FIRE DAMPER. RE:1/M3.12



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1 MECHANICAL FLOOR PLAN - RMS - SECTION E
Scale: 1/8" = 1'-0"

Revision /	Date	
3	06-06-24	CITY COMMENTS 3

Project:
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MECHANICAL FLOOR PLAN - SECTION E

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Job No. 1821-13-02	Sheet No. M2.15
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Date: 10.29.2025	

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MECHANICAL GENERAL NOTES:

1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. RELOCATE EXISTING SUPPLY GRILLE.
2. ROUTE CHILLED SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.
3. ROUTE HOT WATER SUPPLY AND RETURN PIPING TO EXISTING MAIN PIPING. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE SYSTEM, SIZE, AND EXACT LOCATION.

N

1 **MECHANICAL FLOOR PLAN - RMS - SECTION F**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
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MECHANICAL FLOOR PLAN - SECTION F

PACKAGE | VOLUME

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MECHANICAL GENERAL NOTES:

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2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
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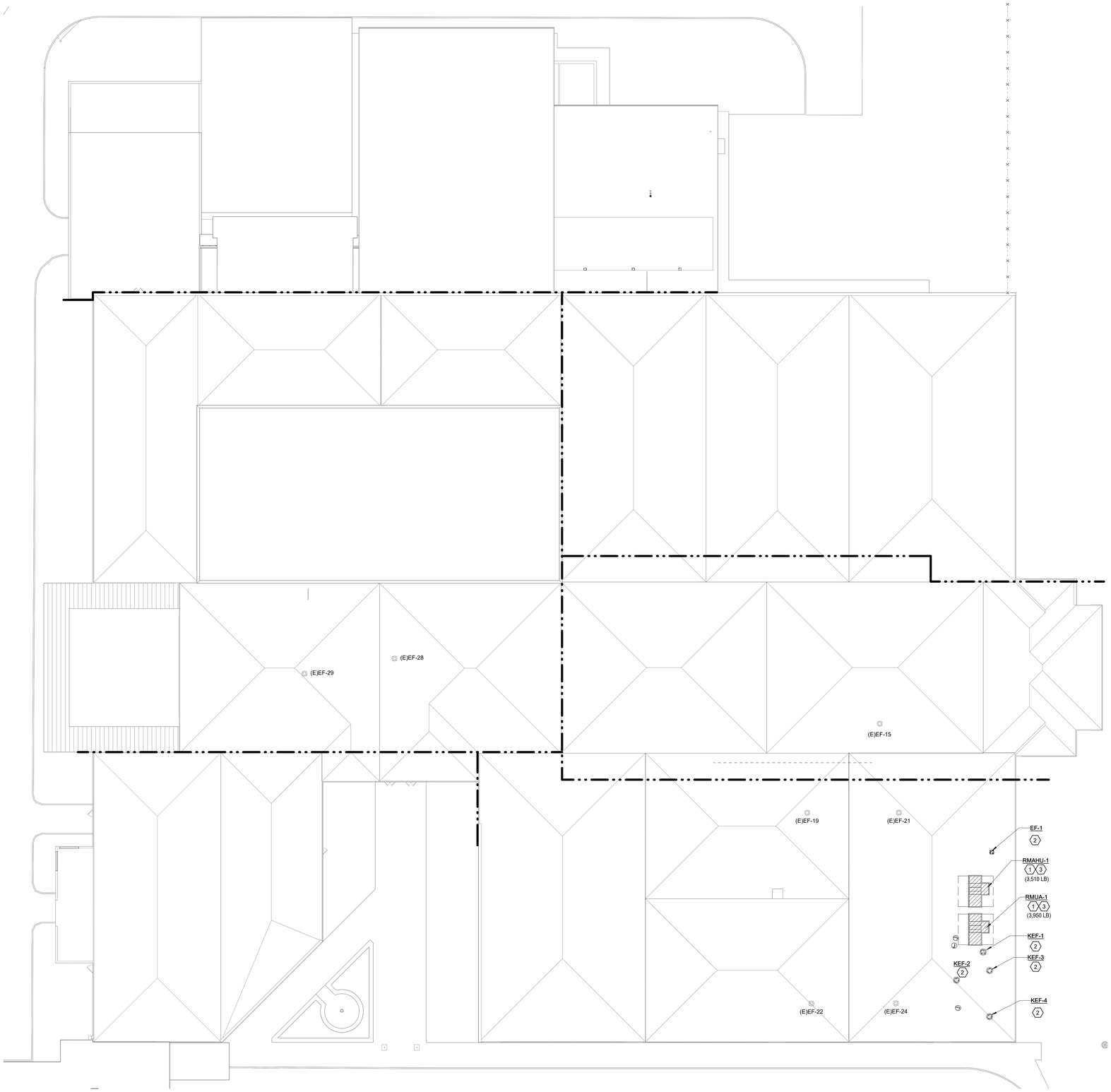
MECHANICAL KEYED NOTES:

1. MOUNT ON WIND RESISTANT ROOF CURB. RE 1/M5.12 FOR DETAIL.
2. MOUNT ON WIND RESISTANT EQUIPMENT SUPPORT. RE 20/M5.11 FOR DETAIL.
3. ROUTE FULL SIZE CONDENSATE TO NEAREST EXISTING ROOF DRAIN. INSTALL TRAP AS RECCOMENDED BY MANUFACTURER.



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1 **MECHANICAL ROOF PLAN**
Scale: 1" = 20'-0"

Date

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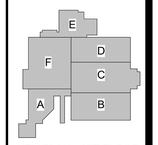

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MECHANICAL ROOF PLAN

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MECHANICAL GENERAL NOTES:

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2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR), UNLESS OTHERWISE NOTED.
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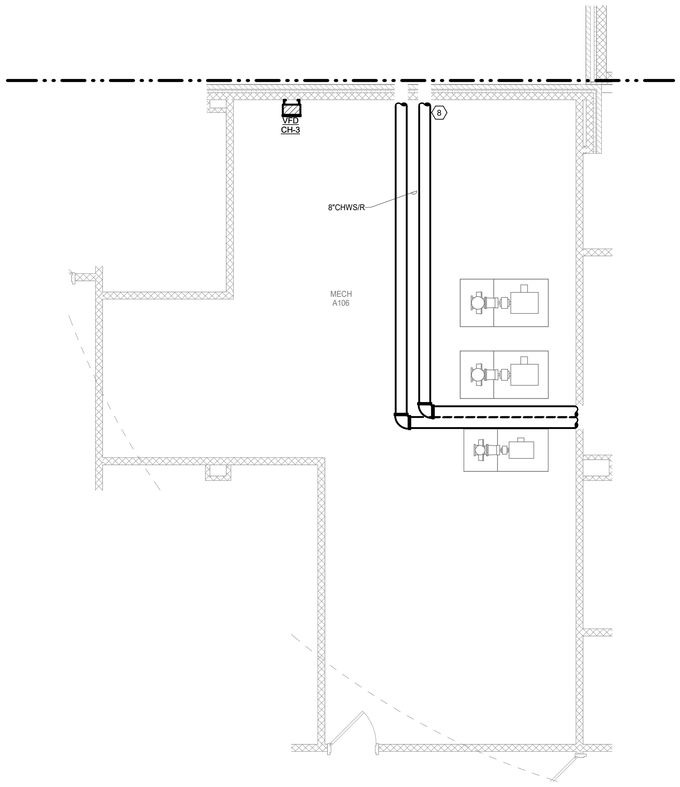
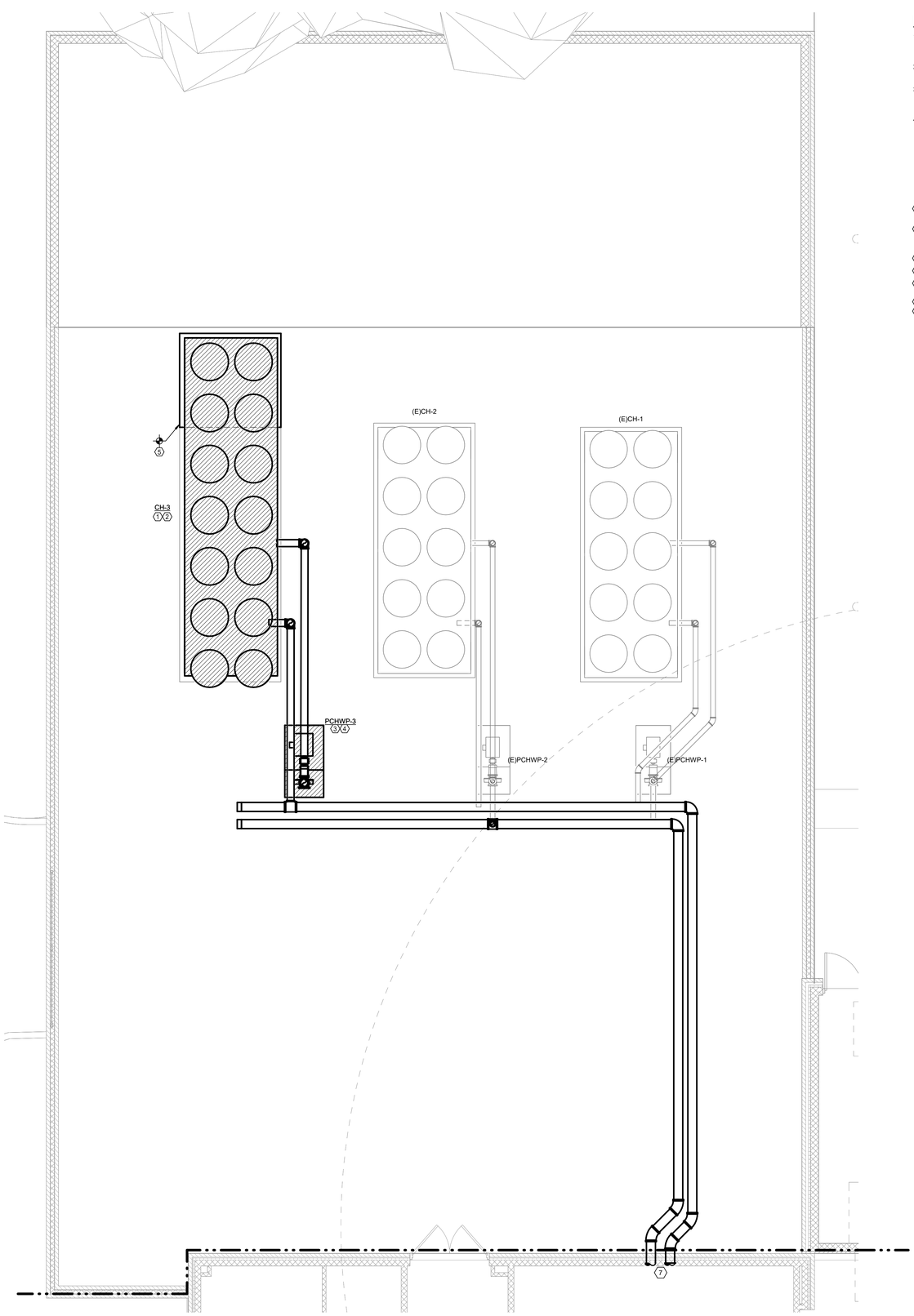
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

1. MOUNT NEW CHILLER ON EXISTING CONCRETE PAD EXTEND AS REQUIRED.
2. VERIFY SERVICE AND AIRFLOW CLEARANCE WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
3. PROVIDE NEW CHILLED WATER PUMP REFER TO DETAILS.
4. PROVIDE 4" THICK HOUSE KEEPING CONCRETE PAD.
5. EXTEND EXISTING HOUSEKEEPING CONCRETE PAD AS REQUIRED TO MOUNT NEW AIR COOLED CHILLER.
6. RE: 2/M3.11 FOR CONTINUATION.
7. RE: 1/M3.11 FOR CONTINUATION.



2 **MECHANICAL ENLARGED FLOOR PLAN - RMS - Dependent 1**
Scale: 1/4" = 1'-0"



N 1 **MECHANICAL ENLARGED FLOOR PLAN - RMS - SERVICE YARD**
Scale: 1/4" = 1'-0"

Project:
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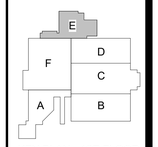

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MECHANICAL ENLARGED PLANS

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Job No. 1821-13-02	Sheet No. M3.11
Drawn By: AA	
Date: 10.29.2025	

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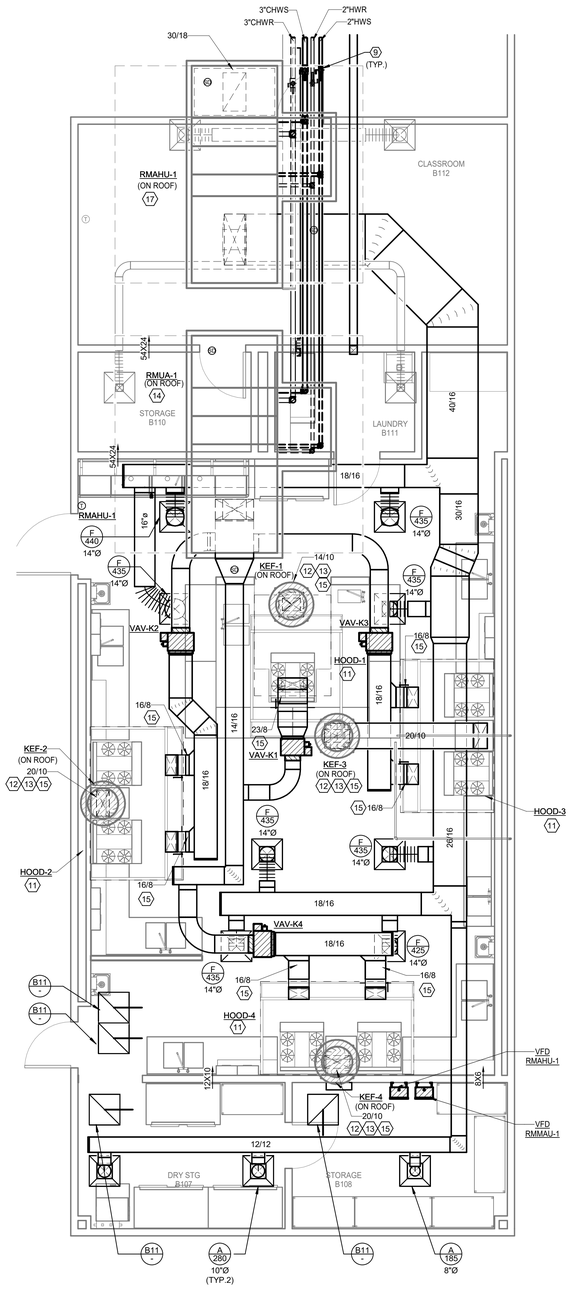
MECHANICAL GENERAL NOTES:

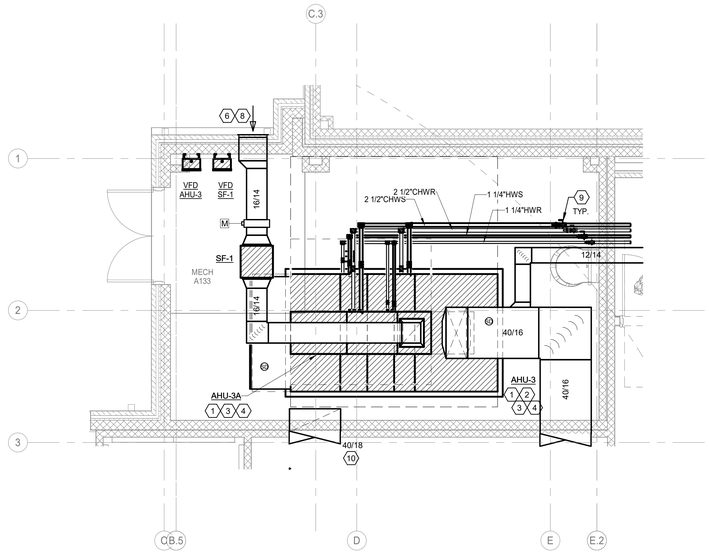
1. COORDINATE IN THE FIELD THE EXACT LOCATION OF MECHANICAL EQUIPMENT WITH CONTRACTOR AND ALL TRADES.
2. SENSORS SHALL BE MOUNTED AT +48" AFF (ABOVE FINISHED FLOOR). UNLESS OTHERWISE NOTED.
3. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR ALL ELECTRICAL POWER REQUIREMENTS.
4. THESE CONSTRUCTION DRAWINGS ARE DIAGRAMMATIC AND DO NOT NECESSARILY REFLECT ACTUAL DIMENSIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD-VERIFY ALL DIMENSIONS AND COORDINATE PLACEMENT OF ALL EQUIPMENT AND ROUTING OF ALL PIPING AND/OR HVAC SYSTEMS.

MECHANICAL KEYED NOTES:

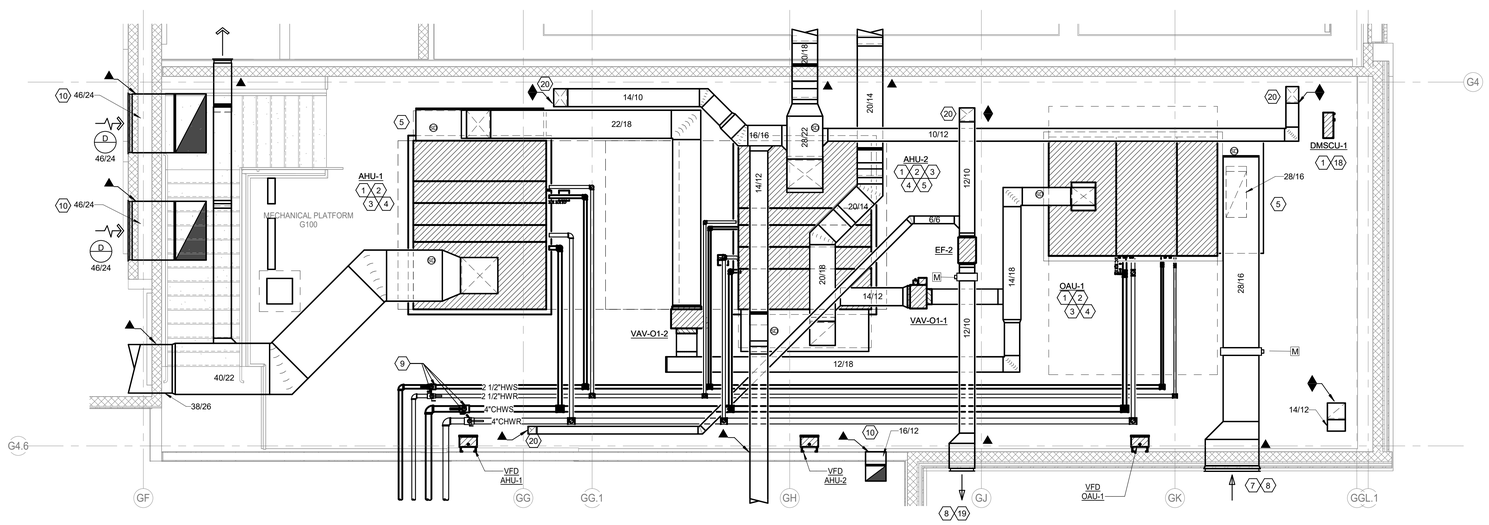
1. VERIFY SERVICE CLEARANCES FOR AIR FILTER, FAN SHAFT AND COIL REMOVAL WITH EQUIPMENT MANUFACTURER. COORDINATE WITH ALL TRADES NOT TO OBSTRUCT.
2. PROVIDE 4" THICK CONCRETE HOUSEKEEPING PAD.
3. ROUTE FULL SIZE CONDENSATE DRAIN PIPING TO FLOOR SINK (SEE PLUMBING DRAWING FOR EXACT LOCATION). INSTALL CONDENSATE TRAP AS RECOMMENDED PER MANUFACTURER.
4. REFER TO DETAILS FOR AHU COIL PIPING.
5. PROVIDE FULL SIZE PLENUM AT RETURN AIR INLET FOR AHU AS SHOWN.
6. PROVIDE 24" WIDE X 24" HIGH RUSKIN MODEL EME520MD WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF xxx SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT.
7. PROVIDE 42" WIDE X 40" HIGH RUSKIN MODEL EME520MD WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 5.16 SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT.
8. PROVIDE DUCTWORK AT FULL SIZE OF LOUVER.
9. PROVIDE ISOLATION VALVE AT LOCATION SHOWN.
10. PROVIDE INTERNALLY LINED RETURN AIR ELBOW.
11. KITCHEN HOOD PROVIDED BY FOOD SERVICE CONSULTANT. MECHANICAL CONTRACTOR TO INSTALL AND MAKE FINAL DUCT CONNECTIONS.
12. KITCHEN EXHAUST DUCTWORK TO BE WELDED 16 GAUGE BLACK STEEL CONSTRUCTION. WRAP DUCTWORK IN A TOTALLY ENCAPSULATED FOIL FACED FIRE BOARD WITH A MINIMUM OF TWO HOUR FIRE RATING. SLOPE DUCT TOWARDS HOOD AND PROVIDE CLEANOUT AT EACH CHANGE OF DIRECTION. REFER TO SPECIFICATIONS FOR SPECIAL CONSTRUCTION AND INSULATION REQUIREMENTS.
13. FULL SIZE EXHAUST AIR DUCTWORK DOWN FROM EXHAUST FAN ON ROOF. PROVIDE TRANSITION TO SIZE INDICATED.
14. ROUTE FULL SIZE MAKEUP AIR DUCTWORK UP TO ROOF MOUNTED AIR HANDLING UNIT ON ROOF. PROVIDE TRANSITION AS INDICATED.
15. TRANSITION DUCTWORK TO HOOD COLLAR DIMENSION AS REQUIRED.
16. PROTECT DUCT PENETRATION WITH AN APPROVED THROUGH PENETRATION FIRESTOP SYSTEM IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE.
17. PROVIDE FULL SIZE PLENUM AT RETURN THROUGH ROOF FOR AHU AS SHOWN. PROVIDE SMOKE DETECTOR.
18. ROUTE REFRIGERANT LINES TO ASSOCIATED INDOOR MINI SPLIT UNIT.
19. PROVIDE 20" WIDE X 20" HIGH RUSKIN MODEL EME520MD WIND-DRIVEN RAIN RESISTANT STATIONARY LOUVER OR APPROVED EQUAL WITH MINIMUM FREE AREA OF 1.02 SQ. FT. PROVIDE WITH BIRD SCREEN AND PAINT TO MATCH WALL OR AS SPECIFIED BY ARCHITECT. COORDINATE FINAL LOCATION WITH ARCHITECT.
20. ROUTE DUCT DOWN THROUGH MEZZANINE FLOOR AT SIZE INDICATED AND PROVIDE FIRE DAMPER. RE:1/M2.15



3 **MECHANICAL ENLARGED FLOOR PLAN - RMS - CULLINARY ARTS**
Scale: 1/4" = 1'-0"



N 2 **MECHANICAL ENLARGED FLOOR PLAN - RMS - MECH A133**
Scale: 1/4" = 1'-0"



N 1 **MECHANICAL MEZZANINE PLAN - RMS**
Scale: 1/4" = 1'-0"

Revision /	Date	
3	06-06-24	CITY COMMENTS 3

Project:
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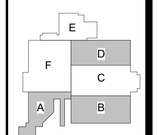

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MECHANICAL ENLARGED PLANS

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Salas O'Brien Project Number: 2022-05088-00

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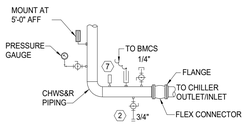
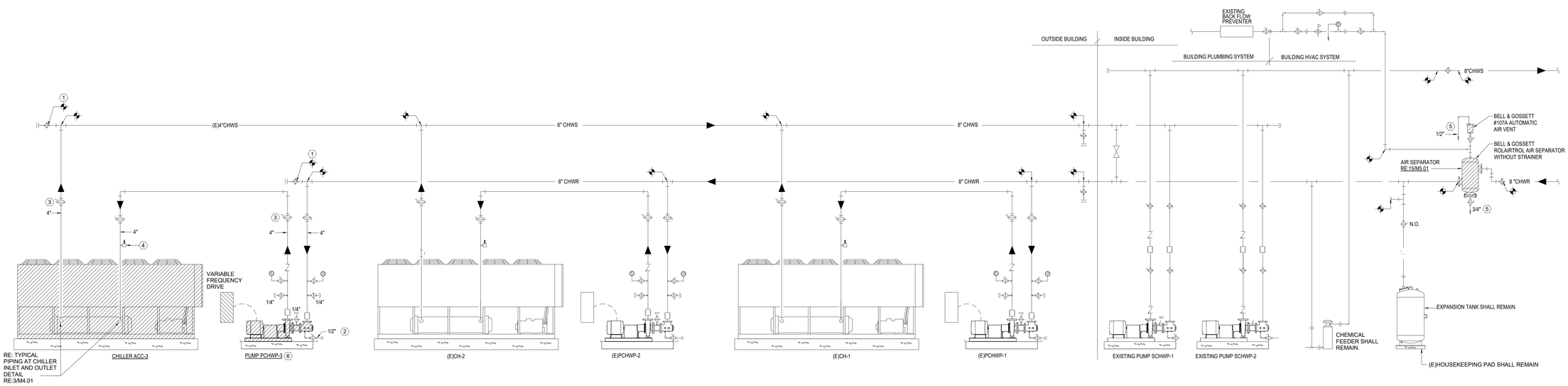
MECHANICAL KEYED NOTES

1. PROVIDE 6" ISOLATION VALVE AND FLANGE OFF BOTTOM OF MAIN PIPING. TERMINATE WITH FLANGE MAXIMUM OF 2'-0" FROM BOTTOM OF PIPE FOR TEMPORARY CHILLER CONNECTION.
2. PROVIDE BALL VALVE WITH HOSE THREAD ADAPTER AT FULL SIZE OR AT SIZE INDICATED.
3. BALANCING VALVE TO BE PROVIDED WITH INFINITE POSITION CRANK OR MEMORY STOP FOR BALANCING SERVICE.
4. PROVIDE FLOW SWITCH. REFER TO DETAILS FOR MORE INFORMATION.
5. ROUTE FULL SIZE TYPE "L" COPPER DRAIN TO NEAREST FLOOR DRAIN.
6. PROVIDE NEW 4" CONCRETE PAD.
7. PROVIDE PETE'S PLUG. (TYP.)



2 TYPICAL PIPING AT INLET AND OUTLET OF CHILLER
SCALE: NO SCALE



1 CHILLED WATER PIPING DIAGRAM
SCALE: NO SCALE

Revision / Date

Project:
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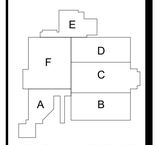

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MECHANICAL PIPING DIAGRAM

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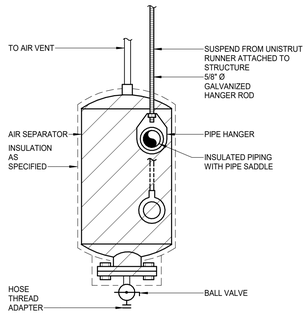
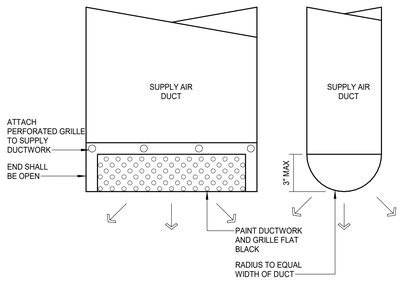


20 SUPPORT AT AIR SEPARATOR
SCALE: NONE



15 PERFORATED GRILLE (AUDITORIUM)
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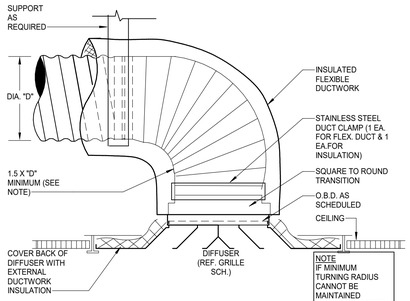
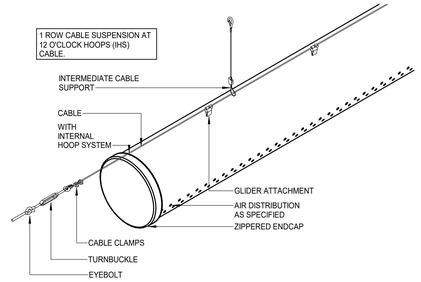
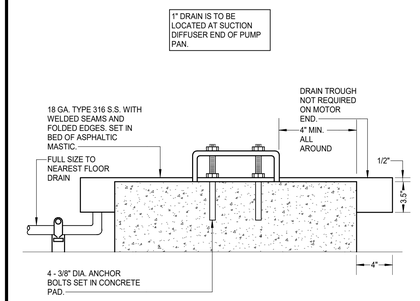


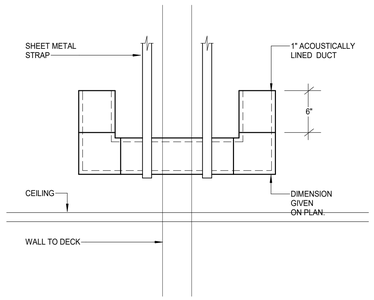
FLEX DUCT CONNECTION AT SUPPLY AIR DIFFUSER
SCALE: NONE



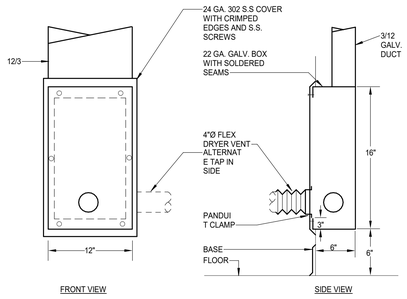
7 FABRIC DUCT SUSPENSION DETAIL
SCALE: NONE



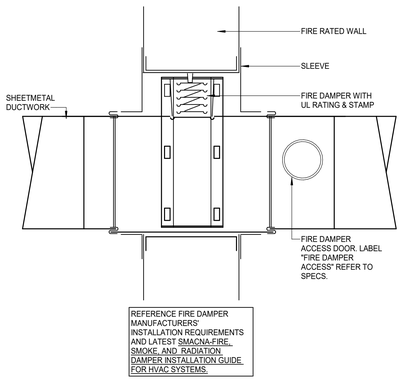
3 PUMP PAN
SCALE: NONE



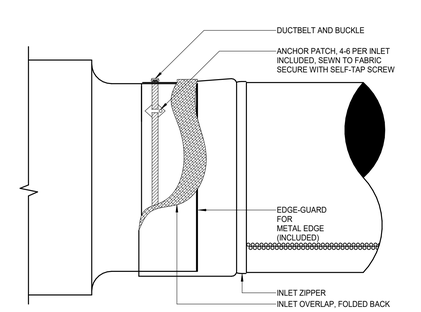
18 TRANSFER AIR DUCT
SCALE: NONE



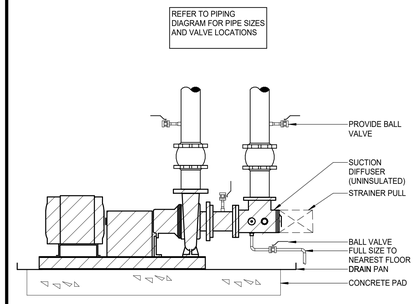
14 LINT TRAP
SCALE: NONE



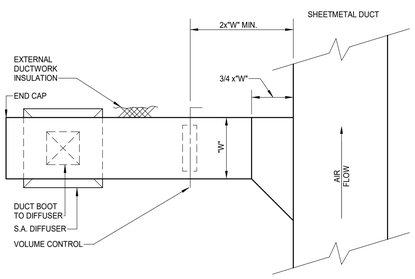
10 FIRE DAMPER
SCALE: NONE



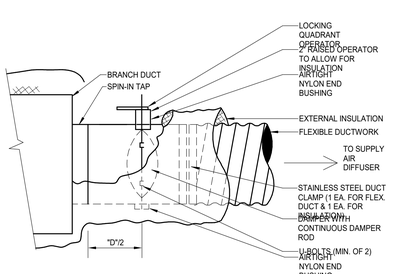
6 FABRIC DUCT INLET DETAIL
SCALE: NONE



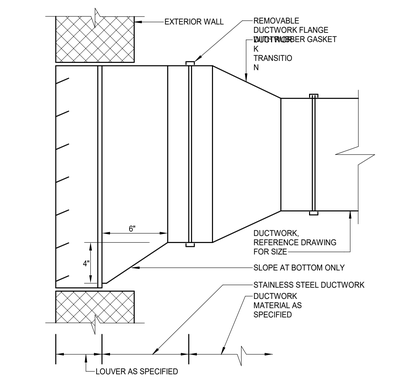
2 END SUCTION PUMP
SCALE: NONE



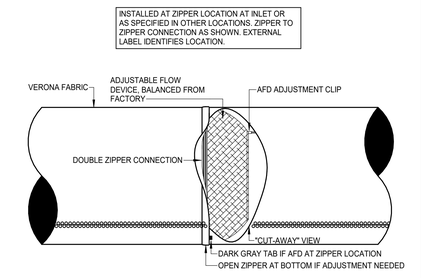
RIGID DUCT TAP TO SINGLE SUPPLY AIR DIFFUSER
17 SCALE: NONE



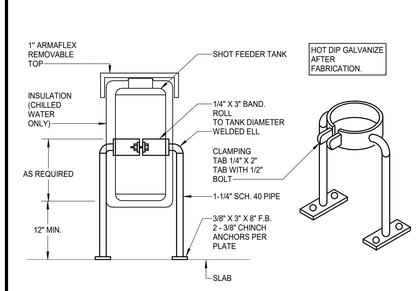
13 FLEXIBLE DUCT TAP - SPIN-IN
SCALE: NONE



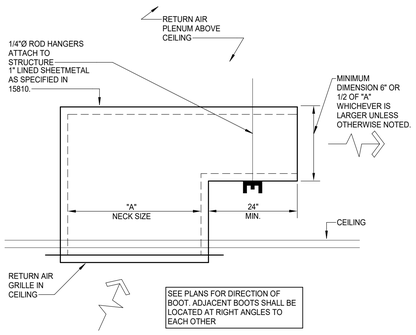
9 DUCTWORK AT LOUVER
SCALE: NONE



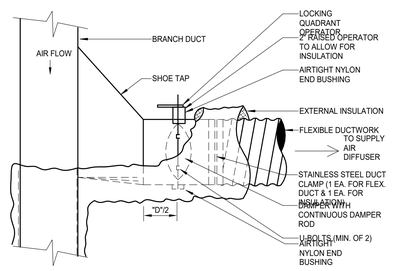
5 ADJUSTABLE FLOW DEVICE (AFD)
SCALE: NONE



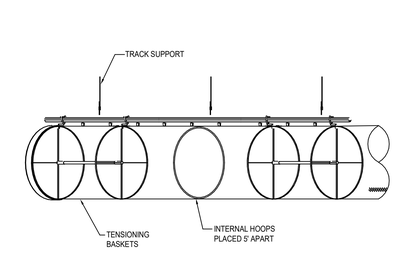
CHILLED AND HOT WATER CHEMICAL FEEDER TANK SUPPORT DETAIL
1 SCALE: NONE



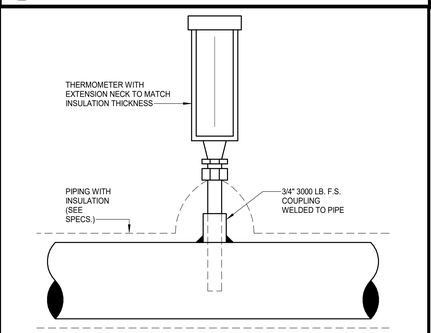
16 RETURN AIR GRILLE BOOT
SCALE: NONE



12 FLEXIBLE DUCT TAP - SHOE
SCALE: NONE



8 PULL-WITH U-TRACK DETAIL
SCALE: NONE

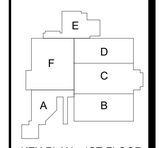


4 THERMOMETER INSTALLATION
SCALE: NONE

Revision / Date

Project: RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
N.T.S

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Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

MECHANICAL DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. M5.11
Drawn By: AA	
Date: 10.29.2025	

10/28/2025 2:16:14 PM
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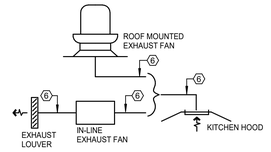
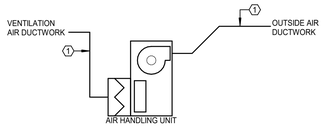
SYMBOL LEGEND

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
GENERAL	
(#)	KEY NOTE TAG
	REVISION TAG
	NEW EQUIPMENT
DUCTWORK	
	SUPPLY AIR DUCTWORK
	RETURN AIR AND OUTSIDE AIR DUCTWORK
	EXHAUST AIR DUCTWORK
	FLEXIBLE DUCTWORK
	SUPPLY AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	EXHAUST AIR DUCTWORK THROUGH HORIZONTAL PARTITION
	FIRE DAMPER (VERTICAL)
	FIRE DAMPER (HORIZONTAL)
	SMOKE DAMPER (VERTICAL)
	SMOKE DAMPER (HORIZONTAL)
	COMBINATION FIRE & SMOKE DAMPER (VERTICAL)
	COMBINATION FIRE & SMOKE DAMPER (HORIZONTAL)
	MANUAL BALANCING DAMPER (SEE DAMPER SCHEDULE)
M	MOTORIZED DAMPER (SEE DAMPER SCHEDULE)
SENSORS	
T	THERMOSTAT AND TEMPERATURE SENSOR
H	HUMIDISTAT
SD	SMOKE DETECTOR
HD	HEAT DETECTOR
AIR DEVICES	
	GRILLE SIZE TAG (REFER TO GRILLE SIZE LEGEND)
	SUPPLY AIR GRILLE WITH FOUR-WAY THROW
	SUPPLY AIR GRILLE WITH THREE-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY THROW
	SUPPLY AIR GRILLE WITH TWO-WAY CORNER THROW
	SUPPLY AIR GRILLE WITH ONE-WAY THROW
	RETURN AIR GRILLE
	RETURN AIR GRILLE WITH SOUND BOOT
	EXHAUST AIR GRILLE
	SUPPLY AIR SIDEWALL GRILLE
	RETURN AIR SIDEWALL GRILLE
20X12	RETURN AIR OPENING ABOVE CEILING
PIPING	
–CWS&R–	CONDENSER WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CWS–	CONDENSER WATER SUPPLY
–CWR–	CONDENSER WATER RETURN
–CHWS&R–	CHILLED WATER SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–CHWS–	CHILLED WATER SUPPLY
–CHWR–	CHILLED WATER RETURN
–HWS&R–	HOT WATER FOR HYDRONIC HEATING SUPPLY & RETURN (TOTAL OF TWO PIPES, ONLY ONE PIPE SHOWN FOR DRAWING CLARITY)
–HWS–	HOT WATER FOR HYDRONIC HEATING SUPPLY
–HWR–	HOT WATER FOR HYDRONIC HEATING RETURN
—D—	CONDENSATE DRAIN LINE
—AD—	AUXILLARY CONDENSATE DRAIN LINE
	ELBOW UP
	ELBOW DOWN
	90° ELBOW
	45° ELBOW
	TEE
	TEE DOWN
	TEE UP
	TOP BRANCH CONNECTION
	BOTTOM BRANCH CONNECTION
	FLANGE
	CAP
	CONTINUATION
	FLOOR DRAIN (REFER TO PLUMBING DRAWINGS)
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	BUTTERFLY VALVE WITH OPERATOR
	PLUG VALVE
	TWO-WAY CONTROL VALVE
	THREE-WAY CONTROL VALVE
	PRESSURE REDUCING VALVE
	PRESSURE RELIEF VALVE
	BALL VALVE
	STRAINER
	UNION
	PETE'S PLUG
	PRESSURE GAUGE
	TEMPERATURE SENSOR IN PIPE
	VENTURI FLOW METER
	FLOW SWITCH
FM	FLOW MEASURING STATION
	EXPANSION JOINT
	FLEXIBLE CONNECTION
	GAUGE COCK
	SITE GLASS
	DIFFERENTIAL PRESSURE SENSOR
	ANCHOR
	PIPE GUIDE
SUBSCRIPTS AND ABREVIATIONS	
AFF	ABOVE FINISHED FLOOR
BBS	BELOW BOTTOM OF STRUCTURE
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
CA	COMBUSTION AIR
CFM	CUBIC FEET PER MINUTE
EA	EXHAUST AIR
FPM	FEET PER MINUTE
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	OUTSIDE AIR
RA	RETURN AIR
SA	SUPPLY AIR
RENOVATIONS	
	POINT OF CONNECTION FROM NEW TO EXISTING
	ITEM TO REMAIN
	ITEM TO BE REMOVED

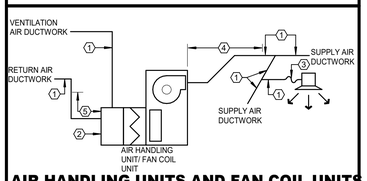
DUCT LINER AND INSULATION



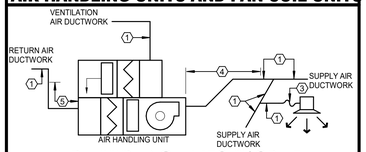
KITCHEN HOOD EXHAUST AIR SYSTEMS



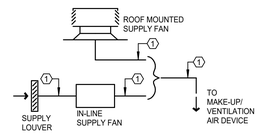
OUTSIDE AIR PRETREATMENT UNIT



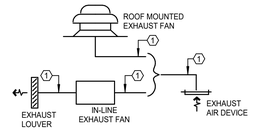
AIR HANDLING UNITS AND FAN COIL UNITS



AIR HANDLING UNITS W/ SPLIT DEHUMIDIFICATION UNITS



MAKE-UP/VENTILATION AIR SYSTEMS

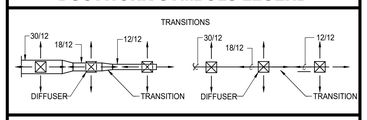


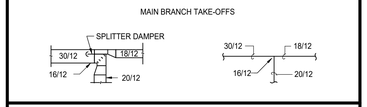
EXHAUST AIR SYSTEMS

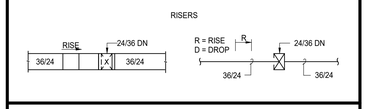
KEYED NOTES:

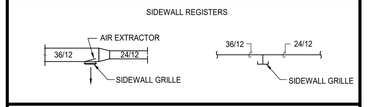
1. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
2. SHEETMETAL DUCTWORK RETURN AIR PLENUM WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
3. FLEXIBLE DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED.
4. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT DISCHARGE TO 10'-0" DOWNSTREAM.
5. SHEETMETAL DUCTWORK WITH EXTERNAL DUCTWORK INSULATION AS SPECIFIED AND 1" THICK 1-1/2 LB LINER AS SPECIFIED FROM AIR HANDLING UNIT INLET TO 10'-0" UPSTREAM.
6. EXHAUST DUCTWORK AS SPECIFIED WITH FIREBOARD INSULATION AS SPECIFIED.
7. SHEETMETAL DUCTWORK ONLY. NO INSULATION REQUIRED.

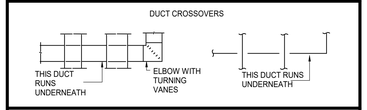
DUCTWORK SYMBOLS LEGEND

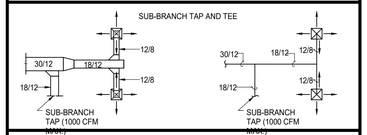


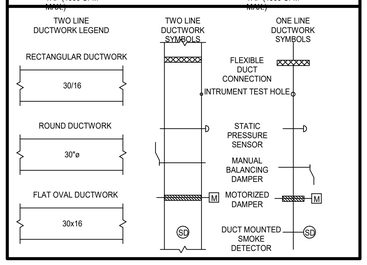




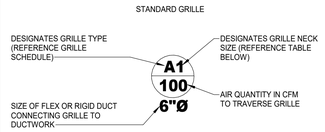




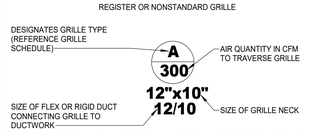




GRILLE SIZING SCHEDULE



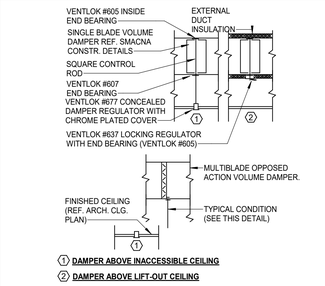
ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE OTHERWISE SHOWN.

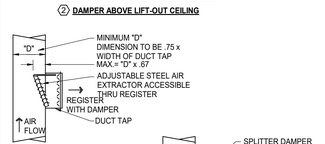


ALL GRILLES SHOWN SHALL BE FOUR-WAY THROW UNLESS OTHERWISE SHOWN. ALL REGISTERS SHALL HAVE A 45° HORIZONTAL DEFLECTION UNLESS OTHERWISE SHOWN.

GRILLE SIZE DESIGNATION	GRILLE NECK SIZE	GRILLE SIZE DESIGNATION	GRILLE NECK SIZE
1	6" x 6"	7	15" x 15"
2	8" x 8"	8	16" x 16"
3	9" x 9"	9	18" x 18"
4	10" x 10"	10	20" x 20"
5	12" x 12"	11	22" x 22"
6	14" x 14"	12	24" x 24"

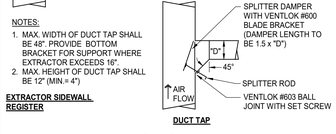
DUCTWORK CONSTRUCTION DETAILS





1 **DAMPER ABOVE INACCESSIBLE CEILING**

2 **DAMPER ABOVE LIFT-OUT CEILING**

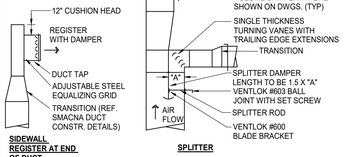


NOTES:

1. MAX. WIDTH OF DUCT TAP SHALL BE 48". PROVIDE BOTTOM BRACKET FOR SUPPORT WHERE EXTRACTOR EXCEEDS 16"
2. MAX. HEIGHT OF DUCT TAP SHALL BE 12" (MIN.= 4")

EXTRACTOR SIDEWALL REGISTER

DUCT TAP



SIDEWALL REGISTER AT END OF DUCT

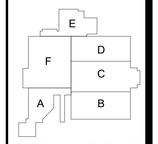
SPLITTER

Project:

RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

MECHANICAL DETAILS

PACKAGE VOLUME

Job No. 1821-13-02
Drawn By: AA
Date: 10.29.2025
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Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/19121-13-01_02 RIVERWOOD MS ADD & RENO_MEP1.rvt

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PACKAGED AIR COOLED CHILLER

MARK	ACTUAL CAPACITY (TONS)	LEAVING WATER TEMP.(°F)	GPM	PRESSURE DROP (FT.)	AMBIENT AIR TEMP. (°F)	CURRENT CHARAC. V	P	F	MANUFACTURER	MODEL	MOCP	MCA	REMARKS
CH-3	220	42	528	20.0	95 °F	480	3	60	CARRIER	30RC	600	500	1,2,3,4,5

GENERAL NOTES:
1. MAXIMUM FOULING FACTOR FOR THE EVAPORATOR IS 0.0001
2. MAINTAIN MINIMUM CLEARANCES REQUIRED BY CHILLER MANUFACTURER FOR PROPER AIRFLOW TO FANS AND UNIT. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON EQUIPMENT FOR SERVICE, MAINTENANCE AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCES AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT HEAD PRESSURE CONTROL.
2. PROVIDE WITH INTEGRAL MAIN ELECTRICAL DISCONNECT SWITCH.
3. PROVIDE WITH INSULATION ON ALL SUCTION LINES.
4. PROVIDE HIGH EFFICIENCY CHILLER. (MIN. OF 9.5 EER)
5. PROVIDE WITH POLYMER CONDENSER FANS AND COMPRESSOR BLANKETS.

PUMP

MARK	SERVICE	TYPE	GPM	HEAD (FT.)	MOTOR HORSE POWER	MAX. RPM	CURRENT CHARAC. V	P	F	MANUFACTURER	MODEL NUMBER	REMARKS
PCHWP-3	CHILLED WATER	HORIZONTAL END SUCTION	528	50.00	10	1800	480	3	60	ARMSTRONG	4030	1,2,3,4

GENERAL NOTES:
1. PUMP IS TO HAVE A NON-OVERLOADING MOTOR.
2. MINIMUM RECOMMENDED CLEARANCE AROUND A PUMP IS 24 INCHES. MAINTAIN MINIMUM CLEARANCES AS REQUIRED FOR SERVICE, MAINTENANCE, AND INSPECTION.

REMARKS:
1. PROVIDE WITH GAUGE TAPPING
2. PROVIDE WITH SUCTION DIFFUSER AT PUMP INLET.
3. PROVIDE PUMP WITH BACK PULL OUT.
4. PROVIDE WITH VARIABLE FREQUENCY DRIVE.

VARIABLE VOLUME TERMINAL BOX

MARK	MAXIMUM CFM	MINIMUM CFM	INLET DIAMETER SIZE (IN.)	HOT WATER COIL GPM	HOT WATER COIL CONNECTING PIPE SIZE	REMARKS
VAV-13-11	900	230	10	2.1	3/4"	-
VAV-13-12	900	230	10	2.1	3/4"	-
VAV-14-11	900	230	10	2.1	3/4"	-
VAV-16-9	900	230	10	2.1	3/4"	-
VAV-17-11	900	230	10	2.1	3/4"	-
VAV-17-12	900	230	10	2.1	3/4"	-
VAV-18-8	400	110	8	0.9	3/4"	-
VAV-18-10	640	180	8	1.5	3/4"	-
VAV-K1	1,350	360	12			-
VAV-K2	1,890	480	14			-
VAV-K3	1,890	480	14			-
VAV-K4	1,890	480	14			-
VAV-O1-1	910	360	10			1
VAV-O1-2	2,460	630	16			1

GENERAL NOTES:
1. MAXIMUM STATIC PRESSURE DROP OF AIR THROUGH THE TERMINAL BOX SHALL BE 0.2" ESP.
2. MAXIMUM VELOCITY THROUGH DUCT INLET SHALL BE 2,000 FPM.
3. MAXIMUM STATIC PRESSURE DROP THROUGH HEATER COIL SHALL BE 0.25" ESP.
4. MAXIMUM STATIC PRESSURE DROP OF WATER THROUGH HEATER COIL SHALL BE 10' W.G.
5. BTUH REQUIRED FOR HOT WATER HEATING IS HEATING GPM MULTIPLIED BY 10,000.
6. SUSPEND UNIT WITH FOUR THREADED HANGER RODS ATTACHED TO TWO UNISTRUT RUNNERS SECURED TO STRUCTURE. REFER TO MANUFACTURER FOR MORE DETAILS.
7. UNITS TO BE MOUNTED BETWEEN BEAMS AND 18" MAXIMUM ABOVE CEILING. AVOID MOUNTING OVER LIGHTS WHEREVER POSSIBLE.
8. REFER TO PIPING AT HOT WATER COIL DETAILS. PROVIDE WITH 2-WAY CONTROL VALVE UNLESS OTHERWISE SCHEDULED.

REMARKS:
1. PROVIDE WITH DCV.

ROOF MOUNTED AIR HANDLING UNIT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT. STATIC PRESSURE (IN. W.C)	FAN HORSE POWER	FAN CURRENT CHARAC. V	PH	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB	LEAVING WET BULB	COOLING WATER ENTERING TEMP (°F)	GPM	PRESSURE DROP (FT.)	HEATING ENTERING AIR TEMPERATURE (°F)	MIN. HEATING CAPACITY	HEATING WATER ENTERING TEMP. (°F)	GPM	PRESSURE DROP (FT.)	PIPE SIZE TO COIL (IN.) CHILLED WATER	HOT WATER	REMARKS
RMAHU-1	4,220	1,060	1.50	5.0	480	3	60	80.6	67.4	54.6	53.8	45	23.7	15.0	67.7	124,422	180.0	6.3	10.0	2"	1"	1,3,4,6,7,8,,10,11,12,13 ,17
RMUA-1	7,020	7,020	1.50	7.5	480	3	60	98.0	80.0	75.0	62.5	45	64.9	15.0	27.0	212,285	180.0	10.7	10.0	3"	1 1/4"	2,3,5,6,7,8,9,11,12,13, 16,17

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
2. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
3. PROVIDE HORIZONTAL UNIT.
4. PROVIDE CONSTANT VOLUME UNIT.
5. RMUA-1 SHALL BE INTERLOCKED WITH HOOD FIRE SUPPRESSION SUCH THAT RMAU-1 IS DEACTIVATED UPON DETECTION OF FIRE BELOW HOOD.
6. PROVIDE UNIT WITH AIR PURIFICATION SYSTEM. REFER TO SPECIFICATIONS.
7. PROVIDE TWO-WAY COOLING CONTROL VALVES.
8. PROVIDE THREE-WAY HEATING CONTROL VALVES.
9. PROVIDE HOT WATER COIL IN PRE-HEAT POSITION.
10. PROVIDE HOT WATER COIL IN RE-HEAT POSITION.
11. PROVIDE UNIT WITH BOTTOM DISCHARGE.
12. PROVIDE UNIT WITH PENTHOUSE SECTION TO ENCLOSE PIPING AND CONTROL VALVES.
13. PROVIDE UNIT WITH ANGLED FILTER SECTION.
14. PROVIDE SINGLE ZONE VAV UNIT.
15. PROVIDE TWO-WAY HEATING CONTROL VALVES.
16. PROVIDE WITH SINGLE ZONE VARIABLE VOLUME UNIT.
17. PROVIDE UNIT WITH VARIABLE FREQUENCY DRIVE.

AIR HANDLING UNIT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT. STATIC PRESSURE (IN. W.C)	FAN HORSE POWER	FAN CURRENT CHARAC. V	PH	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	LEAVING DRY BULB	LEAVING WET BULB	COOLING WATER ENTERING TEMP (°F)	GPM	PRESSURE DROP (FT.)	HEATING ENTERING AIR TEMPERATURE (°F)	MIN. HEATING CAPACITY	HEATING WATER ENTERING TEMP. (°F)	GPM	PRESSURE DROP (FT.)	PIPE SIZE TO COIL (IN.) CHILLED WATER	HOT WATER	REMARKS
AHU-1	9,555	2,460	1.50	10.0	480	3	60	75.0	62.5	53.8	53.0	45	34.9	15.0	66.1	298,231	180.0	15.1	10.0	2"	1 1/2"	1,3,4,5,7,10,12,13,16,17
AHU-2	4,600	910	1.50	5.0	480	3	60	75.0	62.5	53.8	53.0	45	16.8	15.0	66.0	144,072	180.0	7.3	10.0	1 1/2"	1 1/4"	1,3,4,5,7,10,12,13,16,17
AHU-3	4,780	1,400	1.50	5.0	480	3	60	75.0	62.5	53.8	53.0	45	17.5	15.0	65.6	151,775	180.0	7.7	10.0	1 1/2"	1 1/4"	1,3,4,5,7,10,12,13,16,17
AHU-3A	1,400	1,400						98.0	80.0	53.5	53.0	45	18.0	15.0	27.0	65,016	180.0	3.3	10.0	1 1/2"	3/4"	2,3,4,7,10,11,13,14,15,16 ,17
OAU-1	3,370	3,370	2.00	5.0	480	3	60	98.0	80.0	53.5	53.0	45	43.4	15.0	27.0	163,782	180.0	8.3	10.0	2 1/2"	1 1/4"	2,3,4,5,7,10,11,13,16,17

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. VELOCITY NOT TO EXCEED 500 FPM ON COOLING COIL.
2. VELOCITY NOT TO EXCEED 450 FPM ON COOLING COIL.
3. PROVIDE HORIZONTAL UNIT.
4. PROVIDE CONSTANT VOLUME UNIT WITH VARIABLE FREQUENCY DRIVE.
5. PROVIDE FRONT DISCHARGE.
6. PROVIDE TOP DISCHARGE.
7. PROVIDE TWO-WAY COOLING CONTROL VALVES.
8. PROVIDE THREE-WAY COOLING CONTROL VALVES.
9. PROVIDE TWO-WAY HEATING CONTROL VALVES.
10. PROVIDE THREE-WAY HEATING CONTROL VALVES.
11. PROVIDE HOT WATER COIL IN PRE-HEAT POSITION.
12. PROVIDE HOT WATER COIL IN REHEAT POSITION.
13. PROVIDE UNIT WITH ANGLED FILTER SECITON.
14. UNIT INDICATED SHALL BE STACKED OAU FURNISHED WITH ASSOCIATED AHU (LISTED ABOVE). UNIT INCLUDES ANGLED FILTER MIXING BOX, PREHEAT COIL, ACCESS SPACE, COOLING COIL AND DISCHARGE PLENUM. UNIT DOES NOT HAVE FAN SECTION. SPLIT DEHUMIDIFICATION UNIT SHALL DELIVER OUTSIDE AIR TO MIXING BOX SECTION OF MAIN AIR HANDLER UNIT UPSTREAM OF COIL.
15. SPLIT DEHUMIDIFICATION UNIT TO BE MOUNTED ON TOP OF ASSSOCIATED AHU.
16. PROVIDE UNIT WITH VARIABLE FREQUENCY DRIVE.
17. PROVIDE UNIT WITH AIR PURIFICATION SYSTEM. REFER TO SPECIFICATIONS.

FAN

MARK	LOCATION NAME	LOCATION NUMBER	CFM	EXT. STATIC PRESSURE (IN. W.C.)	MAX. FAN RPM	HORSE POWER	CURRENT CHARAC. V	P	F	LOCALLY SWITCHED BY	INTERLOCKED WITH	FAN TYPE	DRIVE TYPE	MANUFACTURER	MODEL NUMBER	REMARKS
KEF-1	DRY STG	B107	1,500	1.00	1,254	1	120	1	60	-	HOOD-1	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
KEF-2	DRY STG	B107	2,100	1.00	1,201	1	120	1	60	-	HOOD-2	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
KEF-3	DRY STG	B107	2,100	1.00	1,201	1	120	1	60	-	HOOD-3	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
KEF-4	DRY STG	B107	2,100	1.00	1,201	1	120	1	60	-	HOOD-4	ROOF MOUNTED	DIRECT	COOK	VCR	1,2,3,4,7
EF-1	CLASSROOM	B112	125	0.50	1,550	0.13	120	1	60	-	AHU-16	ROOF MOUNTED	BELT	COOK	ACED	1,2,4
EF-2	MECHANICAL PLATFORM	G100	725	0.75	2,160	0.3	120	1	60	-	AHU-2	INLINE	BELT	COOK	SQND	1,2,4,6
SF-1	MECH	A133	1,400	0.50	1,103	0.34	480	3	60	-	AHU-3	INLINE	BELT	COOK	SQND	1,2,4,5,6

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MINIMUM RECOMMENDED CLEARANCE AROUND UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH DISCONNECT SWITCH.
2. PROVIDE WITH ROOF CURB AND BIRD SCREEN.
3. PROVIDE WITH EC CONTROL MOTOR
4. PROVIDE WITH MOTORIZED DAMPER.
5. PROVIDE WITH VARIABLE FREQUENCY DRIVE.
6. SUSPEND FAN FROM STRUCTURE WITH FOUR THREADED RODS AND UNISTRUT.
7. PROVIDE WITH CLEANOUT PORT, VENTED CURB EXTENSION TO MEET NFPA 96, DRAIN CONNECTION, GREASE TRAP AND HINGE KIT.

DUCTLESS MINI-SPLIT - OUTDOOR UNIT

MARK	MIN. TOTAL CAPACITY (BTUH)	OUTDOOR AIR TEMP (°F)	MINIMUM EER/ SEER	CURRENT CHARAC. V	PH	F	RELATED UNIT MARK	REMARKS
DMSCU-1	17,100	95	-/15.2	208	1	60	DMS-1	1,2,3

GENERAL NOTES:
1. MINIMUM RECOMMENDED CLEARANCE AROUND ROOFTOP UNIT IS 12 INCHES ON NON-SERVICE SIDES AND 30 INCHES ON SERVICE SIDES. MAINTAIN MINIMUM CLEARANCE FOR CONDENSER AIR FLOW AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. PROVIDE WITH LOW AMBIENT CONTROL DOWN TO 20 DEG F.
2. PROVIDE WITH DISCONNECT SWITCH.
3. REFRIGERANT LINES TO BE SIZED TO MANUFACTURER'S REQUIREMENTS.

GRILLE

MARK	SERVICE	TYPE	DAMPER	CONSTRUCTION MATERIAL	FINISH COLOR	MANUFACTURER	MODEL NUMBER	DESCRIPTION
A	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	OMNI	EXPOSED T-BAR CEILING FRAME STYLE WITH OR 12"X12" FACE.
B	RETURN AIR	GRILLE	-	STEEL	-	TITUS	PAR	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" OR 12"X12" FACE. (1,2).
C	SUPPLY AIR	GRILLE	-	STEEL	-	TITUS	300RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTE
D	RETURN AIR	GRILLE	-	STEEL	-	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)
E	EXHAUST AIR	GRILLE	-	STEEL	-	TITUS	PAR	SURFACE MOUNT CEILING FRAME STYLE WITH 18"X18" OR 12"X12" FACE. PERFERATED FACE.
F	SUPPLY AIR	DIFFUSER	-	STEEL	-	TITUS	PAS	EXPOSED T-BAR CEILING FRAME STYLE WITH 24"X24" FACE. (1)
G	EXHAUST AIR	GRILLE	-	STEEL	-	TITUS	350RL	DOUBLE DEFLECTION SIDEWALL GRILLE WITH HORIZONTAL FRONT BARS. SURFACE MOUNTED (1)

GENERAL NOTES:
1. DAMPERS NOTED AS U.L. SHALLBE A 'U.L.' CLASSIFIED CEILING RADIATION DAMPER WITH THERMAL BLANKET.
2. COORDINATE FINAL AIR DEVICE LOCATION AND FINISH COLOR WITH ARCHITECT.

REMARKS:
1. COORDINATE FINAL AIR DEVICE LOCATION AND FIINISH COLOR WITH ARCHITECT.
2. PROVIDE WITH RETURN AIR BOOT WHEN USED FOR PLENUM RETURN.

DUCTLESS MINI-SPLIT - INDOOR UNIT

MARK	FAN SUPPLY AIR CFM	FAN OUTSIDE AIR CFM	FAN EXT-STATIC PRESSURE (IN. W.C.)	FAN HORSE POWER	FAN CURRENT CHARAC. V	PH	F	COOLING AIR TEMPERATURE (°F) ENTERING DRY BULB	ENTERING WET BULB	COOLING MIN. TOTAL CAPACITY (BTUH)	COOLING MIN. SENS. CAPACITY (BTUH)	MINIMUM EER/ SEER	NUMBER OF STAGES	REMARKS
DMS-1	370	0	0.10	40.0	208	1	60	75.0	62.5	17,100	13,680	-/15.2	1	1,2,3,4,5

GENERAL NOTES:
1. EXTERNAL STATIC PRESSURE INCLUDES LOSSES DUE TO DUCTWORK, AIR DEVICES, DAMPERS, AND DUCT MOUNTED HOT WATER COILS WHERE APPLICABLE. DIRTY FILTER AND UNIT CASING MUST BE ADDED TO EXTERNAL STATIC PRESSURE TO OBTAIN TOTAL PRESSURE LOSS. INCREASE HORSEPOWER AS REQUIRED TO MEET YOUR TOTAL PRESSURE LOSS. COORDINATE WITH ELECTRICIAN.
2. MAINTAIN MINIMUM CLEARANCE FOR COIL PULL AS RECOMMENDED BY UNIT MANUFACTURER. MAINTAIN MINIMUM CLEARANCE AS REQUIRED TO OPEN ACCESS AND CONTROL DOORS ON UNIT FOR SERVICE, MAINTENANCE, AND INSPECTION. MAINTAIN MINIMUM ELECTRICAL CLEARANCE AS REQUIRED BY NEC.

REMARKS:
1. UNIT TO BE INSTALLED PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. CONTROLLED BY PROGRAMMABLE WIRED THERMOSTAT.
3. REFRIGERANT LINES TO BE SIZED PER MANUFACTURER'S REQUIREMENTS.
4. INDOOR UNIT IS POWERED FROM OUTDOOR UNIT.
5. PROVIDE INTEGRAL MINI SPLIT CONDENSATE PUMP KIT ASP-MA-UNI MINI AQUA BY ASPEN PUMPS OR EQUAL. CONDENSATE PUMP SHALL BE INSTALLED INSIDE HIG WALL UNIT. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS.

DUCT ATTENUATORS

MARK	CFM	DUCT DIMENSIONS WIDTH	DUCT DIMENSIONS HEIGHT	SERVE	DUCT VELOCITY (FPM)	LENGTH	MANUFACTURUER	MODEL	REMARKS
SA-1	4,785	40	18	AHU-3	957	36"	IAC ACOUSTICS1	LFL	1

GENERAL NOTES:

1. MAXIMUM STATIC PRESSURE DROP OF AIR THROUGH THE SILENCERS SHALL NOT EXCEED 0.35" W.G. ESP
2. PROVIDE WITH GALVANIZED, LOCKFORMED CASING CONSTRUCTED TO SMACNA STANDARDS. AIRTIGHT CONSTRUCTION SHALL BE
ACHIEVED BY USE OF A DUCT-SEALING COMPOUND SUPPLIED AND INSTALLED BY THE CONTRACTOR AT THE JOBSITE.
3. PROVIDE WITH 2" SLIP CONNECTION AT EACH END.
4. PROVIDE WITH GALVANIZED NOSE AT INLET.
5. PROVIDE WITH GALVANIZED GAP PLATES BETWEEN SPLITTERS TO ENSURE CLOSE DIMENSIONAL TOLERANCES AT AIR PASSAGES.
6.PROVIDE WITH PERFORATED GALVANIZED SPLITTERS COMPLETE WITH PERFORATED DIFFUSER TAIL SECTIONS.
7. SPLITTERS FILLED WITH ACOUSTIC GRADE GLASS FIBER UNDER MINIMUM 15% COMPRESSION.
8. SILENCERS SHALL BE LOCATED AS CLOSE TO NOISE GENERATING EQUIPMENT AS POSSIBLE WITH 5 EQUIVALENT DUCT
DIAMETERS OF STRAIGHT, UNOBSTRUCTED DUCTWORK ON INLET AND DISCHARGE SIDE OF SILENCER.
9. SILENCERS SHALL NOT FAIL STRUCTURALLY WHEN SUBJECTED TO A DIFFERENTIAL AIR PRESSURE OF 8" W.G.
10. SILENCER INLET AND OUTLET CONNECTION DIMENSIONS MUST BE EQUAL TO THE DUCT SIZES SHOWN ON THE DRAWINGS

REMARKS:

1. STRAIGHT DUCT SILENCER TYPE TO BE USED.

Revision /	Date	
3	06-06-24	CITY COMMENTS 3
5	04-29-25	Addendum 3

Project:
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2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
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KINGWOOD, TX

BRADLEY KALMANS
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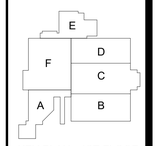

KEY PLAN - 1ST FLOOR
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MECHANICAL SCHEDULES

PACKAGE VOLUME

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02
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LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, DISCONNECT BRANCH CIRCUIT BACK TO NEAREST JUNCTION BOX ABOVE CEILING SPACE FOR RE-USE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.
5. UNLESS NOTED OTHERWISE, HANG ALL EXISTING LIGHT FIXTURES BY CEILING SUPPORT WIRE ABOVE CEILING TO FACILITATE DEMOLITION OF CEILING GRID. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.
6. UNLESS NOTED OTHERWISE, SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE DEMOLITION OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: EXIT SIGNS, FIRE ALARM DEVICES, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REMOVED.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL EXTERIOR ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX FOR PREPARATION OF NEW ADDITION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR RE-USE. ALL EXISTING LIGHT SWITCH BOXES SHALL REMAIN AND SHALL BE RE-USED AS PRACTICAL FOR NEW WIRING DEVICES. EXISTING BOXES NOT RE-USED SHALL BE PROVIDED WITH STAINLESS STEEL COVERPLATES.
3. DISCONNECT AND REMOVE EXISTING ELECTRIC CORD REEL AND ASSOCIATED RECEPTACLE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUIT INTACT FOR RE-USE.
4. DISCONNECT AND REMOVE EXISTING WIRING DEVICE AND ASSOCIATED WIRING BACK TO NEAREST ACTIVE JUNCTION BOX. PATCH WALL TO MATCH EXISTING OR PROVIDE SS COVER PLATE.
5. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.
6. DISCONNECT AND REMOVE EXISTING LIGHT FIXTURE. LEAVE CIRCUITRY IN PLACE FOR CONNECTION OF REPLACEMENT LIGHT FIXTURE.



N 1 **ELECTRICAL DEMOLITION FLOOR PLAN -RMS - AREA A**
Scale: 1/8" = 1'-0"

Date
Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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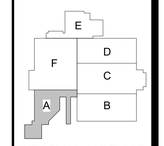
PROFESSIONAL ENGINEER
STATE OF TEXAS
10-29-2025



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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E0.11
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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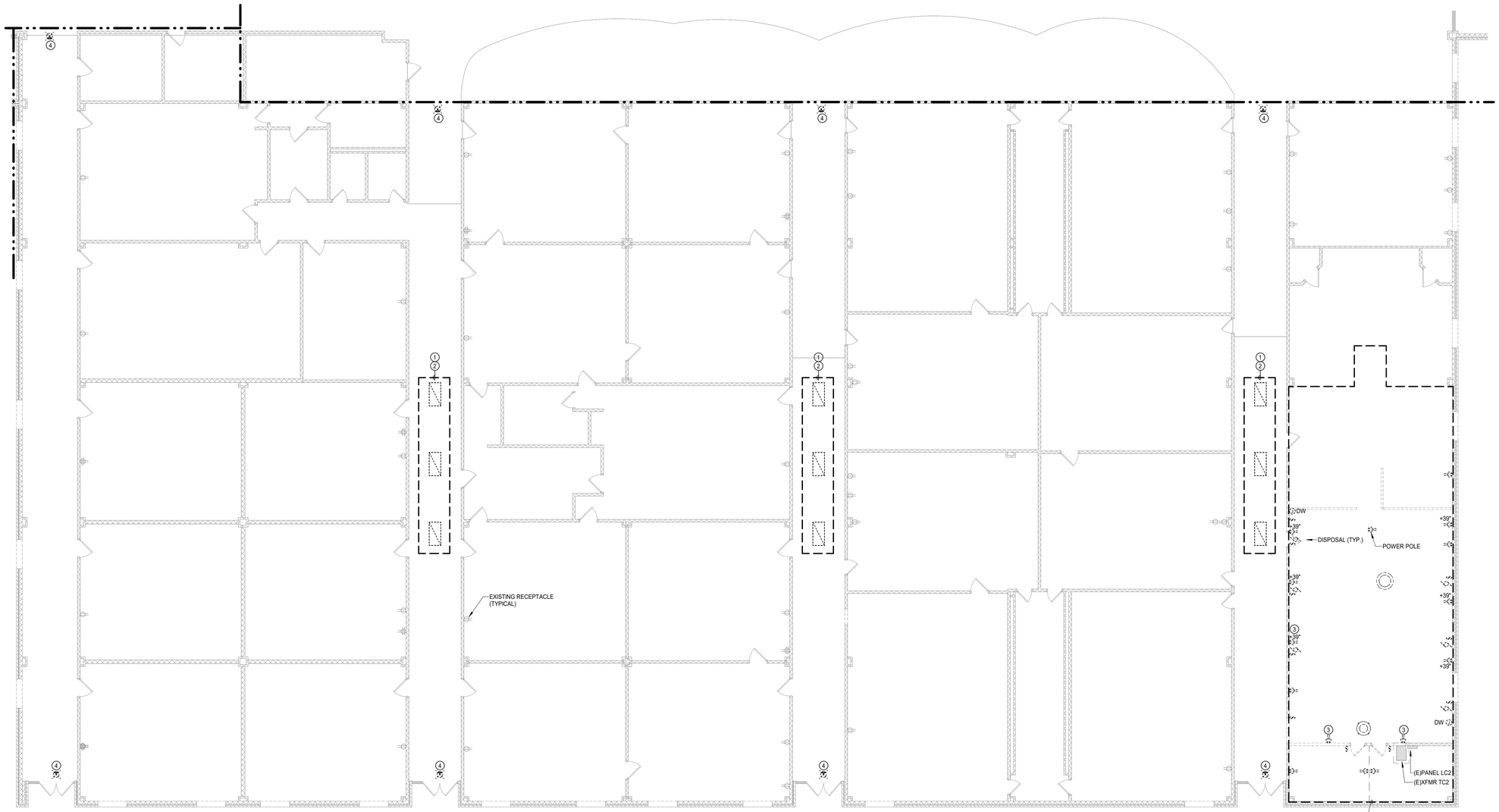
LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, DISCONNECT BRANCH CIRCUIT BACK TO NEAREST JUNCTION BOX ABOVE CEILING SPACE FOR RE-USE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.
5. UNLESS NOTED OTHERWISE, HANG ALL EXISTING LIGHT FIXTURES BY CEILING SUPPORT WIRE ABOVE CEILING TO FACILITATE DEMOLITION OF CEILING GRID. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.
6. UNLESS NOTED OTHERWISE, SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE DEMOLITION OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: EXIT SIGNS, FIRE ALARM DEVICES, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REMOVED.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX OUTSIDE PERIMETER AREA TO MAKE READY FOR NEW SKYLIGHT. LEAVE CIRCUITRY INTACT FOR RECONNECTION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR RE-USE.
3. DISCONNECT AND REMOVE EXISTING WIRING DEVICE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. PATCH WALL TO MATCH EXISTING.
4. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.



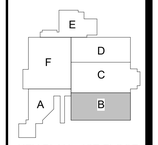
N

1 **ELECTRICAL DEMOLITION FLOOR PLAN -RMS - AREA B**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
83219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E0.12
Drawn By: DES	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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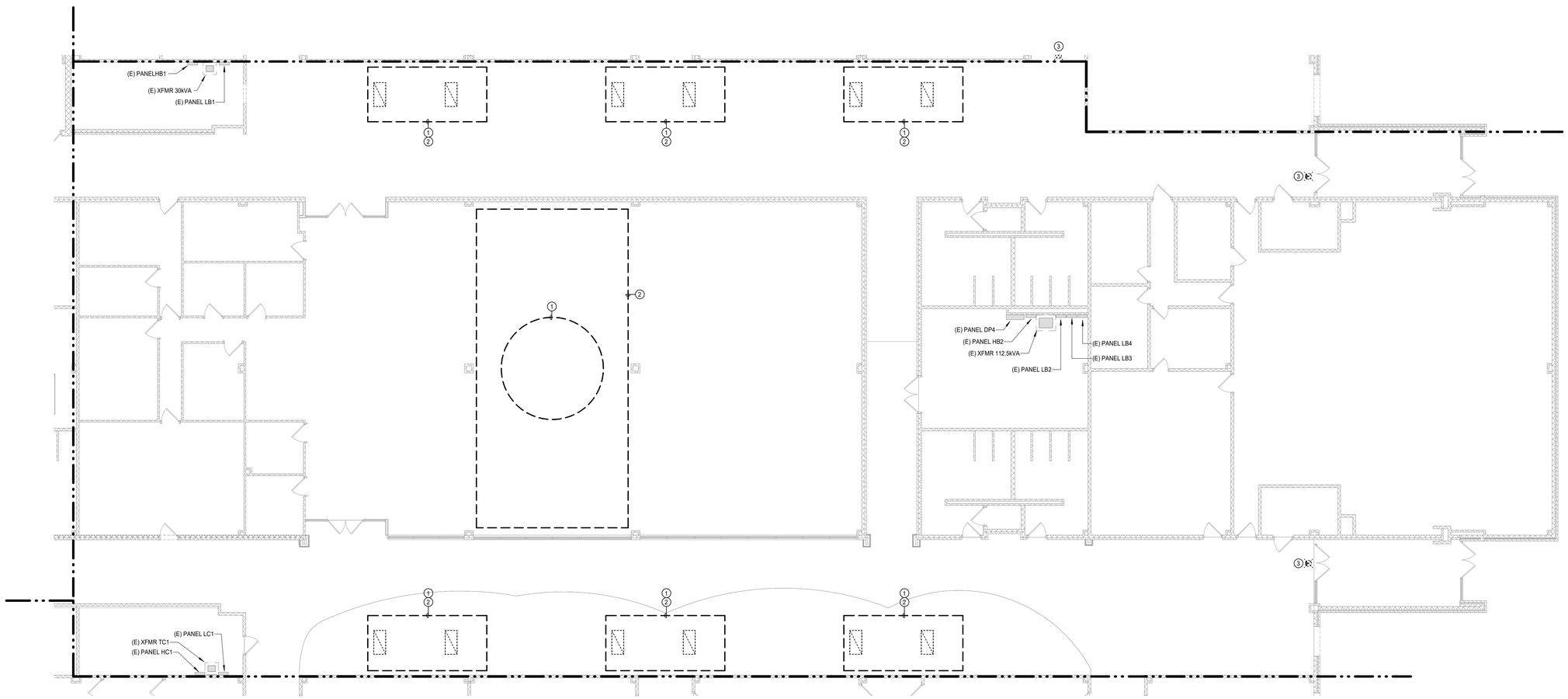
LINETYPE LEGEND	
———	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, DISCONNECT BRANCH CIRCUIT BACK TO NEAREST JUNCTION BOX ABOVE CEILING SPACE FOR RE-USE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.
5. UNLESS NOTED OTHERWISE, HANG ALL EXISTING LIGHT FIXTURES BY CEILING SUPPORT WIRE ABOVE CEILING TO FACILITATE DEMOLITION OF CEILING GRID. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.
6. UNLESS NOTED OTHERWISE, SUSPEND OR REMOVE AND STORE ALL CEILING MOUNTED ELECTRICAL DEVICES TO FACILITATE DEMOLITION OF CEILING GRID. DEVICES INCLUDE BUT ARE NOT LIMITED TO: EXIT SIGNS, FIRE ALARM DEVICES, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REMOVED.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX OUTSIDE PERIMETER AREA TO MAKE READY FOR NEW SKYLIGHT. LEAVE CIRCUITRY INTACT FOR RECONNECTION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR RE-USE.
3. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.



N 1 **ELECTRICAL DEMOLITION FLOOR PLAN -RMS - AREA C**
Scale: 1/8" = 1'-0"

Date
Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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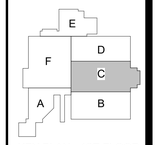
PROFESSIONAL ENGINEER
10-29-2025



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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION C

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E0.13
Drawn By: DES	
Date: 10.29.2025	

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Salas O'Brien Project Number: 2022-05088-00

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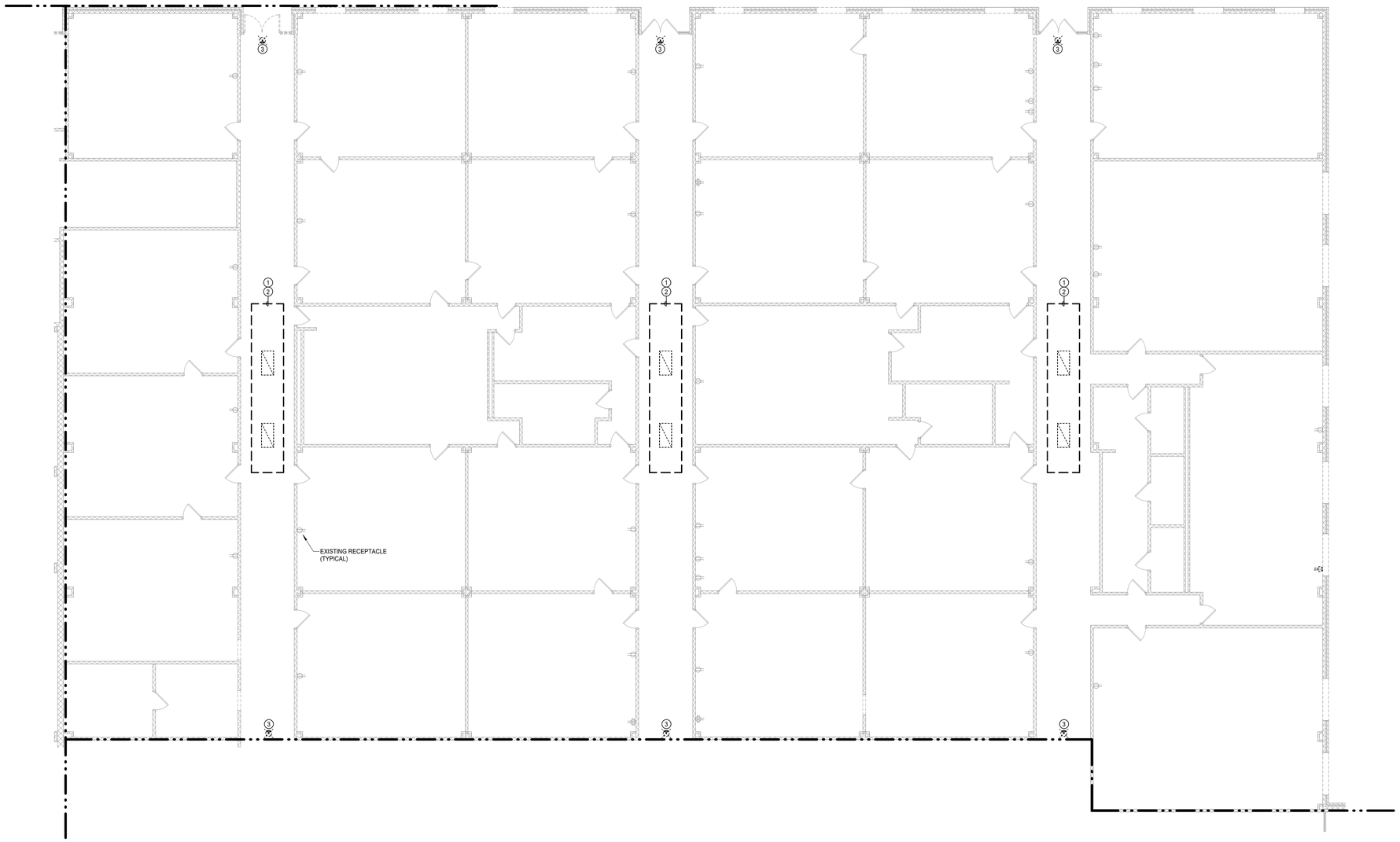
LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, DISCONNECT BRANCH CIRCUIT BACK TO NEAREST JUNCTION BOX ABOVE CEILING SPACE FOR RE-USE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE ALL ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX OUTSIDE PERIMETER AREA TO MAKE READY FOR NEW SKYLIGHT. LEAVE CIRCUITRY INTACT FOR RECONNECTION.
2. DISCONNECT AND REMOVE EXISTING LIGHTING AND EXISTING CONDUIT BACK TO NEAREST ACTIVE JUNCTION BOX. LEAVE CIRCUITRY INTACT FOR CONNECTION OF REPLACEMENT LIGHTING FIXTURES.
3. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.



N 1 **ELECTRICAL DEMOLITION FLOOR PLAN -RMS - AREA D**
Scale: 1/8" = 1'-0"

Date
Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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KINGWOOD, TX

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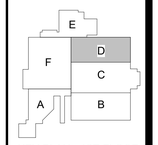

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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E0.14
Drawn By: DES	
Date: 10.29.2025	

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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LINETYPE LEGEND	
————	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, DISCONNECT BRANCH CIRCUIT BACK TO NEAREST JUNCTION BOX ABOVE CEILING SPACE FOR RE-USE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.

ELECTRICAL KEYED NOTES:

(1) DISCONNECT AND REMOVE ALL EXTERIOR ELECTRICAL BACK TO NEAREST ACTIVE JUNCTION BOX FOR PREPARATION OF NEW ADDITION.

N 1 **ELECTRICAL DEMOLITION FLOOR PLAN -RMS - AREA E**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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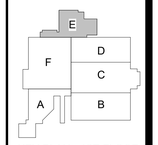

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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION E

PACKAGE | VOLUME

Job No. 1821-13-02
Sheet No. E0.15
Drawn By: DES
Date: 10.29.2025

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Salas O'Brien Project Number: 2022-05088-00

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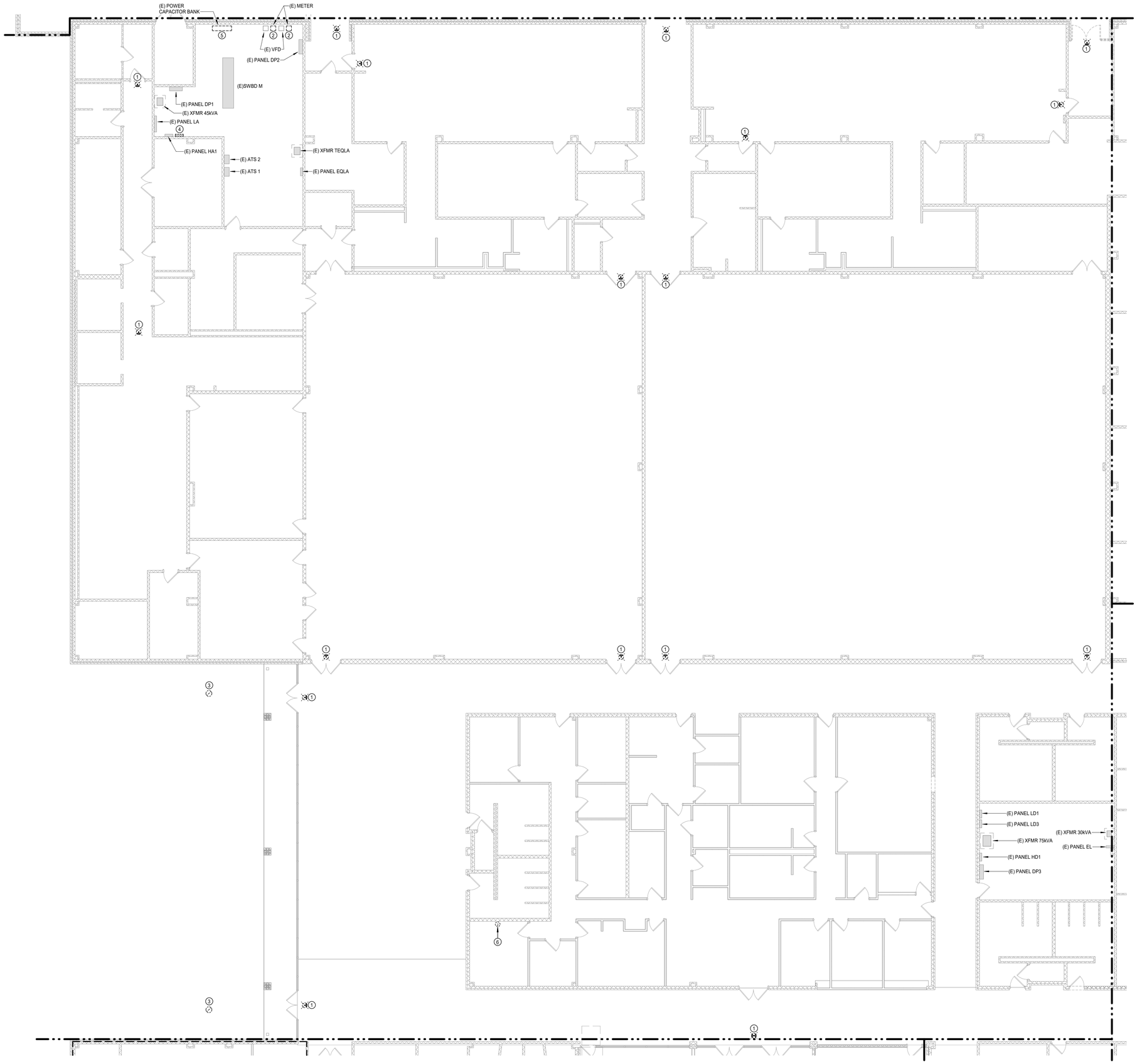

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1 **ELECTRICAL DEMOLITION FLOOR PLAN -RMS - AREA F**
Scale: 1/8" = 1'-0"

LINETYPE LEGEND	
———	EXISTING TO REMAIN
- - - - - - - - -	DISCONNECT AND REMOVE

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. DISCONNECT AND REMOVE ALL ABANDONED WIRING AND CONDUIT.
3. DISCONNECT AND REMOVE ALL CONDUIT, WIRE, AND DISCONNECTING MEANS ASSOCIATED WITH HVAC EQUIPMENT BEING REMOVED.
4. DISCONNECT AND REMOVE ALL ELECTRICAL FROM WALLS SCHEDULED TO BE DEMOLISHED. UNLESS INDICATED OTHERWISE, DISCONNECT BRANCH CIRCUIT BACK TO NEAREST JUNCTION BOX ABOVE CEILING SPACE FOR RE-USE. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT WALL DEMOLITION.

ELECTRICAL KEYED NOTES:

1. DISCONNECT AND REMOVE EXISTING EXIT SIGNAGE AND ASSOCIATED CONDUIT/WIRE BACK TO NEAREST ACTIVE JUNCTION BOX.
2. DISCONNECT AND REMOVE EXISTING SUB-METERING. RE-ROUTE AND MAINTAIN CONTINUITY OF EXISTING VFD CIRCUITRY.
3. DISCONNECT AND REMOVE EXISTING CANOPY LIGHT. LEAVE CIRCUITRY INTACT FOR CONNECTION OF REPLACEMENT LIGHT FIXTURE.
4. DISCONNECT AND REMOVE EXISTING PANEL BOARD AND REPLACE WITH NEW. FIELD VERIFY EXISTING BRANCH CIRCUITS TO REMAIN ACTIVE AND RECONNECT TO NEW PANEL AS PRACTICAL.
5. DISCONNECT AND REMOVE EXISTING KVAR CAPACITOR BANK AND ASSOCIATED CONDUIT/WIRE BACK TO SOURCE.
6. DISCONNECT AND REMOVE ALL ELECTRICAL TO EXISTING FIRE ALARM CONTROL PANEL. LEAVE CIRCUITRY INTACT FOR CONNECTION OF REPLACEMENT FIRE ALARM CONTROL PANEL.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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KINGWOOD, TX

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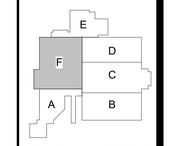

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ELECTRICAL DEMOLITION FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1021-13-02	Sheet No. E0.16
Drawn By: DES	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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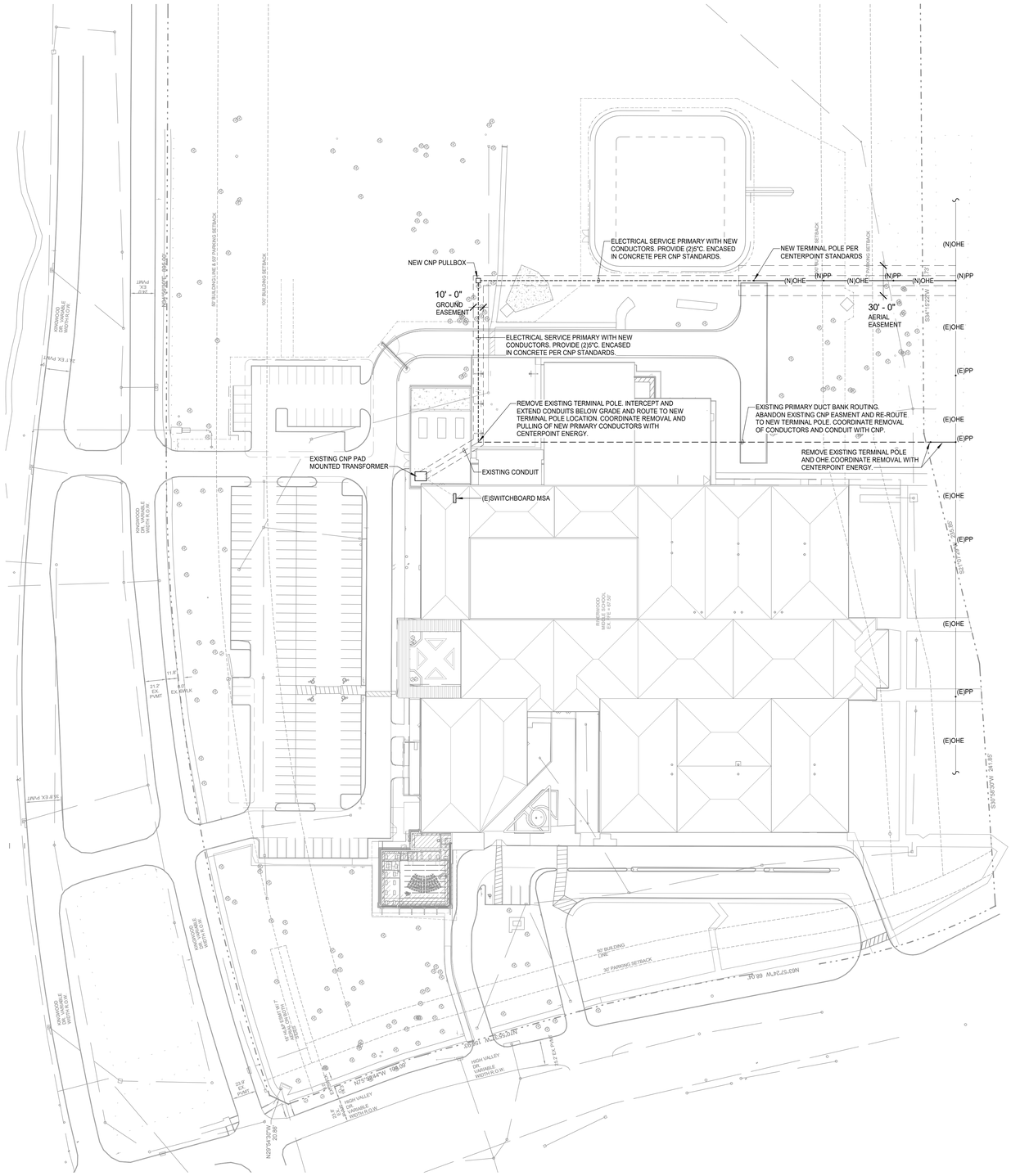

N

1 **ELECTRICAL SITE PLAN - RMS**
Scale: 1" = 50'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

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ELECTRICAL SITE PLAN - RMS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E1.11
Drawn By: DES	
Date: 10.29.2025	

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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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ELECTRICAL GENERAL NOTES:

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC 2015. REFER TO CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
2. CONTRACTOR SHALL MAINTAIN CONSTANT UNSWITCHED POWER FOR EMERGENCY LOAD CONTROL RELAYS AND / OR EXIT SIGNS.
3. LOCATE DIGITAL LIGHTING CONTROLLER AND / OR EMERGENCY LOAD CONTROL RELAY ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW ADJACENT TO SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND / OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING. IN AREAS WITH NO CEILING AND / OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE PLASTIC TAPE MACHINE TYPED NAME PLATE TO BOTTOM OF CEILING T-GRID BELOW RELAY LOCATION. WHITE LETTERS ON BLACK BACKGROUND WITH 1/4" HIGH LETTERS ON 1/2" TALL LABEL FOR DIGITAL MODULE. INDICATE AS: DLM.
4. OCCUPANCY / VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED. CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER.
5. SPACES WITH MULTIPLE OCCUPANCY / VACANCY SENSORS OR WHERE LINE OF SIGHT MAY BE OBSCURED, SHALL BE LINKED TOGETHER FOR SIMULTANEOUS OPERATION WITHIN THE SPACE.
6. COORDINATE LOCATION OF LIGHT FIXTURES IN ALL MEPT ROOMS WITH MECHANICAL EQUIPMENT, PIPING, AND ALL OTHER TRADES. SUSPEND OR WALL MOUNT FIXTURES WHERE PRACTICAL.
7. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. EXISTING LIGHT FIXTURE. PROVIDE WITH NEW UL924 EMERGENCY LOAD CONTROL RELAY TO CONTROL EMERGENCY LIGHTING WITH NORMAL LIGHTING. CONNECT TO NEW EMERGENCY CIRCUIT AS INDICATED AND MAKE FINAL CONNECTION TO LIGHT FIXTURE.
2. CONNECT TO EXISTING NORMAL LIGHTING CIRCUITRY PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
3. PROVIDE UL1008 EMERGENCY GENERATOR TRANSFER DEVICE (GTD) FOR CONNECTION OF EXISTING LIGHT FIXTURE. UTILIZE EXISTING NORMAL LIGHTING CIRCUIT; CONNECT TO NEW EMERGENCY CIRCUIT AS INDICATED; MAKE FINAL CONNECTION TO LIGHT FIXTURE.
4. EXISTING EXTERIOR LIGHT FIXTURE LOCATION. PROVIDE NEW FIXTURE IN SAME LOCATION. INTERCEPT EXISTING WIRING AND ROUTE AS INDICATED FOR NEW CONTROLS AND EMERGENCY.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
92219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025

KEY PLAN - 1ST FLOOR
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ELECTRICAL LIGHTING
FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E2.11
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

1 ELECTRICAL LIGHTING FLOOR PLAN - RMS - SECTION A
Scale: 1/8" = 1'-0"

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ELECTRICAL GENERAL NOTES:

1. LIGHTING CONTROLS SHALL COMPLY WITH IECC 2015. REFER TO CONTROLS SCHEDULE FOR ALL LIGHTING CONTROLS, SENSORS, AND SWITCHING SCHEMES THROUGHOUT FACILITY.
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3. LOCATE DIGITAL LIGHTING CONTROLLER AND / OR EMERGENCY LOAD CONTROL RELAY ABOVE ACCESSIBLE CEILING 12-FEET AFF OR BELOW ADJACENT TO SWITCH CONTROLLING THE SPACE. IN NON-ACCESSIBLE AND / OR HIGH CEILING AREAS, LOCATE DIGITAL LIGHTING CONTROLLER IN ADJACENT ANCILLARY AREA WITH ACCESSIBLE CEILING. IN AREAS WITH NO CEILING AND / OR IN EXTERIOR APPLICATIONS LOCATE ADJACENT TO PANEL SERVING THE LOAD. PROVIDE PLASTIC TAPE MACHINE TYPED NAME PLATE TO BOTTOM OF CEILING T-GRID BELOW RELAY LOCATION. WHITE LETTERS ON BLACK BACKGROUND WITH 1/4" HIGH LETTERS ON 1/2" TALL LABEL FOR DIGITAL MODULE. INDICATE AS: DLM.
4. OCCUPANCY / VACANCY SENSOR AND DAYLIGHTING SENSOR LOCATIONS INDICATE SPACE OR AREA CONTROLLED. CONTRACTOR TO PROVIDE ACTUAL QUANTITIES, TYPES, AND MOUNTING LOCATIONS AS RECOMMENDED BY MANUFACTURER.
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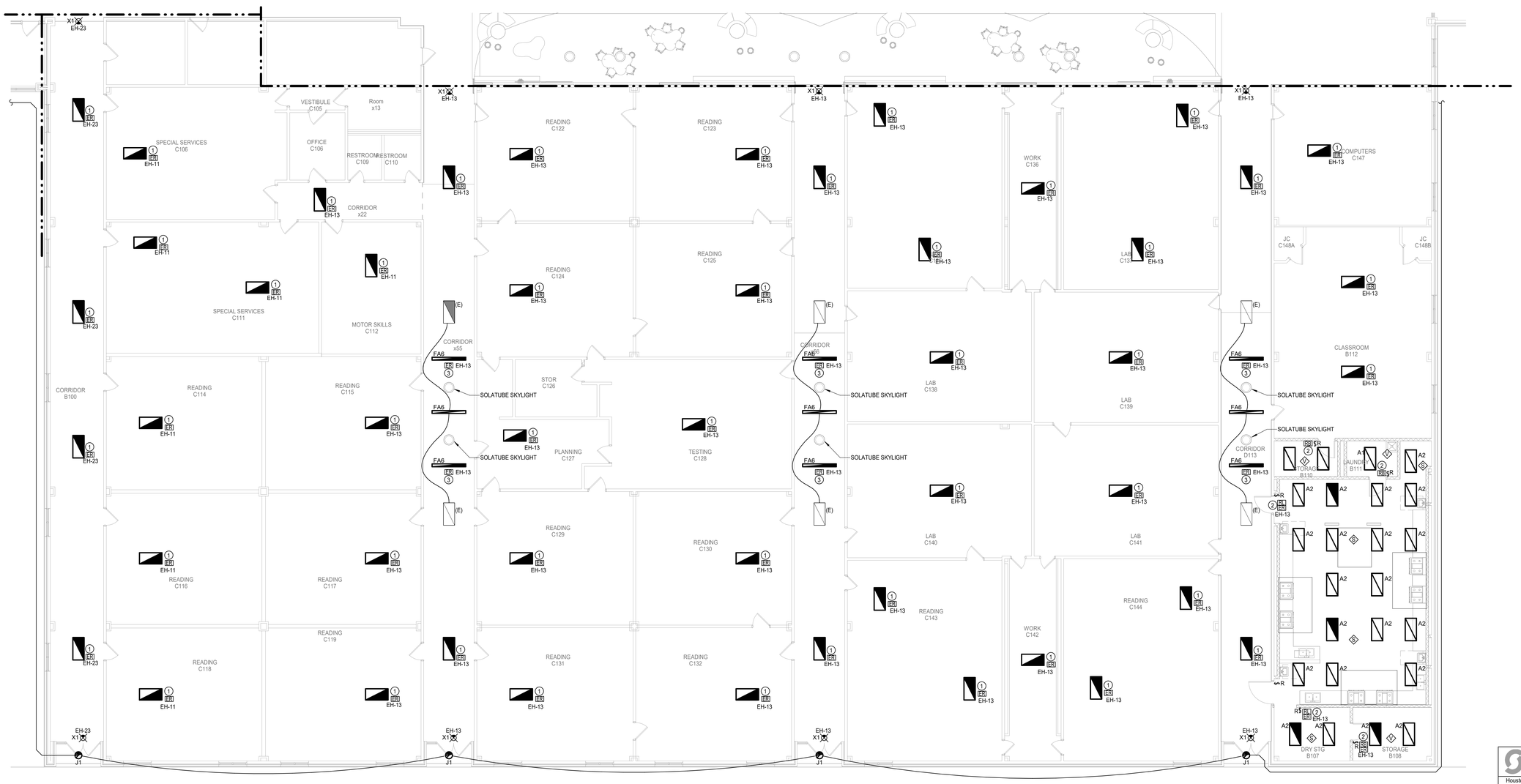

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1 **ELECTRICAL LIGHTING FLOOR PLAN - RMS - SECTION B**
Scale: 1/8" = 1'-0"

Date
Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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ELECTRICAL LIGHTING
FLOOR PLAN - SECTION B

PACKAGE | VOLUME

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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02
Drawn By: DES
Date: 10.29.2025
Sheet No. E2.12

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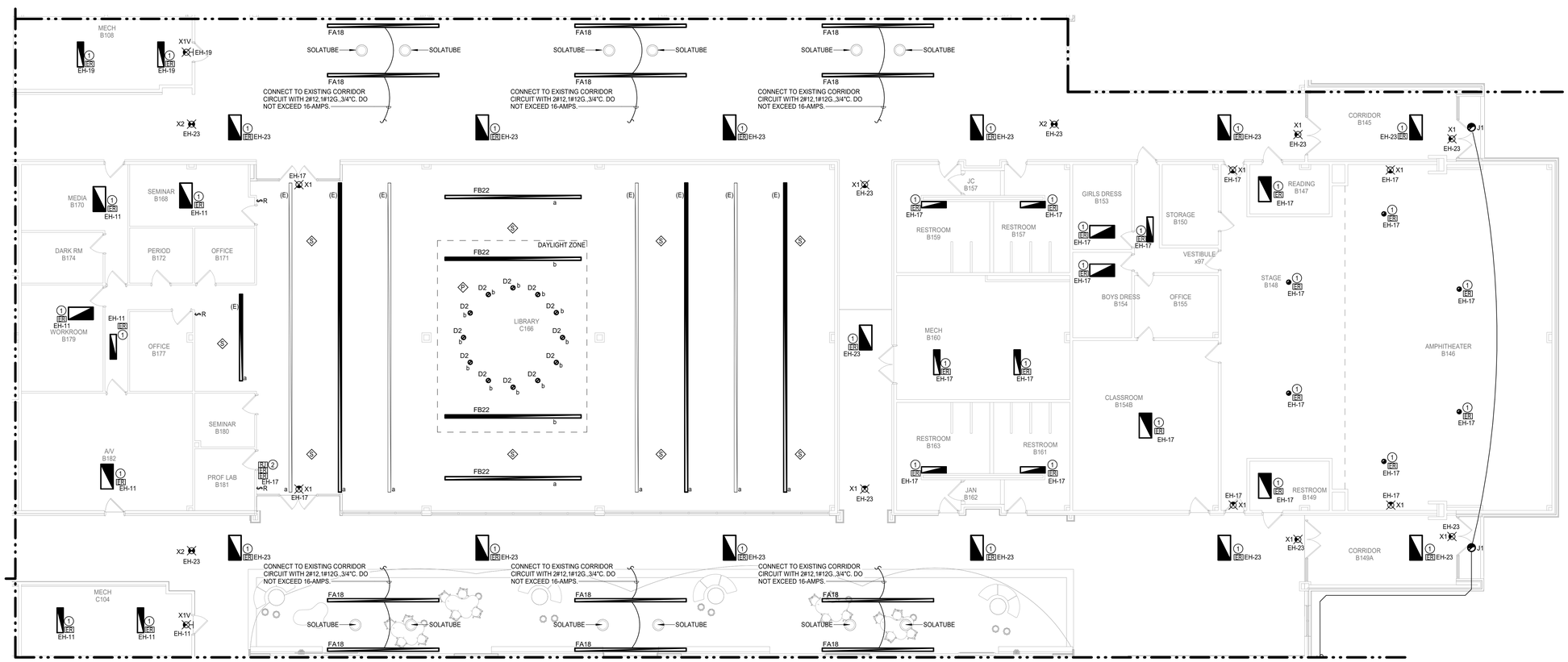

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1 ELECTRICAL LIGHTING FLOOR PLAN - RMS - SECTION C
Scale: 1/8" = 1'-0"

Date

Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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KINGWOOD, TX

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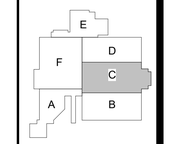
ENGINEER
STATE OF TEXAS
10-29-2025



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ELECTRICAL LIGHTING FLOOR PLAN - SECTION C

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E2.13
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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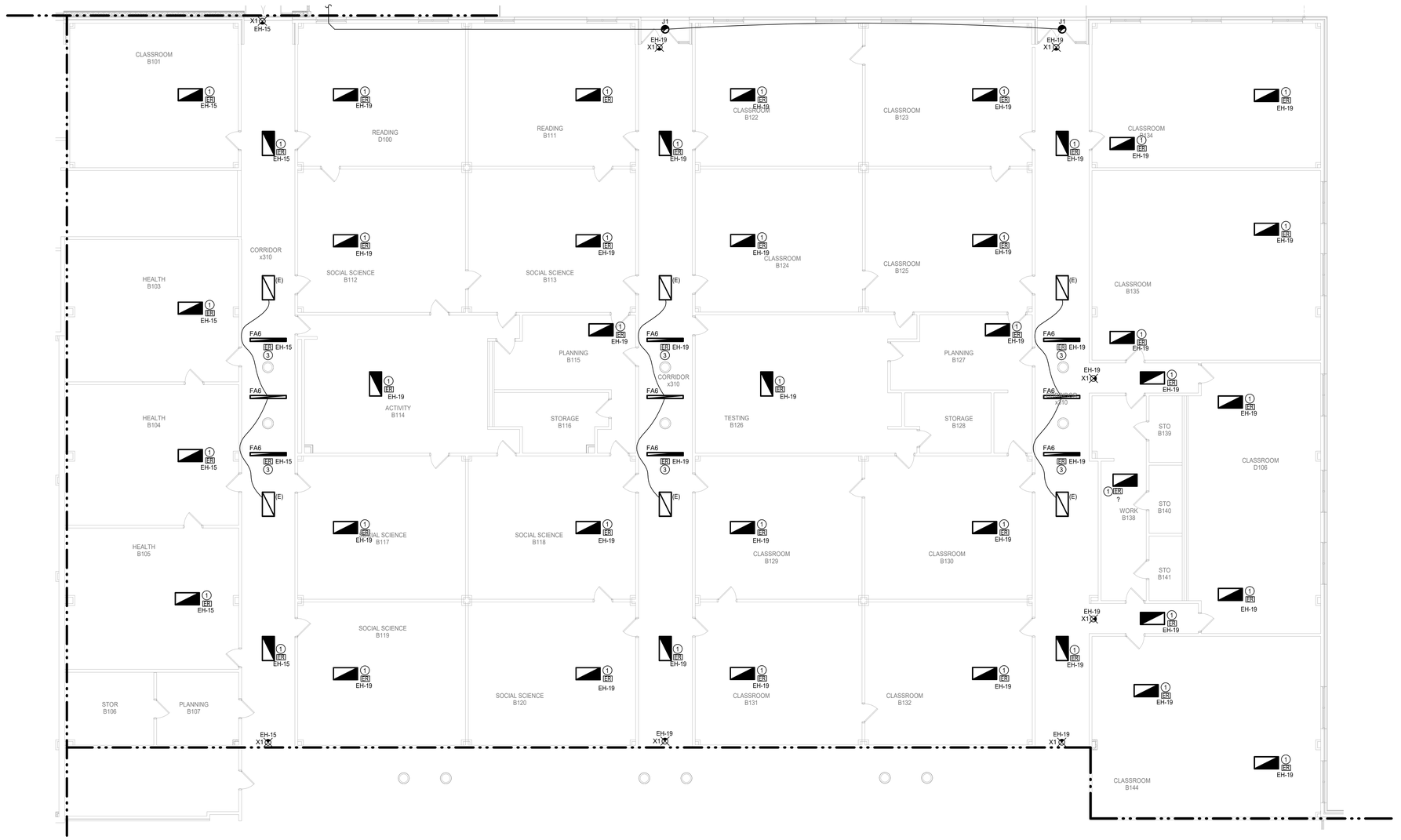

1 **ELECTRICAL LIGHTING FLOOR PLAN - RMS - SECTION D**
Scale: 1/8" = 1'-0"

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

BRADLEY KALMANS
80219
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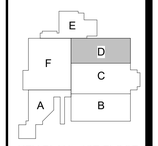
PROFESSIONAL ENGINEER
STATE OF TEXAS
10-29-2025



KEY PLAN - 1ST FLOOR
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

ELECTRICAL LIGHTING FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E2.14
Drawn By: DES	
Date: 10.29.2025	

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ELECTRICAL GENERAL NOTES:

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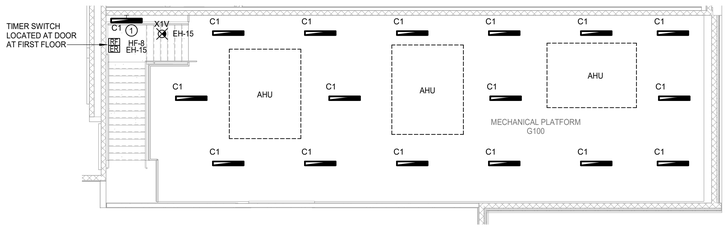
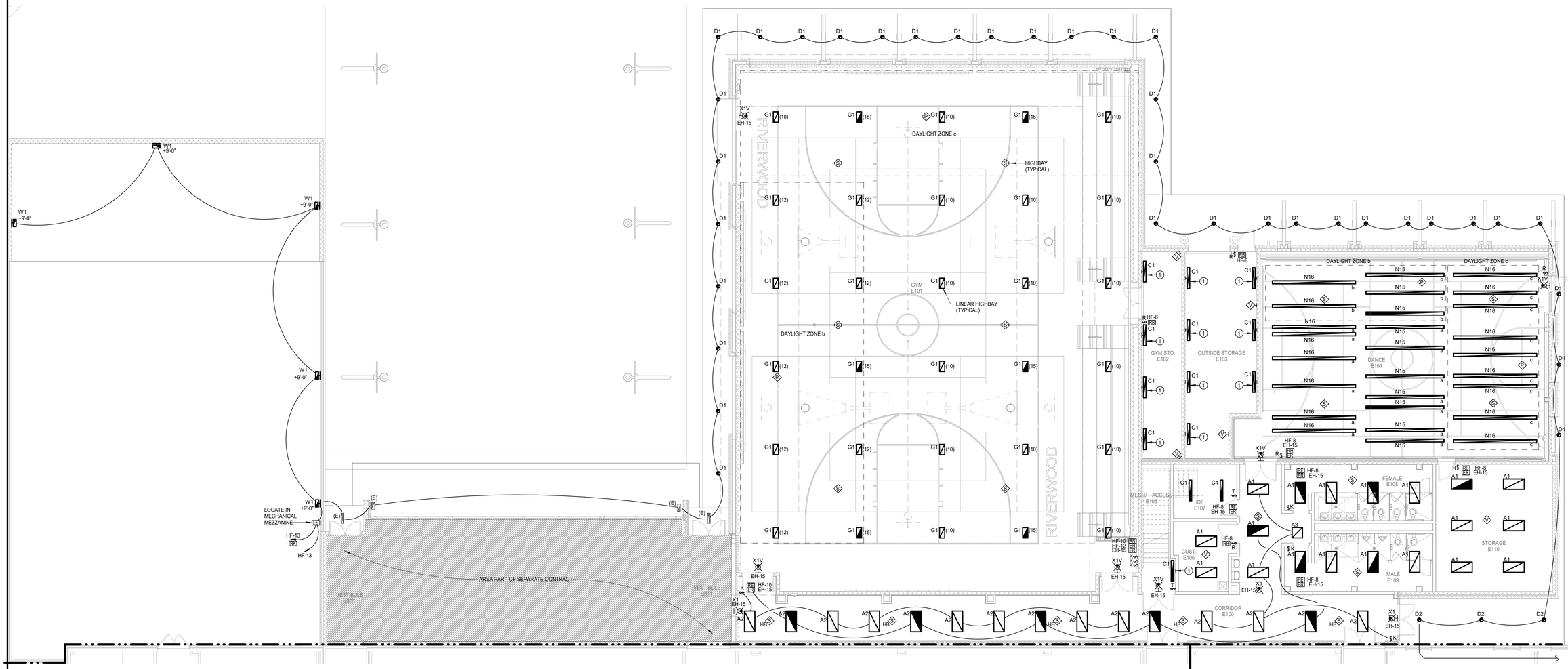
ELECTRICAL KEYED NOTES:

(1) WALL MOUNT LIGHT FIXTURE AT +9'-0" AFF.



N 2 **ELECTRICAL LIGHTING PLAN - MECH PLATFORM**
Scale: 1/8" = 1'-0"



N 1 **ELECTRICAL LIGHTING FLOOR PLAN - RMS - SECTION E**
Scale: 1/8" = 1'-0"

Revision /	Date	
3	06-06-24	CITY COMMENTS 3

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

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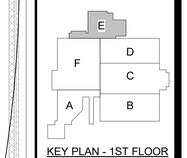
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

ELECTRICAL LIGHTING FLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E2.15
Drawn By: DES	
Date: 10.29.2025	

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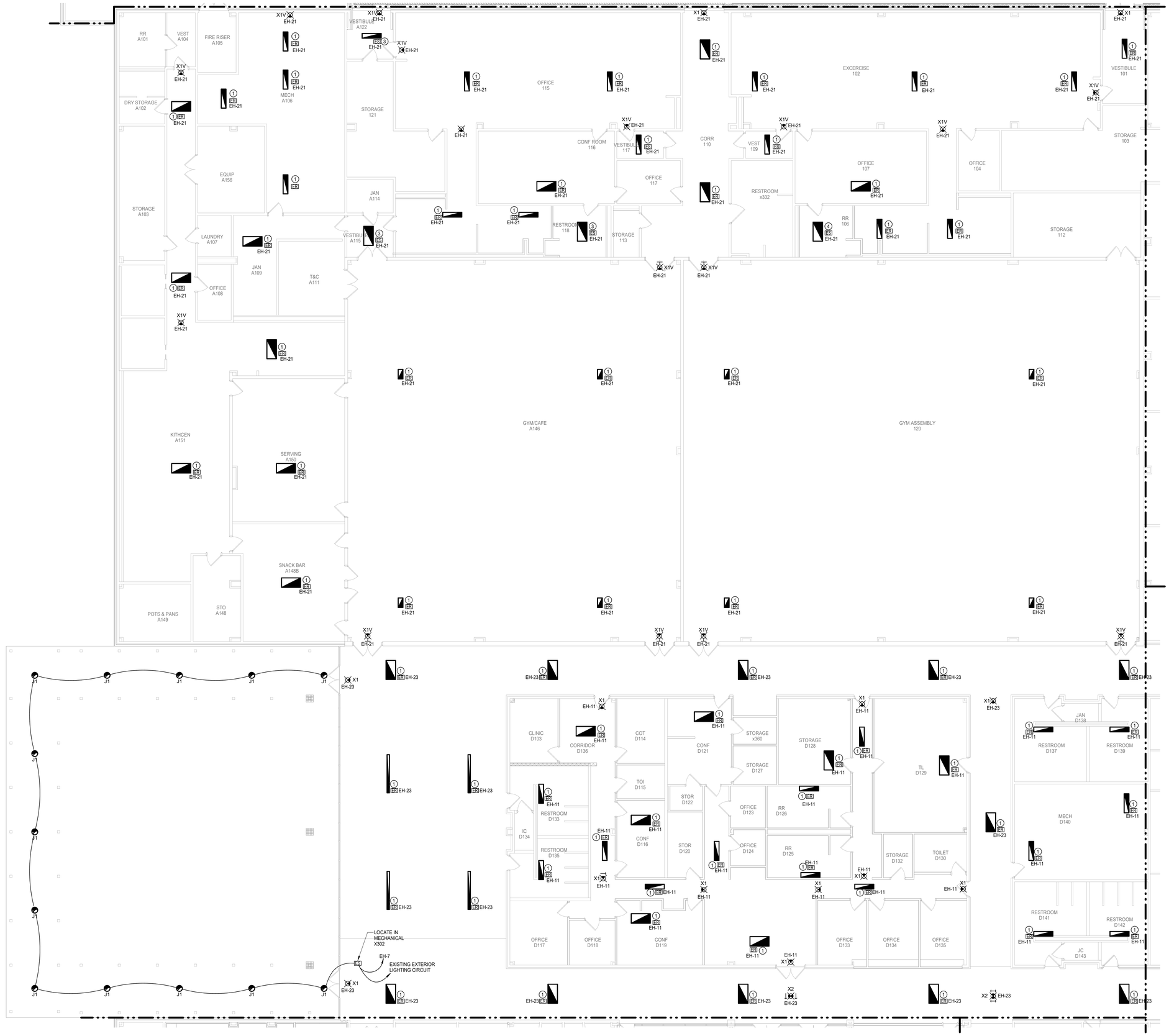

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N

1 **ELECTRICAL LIGHTING FLOOR PLAN - RMS - SECTION F**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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KINGWOOD, TX

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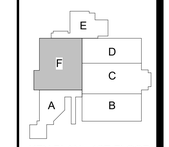

KEY PLAN - 1ST FLOOR
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ELECTRICAL LIGHTING FLOOR PLAN - SECTION F

PACKAGE | VOLUME

Job No. 1821-13-02
Drawn By: DES
Date: 10.29.2025
Sheet No. E2.16

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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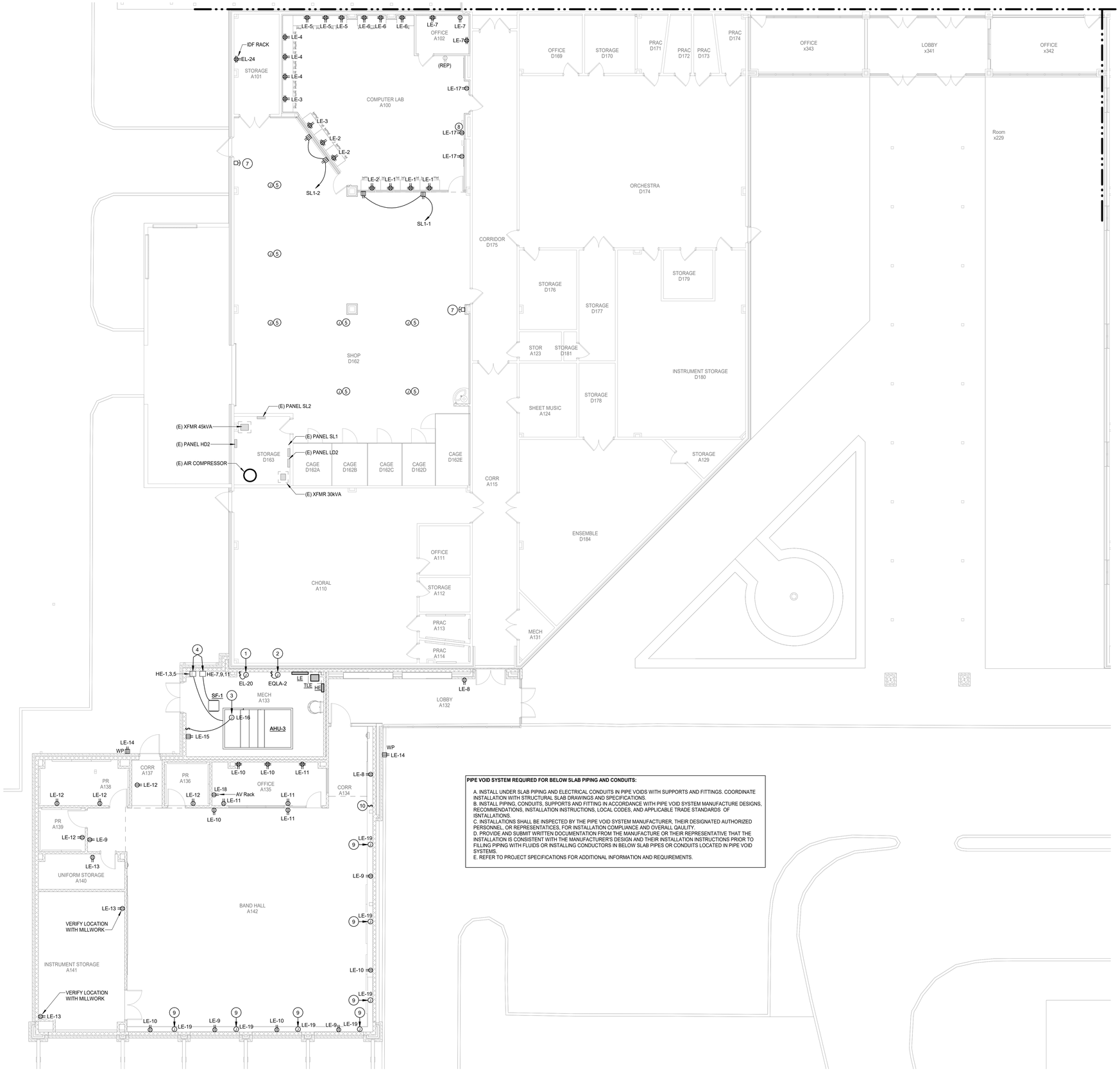


PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTING IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF ISNTALLATIONS.
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATICES, FOR INSTALLATION COMPLIANCE AND OVERALL QAULITY.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

N

1 ELECTRICAL POWER FLOOR PLAN -RMS - SECTION A

Scale: 1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

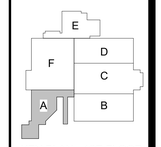
1. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF FIRE ALARM BOOSTER PANEL. VERIFY FINAL LOCATION WITH FIRE ALARM SHOP DRAWINGS AND MAKE FINAL CONNECTION.
2. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF BMCS PANEL. VERIFY FINAL LOCATION WITH BMCS SHOP DRAWINGS AND MAKE FINAL CONNECTION.
3. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.
4. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER (VFD), PROVIDED BY DIVISION 23, INSTALLED BY DIVISION 26.
5. PROVIDE 120V ELECTRIC CORD REEL MOUNTED TO BOTTOM OF STRUCTURE WITH GFCI DOUBLE DUPLEX RECEPTACLE. VERIFY EXACT LOCATION WITH OWNER PRIOR TO ROUGH-IN. CONNECT TO EXISTING CORD REEL CIRCUIT PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.
6. CONNECT TO EXISTING PANEL SL1 WITH 2#12, 1#12G, 3/4"C.
7. PROVIDE NEW EPO (EMERGENCY POWER OFF) FOR LOCAL PANEL SHUT OFF FOR SHOP EQUIPMENT. PROVIDE SWITCH WITH COVER AND KEY RESET. APPROVED MANUFACTURER: STI OR APPROVED EQUAL.
8. RECEPTACLE FOR WALL MOUNTED DISPLAY. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER.
9. PROVIDE A JUNCTION BOX FOR CONNECTION OF MOTORIZED SHADES. COORDINATE LOCATION OF LOW VOLTAGE SHADE CONTROLS WITH ARCHITECT AND MAKE ALL FINAL CONNECTIONS.
10. MOTORIZED SHADE CONTROLLER PROVIDED WITH SHADES. VERIFY EXACT LOCATION WITH ARCHITECT.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

Revision /	Date	
1	02-28-24	CITY COMMENTS 1
5	04-29-25	Addendum 3

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
82219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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ELECTRICAL POWER FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E3.11
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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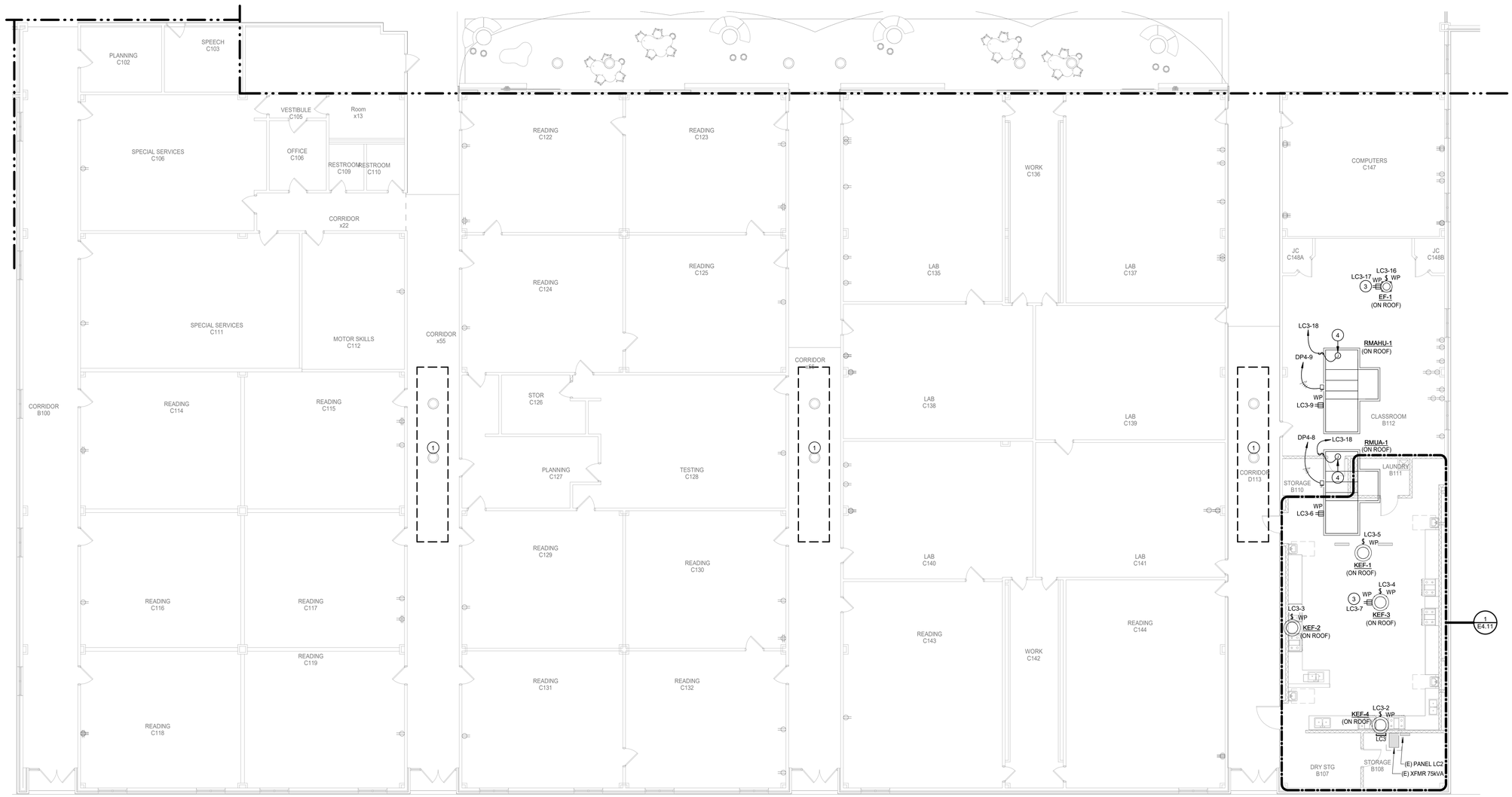
ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (5)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
2. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (5)3/4" CONDUITS AND (1)1-1/2" CONDUIT. CONTRACTOR SHALL FIELD VERIFY EXISTING.
3. PROVIDE (2)3/4" RIGID GALVANIZED CONDUITS PENETRATED THROUGH ROOF FOR RECEPTACLE WIRING AND SUPPORT PER NEC 314. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATIONS.
4. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.



N

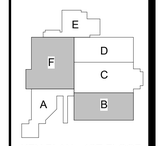
1 ELECTRICAL POWER FLOOR PLAN -RMS - SECTION B

Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-28-24	CITY COMMENTS 1
5	04-29-25	Addendum 3

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



KEY PLAN - 1ST FLOOR
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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

ELECTRICAL POWER FLOOR PLAN - SECTION B

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E3.12
Drawn By: DES	
Date: 10.29.2025	

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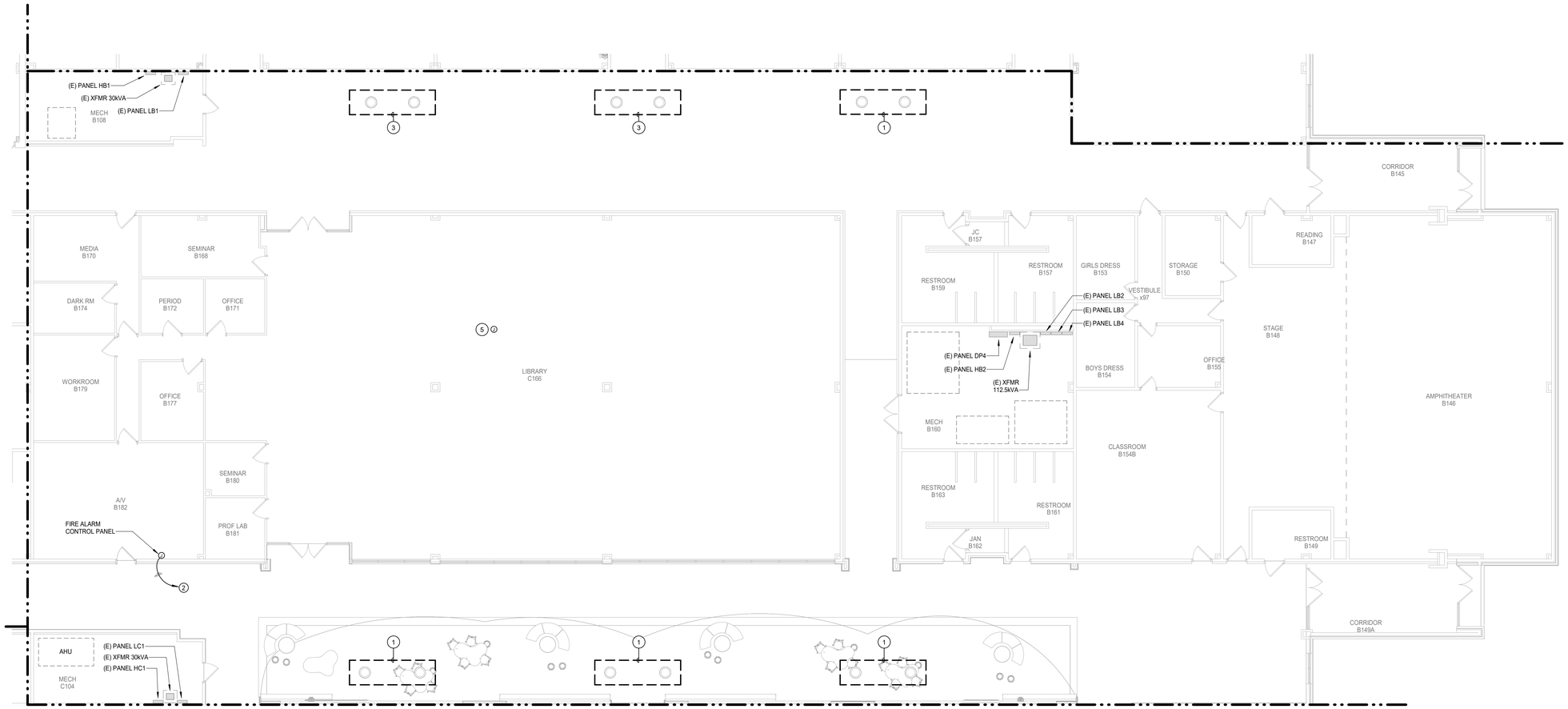
ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

1. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (5)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.
2. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (15)1/2" MC CABLE. CONTRACTOR SHALL FIELD VERIFY EXISTING.
3. CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (10)3/4" CONDUIT. CONTRACTOR SHALL FIELD VERIFY EXISTING.
4. PROVIDE (2)3/4" RIGID GALVANIZED CONDUITS PENETRATED THROUGH ROOF FOR RECEPTACLE WIRING AND SUPPORT PER NEC 314. REFER TO ARCHITECTURAL DRAWINGS FOR ROOF PENETRATIONS.
5. CONTRACTOR TO PROVIDE FLUSH MOUNTED CEILING RECEPTACLE FOR CEILING MOUNTED PROJECTOR. COORDINATE EXACT LOCATION WITH ARCHITECTOWNER AND MAKE FINAL CONNECTION.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

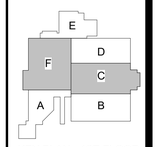


N 1 **ELECTRICAL POWER FLOOR PLAN -RMS - SECTION C**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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ELECTRICAL POWER FLOOR PLAN - SECTION C

PACKAGE | VOLUME

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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02
Drawn By: DES
Date: 10.29.2025
Sheet No. E3.13

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ELECTRICAL GENERAL NOTES:

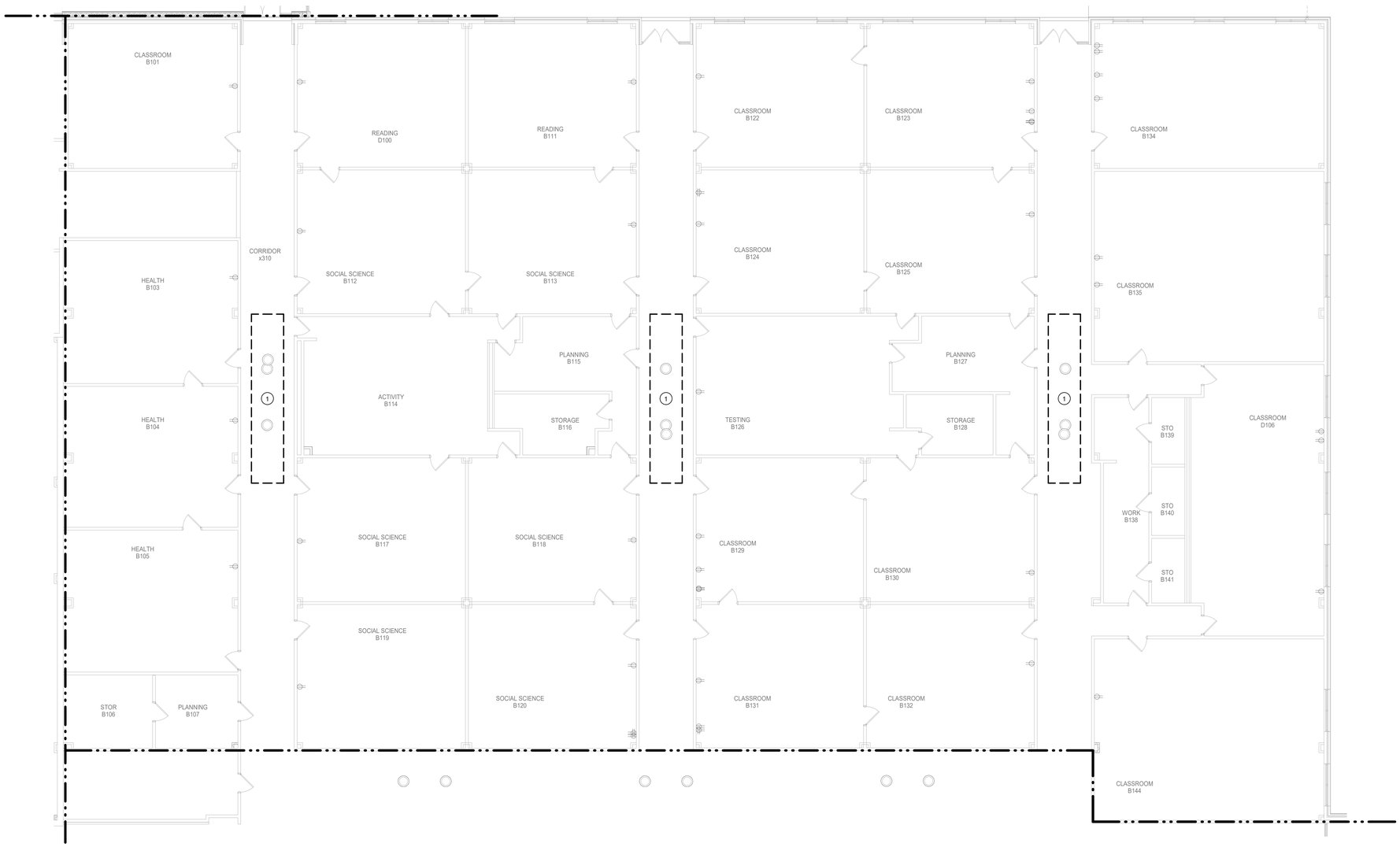
1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

(1) CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (5)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.

(2) CONTRACTOR SHALL INTERCEPT ALL EXISTING BRANCH CIRCUITS AND/OR FEEDERS IN THIS AREA AND RE-ROUTE AROUND NEW SKYLIGHT. CONTRACTOR TO EXTEND CONDUIT/WIRE AND RECONNECT TO EXISTING CIRCUITRY. TYPICAL FOR (10)3/4" CONDUITS. CONTRACTOR SHALL FIELD VERIFY EXISTING.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.



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1 **ELECTRICAL POWER FLOOR PLAN -RMS - SECTION D**
Scale: 1/8" = 1'-0"

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

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ELECTRICAL POWER FLOOR PLAN - SECTION D

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E3.14
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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PIPE VOID SYSTEM REQUIRED FOR BELOW SLAB PIPING AND CONDUITS:

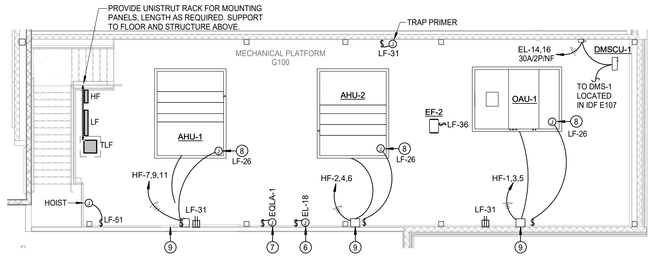
A. INSTALL UNDER SLAB PIPING AND ELECTRICAL CONDUITS IN PIPE VOIDS WITH SUPPORTS AND FITTINGS. COORDINATE INSTALLATION WITH STRUCTURAL SLAB DRAWINGS AND SPECIFICATIONS.
B. INSTALL PIPING, CONDUITS, SUPPORTS AND FITTING IN ACCORDANCE WITH PIPE VOID SYSTEM MANUFACTURE DESIGNS, RECOMMENDATIONS, INSTALLATION INSTRUCTIONS, LOCAL CODES, AND APPLICABLE TRADE STANDARDS OF ISNTALLATIONS
C. INSTALLATIONS SHALL BE INSPECTED BY THE PIPE VOID SYSTEM MANUFACTURER, THEIR DESIGNATED AUTHORIZED PERSONNEL, OR REPRESENTATICES, FOR INSTALLATION COMPLIANCE AND OVERALL QAULITY.
D. PROVIDE AND SUBMIT WRITTEN DOCUMENTATION FROM THE MANUFACTURE OR THEIR REPRESENTATIVE THAT THE INSTALLATION IS CONSISTENT WITH THE MANUFACTURER'S DESIGN AND THEIR INSTALLATION INSTRUCTIONS PRIOR TO FILLING PIPING WITH FLUIDS OR INSTALLING CONDUCTORS IN BELOW SLAB PIPES OR CONDUITS LOCATED IN PIPE VOID SYSTEMS.
E. REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

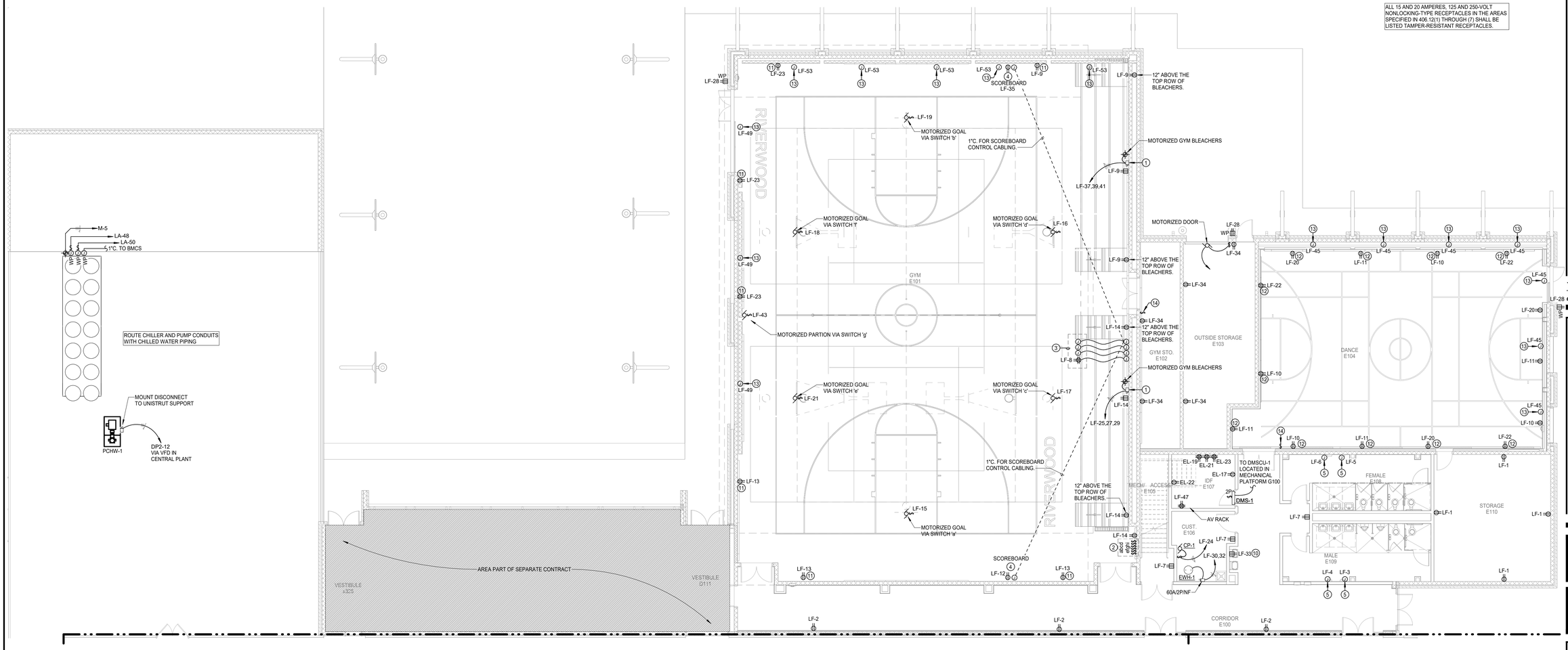
ELECTRICAL KEYED NOTES:

1. PROVIDE 60A/3P/NF DISCONNECT FOR CONNECTION OF BLEACHER CONTROL/CONTACTOR PANEL. INSTALL PER MANUFACUTER RECOMENDATIONS AND MAKE ALL FINAL CONNECTIONS TO BLEACHER CONTROL PANEL.
2. KEYED SWITCH LOCATION FOR BASKETBALL GOALS, PARTITION & BLEACHERS. PROVIDE LABEL WITH FUNCTION FOR EACH SWITCH. LOCATE SWITCHES IN RECESSED HINGED BOX WITH LOCKABLE COVER. COORDINATE KEYING AND FINAL LOCATION OF SWITCHES WITH OWNER PRIOR TO ROUGH-IN. (SWITCHES a,b,c,d,e,f,g,h,i,j,k,l,p)
3. PROPOSED SCORER'S TABLE LOCATION. MOUNT MICROPHONE, DATA, POWER, ETC. IN BASEPLATE OF BOTTOM BLEACHER. VERIFY EXACT LOCATION WITH ARCHITECT/OWNER. REFER TO DETAIL FOR ADDITIONAL INFORMATION.
4. POWER AND CONTROL DEVICES FOR SCOREBOARD. COORDINATE EXACT LOCATION OF SCOREBOARD WITH ARCHITECT PRIOR TO ROUGH-IN. REFER TO DETAIL FOR MORE INFORMATION.
5. PROVIDE JUNCTION BOX FOR CONNECTION OF ELECTRIC HAND DRYER. VERIFY EXACT LOCATION AND MAKE FINAL CONNECTION. PROVIDE WITH LOCK-OFF DEVICE AT PANEL FOR CIRCUIT BREAKER.
6. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF FIRE ALARM BOOSTER PANEL. VERIFY FINAL LOCATION WITH FIRE ALARM SHOP DRAWINGS AND MAKE FINAL CONNECTION.
7. PROVIDE JUNCTION BOX AT +54"AFF FOR CONNECTION OF BMCS PANEL. VERIFY FINAL LOCATION WITH BMCS SHOP DRAWINGS AND MAKE FINAL CONNECTION.
8. PROVIDE JUNCTION BOX FOR CONNECTION OF AIR PURIFICATION SYSTEM. COORDINATE EXACT LOCATION AND MAKE FINAL CONNECTION.
9. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER (VFD), PROVIDED BY DIVISION 23. INSTALLED BY DIVISION 26.
10. RECEPTACLE FOR DRINKING FOUNTAIN. LOCATE IN READILY ACCESSIBLE LOCATION BELOW DRINKING FOUNTAIN UNDER UPPER BASIN.
11. PROVIDE TRIM KIT TO MOUNT RECEPTACLE IN GYM PADDING. COORDINATE INSTALLATION OF RECEPTACLE WITH ARCHITECT / GYM PADDING VENDOR PRIOR TO ROUGH-IN.
12. COORDINATE INSTALLATION OF RECEPTACLE WITH ARCHITECT / MIRROR VENDOR PRIOR TO ROUGH-IN. PROVIDE WITH MATCHING MIRROR COVERPLATE.
13. PROVIDE A JUNCTION BOX FOR CONNECTION OF MOTORIZED SHADES. COORDINATE LOCATION OF LOW VOLTAGE SHADE CONTROLS WITH ARCHITECT AND MAKE ALL FINAL CONNECTIONS.
14. MOTORIZED SHADE CONTROLLER PROVIDED WITH SHADES. VERIFY EXACT LOCATION WITH ARCHITECT.



N 2 **ELECTRICAL POWER PLAN - MECH PLATFORM**
Scale: 1/8" = 1'-0"

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.



N 1 **ELECTRICAL POWER FLOOR PLAN -RMS - SECTION E**
Scale: 1/8" = 1'-0"

Revision /	Date
1	02-28-24 CITY COMMENTS 1
3	06-06-24 CITY COMMENTS 3

Project: RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS 82219 LICENSED PROFESSIONAL ENGINEER
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ELECTRICAL POWER FLOOR PLAN - SECTION E

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E3.15
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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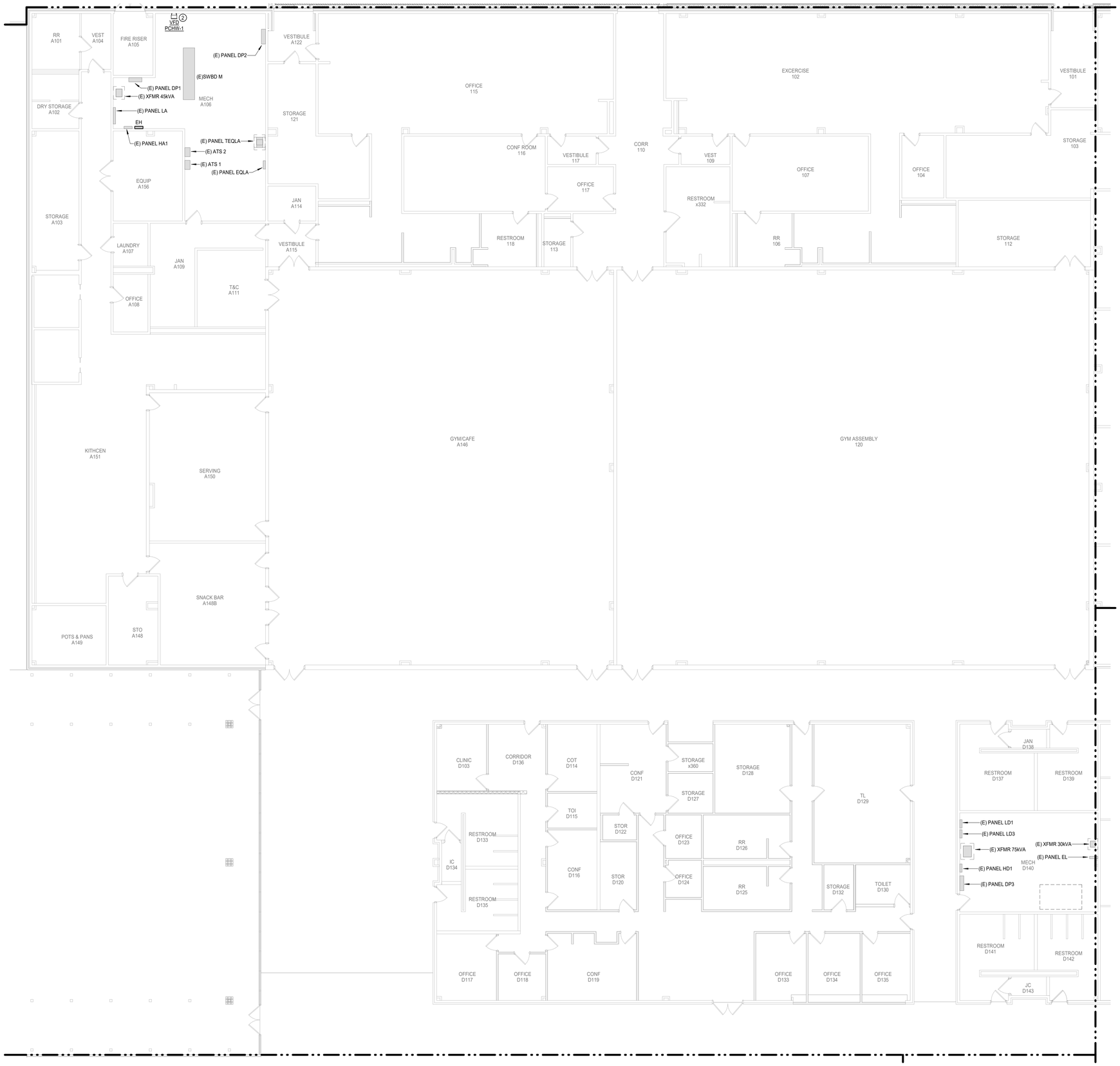

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1 **ELECTRICAL POWER FLOOR PLAN -RMS - SECTION F**
Scale: 1/8" = 1'-0"

ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. UNLESS NOTED OTHERWISE, REINSTALL ALL EXISTING LIGHT FIXTURES AND ALL CEILING MOUNTED ELECTRICAL IN NEW CEILINGS WHERE APPLICABLE. DEVICES INCLUDE BUT ARE NOT LIMITED TO: LIGHTS, EXIT SIGNS, OCCUPANCY SENSORS, ETC. REFER TO ARCHITECTURAL PLANS FOR AREAS THAT THE CEILING IS BEING REPLACED.

ELECTRICAL KEYED NOTES:

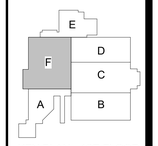
1. VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER, PROVIDE BY DIVISION 23, INSTALLED BY DIVISION 26.
2. CONNECT TO EXISTING CIRCUIT PRESERVED DURING DEMOLITION. EXTEND CONDUIT/WIRE AND MAKE FINAL CONNECTION.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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ELECTRICAL POWER FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E3.16
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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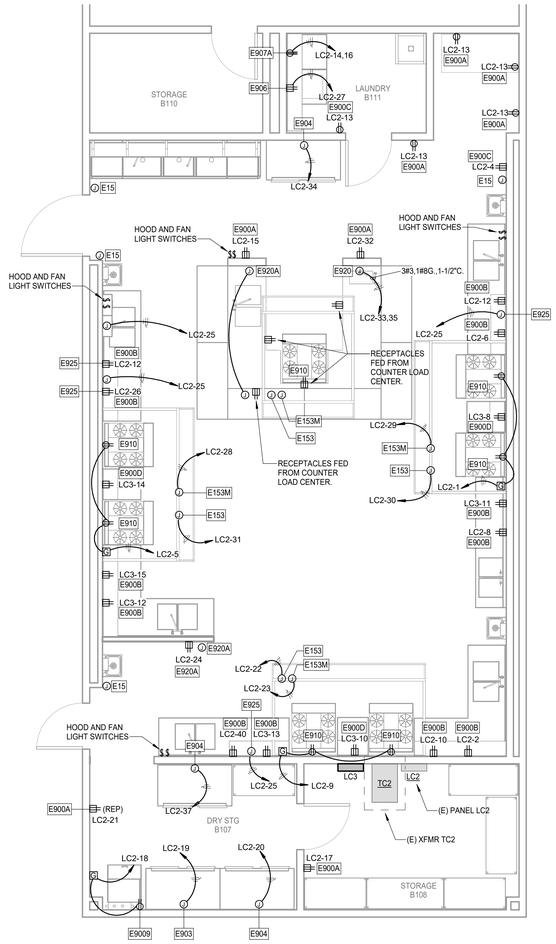
ELECTRICAL GENERAL NOTES:

1. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL SWITCHBOARDS, PANELBOARDS, TRANSFORMERS, SHALL REMAIN.
2. REFER TO FOOD SERVICE (QF-SERIES) AND TECHNOLOGY (T-SERIES) DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL DIVISION 26 SCOPE OF WORK.
3. ALL SINGLE-PHASE RECEPTACLES RATED 150-VOLTS TO GROUND OR LESS, 50-AMPERES OR LESS AND THREE-PHASE RECEPTACLES RATED 150-VOLTS TO GROUND OR LESS, 100 AMPERES OR LESS SHALL HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION IN THE KITCHEN, SERVING, AND ALL OTHER ASSOCIATED KITCHEN AREAS.
4. PROVIDE ENGRAVED SWITCH-PLATES INDICATING FUNCTION FOR ALL HOOD VENT LIGHT / EXHAUST FAN SWITCHES. COORDINATE FINAL SWITCH LOCATIONS WITH OWNER PRIOR TO ROUGH-IN.
5. REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATIONS OF EQUIPMENT AND SCHEDULES. CONTRACTOR TO PROVIDE DISCONNECT SWITCHES AND MAKE ALL FINAL CONNECTIONS TO POWER AND CONTROL EQUIPMENT.

ALL 15 AND 20 AMPERES, 125 AND 250-VOLT NONLOCKING-TYPE RECEPTACLES IN THE AREAS SPECIFIED IN 406.12(1) THROUGH (7) SHALL BE LISTED TAMPER-RESISTANT RECEPTACLES.



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1 **ELECTRICAL KITCHEN PLAN**
Scale: 1/4" = 1'-0"

FOODSERVICE ELECTRICAL SCHEDULE								
FDP ENO	FDP ECONN	FDP ELOAD	FDP EVOLT	FDP EPH	FDP ESERVICE TO	FDP ELOC	FDP EAFF	FDP EREMARKS
E15	JB	---	---	--	REMOTE FIRE PULL	WALL	48"	RE: NOTE #11 - RECESSED JB - EXTEND TO FIRE SYSTEM FOR HOOD
E153	JB	10.0A	120	1	HOOD LIGHTS	CLG	DFA	BTC
E153M	JB	10.0A	120	1	HEAT SENSOR	CLG	DFA	BTC
E900A	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	24"	---
E900B	DR	16.0A	120	1	CONVENIENCE OUTLET	WALL	47"	---
E900C	WPR	16.0A	120	1	CONVENIENCE OUTLET	WALL	18"	---
E900D	DR	16.0A	120	1	CONVENIENCE	WALL	44"	SHUNT TRIP BREAKER
E900E	JB	---	---	--	DATA CONNECTION	WALL	24"	DATA CONNECTION FOR MOBILE TEACHING DISPLAY
E900F	DR	20.0A	120	1	MOBILE TEACHING DISPLAY	WALL	24"	DEDICATED CIRCUIT
E903	JB	14.9A	120	1	FREEZER	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E904	JB	8.2A	120	1	REFRIGERATOR	WALL	90"	BTC; RE: NOTE #4 - OMIT PLUG. UNIT TO BE HARDWIRED.
E906	DR	16.0A	120	1	CLOTHES WASHER	WALL	48"	--
E907A	SR	30.0A	208	1	CLOTHES DRYER	WALL	48"	VERIFY NEMA PLUG RECEPTACLE
E909	DR	11.9A	120	1	ICE MACHINE	WALL	60"	---
E910	DR	1.0A	120	1	6 BURNER RANGE	WALL	24"	SHUNT TRIP BREAKER
E920	JB	60.0A	240	1	LOAD CENTER	WALL	24"	BTC
E920A	JB	---	---	--	DATA CONNECTION	WALL	24"	EXTEND TO FRONT OF COUNTER WITHIN COUNTER BODY
E925	JB	1.0A	120	1	FIRE PROT. SYSTEM	CLG	DFA	BTC

Revision /	Date	
1	02-28-24	CITY COMMENTS 1

Project:
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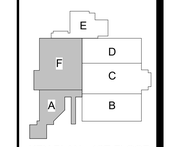

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ELECTRICAL CULINARY KITCHEN PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E4.11
Drawn By: DES	
Date: 10.29.2025	

Salas O'Brien
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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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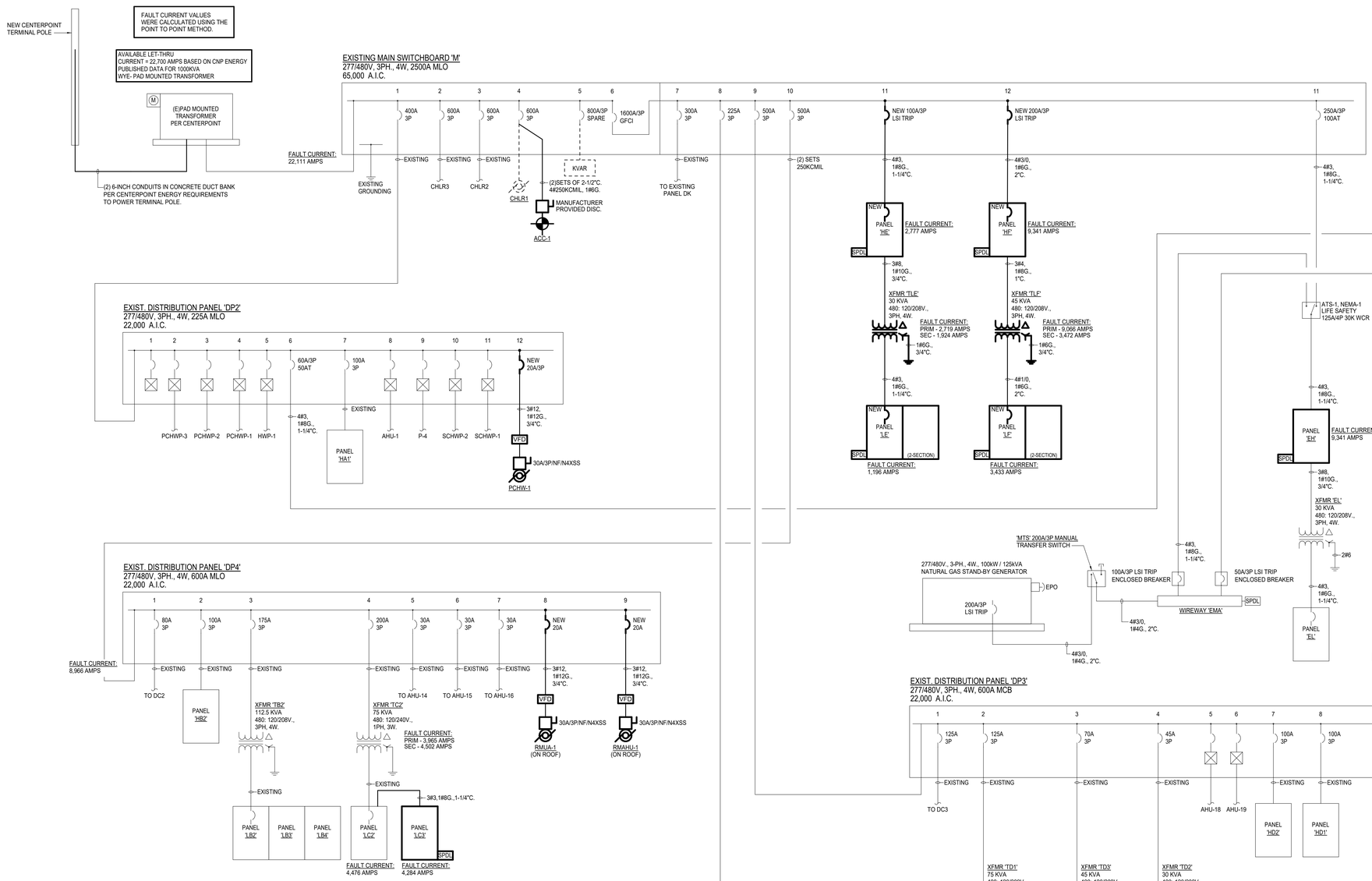

LINETYPE LEGEND

DISCONNECT AND REMOVE	– – – – – –
EXISTING TO REMAIN	———
NEW WORK	———

PANELBOARD CIRCUIT DIRECTORY:

CONTRACTOR SHALL RECORD AND/OR PRESERVE THE EXISTING CIRCUIT DIRECTORY, IF ANY, FOR THE SOLE PURPOSE UPON COMPLETION OF NEW WORK OF PRODUCING A NEW CIRCUIT DIRECTORY.

CONTRACTOR SHALL PROVIDE AS PART OF THE CONSTRUCTION DOCUMENTS A NEW, NEATLY TYPED DIRECTORY. CONTRACTOR SHALL TRACE ALL EXISTING CIRCUITS AND SHALL LEGIBLY IDENTIFY AS TO ITS CLEAR, EVIDENT, AND SPECIFIC PURPOSE OR USE, LOADS SERVED AND LOCATION AND/OR THE PANELBOARD SCHEDULE ON THE DRAWINGS. THE WORD "EXISTING" SHALL NOT BE USED ON PANELBOARD DIRECTORIES. SPARE BREAKERS ARE TO BE LISTED AS "SPARE". SPACES WITH NO BREAKERS ARE TO BE LEFT BLANK. REFER TO NEC-2017: 408.4(A)

ALL EQUIPMENT/MATERIALS TO BE INSTALLED SHALL BE LISTED AND LABELED FOR THE INTENDED USE, AND INCLUDED IN A LIST PUBLISHED BY AN APPROVED AGENCY. ONLY LISTED AND LABELED EQUIPMENT/MATERIALS SHALL BE USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING PER NEC ARTICLE 110.3(B). CITY OF HOUSTON ELECTRICAL CODE SECTION 508, AND AUTHORITY HAVING JURISDICTION REQUIREMENTS.

-EXISTING LABEL-

SERVICE EQUIPMENT AVAILABLE FAULT CURRENT LABELING:
PROVIDE A 2 x 3 INCH LABEL WITH BLUE LETTERING ON CONTRASTING BACKGROUND PERMANENTLY AFFIXED TO THE SERVICE DISCONNECT/EQUIPMENT PRIOR TO ENERGIZING THE SERVICE EQUIPMENT. THE LABEL SHALL INCLUDE THE DATE OF INSTALLATION AND THE DATE OF CALCULATION. THE DATE OF CALCULATION SHALL BE THE DATE INDICATED BY THE ENGINEER OF RECORD'S SEAL ON THE CONSTRUCTION DOCUMENT ELECTRICAL ONE-LINE DIAGRAM/RISER DRAWING. EXAMPLE:

SERVICE EQUIPMENT AVAILABLE FAULT CURRENT: 22,111 AMPS
DATE OF INSTALLATION: MM/DD/YY
DATE OF CALCULATION: 01/21/022
SWITCHBOARD M

ELECTRICAL LOAD ANALYSIS: MSB
480V,3PH.,4W

LOAD DESCRIPTION	LOAD KVA
PEAK KVA = 612.0 kVA @ 125%	765.0
LOAD REMOVED	-110.0
NEW LOAD	
LIGHTING @ 125%	39.0
RECEPTACLES (CONNECTED)	(24.3)
1ST 10KVA @ 100% (NEC 220-44)	10.0
REMAINDER @ 50% (NEC 220-44)	7.3
MISCELLANEOUS	39.6
HVAC: AHU'S, PUMPS, ETC	44.2
KITCHEN EQUIPMENT @ 65%	13.0
CHILLERS	201.6
TOTAL	1119.7

TOTAL / 480 $\sqrt{3}$ = 1347.4 AMPS
EXISTING 2500 AMP SERVICE

GENERATOR LOAD ANALYSIS
480V,3PH.,4W

LOAD DESCRIPTION	LOAD KVA
EXISTING LOAD	42.0
NEW LIGHTING @ 125%	29.1
NEW RECEPTACLES @ 100%	1.4
NEW MISCELLANEOUS @ 100%	2.0
NEW HVAC @ 100%	5.1
TOTAL CONNECTED LOAD	79.6

GENERATOR CAPACITY - 100KW X 1.25 = 125.0 KVA

1 ELECTRICAL ONE-LINE DIAGRAM
SCALE: NONE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
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KINGWOOD, TX

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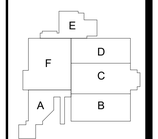

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ELECTRICAL ONE-LINE DIAGRAM

PACKAGE	VOLUME

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02	Sheet No. E5.11
Drawn By: DES	
Date: 10.29.2025	

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Branch Panel: LF

Location: MECHANICAL... **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: TLF **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 150A MCB
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Receptacles	#12	20	0.7 / 0.5			1	20	#12	Receptacles	2	
LF	3	Electric Hand Dryer	#10	30		2.5 / 2.5		1	30	#10	Electric Hand Dryer	4	LF
LF	5	Electric Hand Dryer	#10	30			2.5 / 2.5	1	30	#10	Electric Hand Dryer	6	LF
	7	Receptacles	#12	20	0.5 / 0.4			1	20	#12	Receptacles GYM E101	8	
	9	Receptacles Room E101	#12	20		0.7 / 0.7		1	20	#12	Receptacles DANCE E104	10	
	11	Receptacles DANCE E104	#12	20			0.7 / 0.5	1	20	#12	Gym Scoreboard	12	
	13	Receptacles	#12	20	0.5 / 0.7			1	20	#12	Receptacles	14	
	15	Motorized Goal	#12	20		0.5 / 0.5		1	20	#12	Motorized Goal	16	
	17	Motorized Goal	#12	20			0.5 / 0.5	1	20	#12	Motorized Goal	18	
	19	Motorized Goal	#12	20	0.5 / 0.5			1	20	#12	Receptacles DANCE E104	20	
	21	Motorized Goal	#12	20		0.5 / 0.5		1	20	#12	Receptacles DANCE E104	22	
	23	Receptacles	#12	20	1		0.5 / 0.5	1	20	#12	CP-1	24	
	25				1.3 / 1.0			1	20	#12	Lighting MECHANICAL...	26	
	27	Motorized Gym Bleachers	#12	20	3	1.3 / 0.5		1	20	#12	Receptacles	28	
	29						1.3 / 3.0	2	40	#8	EWH-1	30	
	31	Receptacles	#12	20	0.5 / 3.0							32	
	33	Drinking Fountain	#12	20	1	0.4 / 0.9		1	20	#12	Receptacles Room E103, E102	34	
	35	Gym Scoreboard	#12	20	1		0.5 / 0.3	1	20	#12	EF-2	36	
	37				1.3 / 0.0							38	
	39	Motorized Gym Bleachers	#12	20	3	1.3 / 0.0		3	30	--	SPDL	40	--
	41						1.3 / 0.0					42	
	43	Motorized Partition	#12	20	1.0 / 0.0			1	20	--	Spare	44	--
	45	Motorized Shades	#12	20	1	1.1 / 0.0		1	20	--	Spare	46	--
	47	Receptacles	#12	20	1		0.4 / 0.0	1	20	--	Spare	48	--
	49	Motorized Shades	#12	20	0.5 / 0.0			1	20	--	Spare	50	--
	51	Motorized Hoist	#12	20	1	0.5 / 0.0		1	20	--	Spare	52	--
	53	Motorized Shades	#12	20	1		0.8 / 0.0	1	20	--	Spare	54	--
	55	Motorized Door	#12	20	0.5 / 0.0			1	20	--	Spare	56	--
--	57	Spare	--	20	1	0.0 / 0.0		1	20	--	Spare	58	--
--	59	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	60	--
--	61	Spare	--	20	0.0 / 0.0			1	20	--	Spare	62	--
--	63	Spare	--	20	1	0.0 / 0.0		1	20	--	Spare	64	--
--	65	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	66	--
--	67	Spare	--	20	0.0 / 0.0			1	20	--	Spare	68	--
--	69	Spare	--	20	1	0.0 / 0.0		1	20	--	Spare	70	--
--	71	Space	--	--	1		0.0 / 0.0	1	--	--	Space	72	--
--	73	Space	--	--	0.0 / 0.0			1	--	--	Space	74	--
--	75	Space	--	--	1	0.0 / 0.0		1	--	--	Space	76	--
--	77	Space	--	--	1		0.0 / 0.0	1	--	--	Space	78	--
--	79	Space	--	--	0.0 / 0.0			1	--	--	Space	80	--
--	81	Space	--	--	1	0.0 / 0.0		1	--	--	Space	82	--
--	83	Space	--	--	1		0.0 / 0.0	1	--	--	Space	84	--
		Total Load:			13.6 kVA	14.5 kVA	15.8 kVA						
		Total Amps:			113 A	122 A	133 A						

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	6.3 kVA	100.00%	6.3 kVA		
Lighting	0.0 kVA	0.00%	0.0 kVA	**Total Conn. Load:**	43.9 kVA
Miscellaneous	28.3 kVA	100.00%	28.3 kVA	**Total Est. Demand:**	43.9 kVA
Receptacles	9.4 kVA	100.00%	9.4 kVA	**Total Conn. Current:**	122 A
				Total Est. Demand...	122 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LC2

Location: STORAGE B108 **Volts:** 120/240 Single **A.I.C. Rating:** 10,000
Supply From: **Phases:** 1 **Enclosure:** Type 1
Mounting: Surface **Wires:** 3 **Mains:** 400A MCB
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	Breaker	Wire	Circuit Description	CKT	Note
1,ST	1	Burner Range (E910)	#12	20	1	0.4 / 0.2	1	20	#12	Convenience Receipt. (E900B)	2	
--	3	- - - SHUNT TRIP - - -	--	20	1	0.0 / 1.0	1	20	#12	Convenience Receipt. (E900C)	4	
1,ST	5	Burner Range (E910)	#12	20	1	0.5 / 1.0	1	20	#12	Convenience Receipt. (E900B)	6	
--	7	- - - SHUNT TRIP - - -	--	20	1	0.0 / 0.2	1	20	#12	Convenience Receipt. (E900B)	8	
1,ST	9	Burner Rangeр (E910)	#12	20	1	0.5 / 0.2	1	20	#12	Convenience Receipt. (E900B)	10	
--	11	- - - SHUNT TRIP - - -	--	20	1	0.0 / 1.2	1	20	#12	Convenience Receipt. (E900B)	12	
1,G	13	Convenience Receipt.(E900A)	#12	20	1	0.9 / 1.6					14	1,G
1	15	Convenience Receipt.(E900A)	#12	20	1		2	30	#10	Dryer (E907A)	16	
1	17	Convenience Receipt.(E900A)	#12	20	1	0.2 / 0.3	1	20	#12	Ice Machine (9009)	18	
1,LF	19	Refrigerator (E903)	#12	20	1	0.5 / 0.5	1	20	#12	Freezer (E904)	20	LF
	21	Receptacles DRY STG B107	#12	20	1	0.2 / 0.5	1	20	#12	Hood Lights (E153)	22	
	23	Heat Sensor (E153M)	#12	20	1	0.5 / 0.2	1	20	#12	Convenience Receipt. (E920A)	24	
	25	Fire Protection System (E925)	#12	20	1	2.0 / 0.2	1	20	#12	Convenience Receipt. (E900B)	26	
	27	Clothes Washer (E906)	#12	20	1	1.5 / 0.5	1	20	#12	Heat Sensor (E153M)	28	
	29	Heat Sensor (E153M)	#12	20	1	0.5 / 0.5	1	20	#12	Hood Lights (E153)	30	
	31	Hood Lights (E153)	#12	20	1	0.5 / 0.2	1	20	#12	Convenience Receipt. (E900A)	32	
	33	Load Center (E920)	#3	100	2	7.0 / 0.5	1	20	#12	Freezer (E904)	34	LF
	35					7.0 / 3.4	2	100	1-L	PANEL LC3	36	
LF	37	Refrigerator (E904)	#12	20	1	0.5 / 2.4					38	
--	39	Spare	--	20	1	0.0 / 0.2	1	20	#12	Convenience Receipt. (E900B)	40	
--	41	Spare	--	20	1	0.0 / 0.0	1	20	--	Spare	42	--
		Total Load:				19.7 kVA	19.0 kVA					
		Total Amps:				164 A	158 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	3.1 kVA	100.00%	3.1 kVA		
Miscellaneous	22.0 kVA	100.00%	22.0 kVA	**Total Conn. Load:**	38.7 kVA
Power	0.4 kVA	100.00%	0.4 kVA	**Total Est. Demand:**	36.9 kVA
Receptacles	13.7 kVA	86.55%	11.8 kVA	**Total Conn. Current:**	161 A
				Total Est. Demand...	154 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

**Remove un-used breakers and replace with 20A/1P spare.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE
1-L - REFER TO ONE-LINE DIAGRAM

Branch Panel: LC3

Location: STORAGE B108 **Volts:** 120/240 Single **A.I.C. Rating:** 10,000
Supply From: LC2 **Phases:** 1 **Enclosure:** Type 1
Mounting: Surface **Wires:** 3 **Mains:** 400A MCB
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	Breaker	Wire	Circuit Description	CKT	Note
	1	KEF-4	#12	20	1	0.7 / 0.0	1	20	#12	Receptacles	2	
	3	KEF-2	#12	20	1	0.7 / 0.7	1	20	#12	KEF-3	4	
	5	KEF-1	#12	20	1	0.7 / 0.2	1	20	#12	Receptacles	6	
	7	Receptacles	#12	20	1	0.2 / 0.2	1	20	#12	Convenience Receptacle...	8	ST
	9	Receptacles	#12	20	1	0.2 / 0.2	1	20	#12	Convenience Receptacle...	10	
	11	Convenience Receptacle...	#12	20	1	0.2 / 0.2	1	20	#12	Convenience Receptacle...	12	
	13	Convenience Receptacle...	#12	20	1	0.2 / 0.2	1	20	#12	Convenience Receptacle...	14	
	15	Convenience Receptacle...	#12	20	1	0.2 / 0.1	1	20	#12	EF-1	16	
	17	Receptacles	#12	20	1	0.2 / 1.0	1	20	#12	Air Purification Unit	18	
--	19	Spare	--	20	1	0.0 / 0.0	1	20	--	Spare	20	--
--	21	Spare	--	20	1	0.0 / 0.0	1	20	--	Spare	22	--
--	23	Spare	--	20	1	0.0 / 0.0	1	20	--	Spare	24	--
--	25	Spare	--	20	1	0.0 / 0.0	1	20	--	Spare	26	--
--	27	Spare	--	20	1	0.0 / 0.0	1	--	--	Space	28	--
--	29	Space	--	--	1	0.0 / 0.0	1	--	--	Space	30	--
--	31	Space	--	--	0.0 / 0.0		1	--	--	Space	32	--
--	33	Space	--	--	1	0.0 / 0.0	1	--	--	Space	34	--
--	35	Space	--	--	1		1	--	--	Space	36	--
--	37	Space	--	--	0.0 / 0.0		1	--	--	Space	38	--
--	39	Space	--	--	1	0.0 / 0.0	1	--	--	Space	40	--
--	41	Space	--	--	1		1	--	--	Space	42	--
		Total Load:				3.4 kVA	2.4 kVA					
		Total Amps:				29 A	20 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	3.1 kVA	100.00%	3.1 kVA		
Miscellaneous	1.0 kVA	100.00%	1.0 kVA	**Total Conn. Load:**	5.8 kVA
Receptacles	2.0 kVA	100.00%	2.0 kVA	**Total Est. Demand:**	5.8 kVA
				Total Conn. Current:	24 A
				Total Est. Demand...	24 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

**Remove un-used breakers and replace with 20A/1P spare.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: EL

Location: MECH D140 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: TE **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 100A MCB
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
--	1	Existing Circuit	--	20	1	0.0 / 0.0		1	20	--	Spare	2	--
--	3	Existing Circuit	--	20	1		0.0 / 0.0	1	20	--	Existing Circuit	4	--
--	5	Existing Circuit	--	20	1		0.0 / 0.0	1	20	--	Existing Circuit	6	--
	7					0.0 / 0.0						8	
--	9	Spare	--	20	3		0.0 / 0.0	3	20	--	Spare	10	--
	11						0.0 / 0.0					12	
	13					0.0 / 1.1						14	
--	15	Spare	--	20	2		0.0 / 1.1	2	20	#8	DMS-1 / DMSCU-1	16	2
1,LO	17	IDF Receptacle	#8	20	1		0.2 / 0.5	1	20	#8	Fire Alarm Booster Panel	18	1,LO
1,LO	19	IDF Receptacle	#8	20	1	0.4 / 0.5		1	20	#8	Fire Alarm Booster Panel	20	1,LO
1,LO	21	IDF Receptacle	#8	20	1		0.4 / 0.2	1	20	#8	IDF Receptacle	22	1,LO
1,LO	23	IDF Receptacle	#8	20	1		0.4 / 0.4	1	20	#8	IDF Receptacle	24	1,LO
		Total Load:				1.9 kVA	1.6 kVA	1.4 kVA					
		Total Amps:				16 A	14 A	12 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	2.4 kVA	100.00%	2.4 kVA		
Miscellaneous	1.0 kVA	100.00%	1.0 kVA	**Total Conn. Load:**	5.0 kVA
Receptacles	1.8 kVA	100.00%	1.8 kVA	**Total Est. Demand:**	5.0 kVA
				Total Conn. Current:	14 A
				Total Est. Demand...	14 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.
2 - EXISTING SPARE. PROVIDE NEW BRANCH CIRCUIT.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: EQLA

Location: MECH A106 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: TEQLA **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 600A
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
1	1	Miscellaneous MECHANICAL...	--	20	1	0.5 / 0.5		1	20	#8	BMCS	2	1
--	3	Space	--	--	1		0.0 / 1.0	1	20	--	Existing Circuit	4	
--	5	Space	--	--	1		0.0 / 1.0	1	20	--	Existing Circuit	6	
	7					0.3 / 0.2						8	
	9	Existing Circuit	--	20	3		0.3 / 0.2	3	20	--	Existing Circuit	10	
	11						0.3 / 0.2					12	
	13					0.3 / 0.5						14	
	15	Existing Circuit	--	20	2		0.3 / 0.5	2	20	--	Existing Circuit	16	
	17	Existing Circuit	--	20	1		0.5 / 2.2	1	20	--	Existing Circuit	18	
	19					0.2 / 0.5		1	20	--	Existing Circuit	20	
	21	Existing Circuit	--	20	3		0.2 / 2.2	1	20	--	Existing Circuit	22	
	23						0.2 / 2.2	1	20	--	Existing Circuit	24	
		Total Load:				2.9 kVA	4.6 kVA	6.6 kVA					
		Total Amps:				24 A	41 A	57 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Miscellaneous	1.0 kVA	100.00%	1.0 kVA		
Existing Circuit	13.1 kVA	100.00%	13.1 kVA	**Total Conn. Load:**	14.1 kVA
				Total Est. Demand:	14.1 kVA
				Total Conn. Current:	39 A
				Total Est. Demand...	39 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

FEED THROUGH LUGS

Branch Panel: LE

NEW

Location: MECH A133 **Volts:** 120/208 Wye **A.I.C. Rating:** 10,000
Supply From: TLE **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 100A MCB
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Receptacles	#12	20	1	1.1 / 1.1		1	20	#12	Receptacles	2	
	3	Receptacles	#12	20	1		0.7 / 1.1	1	20	#12	Receptacles	4	
	5	Receptacles	#12	20	1		1.1 / 1.1	1	20	#12	Receptacles	6	
	7	Receptacles	#12	20	1	0.9 / 0.4		1	20	#12	Receptacles	8	
	9	Receptacles	#12	20	1		0.7 / 1.4	1	20	#12	Receptacles	10	
	11	Receptacles	#12	20	1		0.9 / 0.9	1	20	#12	Receptacles	12	
	13	Receptacles	#12	20	1	0.5 / 0.4		1	20	#12	Receptacles	14	
	15	Receptacles	#12	20	1		0.2 / 0.2	1	20	#12	Air Purification System	16	
	17	Receptacles	#12	20	1		0.5 / 0.5	1	20	#12	AV Rack	18	
	19	Motorized Shades		20	1	0.1 / 0.0		1	20	--	Spare	20	--
--	21	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	22	--
--	23	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	24	--
--	25	Spare	--	20	1	0.0 / 0.0		1	20	--	Spare	26	--
--	27	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	28	--
--	29	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	30	--
--	31	Spare	--	20	1	0.0 / 0.0		1	20	--	Spare	32	--
--	33	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	34	--
--	35	Spare	--	20	1		0.0 / 0.0	1	20	--	Spare	36	--
--	37	Spare	--	20	1	0.0 / 0.0		1	20	--	Spare	38	--
--	39	Spare	--	20	1		0.0 / 0.0	3	30	--	SPDL	40	--
--	41	Spare	--	20	1		0.0 / 0.0					42	
		Total Load:				4.4 kVA	4.3 kVA	5.0 kVA					
		Total Amps:				37 A	36 A	42 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Miscellaneous	0.8 kVA	100.00%	0.8 kVA		
Receptacles	13.0 kVA	88.58%	11.5 kVA	**Total Conn. Load:**	13.7 kVA
				Total Est. Demand:	12.2 kVA
				Total Conn. Current:	38 A
				Total Est. Demand...	34 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: HE

Location: MECH A133 **Volts:** 277/480 Wye **A.I.C. Rating:** 18,000
Supply From: M **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 100A MCB
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1					1.7 / 2.3		1	20	#12	Lighting	2	
	3	AHU-3	#10	30	3		1.7 / 1.2	1	20	#8	Exterior Lighting	4	
	5						1.7 / 0.0	1	20	--	Spare	6	--
	7					0.1 / 0.0		1	20	--	Spare	8	--
	9	SF-1	#12	20	3		0.1 / 0.0	1	20	--	Spare	10	--
	11						0.1 / 0.0	1	20	--	Spare	12	--
	13					4.4 / 0.0		1	--	--	Space	14	--
	15	XFMR TLE	1-L	50	3		4.3 / 0.0	1	--	--	Space	16	--
	17						5.0 / 0.0	1	--	--	Space	18	--
--	19	Space	--	--	1	0.0 / 0.0		1	--	--	Space	20	--
--	21	Space	--	--	1		0.0 / 0.0	1	--	--	Space	22	--
--	23	Space	--	--	1		0.0 / 0.0	1	--	--	Space	24	--
--	25	Space	--	--	1	0.0 / 0.0		1	--	--	Space	26	--
--	27	Space	--	--	1		0.0 / 0.0	1	--	--	Space	28	--
--	29	Space	--	--	1		0.0 / 0.0	1	--	--	Space	30	--
--	31	Space	--	--	1	0.0 / 0.0		1	--	--	Space	32	--
--	33	Space	--	--	1		0.0 / 0.0	1	--	--	Space	34	--
--	35	Space	--	--	1		0.0 / 0.0	1	--	--	Space	36	--
--	37	Space	--	--	1	0.0 / 0.0		1	--	--	Space	38	--
--	39	Space	--	--	1		0.0 / 0.0	3	30	--	SPDL	40	--
--	41	Space	--	--	1		0.0 / 0.0					42	
		Total Load:				8.3 kVA	7.1 kVA	6.6 kVA					
		Total Amps:				30 A	26 A	24 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	5.5 kVA	100.00%	5.5 kVA		
Lighting	3.5 kVA	125.00%	4.4 kVA	**Total Conn. Load:**	22.1 kVA
Miscellaneous	0.8 kVA	100.00%	0.8 kVA	**Total Est. Demand:**	21.5 kVA
Receptacles	13.0 kVA	88.58%	11.5 kVA	**Total Conn. Current:**	27 A
				Total Est. Demand...	26 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: HF

Location: MECHANICAL... **Volts:** 277/480 Wye **A.I.C. Rating:** 18,000
Supply From: M **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 200A MCB
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1					1.7 / 1.7						2	
	3	OAU-1	#12	20	3		1.7 / 1.7	3	30	#8	AHU-2	4	
	5						1.7 / 1.7					6	
	7					3.4 / 3.3		1	20	#12	Lighting	8	
	9	AHU-1	#8	30	3		3.4 / 3.3	1	20	#12	Lighting	10	
	11						3.4 / 1.3	1	20	#12	Lighting	12	
	13	Exterior Lighting	#12	20	1	1.4 / 0.0		1	--	--	Space	14	--
--	15	Spare	--	20	1		0.0 / 0.0	1	--	--	Space	16	--
--	17	Spare	--	20	1		0.0 / 0.0	1	--	--	Space	18	--
--	19	Spare	--	20	1	0.0 / 0.0		1	--	--	Space	20	--
--	21	Spare	--	20	1		0.0 / 0.0	1	--	--	Space	22	--
--	23	Spare	--	20	1		0.0 / 0.0	1	--	--	Space	24	--
--	25	Space	--	--	1	0.0 / 0.0		1	--	--	Space	26	--
--	27	Space	--	--	1		0.0 / 0.0	1	--	--	Space	28	--
--	29	Space	--	--	1		0.0 / 0.0	1	--	--	Space	30	--
--	31	Space	--	--	1	0.0 / 0.0		1	--	--	Space	32	--
--	33	Space	--	--	1		0.0 / 0.0	1	--	--	Space	34	--
--	35	Space	--	--	1		0.0 / 0.0	1	--	--	Space	36	--
	37					13.6 / 0.0						38	
	39	XFMR TLF	1-L	70	3		14.5 / 0.0	3	30	--	SPDL	40	--
	41						15.8 / 0.0					42	
		Total Load:				24.4 kVA	23.9 kVA	23.2 kVA					
		Total Amps:				89 A	87 A	84 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
HVAC	26.2 kVA	100.00%	26.2 kVA		
Lighting	9.2 kVA	125.00%	11.5 kVA	**Total Conn. Load:**	71.6 kVA
Miscellaneous	28.3 kVA	100.00%	28.3 kVA	**Total Est. Demand:**	73.9 kVA
Receptacles	9.4 kVA	100.00%	9.4 kVA	**Total Conn. Current:**	86 A
				Total Est. Demand...	89 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: EH

NEW

Location: MECH A106 **Volts:** 277/480 Wye **A.I.C. Rating:** 10,000
Supply From: ATS 1 **Phases:** 3 **Enclosure:** Type 1
Mounting: Surface **Wires:** 4 **Mains:** 100A MLO
Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	-	20	1	2.0 / 1.9						2	
	3	Existing Circuit	-	20	1		2.0 / 1.6	3	45	-	(E) XFMR TE	4	
	5	Existing Circuit	-	20	1		2.0 / 1.4					6	
	7	Emergency Lighting	#8	20	1	1.1 / 0.0						8	
	9	Emergency Lighting	#8	20	1		2.4 / 0.0	3	20	--	Spare	10	--
	11	Emergency Lighting	#8	20	1		2.3 / 0.0					12	
	13	Emergency Lighting	#8	20	1	3.5 / 0.0		1	--	--	Space	14	--
	15	Emergency Lighting	#8	20	1		2.6 / 0.0	1	--	--	Space	16	--
	17	Lighting

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Branch Panel: HC1

Location: MECH C104 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 18,000
Supply From: | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 400A

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit		20 1	0.3 / 0.3			1 20	--	Existing Circuit	2	
	3	Existing Circuit		20 1		0.3 / 0.3		1 20	--	Existing Circuit	4	
	5	Existing Circuit		20 1			0.3 / 0.3	1 20	--	Existing Circuit	6	
	7	Existing Circuit		20 1	0.3 / 0.3			1 20	--	Existing Circuit	8	
	9	Existing Circuit		20 1		0.3 / 0.3		1 20	--	Existing Circuit	10	
	11						0.1 / 0.2	2 30	--	Existing Circuit	12	
	13	Existing Circuit		50 3	0.1 / 0.2						14	
	15					0.1 / 0.3		1 20	--	- - - SHUNT TRIP - - -	16	
	17						0.1 / 0.0	1 --	--	Space	18	--
	19	Existing Circuit		50 3	0.1 / 0.1						20	
	21					0.1 / 0.1		3 90	--	Existing Circuit	22	
--	23	Space	--	-- 1			0.0 / 0.1				24	
--	25	Space	--	-- 1	0.0 / 0.0			1 --	--	Space	26	--
--	27	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	28	--
--	29	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	30	--
--	31	Space	--	-- 1	0.0 / 0.0			1 --	--	Space	32	--
--	33	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	34	--
--	35	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	36	--
--	37	Space	--	-- 1	0.0 / 0.0			1 --	--	Space	38	--
--	39	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	40	--
--	41	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	42	--
				Total Load:	1.7 kVA	1.8 kVA	1.1 kVA					
				Total Amps:	6 A	7 A	4 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Existing Circuit	4.5 kVA	100.00%	4.5 kVA		
				Total Conn. Load:	4.5 kVA
				Total Est. Demand:	4.5 kVA
				Total Conn. Current:	5 A
				Total Est. Demand...	5 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: HD1

Location: CORRIDOR x310 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 18,000
Supply From: | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Recessed | **Wires:** 4 | **Mains:** 125A MLO

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	2	
	3	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	4	
	5	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	6	
	7	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	8	
	9	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	10	
	11	Existing Circuit	--	20 1			0.3 / 0.0	1 20	--	Spare	12	--
	13	Existing Circuit	--	20 1	0.3 / 0.1						14	
--	15	Space	--	-- 1		0.0 / 0.1		3 20	--	Existing Circuit	16	
--	17	Space	--	-- 1			0.0 / 0.1				18	
	19	Existing Circuit	--	20 1	0.3 / 0.1						20	
--	21	Space	--	-- 1		0.0 / 0.1		3 20	--	Existing Circuit	22	
--	23	Space	--	-- 1			0.0 / 0.1				24	
				Total Load:	2.0 kVA	1.4 kVA	1.1 kVA					
				Total Amps:	7 A	5 A	4 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Existing Circuit	4.5 kVA	100.00%	4.5 kVA		
				Total Conn. Load:	4.5 kVA
				Total Est. Demand:	4.5 kVA
				Total Conn. Current:	5 A
				Total Est. Demand...	5 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LC1

Location: MECH C104 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 400A

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	0.3 / 0.2			2 20	--	Existing Circuit	2	
	3	Existing Circuit	--	20 1		0.3 / 0.2					4	
	5	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	6	
	7	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	8	
	9	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	10	
	11	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	12	
	13	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	14	
	15	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	16	
	17	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	18	
	19	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	20	
	21	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	22	
	23	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	24	
--	25	Space	--	-- 1	0.0 / 0.3			1 20	--	Existing Circuit	26	
	27	Existing Circuit	--	20 1		0.3 / 0.2		2 20	--	Existing Circuit	28	
	29	Existing Circuit	--	20 1			0.3 / 0.2				30	
	31	Existing Circuit	--	30 1	0.3 / 0.0			1 --	--	Space	32	--
	33	Existing Circuit	--	30 1		0.3 / 0.0		1 --	--	Space	34	--
--	35	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	36	--
--	37	Space	--	-- 1	0.0 / 0.0			1 --	--	Space	38	--
--	39	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	40	--
--	41	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	42	--
	43				0.1 / 0.0			1 --	--	Space	44	--
	45	Main	--	100 3		0.1 / 0.0		1 --	--	Space	46	--
	47						0.1 / 0.0	1 --	--	Space	48	--
				Total Load:	3.0 kVA	3.1 kVA	3.0 kVA					
				Total Amps:	25 A	26 A	25 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Existing Circuit	9.0 kVA	100.00%	9.0 kVA		
				Total Conn. Load:	9.0 kVA
				Total Est. Demand:	9.0 kVA
				Total Conn. Current:	25 A
				Total Est. Demand...	25 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LD3

Location: CORRIDOR x310 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Recessed | **Wires:** 4 | **Mains:** 400A MCB

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	3.0 / 3.0			1 20	--	Existing Circuit	2	
	3	Existing Circuit	--	20 1		3.0 / 3.0		1 20	--	Existing Circuit	4	
	5	Existing Circuit	--	20 1			3.0 / 3.0	1 20	--	Existing Circuit	6	
	7	Existing Circuit	--	20 1	3.0 / 3.0			1 20	--	Existing Circuit	8	
	9	Existing Circuit	--	20 1		3.0 / 3.0		1 20	--	Existing Circuit	10	
	11	Existing Circuit	--	20 1			3.0 / 3.0	1 20	--	Existing Circuit	12	
	13	Existing Circuit	--	20 1	3.0 / 3.0			1 20	--	Existing Circuit	14	
	15	Existing Circuit	--	20 1		3.0 / 3.0		1 20	--	Existing Circuit	16	
	17	Existing Circuit	--	20 1			3.0 / 3.0	1 20	--	Existing Circuit	18	
	19	Existing Circuit	--	20 1	3.0 / 3.0			1 20	--	Existing Circuit	20	
	21	Existing Circuit	--	20 1		3.0 / 3.0		1 20	--	Existing Circuit	22	
	23	Existing Circuit	--	20 1			3.0 / 3.0	1 20	--	Existing Circuit	24	
	25	Existing Circuit	--	20 1	3.0 / 3.0			1 20	--	Existing Circuit	26	
	27	Existing Circuit	--	20 1		3.0 / 1.5		2 20	--	Existing Circuit	28	
	29	Existing Circuit	--	20 1			3.0 / 1.5				30	
	31	Existing Circuit	--	20 2	1.5 / 0.0			1 --	--	Space	32	--
	33					1.5 / 0.0		1 --	--	Space	34	--
	35	Existing Circuit	--	20 1			3.0 / 0.0	1 --	--	Space	36	--
	37	Existing Circuit	--	20 1	3.0 / 0.0			1 --	--	Space	38	--
	39	Existing Circuit	--	20 1		3.0 / 0.0		1 --	--	Space	40	--
	41	Existing Circuit	--	20 1			3.0 / 0.0	1 --	--	Space	42	--
				Total Load:	34.5 kVA	33.0 kVA	34.5 kVA					
				Total Amps:	289 A	275 A	289 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Existing Circuit	102.0 kVA	100.00%	102.0 kVA		
				Total Conn. Load:	102.0 kVA
				Total Est. Demand:	102.0 kVA
				Total Conn. Current:	283 A
				Total Est. Demand...	283 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: HB1

Location: MECH B108 | **Volts:** 277/480 Wye | **A.I.C. Rating:** 18,000
Supply From: | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Recessed | **Wires:** 4 | **Mains:** 400A

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	0.3 / 0.3			1 20		Existing Circuit	2	
	3	Existing Circuit	--	20 1		0.3 / 0.3					4	
	5	Existing Circuit	--	20 1			0.3 / 0.3	1 20		Existing Circuit	6	
	7	Existing Circuit	--	20 1	0.3 / 0.3			1 20		Existing Circuit	8	
	9	Existing Circuit	--	20 1		0.3 / 0.3		1 20		Existing Circuit	10	
	11	Existing Circuit	--	20 1			0.3 / 0.3	1 20		Existing Circuit	12	
	13	Existing Circuit	--	20 1	0.3 / 0.3			1 20		Existing Circuit	14	
	15	Existing Circuit	--	20 1		0.3 / 0.0		1 --	--	Space	16	--
	17	Existing Circuit	--	20 1			0.3 / 0.0	1 --	--	Space	18	--
	19	Existing Circuit	--	20 1	0.3 / 0.0			1 --	--	Space	20	--
--	21	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	22	--
--	23	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	24	--
--	25	Space	--	-- 1	0.0 / 0.0			1 --	--	Space	26	--
--	27	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	28	--
--	29	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	30	--
--	31	Space	--	-- 1	0.0 / 0.0			1 --	--	Space	32	--
--	33	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	34	--
--	35	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	36	--
--	37	Space	--	-- 1	0.0 / 0.0			1 --	--	Space	38	--
--	39	Space	--	-- 1		0.0 / 0.0		1 --	--	Space	40	--
--	41	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	42	--
				Total Load:	2.1 kVA	1.5 kVA	1.5 kVA					
				Total Amps:	8 A	5 A	5 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Existing Circuit	5.1 kVA	100.00%	5.1 kVA		
				Total Conn. Load:	5.1 kVA
				Total Est. Demand:	5.1 kVA
				Total Conn. Current:	6 A
				Total Est. Demand...	6 A

Notes:

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LA

Location: MECH A106 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 400A

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	0.3 / 0.2			2 20	--	Existing Circuit	2	
	3	Existing Circuit	--	20 1		0.3 / 0.2					4	
	5	Existing Circuit	--	20 1			0.3 / 0.2	2 20	--	Existing Circuit	6	
--	7	Space	--	-- 1	0.0 / 0.2						8	
--	9	Space	--	-- 1		0.0 / 0.2		2 20	--	Existing Circuit	10	
	11	Existing Circuit	--	20 1			0.3 / 0.2				12	
	13	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	14	
	15	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	16	
	17	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	18	
	19	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	20	
	21	Existing Circuit	--	20 1		0.3 / 0.3		1 21	--	Existing Circuit	22	
--	23	Space	--	-- 1			0.0 / 0.3	1 20	--	Existing Circuit	24	
--	25	Space	--	-- 1	0.0 / 0.3			1 20	--	Existing Circuit	26	
	27	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	28	
	29	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	30	
	31	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	32	
--	33	Space	--	-- 1		0.0 / 0.3		1 20	--	Existing Circuit	34	
	35	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	36	
	37	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	38	
	39	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	40	
	41	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	42	
	43	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	44	
	45	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	46	
	47	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	48	
	49	Existing Circuit	--	20 1	0.3 / 0.5			1 20	--	Miscellaneous	50	1
--	51	Space	--	-- 1		0.0 / 0.3		1 20	--	Existing Circuit	52	
--	53	Space	--	-- 1			0.0 / 0.0	1 --	--	Space	54	--
	55				0.1 / 0.0			1 --	--	Space	56	--
	57	Existing Circuit	--	20 3		0.1 / 0.0		1 --	--	Space	58	--
	59						0.1 / 0.0	1 --	--	Space	60	--
	61	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	62	
	63	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	64	
	65	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	66	
--	67	Space	--	-- 1	0.0 / 0.3			1 20	--	Existing Circuit	68	
	69	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	70	
	71	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	72	
	73	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	74	
	75	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	76	
	77	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	78	
	79	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	80	
	81	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	82	
	83	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	84	
	85	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	86	
	87	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	88	
	89	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	90	
	91	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	92	
	93	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	94	
	95	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	96	
	97	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	98	
	99	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	100	
	101	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	102	
	103	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	104	
	105	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	106	
	107	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	108	
	109	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	110	
	111	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	112	
	113	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	114	
	115	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	116	
	117	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	118	
	119	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	120	
	121	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	122	
	123	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	124	
	125	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	126	
	127	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	128	
	129	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	130	
	131	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	132	
				Total Load:	11.7 kVA	11.5 kVA	11.7 kVA					
				Total Amps:	98 A	96 A	98 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Miscellaneous	1.0 kVA	100.00%	1.0 kVA		
Existing Circuit	33.9 kVA	100.00%	33.9 kVA		
				Total Conn. Load:	34.9 kVA
				Total Est. Demand:	34.9 kVA
				Total Conn. Current:	97 A
				Total Est. Demand...	97 A

Notes:
1 - PROVIDE NEW CIRCUIT BREAKER.

Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Branch Panel: LB1

Location: MECH B108 | **Volts:** 120/208 Wye | **A.I.C. Rating:** 10,000
Supply From: | **Phases:** 3 | **Enclosure:** Type 1
Mounting: Surface | **Wires:** 4 | **Mains:** 400A

Phase in kVA

Note	CKT	Circuit Description	Wire	Breaker	A	B	C	Breaker	Wire	Circuit Description	CKT	Note
	1	Existing Circuit	--	20 1	0.3 / 0.2			2 20	--	Existing Circuit	2	
	3	Existing Circuit	--	20 1		0.3 / 0.2					4	
	5	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	6	
	7	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	8	
	9	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	10	
	11	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	12	
	13	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	14	
	15	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	16	
	17	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	18	
	19	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	20	
	21	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	22	
	23	Existing Circuit	--	20 1			0.3 / 0.3	1 20	--	Existing Circuit	24	
	25	Existing Circuit	--	20 1	0.3 / 0.3			1 20	--	Existing Circuit	26	
	27	Existing Circuit	--	20 1		0.3 / 0.3		1 20	--	Existing Circuit	28	
	29	Existing Circuit	--	20 1			0.3 / 0.1				30	
	31	Existing Circuit	--	20 1	0.3 / 0.1			3 20	--	Existing Circuit	32	
	33	Existing Circuit	--	20 1		0.3 / 0.1					34	
	35	Existing Circuit	--	90 2	0.2 / 0.1						36	
	37					0.2 / 0.1		3 20	--	Existing Circuit	38	
--	39	Space	--	-- 1		0.0 / 0.1					40	
	41	Existing Circuit	--	20 1			0.3 / 0.0	1 --	--	Space	42	--
				Total Load:	3.5 kVA	3.4 kVA	3.4 kVA					
				Total Amps:	29 A	28 A	28 A					

Load Classification	Connected Load	Demand Factor	Estimated...	Panel Totals	
Existing Circuit	10.2 kVA	100.00%	10.2 kVA		
				Total Conn. Load:	10.2 kVA
				Total Est. Demand:	10.2 kVA
				Total Conn. Current:	28 A
				Total Est. Demand...	28 A

Notes:

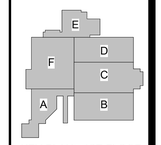
Abbreviations:
G - PROVIDE GFCI CIRCUIT BREAKER
LF - PROVIDE PERMANENT LOCK-OFF DEVICE
LO - PROVIDE PERMANENT LOCK-ON DEVICE

Date

Revision /

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
60219
LICENSED
PROFESSIONAL ENGINEER
10-29-2025



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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

ELECTRICAL PANEL SCHEDULES

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. E6.12
Drawn By: DES	
Date: 10.29.2025	

10/28/2025 2:19:15 PM
Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENOV/1821-13-01_02 RIVERWOOD MS ADD & RENO_MEP7.rvt

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LIGHTING FIXTURE SCHEDULE

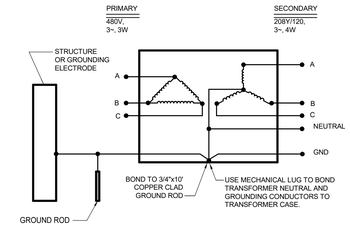
Type	Manufacturer	Model	Mounting	Driver / Light Engine: Type/Lumens	Color Temperature	CRI	Voltage	Input Wattage	Remarks
A1	METALUX	24FP4740C	RECESSED	LED / 4700 LUMENS	4000 K	80+	277 V	47 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
A2	METALUX	24FP6440C	RECESSED	LED / 6400 LUMENS	4000 K	80+	277 V	60 W	2x4 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
A3	METALUX	22FP3240C	RECESSED	LED / 3200 LUMENS	4000 K	80+	277 V	30 W	2x2 FLAT PANEL, OPAQUE ACRYLIC LENS, 0-10V DIMMING, DLC LISTED.
B8	CORELITE	RZL-NL-40L-8-40L840-1D-UNV-STD-W-AC4 8-8FT	SUSPENDED	LED / 8000 LUMENS	4000 K	80+	277 V	70 W	8-FOOT ARCHITECTURAL LINEAR, FROSTED PRIMATIC LENS, AIRCRAFT CABLE, DLC LISTED.
C1	METALUX	4SNLED-LD5-41SLLW-UNV-L840-CD-1-U + WG/SNF-4FT + AYC-CHAIN/SET	SURFACE / PENDANT	LED / 4100 LUMENS	3200 K	80+	277 V	35 W	4-FOOT STRIP, FROSTED LENS, WIREGUARD, 0-10V DIMMING, CHAIN HANG KIT, DLC LISTED.
C2	METALUX	4SNLED-LD5-41SLLW-UNV-L840-CD-1-U	SURFACE	LED / 4100 LUMENS	4000 K	80+	277 V	35 W	4-FOOT STRIP, FROSTED LENS, 0-10V DIMMING, DLC LISTED.
D1	HALO	HC620D010-HM60525840-61WDH	RECESSED	LED / 2000 LUMENS	4000 K	80+	277 V	21 W	6-INCH OPEN DOWNLIGHT, WIDE BEAM, SPECULAR CLEAR TRIM, ENERGY STAR LISTED.
D2	HALO	HC615D010-HM60525840-61WDH	RECESSED	LED / 1500 LUMENS	4000 K	80+	277 V	15 W	6-INCH OPEN DOWNLIGHT, WIDE BEAM, SPECULAR CLEAR TRIM, ENERGY STAR LISTED.
FA6	NEO-RAY	S124DR-S575D840-ETG-6FO-1UDD-F-W	RECESSED	LED / 575 LU/FT	4000 K	80+	277 V	29 W	6-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
FA12	NEO-RAY	S124DR-S575D840-ETG-12FO-1UDD-F-W	RECESSED	LED / 575 LU/FT	4000 K	80+	277 V	58 W	12-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
FA18	NEO-RAY	S124DR-S575D840-ETG-18FO-1UDD-F-W	RECESSED	LED / 575 LU/FT	4000 K	80+	277 V	87 W	18-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
FB22	NEO-RAY	S124DR-S795D840-ETG-22FO-1UDD-F-W	RECESSED	LED / 795 LU/FT	4000 K	80+	277 V	149 W	22-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
G1	METALUX	LHBS=1824-UNV-L84050-U + LHBS-WG14	SURFACE	LED / 18000 LUMENS	4000 K	80+	277 V	160 W	LINEAR HIGH BAY, DIFFUSED LENS, 0-10V DIMMING, WIREGUARD, DLC LISTED.
J1	FAIL-SAFE	TRO15-LD4-30W-40-OPL-BK-UNV-ED-C1	RECESSED	LED / 2125 LUMENS	4000 K	80+	277 V	30 W	6-INCH OPEN DOWNLIGHT, WIDE BEAM, SPECULAR CLEAR TRIM, ENERGY STAR LISTED.
L1	ALW	L3.5SMBWL-S4-LOW-80-4000K-EXT/F-SW-UNV-END-FEED	SURFACE	LED 635 LU/FT	4000 K	90+	277 V	25 W	4-FOOT WET LOCATION LINEAR, LOW PROFILE, DIFFUSE LENS, EXTRUDED ALUMINUM, END FEED,MOUNT IN UPPER CAVITY OF AVADEK CANOPY.
N15	NEO-RAY	S124DR-S350D840-ETG-15FO-1UDD-F-W	RECESSED	LED / 290 LU/FT	4000 K	80+	277 V	45 W	15-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
N16	NEO-RAY	S124DR-S350D840-ETG-16FO-1UDD-F-W	RECESSED	LED / 290 LU/FT	4000 K	80+	277 V	48 W	16-FOOT LINEAR SLOT, SATIN FLUSH LENS, 0-10V DIMMING, WHITE FINISH.
W1	McGRAW EDISON	IST-SA1-1000-740-U-T4W-BK	WALL	LED / 7089 LUMENS	4000 K	70+	277 V	60 W	ARCHITECTURAL WALLPACK, FORWARD THROW DISTRIBUTION, FULL CUT OFF, DLC LISTED. LIGHT SQUARE TRIM PLATE TO MATCH HOUSING FINISH. COLOR SELECTED BY ARCHITECT.
X1	SURE-LITES	EUX6RWH	UNIVERSAL	LED		-	277 V	1 W	SINGLE-FACED EDGE-LIT EXIT SIGN, WHITE HOUSING, RED LETTERING, MIRROR BACKGROUND. PROVIDE CHEVRON DIRECTIONAL ARROWS PER PLANS OR AS DIRECTED BY AHJ.
X1V	SURE-LITES	UX61WH	UNIVERSAL	LED		-	277 V	1 W	SINGLE-FACED VANDAL RESISTANT EXIT SIGN, WHITE HOUSING, RED LETTERING. PROVIDE CHEVRON DIRECTIONAL ARROWS PER PLANS OR AS DIRECTED BY AHJ.
X2	SURE-LITES	EUX6RWH	UNIVERSAL	LED		-	277 V	1 W	SINGLE-FACED EDGE-LIT EXIT SIGN, WHITE HOUSING, RED LETTERING, MIRROR BACKGROUND. PROVIDE CHEVRON DIRECTIONAL ARROWS PER PLANS OR AS DIRECTED BY AHJ.

1 REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT INDICATED IN THE LIGHTING FIXTURE SCHEDULE. WHERE THERE IS AN INCONSISTENCY BETWEEN THE LIGHTING FIXTURE SCHEDULE AND THE SPECIFICATIONS, THE GREATER QUANTITY OR HIGHER QUALITY OF WORK SHALL BE INCLUDED IN THE PROPOSAL.

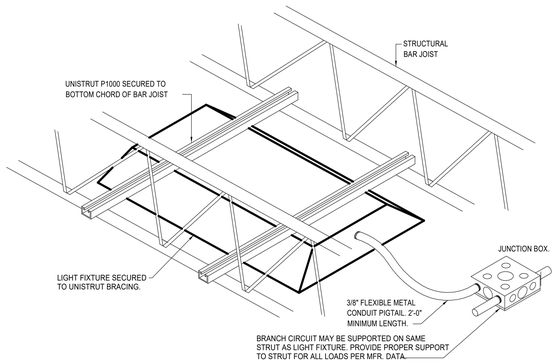
2 LIGHTING FIXTURE MANUFACTURERS OTHER THAN THOSE LISTED IN THE LIGHTING FIXTURE SCHEDULE AND DESIRING TO BID THIS PROJECT SHALL REQUEST PRIOR APPROVAL OF THE FIXTURES THEY WISH TO SUBSTITUTE. PRIOR APPROVAL REQUEST SHALL INCLUDE FIXTURE CUT SHEETS.

LIGHTING CONTROLS SCHEDULE

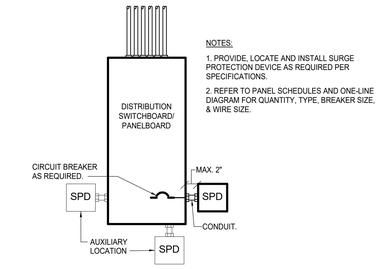
Type	Sensor Operation	# of Lighting Zones	Description
ER	-	-	UL924 LOAD CONTROL RELAY, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
ES	-	-	UL1008 GENERATOR TRANSFER DEVICE, PLENUM RATED, 0-10V COMPATIBLE, 16A MINIMUM
RA	VACANCY - MANUAL ON / AUTO OFF	1	DIGITAL KEYPAD; ON/OFF WITH RAISE LOWER; 0-10V DIMMING.
RB	VACANCY - MANUAL ON / AUTO OFF	1	DIGITAL KEYPAD; ON/OFF MOMENTARY SWITCH; 0-10V DIMMING.
RC	VACANCY - MANUAL ON / AUTO OFF	1	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING.
RD	NONE	1	EXTERIOR LIGHTING, CIRCUIT SHALL BE CONTROLLED VIA CONTACTOR, CONTACTOR CONTROLLED VIA BMCS. LOCATE CONTACTOR IN NEAREST MECHANICAL ROOM.
RE	OCCUPANCY - AUTO ON / AUTO OFF	1	ON/OFF KEYED SWITCH.
RF	NONE	1	12-HOUR WITH HOLD SPRING WOUND TIMER SWITCH. WIRE MULTIPLE TIMER SWITCHES IN PARALLEL.
RG	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	4	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.
RH	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	3	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.
RJ	VACANCY - MANUAL ON / AUTO OFF PHOTOCELL - CLOSED LOOP	3	MULTI-SCENE DIGITAL KEYPAD; ON/OFF SWITCHING; NO DIMMING ZONE (a.c); PHOTOCELL AND 0-10V DIMMING FOR DAYLIGHT ZONE ONLY.
RK	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	1	MULTI-SCENE DIGITAL KEYPAD; 60%, 100%, ON/OFF WITH RAISE/LOWER; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.
RL	OCCUPANCY - AUTO ON @ 50% / AUTO OFF	1	DIGITAL KEYPAD; ON/OFF WITH RAISE LOWER; 0-10V DIMMING.
RM	NONE	2	ON/OFF SWITCH
RN	OCCUPANCY - AUTO ON @ 50% / AUTO OFF PHOTOCELL - CLOSED LOOP	3	ON/OFF KEYED SWITCH; 0-10V DIMMING. PHOTOCELL FOR DAYLIGHT ZONE.



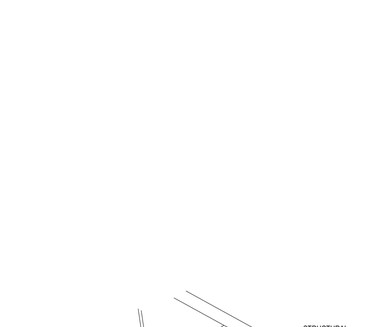
4 TRANSFORMER GROUNDING DETAIL
SCALE: NONE



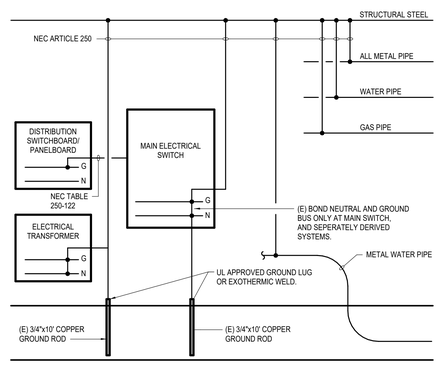
7 GYM LIGHT FIXTURE MOUNTING DETAIL
SCALE: NONE



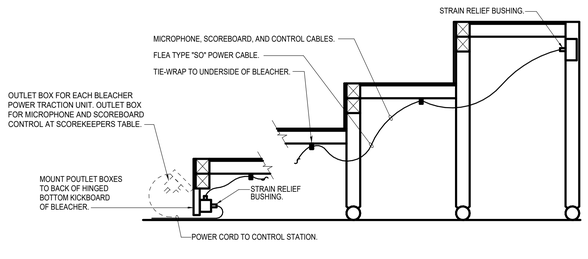
3 SURGE PROTECTION DETAIL
SCALE: NONE



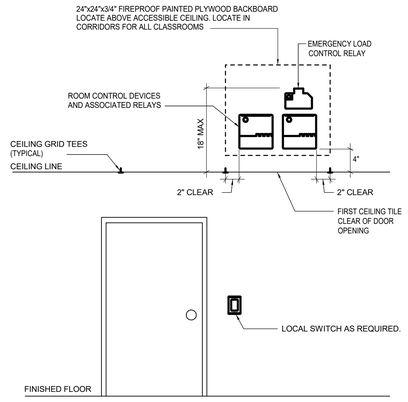
6 GYMNASIUM SCOREBOARD DIAGRAM
SCALE: NONE



2 GROUNDING DETAIL
SCALE: NONE



5 GYMNASIUM BLEACHERS
SCALE: NONE



1 TYPICAL LIGHTING CONTROLS ELEVATION
SCALE: NONE

SYMBOL SCHEDULE

SYMBOL	DESCRIPTION (DISREGARD ITEMS NOT SHOWN ON PLANS)
LIGHTING (LETTER DENOTES TYPE - SEE LIGHT FIXTURE SCHEDULE)	
	LIGHT FIXTURE - RECESSED OR SURFACE MOUNTED
	LIGHT FIXTURE - RECESSED OR SURFACE MOUNTED ON EMERGENCY CIRCUIT
	DOWNLIGHT FIXTURE
	DOWNLIGHT FIXTURE ON EMERGENCY CIRCUIT
	LIGHT FIXTURE - WALL MOUNTED
	LIGHT FIXTURE - WALL MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT - CEILING MOUNTED ON EMERGENCY CIRCUIT
	EXIT LIGHT - WALL MOUNTED ON EMERGENCY CIRCUIT
LIGHTING CONTROLS & DEVICES	
$	LINE VOLTAGE SINGLE POLE SWITCH
$3	LINE VOLTAGE 3-WAY SWITCH
$4	LINE VOLTAGE 4-WAY SWITCH
$K	LINE VOLTAGE MOMENTARY DPST KEYED SWITCH
$D	LINE VOLTAGE DIMMER SWITCH, SIZE AND TYPE AS REQUIRED
$P	LINE VOLTAGE SWITCH WITH PILOT LIGHT
$T	6-HOUR ROTARY TIMER SWITCH WITH NO HOLD U.N.O.
	PUSH BUTTON EPO SWITCH WITH COVER
$MC	LOW VOLTAGE MOMENTARY CONTACT SWITCH
$R	LOW VOLTAGE DIGITAL KEYPAD
$B	LOW VOLTAGE BUILDING MANAGEMENT (BMCS) LOCAL OVERRIDE SWITCH
	OCCUPANCY SENSOR (AUTO ON / AUTO OFF WITHIN 20-MINUTES)
	VACANCY SENSOR (MANUAL ON / AUTO OFF WITHIN 20-MINUTES)
	PHOTOCELL SENSOR
R#	LIGHTING CONTROL SYSTEM. ('#' DENOTES TYPE - SEE LIGHTING CONTROLS SCHEDULE)
ER	EMERGENCY LOAD CONTROL RELAY. MINIMUM 16A AND 0-10V COMPATIBLE. PROVIDE U.L. 924 U.N.O.
RECEPTACLES AND OUTLETS	
	SIMPLEX RECEPTACLE
	DUPLEX RECEPTACLE
U	DUPLEX RECEPTACLE WITH TWO USB CHARGING PORTS.
	125/250 VOLT, 1 PHASE, 3-WIRE, 20 AMPS UNLESS NOTED OTHERWISE
	DOUBLE DUPLEX IN 2-GANG BOX WITH SINGLE COVER PLATE
U	DOUBLE DUPLEX WITH TWO USB CHARGING PORTS IN 2-GANG BOX WITH SINGLE COVER PLATE
	DOUBLE DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE IN 2-GANG BOX WITH SINGLE COVER PLATE
	DUPLEX GROUND FAULT CIRCUIT INTERRUPTER RECEPTACLE
	FLUSH FLOOR DUPLEX RECEPTACLE OUTLET
	FLUSH FLOOR DOUBLE DUPLEX RECEPTACLE OUTLET
D/A	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DUPLEX RECEPTACLE AND DATA OUTLET. REFER TO TECHNOLOGY SERIES DRAWINGS FOR DATA CABLE QUANTIES.
D/A	CONCEALED SERVICE MULTI-ACCESS FLOOR BOX WITH DOUBLE DUPLEX RECEPTACLE AND DATA OUTLET. REFER TO TECHNOLOGY SERIES DRAWINGS FOR DATA CABLE QUANTIES.
J	JUNCTION BOX
G	FLUSH REMOTE GFCI DEVICE (LOCATE IN READILY ACCESSIBLE LOCATION)
MOTOR CONTROLLERS AND EQUIPMENT	
	MOTOR, MAKE FINAL MOTOR CONNECTION
$	MOTOR-RATED SWITCH. 20A UNLESS INDICATED OTHERWISE.
J	DISCONNECT SWITCH AS REQUIRED
J	COMBINATION MOTOR STARTER/DISCONNECT SWITCH AS REQUIRED
	MOTOR STARTER
	PREWIRED DEVICE, MAKE ELECTRICAL FINAL CONNECTIONS
VFD	VARIABLE FREQUENCY DRIVE MOTOR CONTROLLER FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
HF	HIGH EFFICIENCY HARMONIC FILTER FURNISHED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
T	LOW VOLTAGE TRANSFORMER, SIZE AND TYPE AS REQUIRED.
C	CONTACTOR, SIZE AS REQUIRED. REFER TO CONTACTOR SCHEDULE.
	CHIME/BUZZER
ELECTRICAL EQUIPMENT	
	ELECTRICAL PANELBOARD; REFER TO FLOOR PLANS FOR VOLTAGE.
	DRY TYPE TRANSFORMER
	PLYWOOD TELEPHONE BACKBOARD
CIRCUITING	
	CONDUIT
	CONDUIT BELOW FLOOR, SLAB, OR GRADE
	3/4"C. UNLESS OTHERWISE NOTED; LONG HATCH, NEUTRAL; SHORT HATCH, PHASE; LONG HATCH & HOOK, INSULATED GROUND. NO HATCHES INDICATES 2 CONDUCTORS. ARROW INDICATES HOMERUN.
	PARTIAL ELECTRICAL HOME RUN
SUBSCRIPTS AND ABBREVIATIONS	
WP	INDICATES 'WEATHERPROOF'
H	INDICATES 'HORIZONTAL'
NL	INDICATES 'NIGHT LIGHT'.
TP	INDICATES 'TAMPER PROOF'
(KS)	INDICATES 'KNEE SPACE'. LOCATE WIRING DEVICE IN KNEESPACE
U.N.O.	INDICATES 'UNLESS NOTED OTHERWISE'
(E)	INDICATES EXISTING TO REMAIN
(REP)	INDICATES REPLACE DEVICE AND COVERPLATE.
•	NEXT TO ANY SYMBOL INDICATES FINAL ROUGH-IN FIELD COORDINATION BY CONTRACTOR WITH ARCHITECTURAL MILLWORK DRAWINGS AND OTHER TRADES
GENERAL NOTES:	
-ALL EXTERIOR BUILDING ELECTRICAL EQUIPMENT TO BE WEATHERPROOF NEMA-4X MINIMUM. -ALL EXTERIOR RECEPTACLES SHALL BE WATER RESISTANT TYPE.	

ELECTRICAL GENERAL NOTES:

1. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES AND ELECTRICAL DEVICES.
2. ALL LIGHT FIXTURES IN MECHANICAL AREAS SHALL BE COORDINATED WITH MECHANICAL AND PLUMBING EQUIPMENT TO AVOID CONFLICTS. LOCATE LIGHT FIXTURES ON PERIMETER WALLS OF MECHANICAL AREAS WHERE PRACTICAL.
3. ALL EMPTY CONDUIT SHALL HAVE PULL STRING.
4. EACH CONDUIT SHALL BE LIMITED TO (3) CIRCUITS MAXIMUM.
5. VERIFY MOUNTING HEIGHTS OF RECEPTACLES WITH CASEWORK ELEVATIONS PRIOR TO ROUGH-IN. REFER TO ARCHITECTURAL DRAWINGS FOR ROOM ELEVATIONS FOR LOCATION AND COORDINATION OF ELECTRICAL OUTLETS. AT KNEESPACE LOCATIONS, LOCATE ELECTRICAL OUTLETS WITHIN KNEESPACE, UNLESS NOTED OTHERWISE. AT COUNTERS WITH OUT KNEESPACE, LOCATE OUTLETS HORIZONTALLY 6" ABOVE BACK SPLASH, UNLESS NOTED OTHERWISE.
6. ALL FIRE ALARM DEVICES, RECEPTACLES, SWITCHES, AND WIRING DEVICES IN MECHANICAL AND ELECTRICAL ROOMS ARE TO BE RECESSED IN WALLS.
7. ALL LIGHTING, RECEPTACLE, AND EQUIPMENT BRANCH CIRCUITS CONDUITS SHALL CONTAIN A GROUND WIRE. USING THE CONDUIT SYSTEM AS THE ONLY GROUND PATH IS NOT ACCEPTABLE.
10. CENTER ALL EXIT SIGNS OVER DOORS.

Revision /	Date	
3	06-06-24	CITY COMMENTS 3

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RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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ELECTRICAL SYMBOLS, LEGENDS, & SCHEDULES

PACKAGE VOLUME

Job No. 1821-13-02
Drawn By: DES
Date: 10.29.2025
Sheet No. E7.11

Salas O'Brien
Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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TECHNOLOGY LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
*# ▼	WALL MOUNTED NETWORK OUTLET D#: NUMBER OF DATA DROPS IN OUTLET AP: WIRELESS ACCESS POINT.	+18" AFF, UNLESS OTHERWISE NOTED	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
V# ▽	COMMUNICATIONS OUTLET	FIELD COORDINATE	FIELD COORDINATE	
W ▼	WALL MOUNTED NETWORK OUTLET	+44" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
B ▽	WALL MOUNTED BOX FOR FUTURE USE.	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
D# ▼	FLOOR MOUNTED NETWORK OUTLET	N/A	COORDINATE WITH ELECTRICAL CONTRACTOR	FINISHED HARDWARE PROVIDED BY DIV 27
*#	CEILING MOUNTED NETWORK OUTLET AP: WIRELESS ACCESS POINT D#: NETWORK OUTLET	ABOVE CEILING	CEILING BRACKET WITH BISCUIT BLOCK	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. CONDUIT STUB UP AND SLEEVES SHALL HAVE A SOLID UNCUT PLASTIC PROTECTIVE BUSHING.
5. NO CONDUITS SHALL EXCEED FOR 40% MAXIMUM FILL RATIO. CONTRACTOR TO PROVIDE ADDITIONAL CONDUITS REQUIRED.

ACCESS CONTROL LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ACP	ACCESS CONTROL SYSTEM, CONTROL PANEL.	+60" AFF TO CENTER	AS REQUIRED	COORDINATE POWER. NOTE #4.
CR *#	ACCESS CONTROL PROXIMITY CARD READER. *W - INDICATES WALL MOUNTED READER *M - INDICATES MULLION MOUNTED READER	+42" A.F.F.	1-G, 3/4" C	
CR	DOOR MOUNTED ACCESS CONTROL PROXIMITY CARD READER THAT IS INTEGRATED INTO THE DOOR HARDWARE.	+42" AFF	N/A	
DS *#	2-WAY AUDIO/VIDEO INTERCOM DOOR STATION. *W - INDICATES WALL MOUNTED READER *M - INDICATES MULLION MOUNTED READER	+42" AFF	*W: 1-G, 3/4" C *M: 3/4"C	COORDINATE POWER. NOTE #4.
DS	DOOR MOUNTED, 2-WAY AUDIO/VIDEO INTERCOM DOOR STATION.	+42" AFF, FIELD COORDINATE		COORDINATE POWER. NOTE #4
MS	2-WAY AUDIO/VIDEO INTERCOM MASTER STATION.	DESK MOUNTED UNO		COORDINATE POWER. NOTE #4
DR	DOOR RELEASE BUTTON	COORDINATE WITH GC	1-G, 3/4" C	
REX	PIR MOTION REQUEST TO EXIT DEVICE			
DP	DOOR PROP ALARM	CEILING MOUNTED UNO	N/A	N/A
DC	DPDT MAGNETIC DOOR CONTACT/DOOR POSITION SENSOR.	FLUSH MOUNTED IN DOOR FRAME	N/A	PROVIDED BY ACS CONTRACTOR.
RFID	VEHICLE RFID TAG READER.		FIELD COORDINATE RACEWAYS AND BACK BOXES	PROVIDE NECESSARY EQUIPMENT FOR A FULLY FUNCTIONAL VEHICLE ENTRY POINT

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE.
4. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK.

INTERCOM LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
ICS	INTERCOM COMMUNICATIONS SYSTEM HEAD END UNIT.	FLOOR MOUNTED	COORDINATE WITH EC	COORDINATE POWER WITH EC
S	CEILING MOUNT INTERCOM SPEAKER, LAY-IN CEILING	CEILING	CONTRACTOR PROVIDED	
S2	CEILING MOUNT INTERCOM SPEAKER, HARD CEILING.	CEILING	CONTRACTOR PROVIDED	
S3	WALL MOUNT INTERIOR INTERCOM SPEAKER	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
S4	WALL MOUNT,RECESSED EXTERIOR INTERCOM SPEAKER	+10' AFF UNO	CONTRACTOR PROVIDED	
S5	PENDANT MOUNT INTERCOM SPEAKER	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	
S6	SURFACE MOUNT INTERCOM SPEAKER, MOUNT TO STRUCTURE	CEILING	CONTRACTOR PROVIDED	
# IP	IP BASED SPEAKER. '#' TO BE REPLACED WITH S, S2, S3, S4 INDICATING THE SPECIFIC TYPE OF SPEAKER.	REFERENCE FLOOR PLANS	CONTRACTOR PROVIDED	NOTE #5
VC	WALL MOUNTED VOLUME CONTROL	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
CB	INTERCOM CALL BUTTON	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C	SINGLE FACE CLOCK	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
C2	DOUBLE FACE CLOCK	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
RPS	REMOTE PROGRAM SOURCE	DESK TOP	COORDINATE WITH EC	NOTE #5
ACS	ADMINISTRATIVE CALL STATION.	DESK TOP	N/A	NOTE #5
LD	LOCKDOWN BUTTON	+48" AFF	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
LMB	LARGE MESSAGE BOARD, POE+ POWERED	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

VIDEO SURVEILLANCE LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
	WALL/CORNER MOUNT 4-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5, #6
	CEILING MOUNTED 4-SENSOR CAMERA	CEILING		NOTE #5, #6
	2-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5, #6
	1-SENSOR CAMERA	REFERENCE FLOOR PLANS	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5, #6
⊢	SYMBOL INDICATES THAT A VIDEO SURVEILLANCE DEVICE IS WALL MOUNTED			

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE.
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK.
6. VIDEO SURVEILLANCE CAMERAS ARE OFOI.

AUDIO/VIDEO LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
WMP	WALL MOUNTED PROJECTOR	REFERENCE FLOOR PLANS.	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
CMP	CEILING MOUNTED PROJECTOR	CEILING MOUNTED	N/A	NOTE #5
AV-1	WALL MOUNTED AUDIO/VIDEO INPUT OUTLET	+18" AFF UNO	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	
FSD-1	WALL MOUNTED FLAT SCREEN DISPLAY	REFERENCE FLOOR PLAN	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	NOTE #5
FSD-2	WALL MOUNTED FLAT SCREEN DISPLAY ASSOCIATED WITH AV-1 INPUT OUTLET	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
IVD	INTERACTIVE VIDEO DISPLAY	REFERENCE FLOOR PLAN	4 11/16"X4 11/16"X2-1/8" BACK BOX WITH DOUBLE GANG RING, TWO(2) 1.25"C	NOTE #5
CP	AV CONTROL PANEL	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
PS	LOCAL INSTRUCTIONAL SPACE PRESENTATION SPEAKER	CEILING	CONTRACTOR PROVIDED CEILING BOX	COORDINATE POWER WITH EC
	STREAMING CAMERA	CEILING UNO	N/A	NOTE #5

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

LOCAL SOUND SYSTEM LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
LS *	LOCAL SOUND SYSTEM SPEAKER P: POLE MOUNTED SPEAKER	CEILING MOUNT UNO	CONTRACTOR PROVIDED BACK BOX OR 4"X4"X2 1/8" J BOX WITH COVER, 1"C	
LSC	LOCAL SOUND SYSTEM CONTROL PLATE	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
MI	MICROPHONE INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
MA	COMBINATION OUTLET CONSISTING OF ONE (1) MICROPHONE INPUT AND ONE (1) AUXILIARY INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
AI	3.5MM STEREO AUDIO AUXILIARY INPUT	+18" AFF UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
H	HANGING MICROPHONE	CEILING MOUNT	N/A	
ABM	AUXILIARY INPUT AND BLUETOOTH MIXER	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
RACK	VENUE SPECIFIC LOCAL SOUND SYSTEM HEAD END RACK	WALL MOUNT UNO	N/A	
WA	WIRELESS ANTENNA	WALL MOUNT UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
ALA	ASSISTED LISTENING ANTENNA	WALL MOUNT UNO	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
SUB	SUBWOOFER	CEILING MOUNT UNO		

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. THE SYSTEM INTEGRATOR SHALL COORDINATE ALL BOX AND CONDUIT SIZE REQUIREMENTS PRIOR TO ROUGH-IN BY THE PROJECTS ELECTRICAL CONTRACTOR.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK

INTRUSION LEGEND

SYMBOL	DESCRIPTION	ELEVATION	BACK BOX/RACEWAY	NOTES
IDF	INTRUSION DETECTION SYSTEM CONTROL PANEL	+60" AFF	TWO(2) - 1"C TO CONTRACTOR PROVIDED BACK BOX	COORDINATE POWER WITH EC. NOTE #5
KP	INTRUSION DETECTION SYSTEM KEYPAD.	+48" AFF TO TOP	4"X4"X2 1/8" BACK BOX WITH 1-G MUD RING, 1"C	
M	CEILING MOUNTED MOTION DETECTOR	CEILING		
M	WALL MOUNTED MOTION DETECTOR LR: LONG RANGE	REFERENCE FLOOR PLAN	N/A	
GB	CEILING MOUNTED GLASS BREAK DETECTOR	CEILING	N/A	
DC	DPDT MAGNETIC DOOR CONTACT/DOOR POSITION SENSOR.	FLUSH MOUNTED IN DOOR FRAME	N/A	DEVICE PROVIDED BY ACS CONTRACTOR.
SDC	SURFACE MOUNT MAGNETIC DOOR CONTACT.	SURFACE MOUNTED ON DOOR FRAME	N/A	
ODC	OVERHEAD DOOR MOUNT MAGNETIC DOOR CONTACT.	SURFACE MOUNTED ON DOOR FRAME	N/A	
DB	DURESS PANIC BUTTON	UNDER DESK UNO	N/A	

NOTES:
1. #-G INDICATES BACK BOX SIZE.
2. #-C INDICATES CONDUIT SIZE.
3. UNO: UNLESS NOTED OTHERWISE
4. REFERENCE DIVISION 28 SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. PROVIDE AND INSTALL ONE (1) CATEGORY CABLE TO CONNECT DEVICE TO NETWORK.

SUBSCRIPTS AND ABBREVIATIONS

TEXT	DESCRIPTION
'WP'	DEVICE SHALL BE WEATHER PROOF AND RATED FOR EXTERIOR CONDITIONS
•	FIELD COORDINATE ELEVATION.
AFF	ABOVE FINISHED FLOOR
'UC'	DEVICE IS TO BE MOUNTED ON THE UNDERSIDE OF THE ELEVATED CANOPY.
'WG'	WIRE GUARD TO BE PROVIDED AND INSTALLED TO PROTECT ASSOCIATED DEVICE.

SUBSCRIPTS LEGEND - EXISTING DEVICES

TEXT	DESCRIPTION
'E'	EXISTING TO REMAIN.
'D'	DEVICE IS EXISTING AND IS TO BE REMOVED. CONTRACTOR TO REMOVE THE DEVICE AND RETURN TO OWNER.
'R'	REMOVE EXISTING DEVICE AND RELOCATE TO A LOCATION INDICATED ON THE DRAWINGS.

NOTES TO CONTRACTOR

1. EVERY SYMBOL SHOWN ON LEGEND MAY NOT APPEAR ON DRAWINGS.
2. SYSTEM INSTALLERS SHALL COORDINATE LOCATIONS AND CONNECTIONS WITH THE PROJECT'S ELECTRICAL CONTRACTOR.
3. CONTRACTOR TO PROVIDE PROPERLY GROUNDED LIGHTING PROTECTION ON ALL CABLING ENTERING AND EXITING THE BUILDING.

FIRE ALARM

SYMBOL	DESCRIPTION
FACP	FIRE ALARM CONTROL
FAA	FIRE ALARM ANNUNCIATOR PANEL

NOTES:
1. FIRE ALARM SYSTEM IS PERFORMANCE BASED PER SPECIFICATIONS. CONTRACTOR TO REFERENCE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
2. A LICENSED FIRE ALARM PLANNING SUPERINTENDENT CERTIFIED TO A MINIMUM LEVEL 3, IN THE SUBFIELD OF FIRE ALARM SYSTEMS THROUGH THE NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES (NICET), SHALL PROVIDE PLANS AND CALCULATIONS FOR A MANUAL AND AUTOMATIC FIRE DETECTION AND ALARM SYSTEM TO COMPLY WITH THE BUILDING SPACE LAYOUT, BUILDING OCCUPANCY, CURRENT NFPA 72, LOCAL AND STATE CODE REQUIREMENTS, AND THE FIRE ALARM AND DETECTION SYSTEM SPECIFICATIONS.

Revision / Date
4 04-24-25 Addendum 2

Project:
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KINGWOOD, TX

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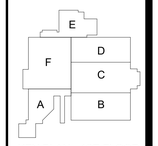

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TECHNOLOGY NOTES AND LEGENDS

PACKAGE VOLUME

Job No. 1821-13-02
Drawn By: NY
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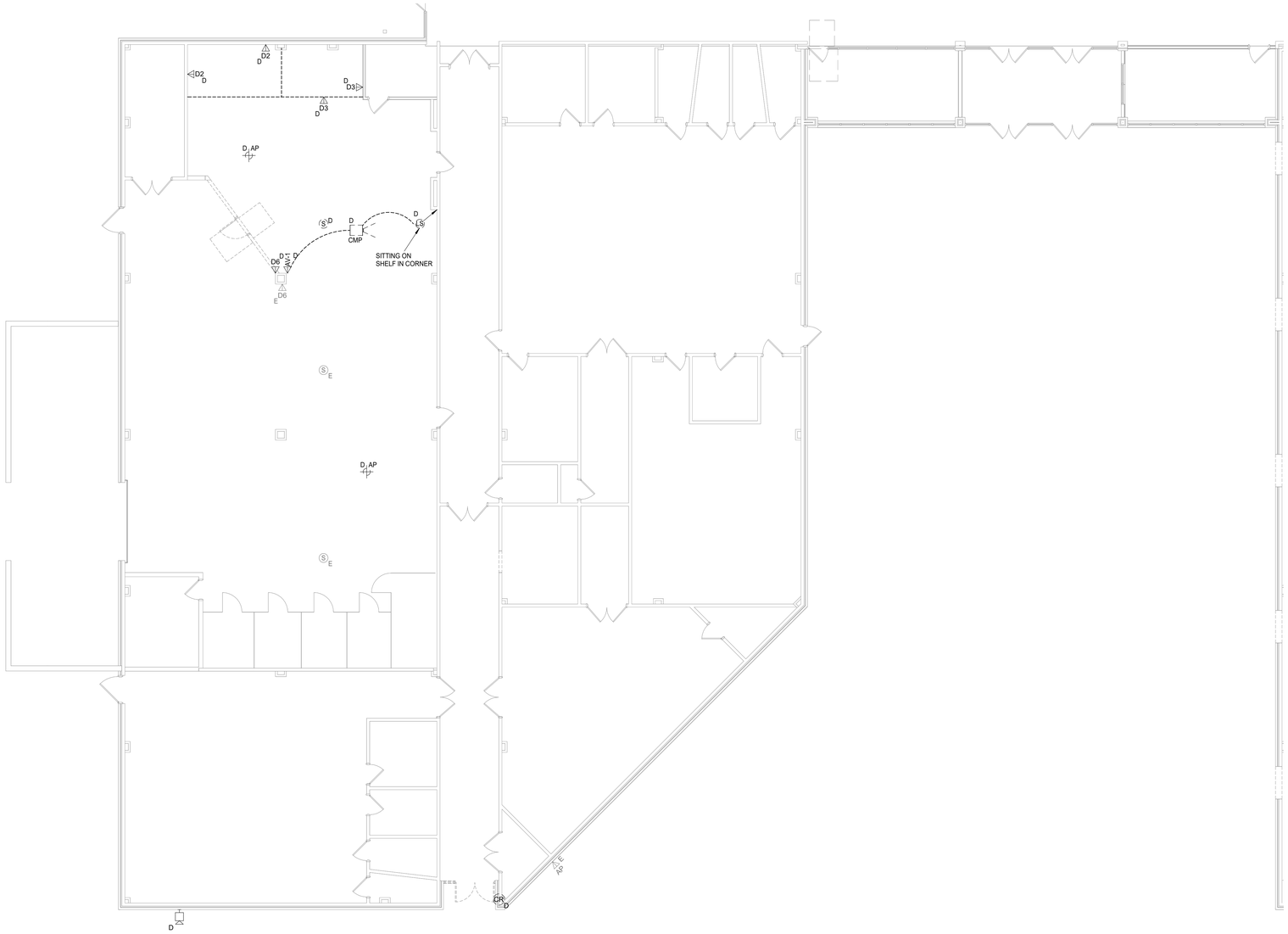

1 **TECHNOLOGY DEMOLITION FLOOR PLAN - RMS - SECTION A**
Scale: 1/8" = 1'-0"

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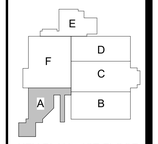

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TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION A

PACKAGE VOLUME

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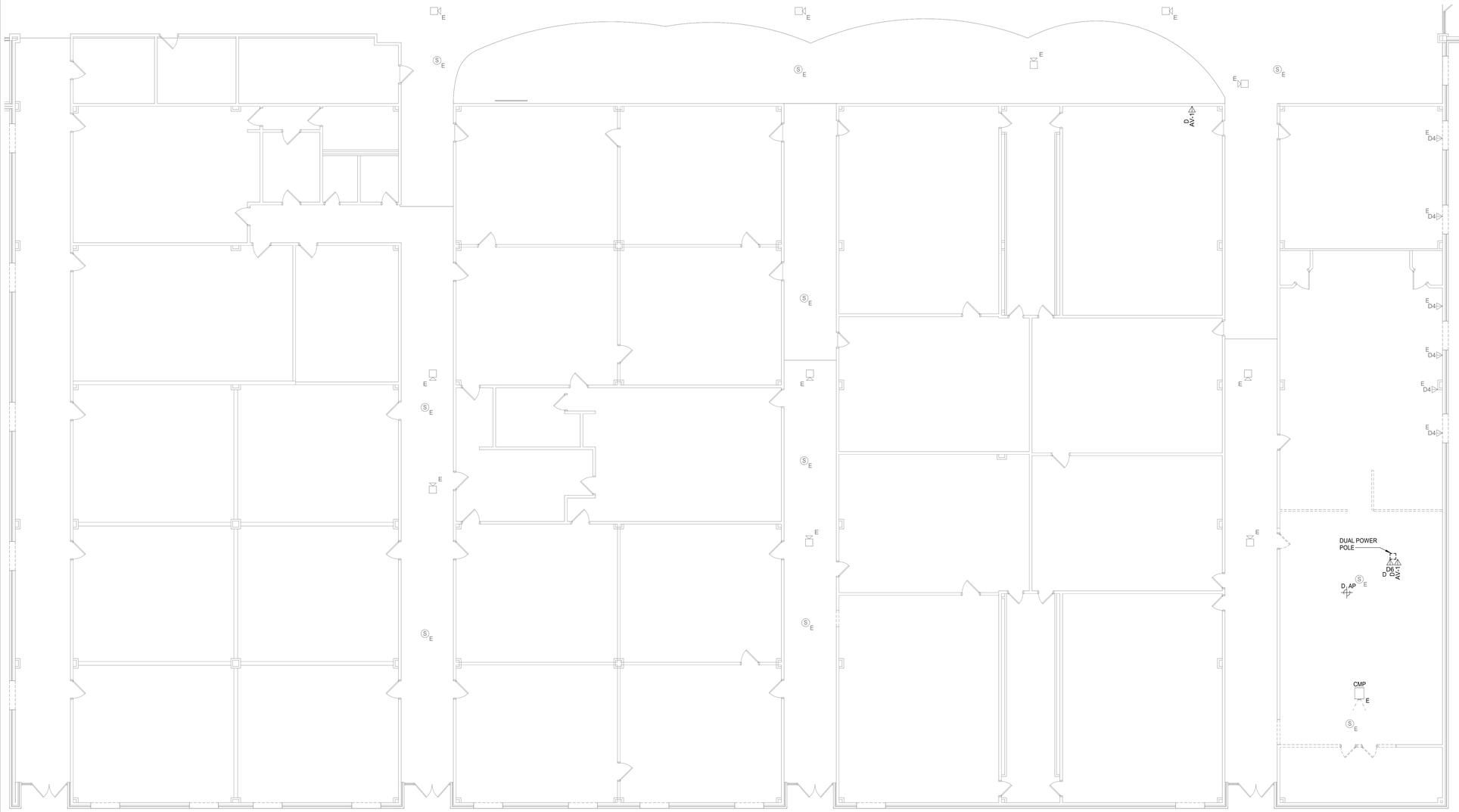

1 **TECHNOLOGY DEMOLITION FLOOR PLAN - RMS - SECTION B**
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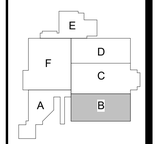

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TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION B

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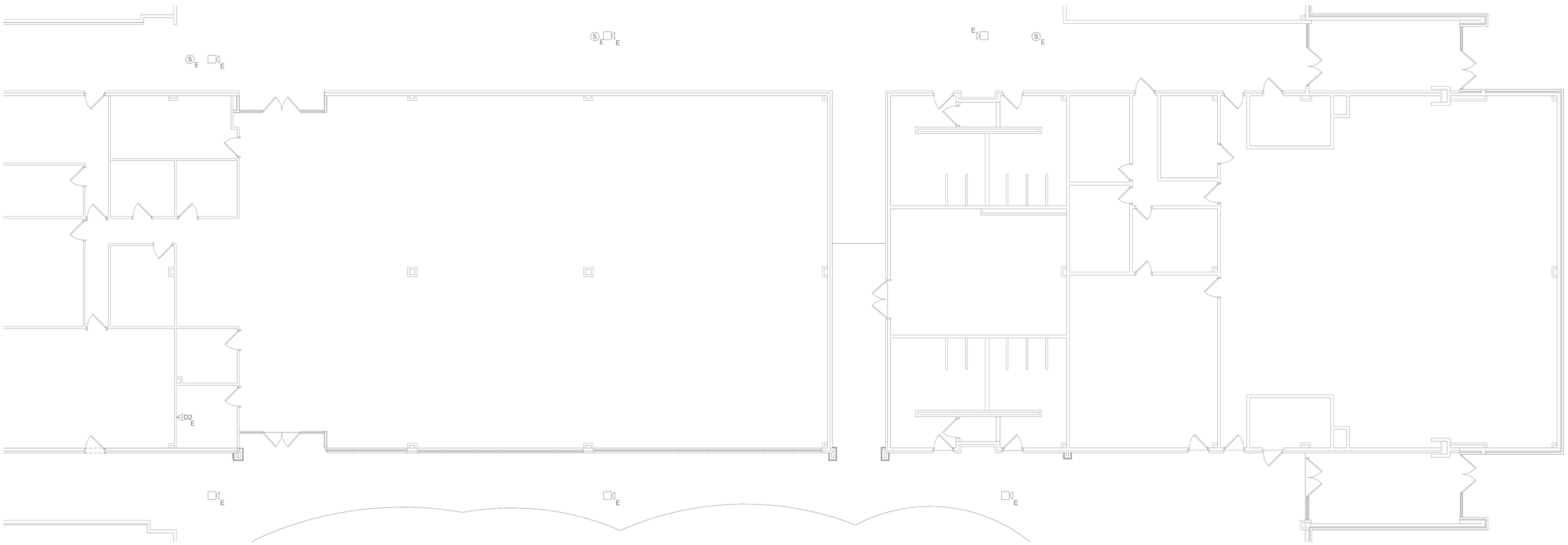

1 **TECHNOLOGY DEMOLITION FLOOR PLAN - RMS - SECTION C**
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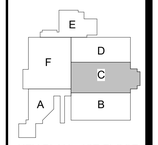

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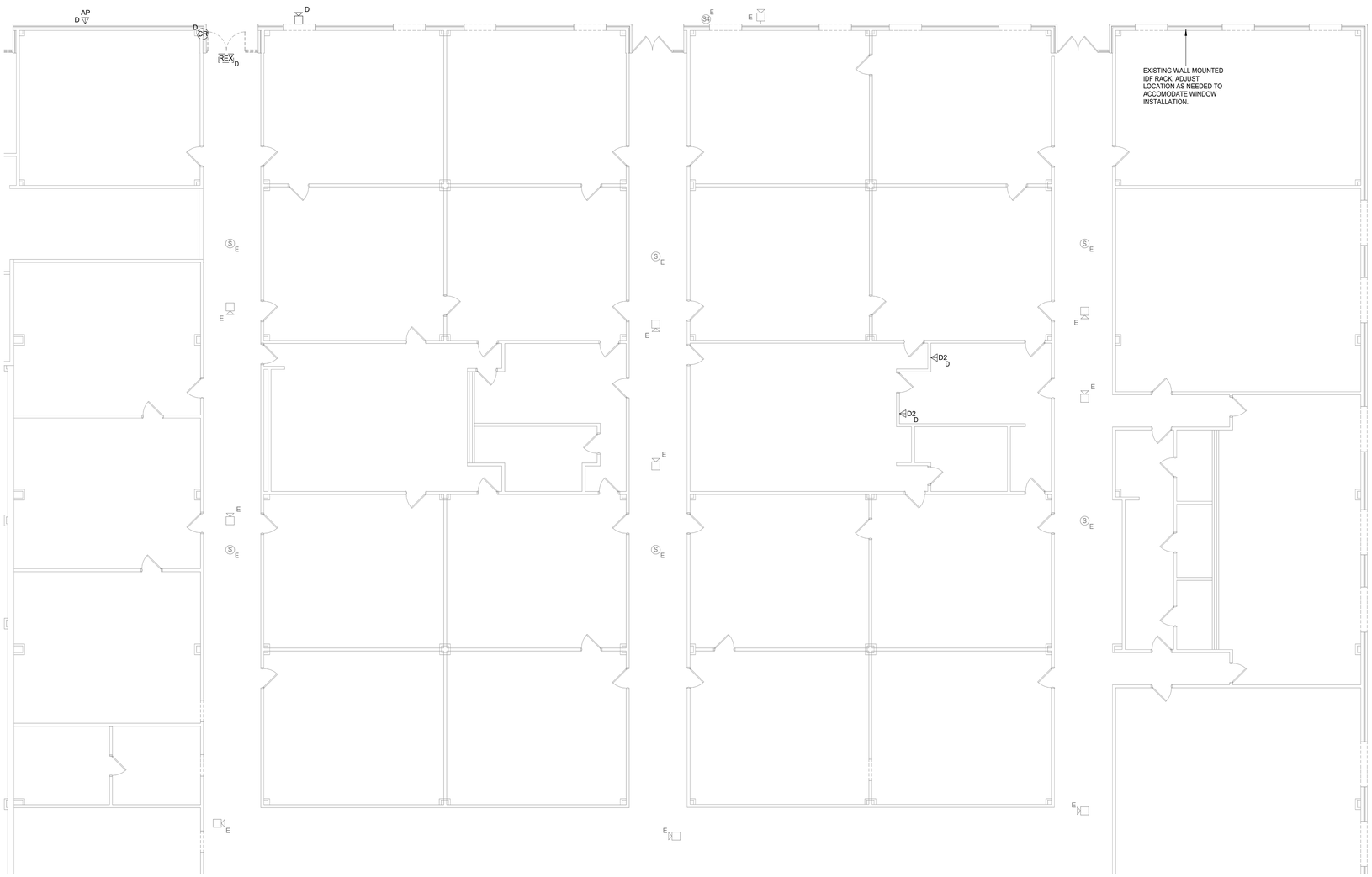

1 **TECHNOLOGY DEMOLITION FLOOR PLAN - RMS - SECTION D**
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TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION D

PACKAGE VOLUME

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Scale: 1/8" = 1'-0"

TECH DEMO PLAN GENERAL NOTES

A CONTRACTOR SHALL PROVIDE NEW CEILING TILES IN INSTANCES WHERE CEILING DEVICES ARE REMOVED, REPLACED OR ADDED. CONTRACTOR SHALL COORDINATE WITH ARCHITECT ON CORRECT MANUFACTURER AND MODEL PRIOR TO REMOVAL OF EXISTING TILE.

B CONTRACTOR SHALL HAVE EACH LOW VOLTAGE SYSTEM TESTED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SYSTEMS SHALL INCLUDE BUT NOT BE LIMITED TO:
1) FIRE ALARM
2) INTERCOM
3) STRUCTURED CABLING
4) INTRUSION DETECTION
5) ACCESS CONTROL
6) AUDIO VIDEO
7) VIDEO SURVEILLANCE
TESTING SHALL INCLUDE THE FUNCTIONALITY OF ALL FIELD DEVICES AND EQUIPMENT. ANY FAILURES OR ITEMS FOUND NOT TO BE FUNCTIONING TO SPECIFICATION, SHALL BE REPORTED PRIOR TO CONSTRUCTION. ANY ITEMS FOUND TO BE IMPROPERLY OR NON-FUNCTIONING UPON THE COMPLETION OF THE PROJECT, SHALL BE REPLACED AND/OR REPAIRED, BY THE CONTRACTOR, AT NO ADDITIONAL COST TO THE PROJECT OR THE OWNER.

C CONTRACTOR SHALL REMOVE ANY DEVICES WHERE CONSTRUCTION OCCURS TO PREVENT POSSIBLE DAMAGE TO THE DEVICE. REMOVAL OF ANY DEVICES WHICH SUPPORT USER CONNECTION OR OTHER SYSTEMS, SHALL BE COORDINATED WITH THE OWNER PRIOR TO REMOVAL AND/OR TAKING OFF LINE. REMOVAL SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING DEVICES AND ASSOCIATED SUPPORT INFRASTRUCTURE:
1) FIRE ALARM DEVICES
2) INTERCOM DEVICES
3) WIRELESS ACCESS POINTS
4) TELEPHONES
5) VIDEO SURVEILLANCE CAMERAS
6) INTRUSION DETECTION DEVICES
7) ACCESS CONTROL DEVICES
8) VIDEO PROJECTION DEVICES
9) VIDEO DISPLAY DEVICES
ANY DEVICES, NOT BEING REINSTALLED, SHALL BE RETURNED TO THE OWNER.

D CONTRACTOR SHALL DOCUMENT THE LOCATION AND ANY ID TAG, MAC ADDRESS, IP ADDRESS, OR BAR CODE OF ANY EXISTING DEVICE THAT IS TO BE REMOVED FROM ITS CURRENT LOCATION. DEVICES THAT ARE TO REMAIN, SHALL BE REINSTALLED IN THE EXACT LOCATION THAT THEY RESIDE IN PRIOR TO CONSTRUCTION, UNLESS NOTED OTHERWISE.

E ANY INDIVIDUAL THAT WILL BE REMOVING, RELOCATING, REINSTALLING, AND/OR TAMPERING WITH ANY EXISTING DEVICES; SHALL BE CERTIFIED BY THE MANUFACTURER OF THE SPECIFIC SYSTEM AND/OR LICENSED AS REQUIRED BY THE STATE TO PERFORM WORK ON THE SYSTEM. THE INDIVIDUAL SHALL BE A FULL-TIME EMPLOYEE OF THE FIRM CONTRACTED TO CONDUCT SUCH WORK ON THE PROJECT AND THAT FIRM SHALL ALSO HOLD ANY CERTIFICATIONS AND/OR LICENSES REQUIRED TO CONDUCT WORK ON THE SPECIFIC SYSTEM.

F ANY INDIVIDUAL/FIRM THAT WILL BE REMOVING, RELOCATING, REINSTALLING, OR TAMPERING WITH IN ANY DEVICES; SHALL BE LICENSED BY THE STATE, AS APPLICABLE, AND CERTIFIED BY THE MANUFACTURER OF THE SYSTEM.

G ALL CABLING ASSOCIATED WITH DEVICES THAT ARE TO BE DEMOLISHED, SHALL BE REMOVED FROM THE DEVICE LOCATION TO THE CABLES POINT OF ORIGIN. NO CABLE SHALL BE ABANDONED IN PLACE.

H ALL EXISTING DEVICES SHOWN ARE EXISTING TO REMAIN. CONTRACTOR TO REMOVE EXISTING DEVICES DURING CONSTRUCTION AND REINSTALL THE DEVICE IN THE SAME LOCATION, UNLESS NOTED OTHERWISE.

I REFERENCE EXISTING DEVICE SUBSCRIPT LEGEND ON THE NOTES AND LEGENDS SHEET.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
80219
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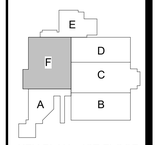
PROFESSIONAL ENGINEER
10-29-2025



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TECHNOLOGY DEMOLITION FLOOR PLAN - SECTION F

PACKAGE | VOLUME

Salas O'Brien
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10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

Job No. 1821-13-02
Drawn By: NY
Date: 10.29.2025
Sheet No. T0.16

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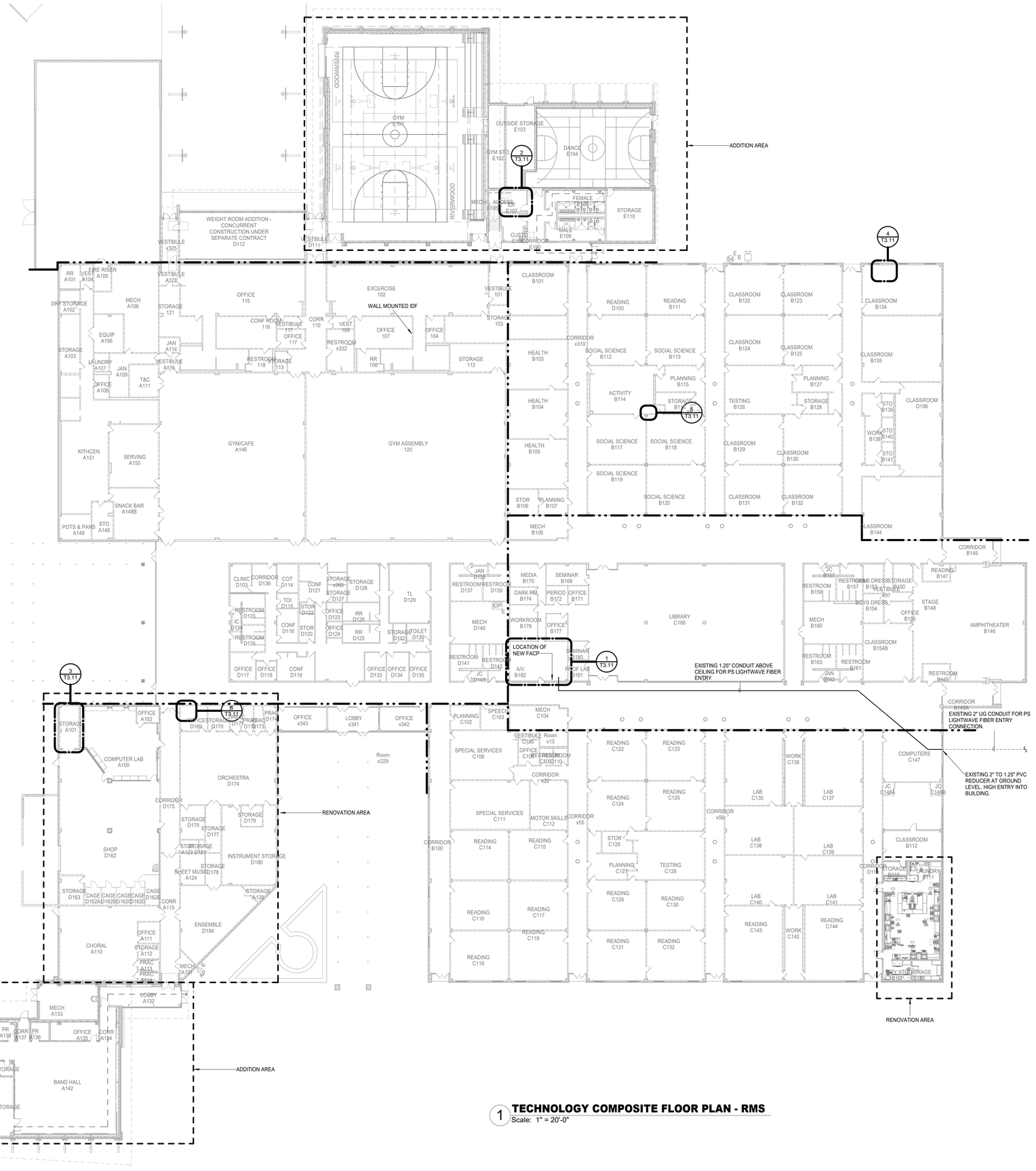

1 **TECHNOLOGY COMPOSITE FLOOR PLAN - RMS**
Scale: 1" = 20'-0"

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

Revision / Date

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TECHNOLOGY COMPOSITE PLAN

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. T1.11
Drawn By: NY	
Date: 10.29.2025	

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10930 W. Sam Houston Pkwy North, Suite 900
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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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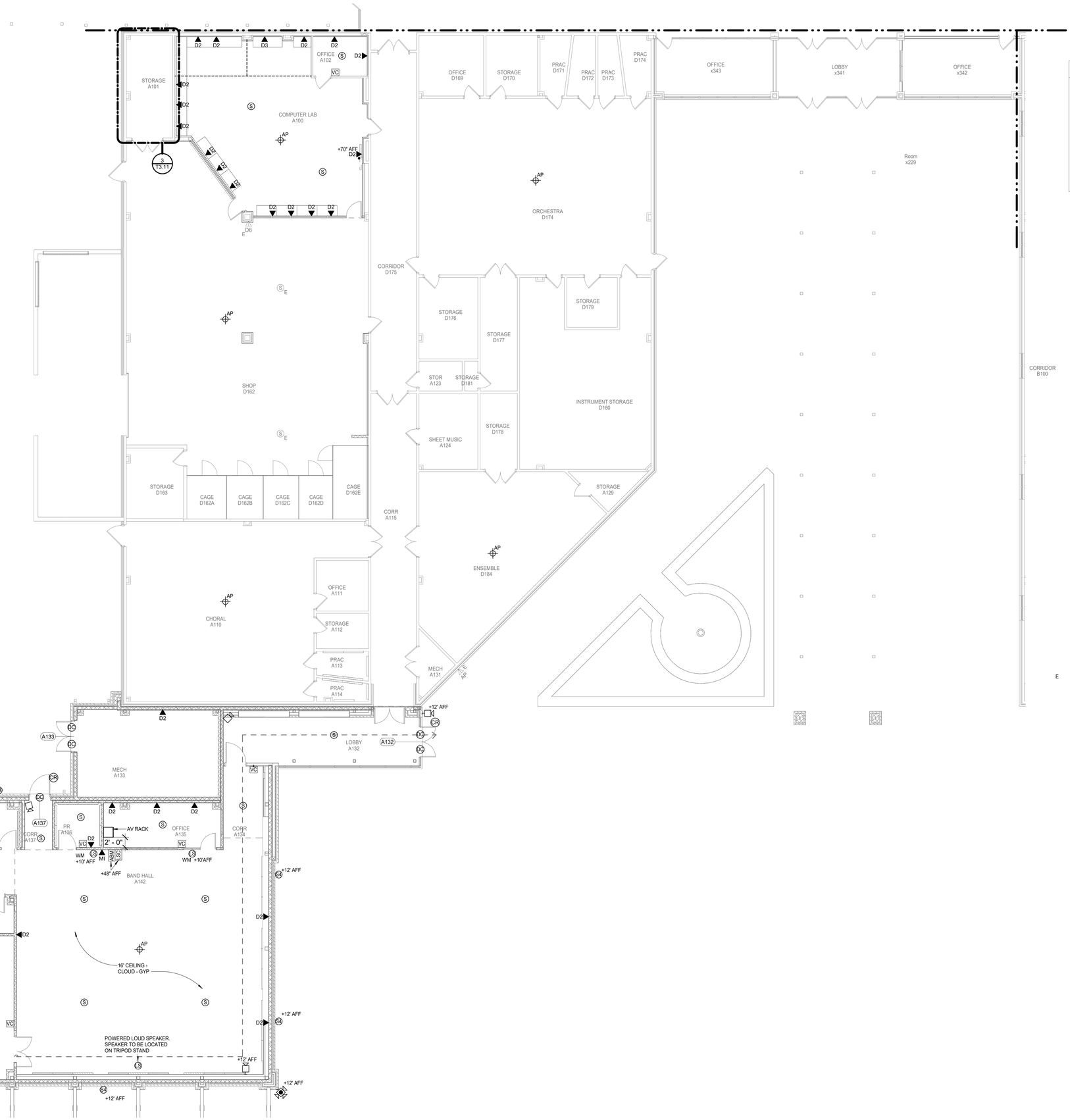

TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
B	COORDINATE ALL CEILING DEVICE LOCATIONS WITH ARCHITECTURAL DRAWINGS AND INTERIOR DESIGN CONSULTANT(IF APPLICABLE) PRIOR TO ROUGH-IN.
C	REFERENCE TECHNOLOGY PLANS, COMPOSITE PLANS, NOTES & LEGENDS AND DETAILS FOR ADDITIONAL INFORMATION AND DEVICE/OUTLET LOCATIONS.
D	CONTRACTOR TO COORDINATE ALL DROP LOCATIONS WITH FURNITURE. COORDINATE WITH ARCHITECT AND OWNER FOR MORE INFORMATION.
E	ALL NEW ACCESS CONTROL DOUBLE DOORS SHALL HAVE INTERNAL REX ON BOTH ACTIVE AND INACTIVE LEAFS.

1 **TECHNOLOGY FLOOR PLAN - RMS - SECTION A**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
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KINGWOOD, TX

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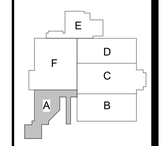

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY FLOOR PLAN - SECTION A

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. T2.11
Drawn By: NY	
Date: 10.29.2025	

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TECHNOLOGY PLAN KEYED NOTES

1	CONTRACTOR TO ADJUST LOCATIONS OF EXISTING DEVICES THAT ARE LOCATED WHERE NEW SOLAR TUBES WILL BE INSTALLED. TYPICAL FOR ALL SHOWN.
2	ALL DIVISION 27 AND 28 EXISTING CABLING THAT IS IN THE AREA OF SOLAR TUBE INSTALLATION SHALL BE PROTECTED AND ADJUSTED AS NEEDED. TYPICAL FOR ALL SHOWN.
3	EXISTING SURFACE AND RECESSED NETWORK OUTLETS EXISTING IN THESE LOCATIONS. ALL DIVISION 27 AND 28 EXISTING CABLING THAT IS IN THE AREA OF NEW EXTERIOR WINDOWS SHALL BE PROTECTED AND ADJUSTED AS NEEDED. TYPICAL FOR ALL SHOWN.
4	OUTLETS TO BE INSTALLED IN BASEPLATE OF THE BLEACHERS. REFERENCE ELECTRICAL POWER PLANS FOR MORE INFORMATION.
5	DEVICES INSTALLED IN A DIFFERENT PROJECT.

TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
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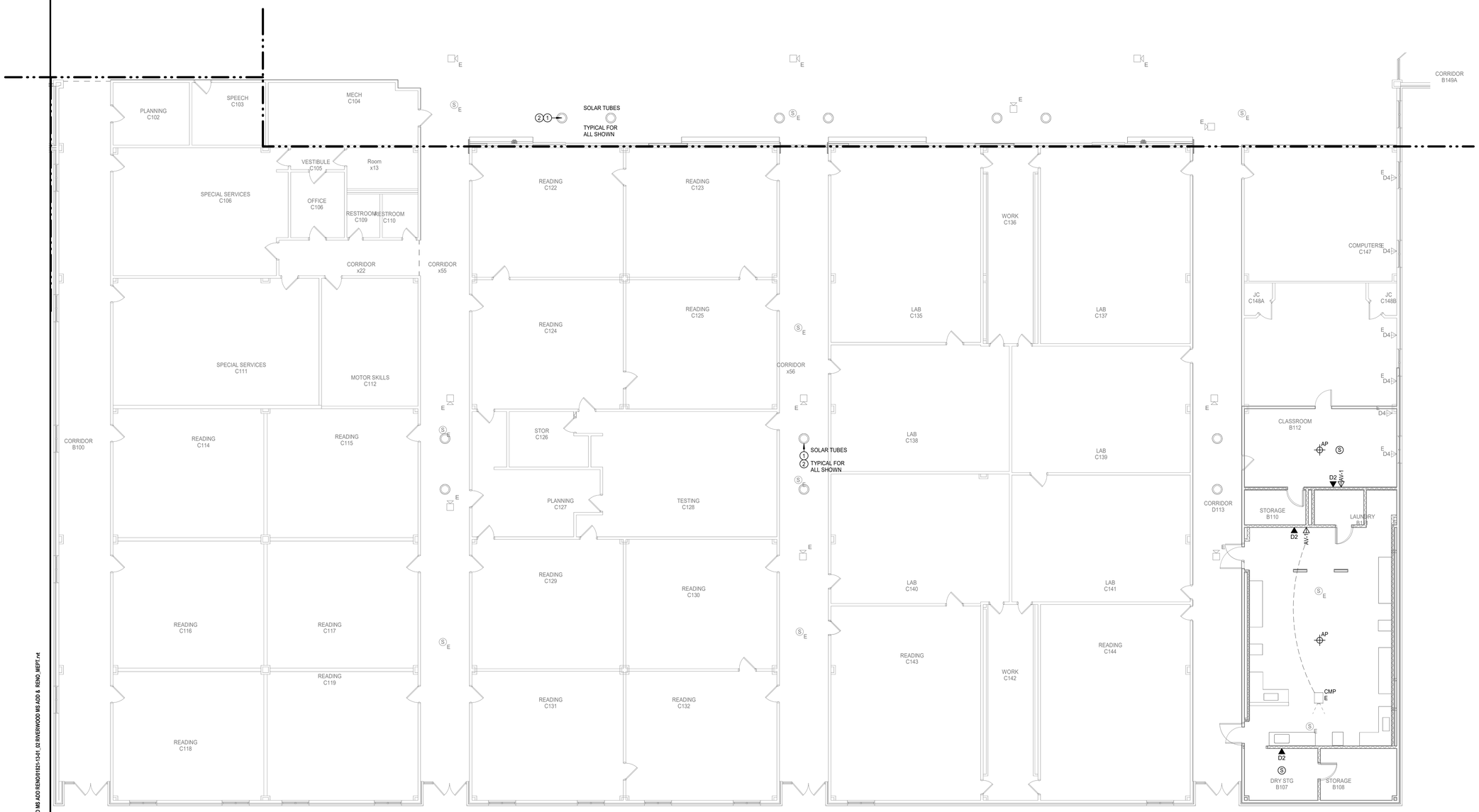

1 TECHNOLOGY FLOOR PLAN - RMS - SECTION B
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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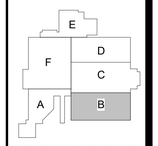

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TECHNOLOGY FLOOR PLAN - SECTION B

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Date: 10.29.2025	

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TECHNOLOGY PLAN GENERAL NOTES

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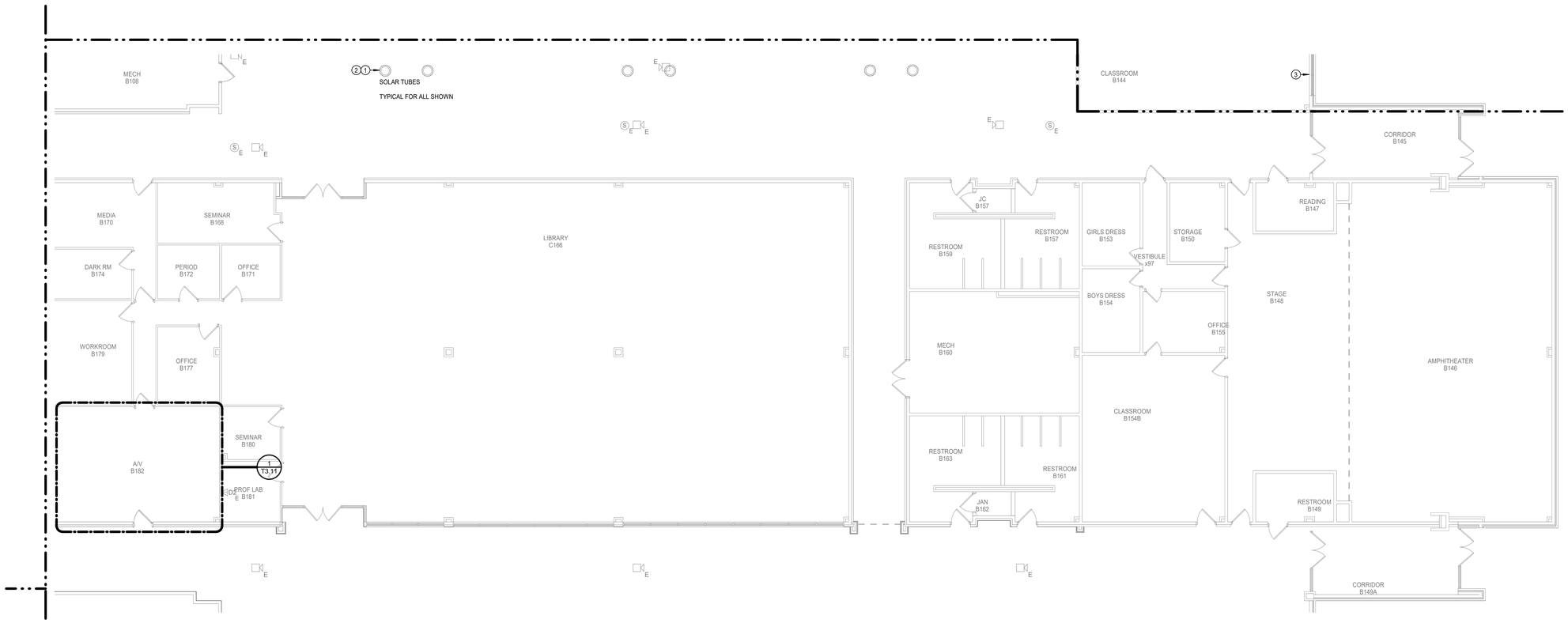
5	DEVICES INSTALLED IN A DIFFERENT PROJECT.



1 TECHNOLOGY FLOOR PLAN - RMS - SECTION C
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Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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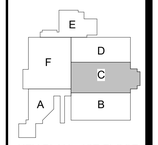

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TECHNOLOGY FLOOR PLAN - SECTION C

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Job No. 1821-13-02	Sheet No. T2.13
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TECHNOLOGY PLAN KEYED NOTES

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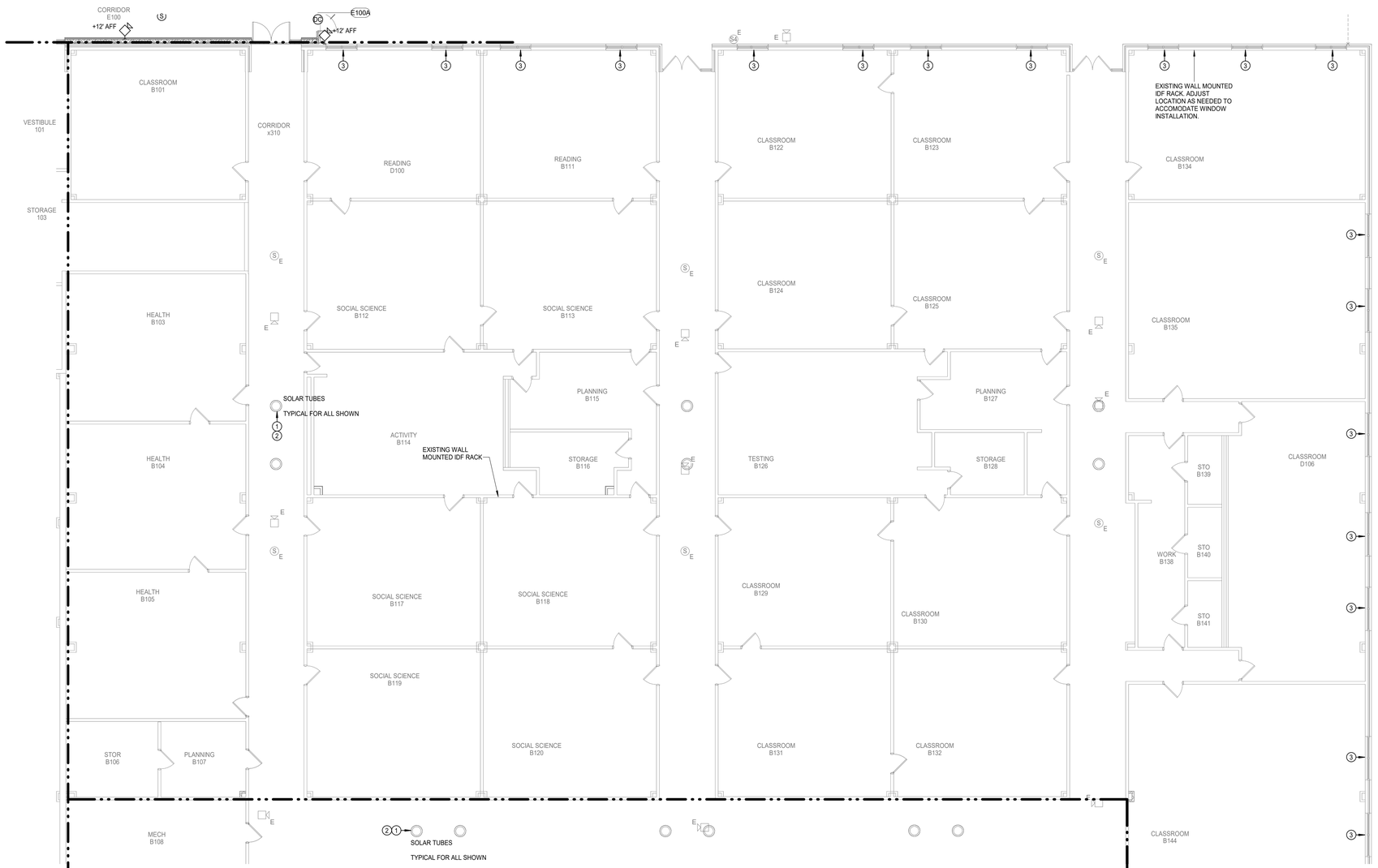

1 **TECHNOLOGY FLOOR PLAN - RMS - SECTION D**
Scale: 1/8" = 1'-0"

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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TECHNOLOGY FLOOR PLAN - SECTION D

PACKAGE | VOLUME

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Houston
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Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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TECHNOLOGY PLAN KEYED NOTES

1	CONTRACTOR TO ADJUST LOCATIONS OF EXISTING DEVICES THAT ARE LOCATED WHERE NEW SOLAR TUBES WILL BE INSTALLED. TYPICAL FOR ALL SHOWN.
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TECHNOLOGY PLAN GENERAL NOTES

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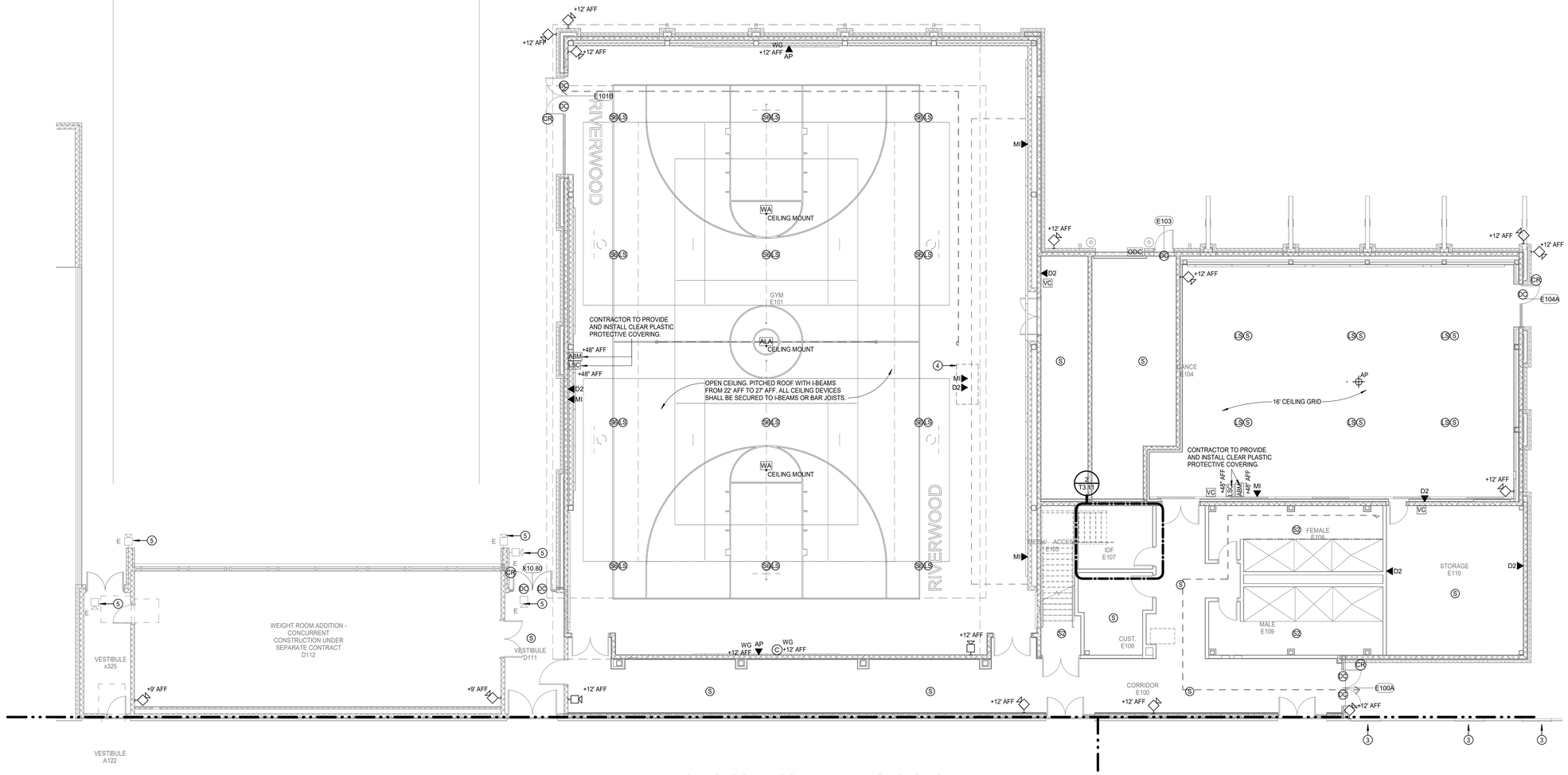

1 **TECHNOLOGY FLOOR PLAN - RMS - SECTION E**
Scale: 1/8" = 1'-0"

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Project:
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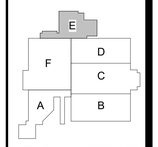

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TECHNOLOGY FLOOR PLAN - SECTION E

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Drawn By: NY	
Date: 10.29.2025	

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Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

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1 **TECHNOLOGY FLOOR PLAN - RMS - SECTION F**
Scale: 1/8" = 1'-0"

TECHNOLOGY PLAN GENERAL NOTES

A	COORDINATE ALL FINAL MOUNTING HEIGHTS, FOR WALL MOUNTED DEVICES, PRIOR TO ROUGH-IN. COORDINATE WITH ARCHITECT, OWNER AND ENGINEER.
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5	DEVICES INSTALLED IN A DIFFERENT PROJECT.

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
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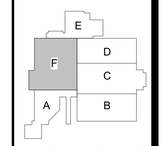

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Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY FLOOR PLAN - SECTION F

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. T2.16
Drawn By: NY	
Date: 10.29.2025	

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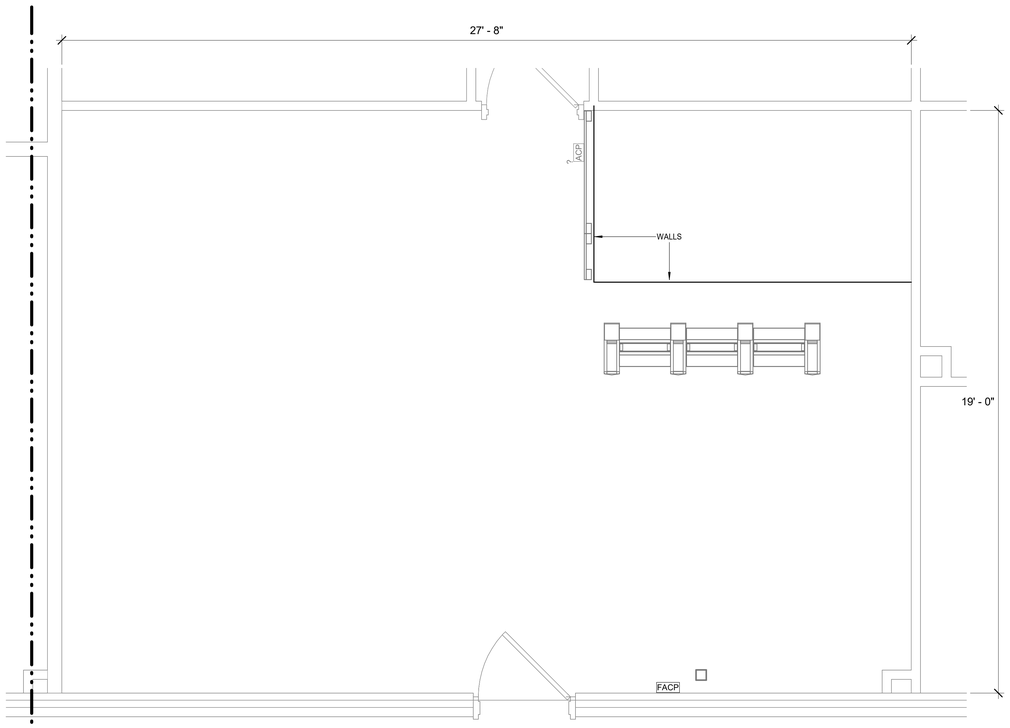

1 **TECHNOLOGY ENLARGED PLAN - MDF - EXISTING**
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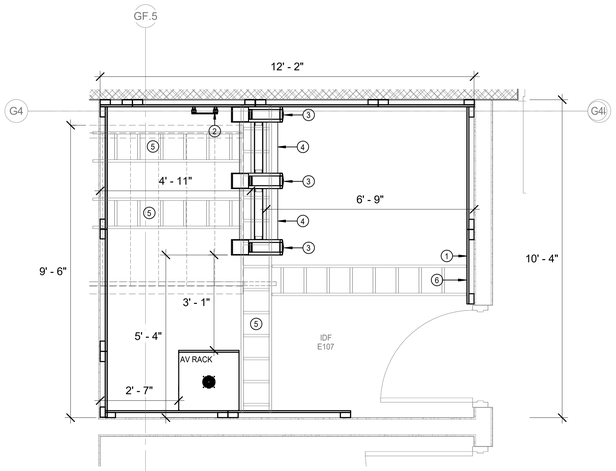

2 **TECHNOLOGY ENLARGED PLAN - NEW IDF E107**
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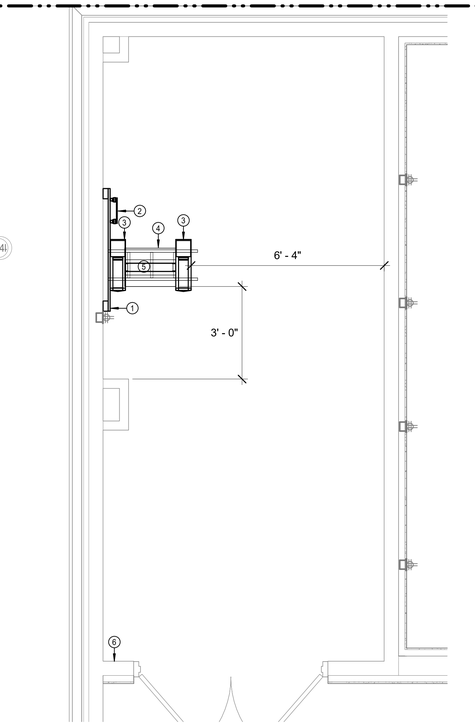

3 **TECHNOLOGY ENLARGED PLAN - IDF - STORAGE 241**
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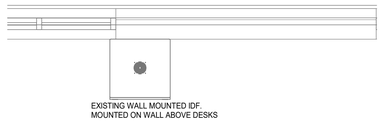

4 **TECHNOLOGY ELARGED PLAN - COMPUTER ROOM IDF - EXISTING**
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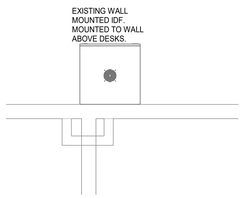


5 **TECHNOLOGY ENLARGED PLAN - CLASSROOM IDF - EXISTING**
Scale: 1/2" = 1'-0"



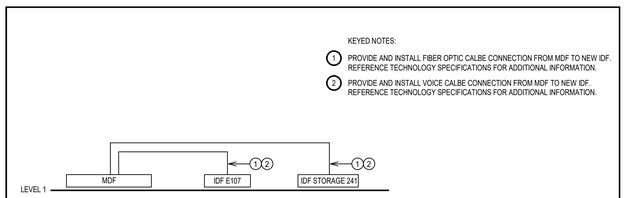
6 **TECHNOLOGY ENLARGED PLAN - BAND ROOM IDF - EXISTING**
Scale: 1/2" = 1'-0"

TECH ENLARGED PLAN GENERAL NOTES

A	ALL RACK LOCATIONS SHALL BE COORDINATED WITH THE PROJECT'S TECHNOLOGY CONSULTANT AND OWNER PRIOR TO INSTALLATION. NO RACKS AND/OR ASSOCIATED CABLE TRAY SYSTEM SHALL BE PERMANENTLY INSTALLED PRIOR TO DOCUMENTED ACCEPTANCE.
B	PATCH PANEL QUANTITY SHALL BE DETERMINED BY STATION CABLE DROP COUNTS SHOWN ON TECHNOLOGY PLANS AND THE ASSOCIATED PROJECT MATRIX. ENSURE PATCH PANEL QUANTITY IS SUFFICIENT TO SUPPORT THE NUMBER OF PORTS REQUIRED BY TECHNOLOGY PLANS PLUS AN ADDITIONAL 25% FOR FUTURE GROWTH.
C	CONTRACTOR SHALL NOT MOUNT EXCEED MORE THAN A 50% RACK FILL RATIO ON ANY RACK.
D	REFERENCE SPECIFICATIONS FOR MATERIALS AND METHODS
E	ALL RACKS, LADDER TRAYS, LIGHTNING PROTECTION ENCLOSURES AND ANY OTHER DEVICES, PART OF THE STRUCTURED CABLING SYSTEM, SHALL BE GROUNDED TO A GROUND BUS BAR LOCATED IN THE TELECOMMUNICATIONS ROOM WITH A #6AWG GROUND CABLE. DAISY CHAINING WILL NOT BE ACCEPTED. ALL ITEMS SHALL HAVE A DEDICATED GROUND CABLE TO BUS BAR. GROUND CABLE SHALL BE GREEN IN COLOR.

TECH ENLARGED PLAN KEYED NOTES

1	INDICATES THE LOCATION OF A 8' TALL, 3/4" FIRE RATED PLYWOOD CONTRACTOR TO PROVIDE AND INSTALL PLYWOOD AND ALL REQUIRED MOUNTING HARDWARE. PLYWOOD SHALL BE PAINTED WHITE WITH FIRE RATED PAINT. TYPICAL FOR ALL SHOWN ON DRAWING.
2	INDICATES THE LOCATION OF A NEW WALL MOUNTED TELECOMMUNICATION GROUND BUS BAR (TGBB). CABLING CONTRACTOR TO PROVIDE BUS BAR AND ALL REQUIRED MATERIAL TO MOUNT AT THE LOCATION SHOWN. TGBB TO BE MOUNTED AT +93" A.F.F.
3	PROVIDE AND INSTALL ONE (1) 7'X6", FRONT AND REAR MANAGED, VERTICAL CABLE MANAGER (BLACK IN COLOR). CABLE MANAGERS SHALL BE INSTALLED ON EACH END OF THE RACK SYSTEMS AND BETWEEN EACH RACK. CABLE MANAGERS SHALL HAVE A SINGLE, SOLID, FULL HEIGHT HINGED DOOR IN THE FRONT AND WIDE SPACED CABLE RINGS WITH SPIN-OPEN LATCHES IN THE REAR. TYPICAL FOR ALL SHOWN IN THE ENTIRE PROJECT.
4	PROVIDE AND INSTALL ONE (1) 2-POST, FLOOR MOUNTED, 7' RELAY RACK (BLACK IN COLOR), PROVIDE BONDING WASHERS, BOLTS, AND NUTS AT ALL MECHANICALLY CONNECTED LOCATIONS OF THE RACK TO ENSURE THAT ALL PIECES OF THE RACK ARE COMPLETELY BONDED. SCRAPING PAINT FROM RACKS TO MAKE A BOND WILL NOT BE ACCEPTED. ALL RACK MOUNTED COMPONENTS SHALL BE MOUNTED WITH BONDING SCREWS AND THE CONTRACTOR SHALL PROVIDE THE OWNER WITH (50) ADDITIONAL BONDING SCREWS FOR THE INSTALLATION OF OWNER EQUIPMENT. NO DAISY CHAINING GROUNDS FROM RACK TO CABLE TRAY OR TO OTHER RACKS WILL BE ACCEPTED. ALL GROUNDS SHALL BE HOME RUN TO THE TELECOMMUNICATIONS GROUND BUS BAR (TGBB). TYPICAL FOR ALL SHOWN ON THE ENTIRE PROJECT.
5	PROVIDE AND INSTALL A 12" WIDE, UNIVERSAL LADDER TRAY AND ALL REQUIRED MOUNTING HARDWARE. LADDER TRAY SHALL BE BLACK IN COLOR. TYPICAL FOR ALL SHOWN ON ENTIRE PROJECT.
6	CONTRACTOR TO PROVIDE AND INSTALL 2-4" CONDUIT PATHWAYS ABOVE CEILING. FIELD COORDINATE FINAL LOCATION.



7 TECHNOLOGY TYPICAL BACKBONE DIAGRAM

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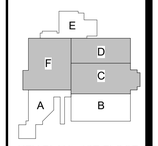

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TECHNOLOGY ENLARGED PLAN

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Job No. 1821-13-02	Sheet No. T3.11
Drawn By: NY	
Date: 10.29.2025	

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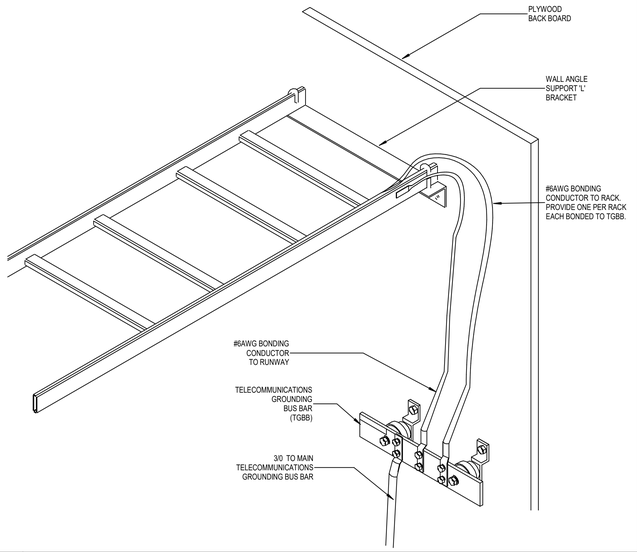
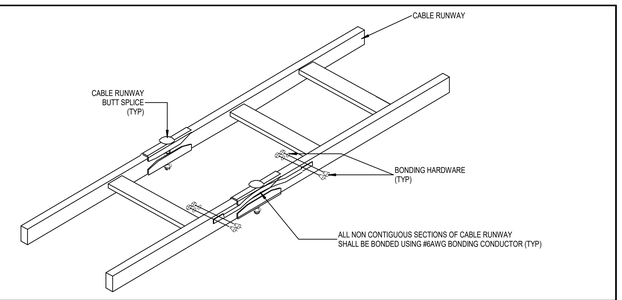
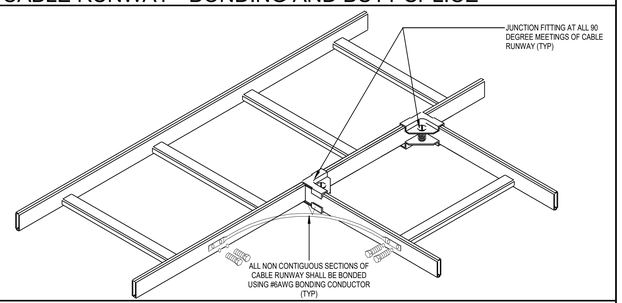


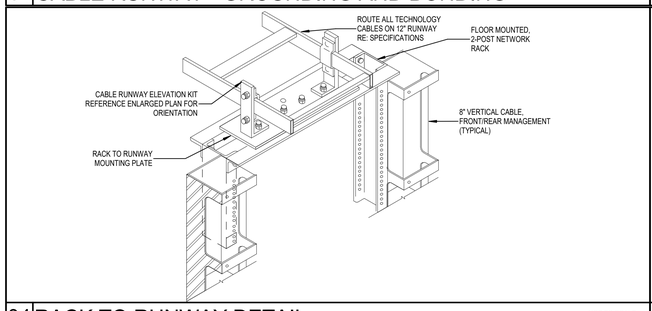
01 CABLE RUNWAY - GROUNDING AND BONDING NOT TO SCALE



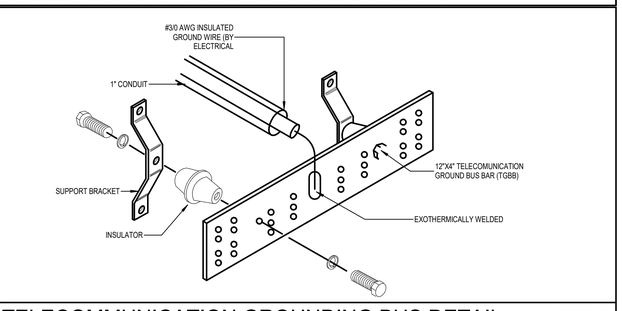
02 CABLE RUNWAY - BONDING AND BUTT SPLICE NOT TO SCALE



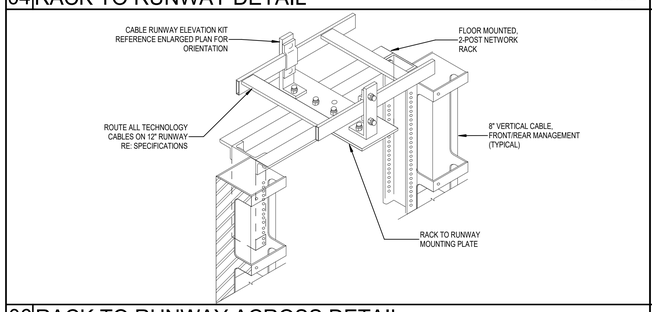
03 CABLE RUNWAY - JUNCTION AND BONDING NOT TO SCALE



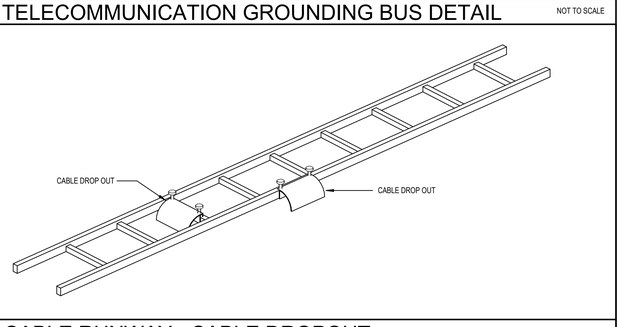
04 RACK TO RUNWAY DETAIL NOT TO SCALE



05 TELECOMMUNICATION GROUNDING BUS DETAIL NOT TO SCALE



06 RACK TO RUNWAY ACROSS DETAIL NOT TO SCALE



07 CABLE RUNWAY - CABLE DROPOUT NOT TO SCALE

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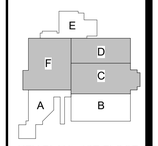

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Job No. 1821-13-02
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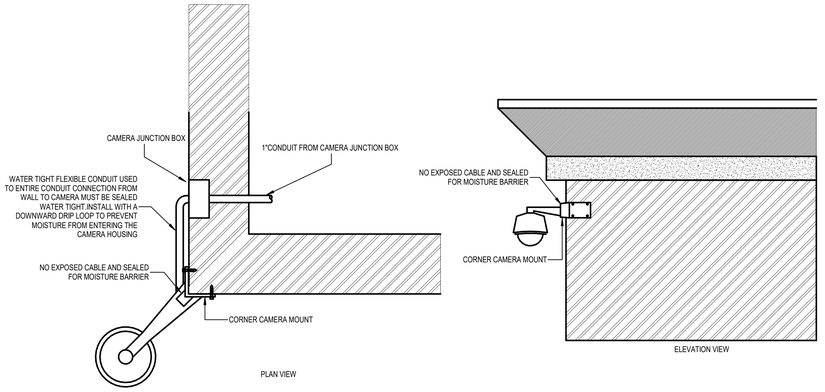
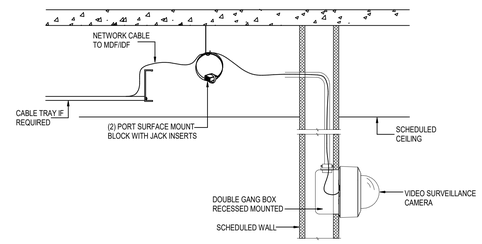


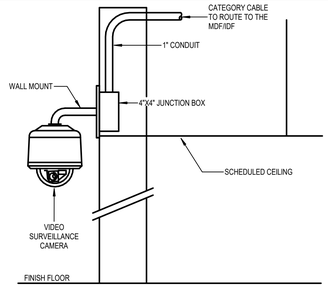
NOTE:

ELECTRICAL CONTRACTOR SHALL PROVIDE 1" CONDUIT WITH PULL STRING TO NEAREST AVAILABLE PLENUM SPACE. SECURITY CONTRACTORS SHALL PROVIDE CABLE FEED-THROUGH MOUNT FOR CAMERA. NO EXPOSED CABLE WILL BE ALLOWED. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.

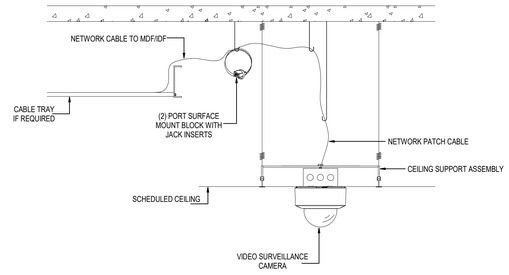
01 CORNER MOUNTING DETAIL — NOT TO SCALE



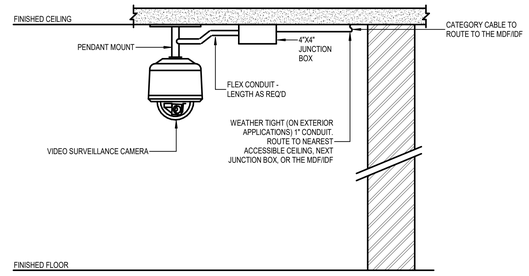
02 INTERIOR WALL MOUNT CAMERA-VERTICAL — NOT TO SCALE



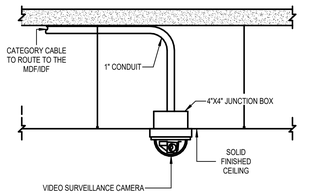
03 INTERIOR WALL MOUNTED DOME CAMERA — NOT TO SCALE



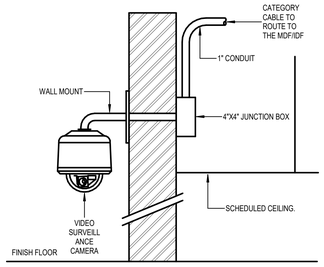
04 INTERIOR LAY-IN CEILING MOUNTED CAMERA — NOT TO SCALE



05 EXT./INT. PENDANT MOUNTED DOME CAMERA — NOT TO SCALE



06 EXTERIOR/INTERIOR SOLID CEILING MOUNT CAMERA — NOT TO SCALE



07 EXTERIOR WALL MOUNTED DOME CAMERA — NOT TO SCALE

GENERAL NOTES:

A. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUITS AND BACK BOXES. CONDUITS SHALL ROUTE TO THE NEAREST, ACCESSIBLE PLENUM SPACE.

B. ALL WALL, CORNER, PENDANT, AND UNDER CANOPY MOUNTING HEIGHTS. SHALL BE COORDINATED WITH THE OWNER AND SECURITY CONSULTANT PRIOR TO ROUGH-IN.

C. CABLE FEED-THROUGH MOUNT FOR CAMERA. NO EXPOSED CABLE WILL BE ALLOWED. SECURITY CONTRACTOR TO COORDINATE MOUNTING HEIGHT WITH ELECTRICAL CONTRACTOR PRIOR TO ROUGH-IN.

08 NOTES — NOT TO SCALE

Revision / Date

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KINGWOOD, TX

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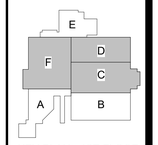

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Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. T5.02
Drawn By: Author	
Date: 10.29.2025	

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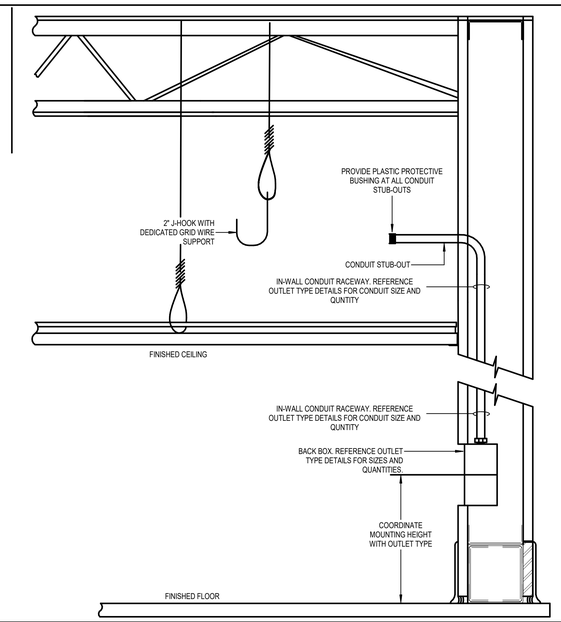
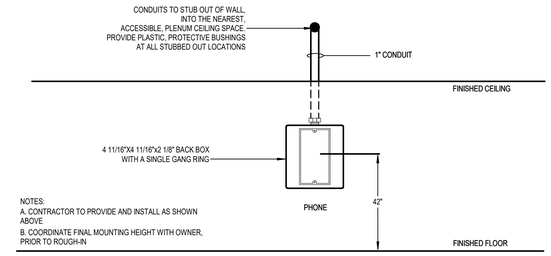
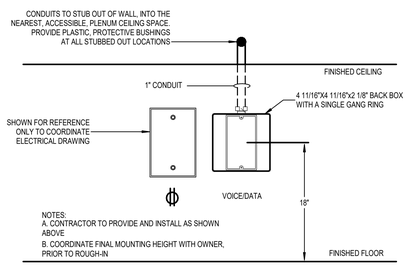


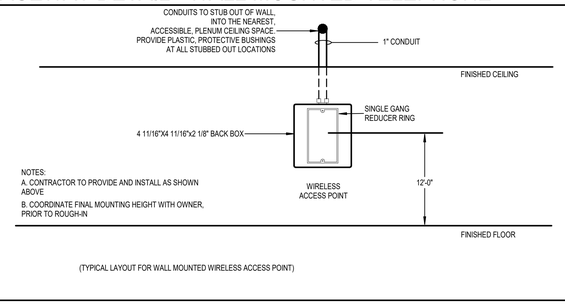
01 LOW VOLTAGE ELEVATION - IN-WALL RACEWAY NOT TO SCALE



02 RACEWAY DETAIL - WALL MOUNTED TELEPHONE NOT TO SCALE

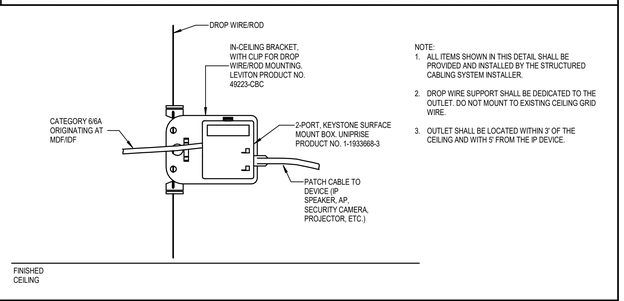


03 RACEWAY DETAIL - TYPICAL VOICE/DATA OUTLET NOT TO SCALE

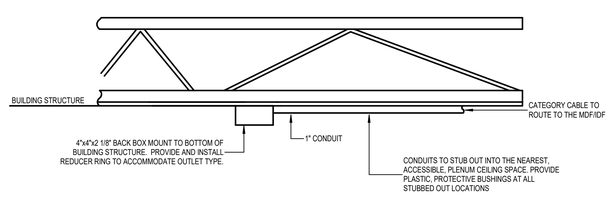


(TYPICAL LAYOUT FOR WALL MOUNTED WIRELESS ACCESS POINT)

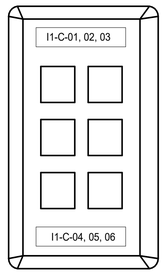
04 RACEWAY DETAIL - WALL MOUNTED WIRELESS AP NOT TO SCALE



05 ABOVE CEILING STAND ALONE OUTLET NOT TO SCALE

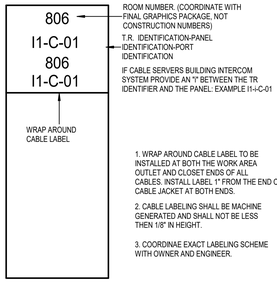


06 OPEN CEILING STRUCTURAL SURFACE MOUNT OUTLET NOT TO SCALE



1. FACEPLATE LABELING SHALL BE MACHINE GENERATED AND SHALL NOT BE LESS THEN 1/4" IN HEIGHT
2. PROVIDE BLANK INSERTS FOR ANY UNUSED PORTS
3. COORDINATE EXACT LABELING SCHEME WITH OWNER AND ENGINEER.

07 FACEPLATE LABEL DETAIL NOT TO SCALE



08 CABLE LABEL DETAIL NOT TO SCALE

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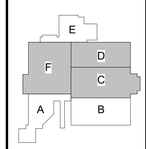

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Houston
10930 W. Sam Houston Pkwy North, Suite 900
Houston, TX 77064
Salas O'Brien Registration: F-4111
Salas O'Brien Project Number: 2022-05088-00

TECHNOLOGY DETAILS

PACKAGE	VOLUME
Job No. 1821-13-02	Sheet No. T5.03
Drawn By: Author	
Date: 10.29.2025	

Autodesk Docs://HUMBLE ISD - CREEKWOOD & RIVERWOOD MS ADD RENO/1821-13-01_03 RIVERWOOD MS ADD & RENO_MEP.rvt
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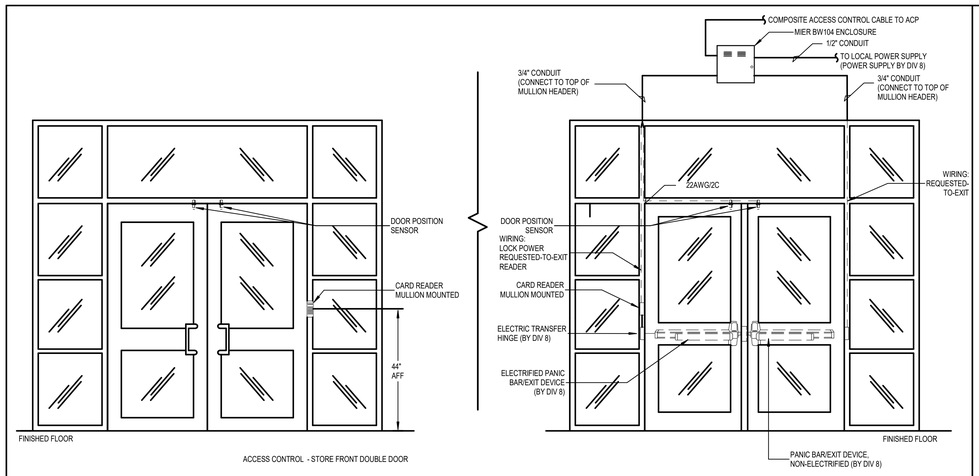
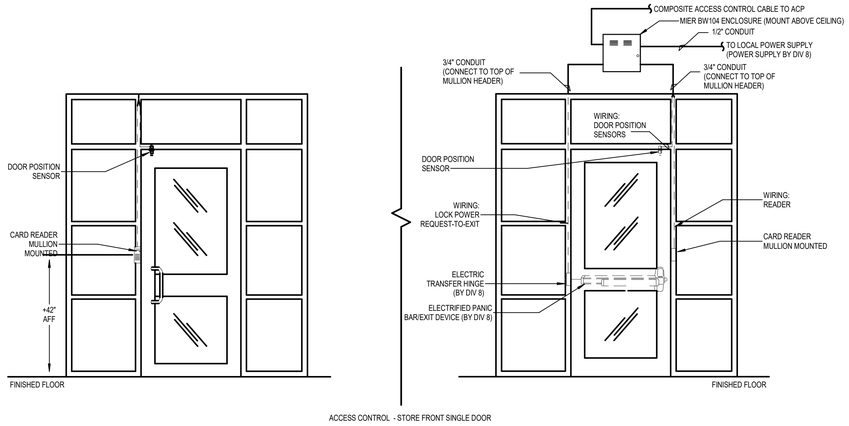


ACCESS CONTROL - STORE FRONT DOUBLE DOOR

01 ACCESS CONTROL - STORE FRONT DOUBLE DOOR

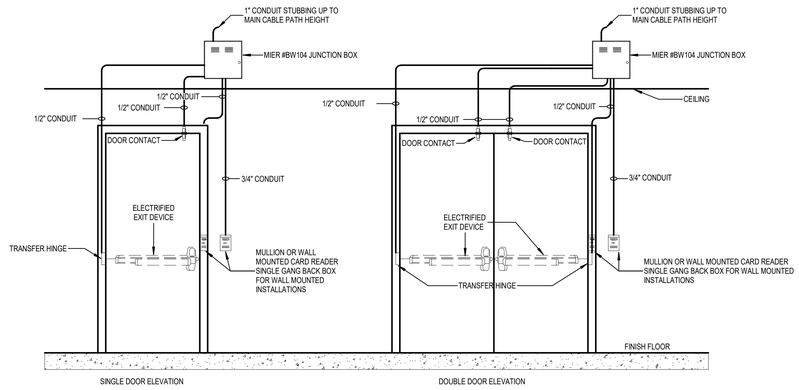
NOT TO SCALE



ACCESS CONTROL - STORE FRONT SINGLE DOOR

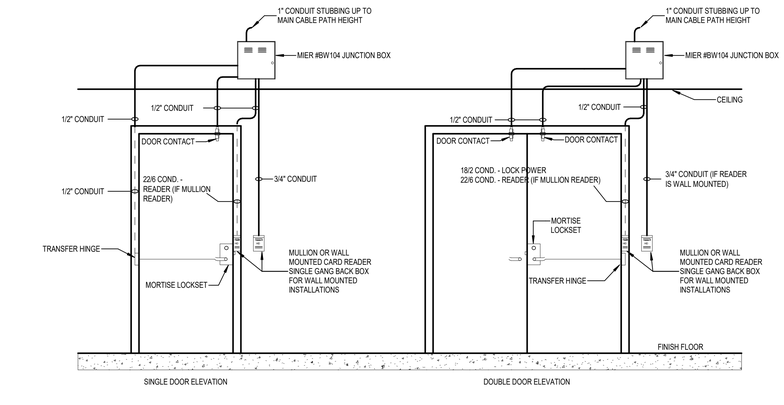
02 ACCESS CONTROL - STORE FRONT SINGLE DOOR

NOT TO SCALE



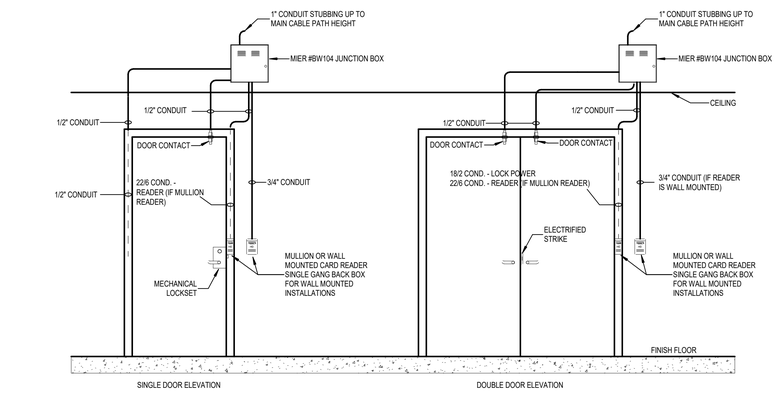
03 ACCESS CONTROL - EXIT DEVICE DOOR ELEVATION

NOT TO SCALE



04 ACCESS CONTROL - MORTISE LOCK DOOR ELEVATION

NOT TO SCALE



05 ACCESS CONTROL - ELECTRIFIED STRIKE DOOR ELEVATION

NOT TO SCALE

Revision / Date

Project:
RIVERWOOD MIDDLE SCHOOL ADDITIONS & RENOVATIONS
2910 HIGH VALLEY DR, HUMBLE, TX 77345
FOR
HUMBLE ISD
KINGWOOD, TX

BRADLEY KALMANS
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