Project No. 25-0067.00

June 17, 2026

06/17/2026

ADDENDUM NO. 4
TO THE
DRAWINGS AND PROJECT MANUAL
FOR
NEW OPPORTUNITY AWARENESS CENTER
KATY INDEPENDENT SCHOOL DISTRICT
KATY, TEXAS

VLK
20445 State Highway 249, Suite 350
Houston, TX 77070
281.671.2300
vlkarchitects.com

4.1 GENERAL

A. This addendum modifies the drawings and project manual, dated May 26, 2026, as noted within and shall become part of the Contract Documents.

B. Each holder of proposal documents registered with the Architect will receive a copy of the addendum. Each prime proposer is responsible for distribution of information conveyed by this addendum to its sub-proposers and suppliers.

C. Proposers shall acknowledge receipt of this addendum in the space provided on the proposal form. Failure to do so may subject proposer to disqualification.

4.2 SECTION 00 42 10 – COMPETITIVE SEALED PROPOSAL FORM – ALTERNATES AND UNIT PRICES

A. Delete this Section previously issued in Addendum No, 3 and insert attached **revised** Section.

4.3 SECTION 09 84 13 - FIXED SOUND-ABSORPTIVE/SOUND-REFLECTIVE PANELS

A. Delete this Section in its entirety and insert attached **revised** Section.

4.4 SECTION 32 18 16.13 - PLAYGROUND PROTECTIVE SURFACING

A. Delete this Section previously issued in Addendum No, 3 and insert attached **revised** Section.

4.5 CIVIL ADDENDUM ITEMS

A. Attached document by Adico Consulting Engineers shall hereby become a part of this addendum.

4.6 MECHANICAL, ELECTRICAL AND PLUMBING ADDENDUM ITEMS

A. Attached document by LTY Engineers shall hereby become a part of this addendum.

4.7 TECHNOLOGY ITEMS

A. Attached document by COMBS Consulting Group shall hereby become a part of this addendum.

4.8 REVISED DRAWINGS

A. Sheet Nos. INDEX, C4.00, C5.00, A1.31, A7.01, A9.01, M2.11, M5.00, M6.01, M7.01, P1.11, P2.10, P2.11, P3.01, P3.02, P3.03, P4.01, E1.11, E2.11, E2.21, T1.11, T1.12, TPA2.11, dated June 17, 2026 and attached hereto, are revised drawings and are hereby made a part of this addendum.

4.9 NEW DRAWINGS

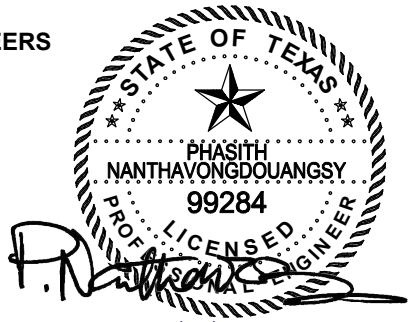
A. Sheet Nos. C4.01 and C4.02, dated June 17, 2026, attached hereto, are new drawings and are hereby made a part of this addendum.

END OF ADDENDUM NO. 4

June 17, 2026

ADICO, LLC. CONSULTING ENGINEERS
TBPE No. F-16423

Phasith Nanthavong, P.E.



06/17/2026

CIVIL CONSULTANT, ADDENDUM No. 4

1. C4.00 – OVERALL SITE UTILITY PLAN

A. Removed water service connection at an existing 8-inch water line south of Legacy Stadium and Field House which includes an 8”x8” Tee with GV & Box, approximately 500 linear feet of 8-inch C900 PVC with bends, fittings, trenching and open cut.

2. C4.01 – OVERALL SITE UTILITY PLAN ALTERNATE NO. 7A

A. Added water service connection at Katyland Drive which includes a 12”x8” TS&V with Box, an 8-inch fire/domestic combination meter in a vault, 8-inch double check backflow preventer in a vault, approximately 2,560 linear feet of 8-inch C900 PVC with bends, fittings, trenching and open cut.

3. C4.02 – OVERALL SITE UTILITY PLAN ALTERNATE NO. 7B

A. Added water service connection at an existing 8-inch water line south of Legacy Stadium and Field House which includes an 8”x8” Tee with GV & Box, approximately 1,240 linear feet of 8-inch C900 PVC with bends, fittings, trenching and open cut.

4. C5.00 - SITE UTILITY PLAN

A. Revised 4-inch domestic water line (C900 PVC) to 3-inch domestic water line (SCH 40 PVC) to match plumbing plans. Updated key notes 2, 3, 4, 5, 6, and 9 to show 3-inch.

B. Revised 6-inch fire line connection and 3-inch domestic water line connection to pump room, to match plumbing plans.

C. Revised sanitary connection points and length of sanitary line along west side of building to match plumbing plans.

D. Revised backflow preventer reference note to see plumbing plans instead of fire engineer plans for details.

END OF ADICO ADDENDUM No. 4 ITEMS

June 17, 2026

MEP ADDENDUM NO. 4 ITEMS

SPECIFICATIONS

22 07 19-PLUMBING PIPING INSULATION – Removed verbiage referencing 'phenolic' insulation and replaced it with 'Cellular Glass' insulation to align with the project insulation requirements.

23 07 13-HVAC INSULATION – Updated spec to say Cellular Glass and not Koolpheen to match performance.

23 73 13-INDOOR AIR HANDLING UNITS – Updated AHU testing portion.

DRAWINGS

1. **SHEET M2.11 – MECHANICAL LEVEL ONE FLOOR PLAN**
   - A. Added exhaust ductwork and a ventilator for dryer.
   - B. Added keynote 5.
   - C. Added grilles for a finished look on the storage rooms.
2. **SHEET M5.00 – MECHANICAL SCHEDULES**
   - A. Revised external static pressure on all AHUs.
3. **SHEET M6.01 – MECHANICAL DETAILS**
   - A. Added detail 7 for dryer exhaust.
4. **SHEET M7.01 – MECHANICAL SCHEMATICS**
   - A. Added note on expansion tank for chilled water expansion tank.
   - B. Added note on expansion tank for hot water expansion tank.
   - C. Relocated air/dirt separator.
5. **SHEET E1.11 - ELECTRICAL SITE PLAN**
   - A. Added Sanitary lift station power

B. Revised ATS/ docking station layout to match one-line.

6. SHEET E2.11 – POWER LEVEL ONE FLOOR PLAN

A. Added power for the boost fan.

7. SHEET E2.21 – ELECTRICAL LIGHTING LEVEL ONE CEILING PLAN

A. Added general lighting notes to denote fixtures ending with E as emergency.

8. SHEET P1.11 — PLUMBING SITE PLAN

A. Modified gas pipe size after the PRV for the generator from 2” to 3”.

9. SHEET P2.10 — PLUMBING UNDERGROUND FLOOR PLAN

A. In Break Room A108, removed the floor sink serving the dishwasher and added a note directing the dishwasher drain to discharge into the adjacent sink.

10. SHEET P2.11 — PLUMBING LEVEL ONE FLOOR PLAN

A. In breakroom A108, removed the water line serving the dishwasher, it will be served from the sink.

B. Removed the domestic water entry PRZ from the plumbing scope. Civil has it shown on their drawings. Refer to the Civil drawings for the domestic water backflow preventer location and installation.

C. On the plumbing alternate plan for the pump room, revised the fire service double check assembly to be installed in the vertical orientation.

D. Shifted FDC to the east wall of the riser room

E. Added PIV to the east wall of the riser room

11. SHEET P3.01 — PLUMBING SCHEDULES AND DETAILS

A. Updated gas pressure regulator schedule to reflect the 3” pipe size for the generator.

B. Updated generator gas load.

12. SHEET P3.02 — PLUMBING SCHEDULES AND DETAILS

A. Updated fire sprinkler system detail to include the PIV and the vertical double check valve for the fire entry.

13. SHEET P3.03 — PLUMBING SCHEDULES AND DETAILS

A. Updated the plumbing fixture schedule for SK-3 to include the tie in for the dishwasher.

14. SHEET P4.01 — PLUMBING RISER DIAGRAMS

A. Updated the gas riser diagram to show the updated gas load for generator and pipe sizes.

B. Removed the floor sink that was serving the dishwasher.

END OF LTY ENGINEERS ADDENDUM ITEMS

TECHNOLOGY ADDENDUM NO. 4 ITEMS

1. SPECIFICATIONS – 275100 Distributed Communications System

A. Added Public Address system requirements to define zoned paging functionality consisting of Vestibule, Instructional North, Instructional South, and Administrative paging zones in accordance with Katy ISD operational requirements.

2. SHEET T1.11 – TECHNOLOGY OVERALL SITE PLAN

A. Added infrastructure updates to the Technology Overall Site Plan. New pathway routing has been incorporated north of the building to provide a redundant service provider entry point and improve service continuity to the property line.

B. Revised Keyed Note 15 to increase the pathway requirement from (2) 2-inch conduits to (2) 4-inch conduits to accommodate incoming service provider cabling and provide additional capacity for future expansion.

3. SHEET T1.12 – TECHNOLOGY EXISTING OVERALL SITE PLAN

A. Added infrastructure updates to the Technology Overall Site Plan. New pathway routing has been incorporated north of the building to provide a redundant service provider entry point and improve service continuity to the property line.

B. Revised Keyed Note 15 to increase the pathway requirement from (2) 2-inch conduits to (2) 4-inch conduits to accommodate incoming service provider cabling and provide additional capacity for future expansion.

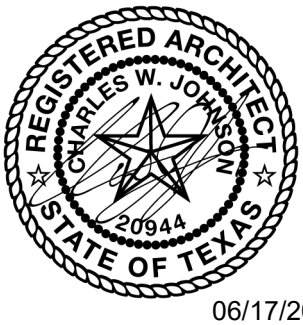
4. SHEET TPA2.11 – PUBLIC ADDRESS ORIENTATION PLAN - LEVEL ONE

A. Revised the paging zone chart to align with district standards and facility operational requirements.

B. Added paging zone boundary diagrams to graphically identify the extents of each paging zone and clarify area assignments throughout the facility.

END OF COMBS CONSULTING GROUP ADDENDUM ITEMS

06/17/2026



06/17/2026

DOCUMENT 00 42 10
COMPETITIVE SEALED PROPOSAL FORM – ALTERNATES AND UNIT PRICES

NEW OPPORTUNITY AWARENESS CENTER
KATY INDEPENDENT SCHOOL DISTRICT

Submitted by: _____

Date: _____Phone No.: _____

To: Board of Trustees
Katy Independent School District
6301 South Stadium Lane
Katy, Texas 77492-0159

Having examined Proposal and Contract Documents prepared by VLK, dated May 26, 2026, and having examined site conditions, the undersigned proposes to furnish all labor, equipment and materials andperform all work for the completion of the above-named project for the sum indicated below.

In submitting his Proposal, the undersigned agrees to the following:

1. Hold proposal open for acceptance 60 days.
2. Accept right of Owner to reject any or all proposals, to waive formalities and to accept Proposal which Owner considers most advantageous.
3. Enter into and execute the contract, if awarded, for the Base Proposal and accepted Alternate Proposals.
4. Complete work in accordance with the Contract Documents within the stipulated contract time.
5. By signing, the undersigned affirms that, to the best of his knowledge, the Proposals havebeen arrived at independently and is submitted without collusion with anyone to obtain information or gain any favoritism that would in any way limit competition or give an unfairadvantage over respondents in the award of this proposal.

I. ALTERNATES

NOTE:

- Show Amounts in both words and figures. In case of discrepancy, amount shown in words will govern.
- Alternate 1 is to be selected as option to Owner as an Add or Deduct from the Base Proposal work as indicated in drawings and specifications.

If the Owner accepts any or all of the Alternates as described in Section 01 23 00 *Alternates*, the undersigned agrees to modify the Base Proposal as stipulated below:

1) Alternate No. 1 - OPTIONAL ADJUSTMENT TO BASE PROPOSAL: For optional adjustment to the Base Proposal: add to the Base Bid the following:
(Add or Deduct) _____Dollars ($_____).
2) Alternate No. 2 - ABUSE RESISTANT GYPSUM BOARD: For providing Abuse Resistant Gypsum Board in rooms 102, 204, 205, 206, 207, 208, 211, 214, 304, 305, 306, 308, 309, 313, 402, 403, 404, and 406, add to the Base Bid the following.
(Add)_____Dollars ($_____).

3) Alternate No. 3 - CHILLERS: There are no Chillers included in the Base Bid. One of the following Alternates below (A, B, or C) will be selected:
   a. Alternate No. 3A: For providing York Centrifugal Liquid Chillers with a 10 year warranty according to Section 23 64 16, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   b. Alternate No. 3B: For providing Carrier Centrifugal Liquid Chillers with a 10 year warranty according to Section 23 64 16, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   c. Alternate No. 3C: For providing Trane Centrifugal Liquid Chillers with a 10 year warranty according to Section 23 64 16, add to the Base Bid the following:
      (Add)_____Dollars ($_____).

4) Alternate No. 4 - AIR HANDLING UNITS: There are no Air Handling Units included in the Base Bid. One of the following Alternates below (A, B, C, or D) will be selected:
   a. Alternate No. 4A: For providing York Air Handling Units according to Section 23 73 13, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   b. Alternate No. 4B: For providing Carrier Air Handling Units according to Section 23 73 13, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   c. Alternate No. 4C: For providing Temptrol Air Handling Units according to Section 23 73 13, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   d. Alternate No. 4D: For providing Trane Air Handling Units according to Section 23 73 13, add to the Base Bid the following:
      (Add)_____Dollars ($_____).

5) Alternate No. 5 - ACCESS CONTROL SYSTEM AND INTRUSION SYSTEM: There is no access control system and no intrusion system included in the Base Bid. One of the following Alternates below (A, B, or C) will be selected:
   a. Alternate No. 5A: For providing Access Control System and Intrusion System per Sections 28 13 00 and 28 16 00, installed by Transnet Communication LLC, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   b. Alternate No. 5B: For providing Access Control System and Intrusion System per Sections 28 13 00 and 28 16 00, installed by Fisk Electric, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   c. Alternate No. 5C: For providing Access Control System and Intrusion System per Sections 28 13 00 and 28 16 00, installed by ACME Electric, add to the Base Bid the following:
      (Add)_____Dollars ($_____).

6) Alternate No. 6 - AUTOMATION CONTROL: There is no automation control included in the Base Bid. One of the following Alternates below (A, B, C, or D) will be selected:
   a. Alternate No. 6A: For providing Automation Control, as manufactured by Unify Energy Solutions - Reliable Controls, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   b. Alternate No. 6B: For providing Automation Control, as manufactured by Hunton Trane - Trane, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   c. Alternate No. 6C: For providing Automation Control, as manufactured by Climatec - Alerton, add to the Base Bid the following:
      (Add)_____Dollars ($_____).
   d. Alternate No. 6D: For providing Automation Control, as manufactured by Automated Logic Corp. - Automated Logic, add to the Base Bid the following:
      (Add)_____Dollars ($_____).

7) Alternate No. 7 - FIRE AND DOMESTIC PUMP ROOM ADDED TO BUILDING

~~**a. Alternate No. 7: State in the proposal form the amount to be added to the base proposal for providing approximately 650 linear feet of new pipe from the existing hydrant off of the East side of Rhodes stadium to a 150 SF addition off of the new building Fire Riser room M1 for domestic and fire pumps in lieu from connecting 2,560 new pipe from Katyland Dr, and new domestic and fire pumps to service the new building. (Add)_____ Dollars ($_____).**~~

b. Alternate No. 7A: State in the proposal form the amount to be added to the base proposal for the following scope:

i. **Water service piping: Approximately 2,560 linear feet of new domestic and fire water service pipe from Katyland Drive to the building and all other associated work for a complete and fully operational system**

ii. **Pump room building addition: A new approximately 150 SF enclosed room addition to the building, attached adjacent to Fire Riser Room M1, including complete structural, architectural, mechanical, plumbing, and electrical work. and all other associated work for complete and fully operational system**

iii. **Pump equipment: New domestic water booster pump and fire pump with all associated piping, valves, fittings, electrical service, controls, and accessories required for a complete and fully operational system serving the new building.**

c. Alternate No. 7B: State in the proposal form the amount to be added to the base proposal for the following scope:

i. **Water service piping: Approximately 1,240 linear feet of new of water service pipe, extending from the existing 8-in line from Legacy Stadium / Field House, located on the North side of Rhodes Stadium, to the new building. Includes all trenching, bedding, backfill, testing, restoration and all other associated work for complete and fully operational system**

ii. **Pump room building addition: A new approximately 150 SF enclosed room addition to the building, attached adjacent to Fire Riser Room M1, including complete structural, architectural, mechanical, plumbing, and electrical work. and all other associated work for complete and fully operational system**

iii. **Pump equipment: New domestic water booster pump and fire pump with all associated piping, valves, fittings, electrical service, controls, and accessories required for a complete and fully operational system serving the new building.**

[ADDENDUM NO. 4]

II. UNIT PRICES

1.1 UNIT PRICE NO.1 - DRILLED CONCRETE PIERS:

A. Submit one copy of drilling log indicating top and bottom elevation of each pier drilled, and water and/or caving encountered. Indicate difference between proposal depth and actual depth.

B. Measurement: Base Proposal shall reflect pier depths indicated in the Proposal Documents.

1. Measure actual depth from top of grade at time of drilling to bottom of pier shaft.
2. Payment will be adjusted based on the total accumulative net difference of the actual depth from the proposed depth indicated for each pier. Payment will not be made for individual piers.
3. Adjustments for actual conditions will be made by Change Order.
4. **Installed cost per linear foot for actual pier depths differing from depth indicated in the Proposal Documents.**
   [ADDENDUM NO. 4]

SIZE	**EXTRA**	**CREDIT**
12/30 in. dia.	**$_____**	**$_____**
22/55 in. dia.	**$_____**	**$_____**
24/60 in. dia.	**$_____**	**$_____**
30/75 in. dia.	**$_____**	**$_____**
32/80 in. dia.	**$_____**	**$_____**

1.2 UNIT PRICE NO. 2 - CONCRETE PAVING

A. Unit Price 2A: Installed cost for each square foot of 5" thick concrete paving with #4 on 24" O.C.E.W added to or deleted from the Work, including subgrade preparation, formwork, reinforcing, and concrete indicated on the Drawings. — UNIT Sq. Ft. | EXTRA $_____ | CREDIT $_____

B. Unit Price 2B: Installed cost for each square foot of 6" thick concrete paving with #4 on 18" O.C.E.W. added to or deleted from the Work, including subgrade preparation, formwork, reinforcing, and concrete indicated on the Drawings. — UNIT Sq. Ft. | EXTRA $_____ | CREDIT $_____

C. Unit Price 2C: Installed cost for each square foot of 7" thick concrete paving with #4 on 18" O.C.E.W. added to or deleted from the Work, including subgrade preparation, formwork, reinforcing, and concrete indicated on the Drawings — UNIT Sq. Ft. | EXTRA $_____ | CREDIT $_____

1.3 UNIT PRICE NO. 3 – CONCRETE SIDEWALKS

A. Installed cost for each square foot of concrete sidewalk added to or deleted from the Work, including subgrade preparation, formwork, reinforcing, and concrete indicated on the Drawings. — UNIT Sq. Ft. | EXTRA $_____ | CREDIT $_____

1.4 UNIT PRICE NO. 4 – SOIL EXCAVATION

A. Installed cost for Soil Excavation per ~~**square**~~ **cubic** added to or deleted from the Work. — UNIT ~~**Sq**~~**Cu**.Yd. | EXTRA $_____ | CREDIT $_____

1.5 UNIT PRICE NO. 5 – SELECT FILL PLACEMENT

A. Installed cost for select fill placement per ~~**square**~~ **cubic** yard added to or deleted from the Work. — UNIT ~~**Sq**~~**Cu**.Yd. | EXTRA $_____ | CREDIT $_____

1.6 UNIT PRICE NO. 6 – CEMENT STABILIZATION SAND

A. Installed cost for Cement Stabilization Sand and per square yard added to or deleted from the Work. — UNIT Sq. Yd. | EXTRA $_____ | CREDIT $_____

1.7 UNIT PRICE NO. 7 – TYPE "A" INLETS

	UNIT	EXTRA	CREDIT
A. Installed cost for Type "A" Inlets added to or deleted from the Work.	Ea.	$_____	$_____

1.8 UNIT PRICE NO. 8 – STORM SEWER

	UNIT	EXTRA	CREDIT
A. Installed cost for 24" HDPE storm sewer including excavation and cement stabilized backfill per linear foot.	Ea.	$_____	$_____

1.9 UNIT PRICE NO. 9 – LIME STABILIZATION FOR WET WEATHER CONDITIONS

	UNIT	EXTRA	CREDIT
A. Installed cost for lime stabilization per square yard for wet weather conditions.	Sq. Yd.	$_____	$_____

1.10 UNIT PRICE NO. 10 - LAN DATA DROPS

A. Installed cost for each data drop added to or deleted from the Work, including rough-in and finish-out.

	UNIT	EXTRA	CREDIT
1. Unit Price 10A: Single data port wired to nearest IDF/MDF room up to 200 feet.	Ea.	$_____	$_____
2. Unit Price 10B: Double data port wired to nearest IDF/MDF room up to 200 feet.	Ea.	$_____	$_____
3. Unit Price 10C: Triple data port wired to nearest IDF/MDF room up to 200 feet.	Ea.	$_____	$_____
4. Unit Price 10D: J-box with 1-1/4" conduit stubbed up wall to above ceiling.	Ea.	$_____	$_____

1.11 UNIT PRICE NO. 11 - ELECTRICAL

A. Installed cost for each of the following added to or deleted from the Work, including rough-in and finish out

	UNIT	EXTRA	CREDIT
1. Unit Price 11A: 120V duplex receptacle on nearest capable circuit up to 25 feet.	Ea.	$_____	$_____
2. Unit Price 11B: 120V duplex receptacle on dedicated circuit, including 20 amp circuit breaker up to 200 feet.	Ea.	$_____	$_____
3. Unit Price 11C: 220V receptacle on dedicated circuit including 20 amp circuit breaker up to 200 feet.	Ea.	$_____	$_____
4. Unit Price 11D: Two-way light switch.	Ea.	$_____	$_____
5. Unit Price 11E: Three-way light switch.	Ea.	$_____	$_____
6. Unit Price 11F: Exit Light	Ea.	$_____	$_____

1.1 UNIT PRICE NO. 12 - LAN CABLING

	UNIT	EXTRA	CREDIT
A. Installed cost for CAT 6 Cable added to or deleted from the Work.	Ln.Ft.	$_____	$_____

1.2 UNIT PRICE NO. 13 - LANDSCAPING

A. Installed cost for each of the following added to or deleted from the Work. Including final grading, bed prep., and excavation.

	UNIT	EXTRA	CREDIT
1. Unit Price 13A: Tree			
a. Mexican Sycamore	Caliper	$_____	$_____
b. Texas Red Oak	Caliper	$_____	$_____
c. Loblolly Pine	Caliper	$_____	$_____
2. Unit Price 13B: Shrub	UNIT	EXTRA	CREDIT
a. Yaupon Holly “Pride of Houston”	Pot Size	$_____	$_____
b. Indian Hawthorne “Calisto”	Pot Size	$_____	$_____
	UNIT	EXTRA	CREDIT
3. Unit Price 13C: Sod	Sq. Ft.	$_____	$_____
	UNIT	EXTRA	CREDIT
4. Unit Price 13 D: Hydromulch	Sq. Ft.	$_____	$_____

III. PROJECT SUPERINTENDENT AND PROJECT MANAGER

The undersigned proposes the following project team members (attach resumes).

Project Executive:_____

Office Location_____

Percent Time Dedicated to Project_____

Project Manager:_____

Office Location_____

Percent Time Dedicated to Project_____

Assistant Project Manager or Project Engineer: _____

Project Superintendent(s): _____

Assistant Superintendent(s): _____

IV. PROPOSED CONSTRUCTION SCHEDULE

Attached a preliminary construction schedule for use in evaluating the Offeror's proposal.

It is understood that the right is reserved by the Owner to reject any or all proposals, or waive any informalities in the proposal process.

_____
Authorized Signature

_____
Title

(Seal, if a Corporation)
State whether Corporation
Partnership or Individual

_____
Name of Contracting Firm

_____
Address

_____
Telephone

_____
Date

END OF DOCUMENT

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06/17/2026

SECTION 09 84 13

FIXED SOUND-ABSORPTIVE/SOUND-REFLECTIVE PANELS

PART 1 - GENERAL

.1 SUMMARY

A. Section Includes: Acoustical wall panel system.

.2 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2026a.

.3 SUBMITTALS

A. General: Submit in accordance with SECTION 01 33 23 - SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Shop Drawings: Submit proposed layout of coverage by acoustical panels, details of proposed mounting method.

C. Samples:

1. Submit a minimum size of 12" x 12" sample of each proposed panel, to include specified facing, proposed edge detailing and a mounting element.
2. Submit manufacturer's available sample selections of fabric or color for Architect's selection and approval.

D. Certification: Submit manufacturer's certificates of flame spread rating of selected fabric facings or products, and independent laboratory tests of sound absorption coefficients for products in thickness specified.

PART 2 - PRODUCTS

.1 CEMENTITIOUS WOOD FIBER ACOUSTICAL WALL PANELS

A. Cementitious Wood Fiber Acoustical Wall Panels: Provide Tectum acoustical wall panels as manufactured by Armstrong World Industries; Telephone: (877) 276-7876; website: www.armstrongceilings.com.

1. (TYPE AP-01) Tectum ~~Standard~~**High NRC** Direct Attach Acoustical Wall Panels. ***[ADDENDUM NO. 4]***
   a. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
   b. Thickness: 2 inches.
   c. Edge: Long edge beveled
   d. Width and Length as shown on drawings.
   e. Color: Provide pre-colored, or painted color, as scheduled in “Material Finish Schedule” in drawings.
   f. Mounting Style: “D-20”. Provide all fasteners, and furring strips, where shown, for a complete single source installation.

B. Flammability (ASTM E84): Flame Spread 25 or less.

C. Hardware: Manufacturer's standard concealed mounting hardware consisting of panel, wall and leveling clips.

.2 PET PLASTICS/FELT ACOUSTIC WALL PANELS

A. Acoustical Wall Panels: Provide pet plastics/felt acoustical wall panels as manufactured by one of the following:

Acoufelt
Autex Acoustics
Kinetics Noise Control, Inc.
Decoustics. Ltd (CertainTeed/Saint-Gobain)
Golterman & Sabo, Inc. (G&S Acoustics)

B. (TYPE AWP-01) Acoustic Wall Panel: Provide Fracture Two-Tone as manufactured by Acoufelt or approved equivalent.

1. Panel Construction: FilaSorb panel of 100% polyester
2. Color/Design: As scheduled in “Material Finish Schedule” in drawings.
3. Panel Size: 14mm/0.55"
4. Provide NRC of 0.75 with 50mm/1.97" air gap.
5. Width and Length: As shown on drawings.

C. Flammability (ASTM E84): Flame Spread 25 or less.

D. Hardware: Manufacturer's standard concealed mounting hardware consisting of panel, wall and leveling clips.

PART 3 - EXECUTION

.1 EXAMINATION

A. Examine walls for conditions that would prevent proper installation of acoustical products, and report such conditions to the Architect for correction.

B. Do not proceed until defective conditions are corrected.

.2 INSTALLATION

A. Securely install acoustical panels aligned plumb and square, with uniform, tight butt joints between adjacent panels, in accordance with manufacturer's written directions.

B. Contractor shall remove packing material, construction debris, tools and equipment from site upon completion of work, leaving each installation clean and acceptable for use and occupancy by Owner.

END OF SECTION

SECTION 22 07 19

PLUMBING PIPING INSULATION

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

The General Provisions of the Contract, including General, Supplementary and Special Conditions, apply to the work specified in this Section.

1.2 GENERAL REQUIREMENTS

A. Install all insulation in conformance with manufacturer's recommendations and these specifications.

B. All interior adhesives and sealants must meet VOC limit requirements of South Coast Air Quality Management District (SCAQMD) Rule #1168. Must comply with the TIPS requirements.

C. All interior paints and coatings must meet VOC limit requirements of South Coast Air Quality Management District (SCAQMD) Rule #1113 and Green Seal GS-11 and GS-03. Must comply with the TIPS requirements.

D. Insulation materials manufactured by the following list of companies will be acceptable provided their materials conform to these specifications (see Paragraph on Substitution): Armstrong, CertainTeed, Childers, Foster, Knauf, Koolphen, Manville, Owens-Corning and Pittsburg-Corning.

E. Flame Spread and Smoke Requirements:

1. All jackets, adhesives, coatings, insulating materials and vapor barrier mastics for piping and equipment shall have a flame spread not higher than 25 and smoke developed rating not higher than 50.

2. All materials containers shall have a U. L. Label.

F. At each pipe support point, provide formed 16-gauge galvanized sheet metal saddle, with length three times pipe size, 8” minimum. Sheet metal saddle shall be secured to pipe insulation using aluminum band at both ends of saddle. For piping 1½” and larger, install a hard section of ~~phenolic~~ Cellular Glass foam pipe insulation, with length three times pipe size, minimum 8" length, on lower 180° of piping, 360° if clamps are used on top of pipe, same thickness as adjacent insulation, to prevent compression at support bearing area. Seal and finish to match adjoining insulation.

G. Install .020" thick aluminum jacket with minimum 2” overlap joint on all insulated piping exposed outside building. Install factory made aluminum covers on all elbows. Cut aluminum neatly to fit all tees, such that all insulation is covered by aluminum. Use waterproofing aluminum colored Foster 95-44 or Childers CP-76-1 sealer to seal all joints. Provide .020x3/4” aluminum bands not more than 12" on center for all jacketing. Install aluminum covers on insulated pipe inside that is exposed to view in finished areas including inside gymnasiums, shop areas and any areas with partial or no ceilings. Cover is not required in mechanical or AHU rooms. Jacketing in contact with soil shall be .010" stainless steel.

H. ACCEPTABLE MANUFACTURERS

1. Glass fiber pipe insulation:

a. Johns-Manville Micro-Lok AP-T

b. Owens-Corning ASJ/SSL

c. Knauf ASJ/SSL

2. Cellular Glass Insulation (Foamglass):

a. Pittsburg Corning

b. Cell-U-Foam

3. Aluminum Jacketing:

a. Childers

b. Pabco

c. RPR

4. Fiberglass reinforcing cloth mesh:

a. Perma Glass Mesh

b. Alpha Glass Mesh

c. Childers Chil-Glas

d. Vimasco

5. Mastics and Adhesives

a. Childers

b. Foster

c. Vimasco

d. Armstrong 520 Adhesive

6. Elastomeric Insulation

a. Armstrong

7. Weather Resistant Coating

a. WB Armaflex Finish

8. Glass fiber blanket insulation

a. Manville R-series Microlite FSKL

b. Owens-Corning eD75 or ED100 RKF

c. Knauf 0.75 PCF FSK

PART 2 – MATERIALS AND METHODS

2.1 DOMESTIC COLD WATER PIPING

A. Insulate all water piping outside and above grade, in exterior walls, within eight (8) feet of exterior walls, inside concrete block walls (not including 6” or deeper chase walls unless concrete touches piping), inside walls where concrete touches piping, central mechanical and boiler room piping, piping inside the building but outside the building insulation (i.e. above insulation on ceiling), in basements and all unconditioned spaces and all piping subject to condensation with 1" thick factory molded fiberglass pipe covering, density not less than 3 pounds per cubic foot, conductivity (k) not higher than .25 at 100° mean temperature difference with factory attached fire retardant, vapor barrier jacket. Piping exposed to view in finished areas, including inside gymnasiums, shop areas and any areas with partial or no ceilings, shall have aluminum jacketing per specification.

B. For piping outside or in unconditioned buildings or spaces, including pipe entry to building at grade and backflow preventers, provide 2” thick, Cellular Glass pipe insulation. Install .010” stainless steel protective jacket from building wall to 6” below grade. Insulation and jacketing for backflow preventers shall be installed with easily removable sections to allow periodic servicing, testing and inspection of backflow preventer without damaging insulation installation or integrity.

C. Install insulation over pipe and carefully connect self sealing laps. Provide 3" butt strips at each joint between sections, sealed with Foster 85-75 or Childers CP-82 adhesive. Coat all vapor retarder film (ASJ) longitudinal and butt joints with anti-fungal Foster 30-80AF vapor barrier coating to prevent moisture ingress. Coating permeance shall be 0.013 perms or less at 43 mil dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Reinforcing mesh shall be 10x10 Childers Chil Glas #10 or Foster Mast a Fab. This application shall provide a minimum dry film thickness of 37 mils. Apply Foster 95-50 or Childers CP-76 insulation joint sealant in ~~phenolic~~ Cellular Glass insulation longitudinal and butt joints to prevent moisture ingress.

D. Insulate fittings with pre-molded cover of same materials and thickness as pipe covering. Field fabricated, mitred fittings will not be accepted. Coat all fittings and elbows with anti-fungal Foster 30-80AF vapor barrier coating and reinforcing mesh. Coating permeance shall be 0.013 perms or less at 43 mil dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Finish all joints and seams smooth and even. Reinforcing mesh shall be 10x10 Childers Chil Glas #10 or Foster Mast a Fab. This application shall provide a minimum dry film thickness of 37 mils.

2.2 DOMESTIC HOT WATER AND TEMPERED WATER PIPING

A. Insulate all hot water supply and return piping, including tempered water and booster heater piping, with factory molded pipe covering made from glass fibers; 1.5" thick with density not less than 3 pounds per cubic foot; conductivity (k) not higher than .25 at 100° mean temperature difference; with factory attached fire retardant jacket. Piping exposed to view in finished areas, including inside gymnasiums, shop areas and any areas with partial or no ceilings, shall have aluminum jacketing per specification.

B. Install insulation over pipe and carefully connect self sealing laps. Provide 3" butt strips at each joint between sections, sealed with Foster 85-75 or Childers CP-82 adhesive. Coat all vapor retarder film (ASJ) longitudinal and butt joints with anti-fungal Foster 30-80AF vapor barrier coating to prevent moisture ingress. Coating permeance shall be 0.013 perms or less at 43 mil dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Reinforcing mesh shall be 10x10 Childers Chil Glas #10 or Foster Mast a Fab. This application shall provide a minimum dry film thickness of 37 mils.Apply Foster 95-50 or Childers CP-76 insulation joint sealant in ~~phenolic~~ Cellular Glass insulation longitudinal and butt joints to prevent moisture ingress.

C. Insulate fittings with pre-molded cover of same materials and thickness as pipe covering. Field fabricated, mitred fittings will not be accepted. Coat all fittings and elbows with anti-fungal Foster 30-80AF vapor barrier

coating and reinforcing mesh. Coating permeance shall be 0.013 perms or less at 43 mil dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Finish all joints and seams smooth and even. Reinforcing mesh shall be 10x10 Childers Chil Glas #10 or Foster Mast a Fab. This application shall provide a minimum dry film thickness of 37 mils.

2.3 SANITARY DRAIN PIPING ABOVE GRADE

A. GENERAL: Insulate horizontal piping, floor drain bodies, elbow at drain, first elbow that turns down and all piping in ceiling plenums of sanitary system serving floor and hub drains receiving condensate from air conditioning and refrigeration equipment. Also insulate all plastic piping inside walls (if any) where concrete touches piping.

B. MATERIALS: 1½" thick flexible fiberglass blanket with vapor barrier or 1" thick fiberglass pipe insulation with vapor barrier.

C. EXECUTION: Seal vapor retarder laps with white Foster 85-75 or Childers CP-82 and staple at 4" on center. Vapor seal staples with Foster 30-80AF. Provide 3" butt strips at each joint between sections and seal as above. Install vapor stop every 15'-0" using Foster 30-80AF. Coating permeance shall be 0.013 perms or less at 43 mil dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Finish all joints and seams smooth and even. Reinforcing mesh shall be 10x10 Childers Chil Glas #10 or Foster Mast a Fab. This application shall provide a minimum dry film thickness of 37 mils. Piping exposed to view in finished areas, including inside gymnasiums, shop areas and any areas with partial or no ceilings, shall have aluminum jacketing per specification.

2.4 STORM DRAINAGE PIPING ABOVE SLAB

A. GENERAL: Insulate horizontal and vertical piping including roof drain bodies. Overflow drains and piping are included in this specification. All piping above grade shall be insulated.

B. MATERIALS: 1½" thick flexible fiberglass blanket with vapor barrier or 1" thick fiberglass pipe insulation with vapor barrier.

C. EXECUTION: Seal vapor retarder laps with white Foster 85-75 or Childers CP-82 and staple at 4" on center. Vapor seal staples with Foster 30-80AF. Provide 3" butt strips at each joint between sections and seal as above. Install vapor stop every 15'-0" using Foster 30-80AF. Coating permeance shall be 0.013 perms or less at 43 mil dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Finish all joints and seams smooth and even. Reinforcing mesh shall be 10x10 Childers Chil Glas #10 or Foster Mast a Fab. This application shall provide a minimum dry film thickness of 37 mils. Piping exposed to view in finished areas, including inside gymnasiums, shop areas and any areas with partial or no ceilings, shall have aluminum jacketing per specification.

2.5 DRINKING FOUNTAIN DRAIN LINES

Insulate from connections to fountains to connection to next larger size drain, or, if drain runs into floor, from fountain to floor, with 1/2" thick pipe covering the same as for Domestic Cold Water Piping.

END OF SECTION

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SECTION 23 07 13

HVAC INSULATIONS

PART 1 – GENERAL

1.1 GENERAL REQUIREMENTS

A. Install all insulation in conformance with manufacturer's recommendations and these specifications.

B. All interior adhesives and sealants must meet VOC limit requirements of South Coast Air Quality Management District (SCAQMD) Rule #1168.

C. All interior paints and coatings must meet VOC limit requirements of South Coast Air Quality Management District (SCAQMD) Rule #1113 and Green Seal GS-11 and GS-03.

D. Insulation materials manufactured by the following list of companies will be acceptable provided their materials conform to these specifications (see Paragraph on Substitution): Armstrong, CertainTeed, Childers, Foster, Knauf, Insulphen, Manville, Owens-Corning, Pittsburg-Corning and Polyguard.

E. Flame Spread and Smoke Requirements:

1. All jackets, adhesives, coatings, insulating materials and vapor barrier mastics for air distribution systems shall meet the requirements of NFPA Bulletin 90-A with a flame spread of 25 or less and smoke developed rating not higher than 50.

2. All jackets, adhesives, coatings, insulating materials and vapor barrier mastics for piping and equipment shall have a flame spread not higher than 25 and smoke developed rating not higher than 50.

3. All materials containers shall have a U. L. Label.

F. At each pipe support point, install a hard section of phenolic foam pipe insulation, minimum 18" length, on lower 180° of piping, 360° if clamps are used on top of pipe, same thickness as adjacent insulation, to prevent compression at support bearing area. Seal and finish to match adjoining insulation. Provide formed 16 gage galvanized sheetmetal saddles, same length as hard section, to completely cover hard section. Saddles shall be strapped / banded at each end so that do not move or slide.

G. Install .020" thick aluminum jacket with minimum 2” overlap joint on all insulated piping exposed outside building. Install factory made aluminum covers on all elbows. Cut aluminum neatly to fit all tees, such that all insulation is covered by aluminum. Use waterproofing aluminum colored Foster 95-44 or Childers CP-76-1 sealer to seal all joints with 1/8” bead. Provide .020x3/4” aluminum bands not more than 12" on center for all jacketing. Install aluminum covers on insulated pipe inside that is exposed to view in finished areas. Cover is not required in mechanical or AHU rooms. Jacketing in contact with soil shall be .010" stainless steel.

PART 2 – MATERIALS AND METHODS

2.1 CHILLED WATER PIPING

A. GENERAL: Insulate all chilled water piping, valves, fittings, air separators, tanks, filter feeders and other items subject to condensation. Insulate chiller connections to chiller barrel insulation so there is no break in the insulation of the system.

B. PIPE:

1. MATERIALS: Molded cellular glass pipe insulation, 7.5 pounds per cubic foot density, conductivity (k) not higher than .29 at 75° mean temperature difference with factory attached fire retardant, vapor barrier jacket.

2. EXECUTION: Steel Piping shall be coated with corrosion-inhibiting gel equal to Polyguard RG2400LT or RG-19. Install insulation over the coated pipe. Provide 3" butt strips at each joint between sections, sealed with Foster 85-75 or Childers CP-82 adhesive. Coat all vapor retarder film (ASJ) longitudinal and butt joints with Foster 30-80AF anti fungal, vapor barrier coating to prevent moisture ingress. Coating permeance shall be 0.013 perms or less at 43 mil (1.0922 mm) dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Apply Foster 95-50 or Childers CP-76 insulation joint sealant on all insulation longitudinal and butt joints to prevent moisture ingress. Provide a mockup section of insulation at valve and fitting location for Owner and Engineer to review prior to proceeding with insulating the entire system.

C. VALVES, FITTINGS AND OTHER COMPONENTS:

1. MATERIALS: Pre-molded cover of same materials and thickness as pipe covering.

2. EXECUTION: Provide vapor barrier coating consisting of a tack coat of white Foster 30-80AF anti-fungal, vapor barrier coating with reinforcing mesh, finished with a 1/16" thick coating of Foster 30-80AF vapor barrier coating. Coating permeance shall be 0.013 perms or less at 43 mil (1.0922 mm) dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating. Finish all joints and seams smooth and even. Reinforcing mesh shall be 10x10 Childers Chil Glas #10 or Foster Mast a Fab. This application shall provide a minimum dry film thickness of 37 mils.

D. CELLULAR GLASS INSULATION THICKNESS:

1. 1 1/2” thick insulation for: 1/2” through 2” pipe

2. 2” thick insulation for: 2 ½” through larger pipe

2.2 BUILDING HEATING WATER PIPING

A. Insulate all hot water piping with factory molded pipe covering made from glass fibers; 2" thick (1½” thick for pipes 1½” and smaller) with density not less than 3 pounds per cubic foot; conductivity (k) not higher than .25 at 100° mean temperature difference; with factory attached fire retardant jacket. Piping insulation outside shall be 1/2“ thicker.

B. Secure all laps and joints with staples at 4" on center. Provide 3" butt strips at each joint between sections.

C. Insulate fittings with pre-molded cover of same materials and thickness as pipe covering.

2.3 CONDENSATE DRAINS

A. Insulate all condensate drain lines with 3/4" thick, closed cell foam insulation with a thermal conductivity (C value) of .27 at 75° F. Insulation shall have a maximum flame spread rating of 25 and a maximum smoke density rating of 50. Exposed piping located close to the floor inside an equipment room, from an air handling unit to floor drain within 24”, need not be insulated.

2.4 CHILLED WATER PUMP

A. GENERAL: Insulate all cold surfaces as required to prevent condensation. Do not insulate pump until the chilled water system has been balanced.

B. MATERIALS: 2" thick phenolic or close cell insulation.

C. INSTALLATION: Cut and form to fit or foam in place. Fill any voids with closed cell insulation. Seal all joints with Foster 30-80. Apply tack coat white Foster 30-80 and then a 1/16" thick finish coat of same material.

2.5 CHILLED WATER SYSTEM EXPANSION AND STORAGE TANKS, AIR SEPARATOR AND FILTER FEEDER

A. Insulate with 2" thick closed cell foam insulation covering conforming to Specifications for Refrigerant Piping Insulation.

2.6 LAP AND JOINT ATTACHMENT

A. Self-sealing type jackets will be acceptable provided the laps are sealed per the manufacturers recommendations and the installation is 100% visually inspected by the insulation contractor's foreman.

2.7 REFRIGERANT PIPING

A. GENERAL: Insulate all refrigerant piping.

B. MATERIAL: 1.5" thick, EPDM closed cell foam insulation with a thermal conductivity (C value) of .27 at 75° F. Insulation shall have a maximum flame spread rating of 25 and a maximum smoke density rating of 50. Chemical composition of material shall not cause or accelerate corrosion or other deterioration of piping.

C. INSTALLATION: Install insulation in accordance with the manufacturer's recommendations using pre-glued slits and butt joints. Visually inspect joints and touchup as necessary with the manufacturer's recommended adhesive. Insulation without pre-glued factory slits shall be installed over piping during fabrication then glued together. Provide aluminum jacketing over insulated piping.

D. MANUFACTURER: Armaflex, Rubatex or ImcoLock by IMCOA

2.8 DUCT INSULATION

A. GENERAL: Insulate all supply air ducts, return air ducts through un-insulated spaces and outside air ductwork, including kitchen hood supply air ducts and dryer vent. Insulate exhaust ducts down stream of inline fan backdraft damper. Insulate backs of all supply air devices.

B. DUCTS INSIDE: 2” thick, fiberglass flexible duct insulation, 1 pound density (Type 100), conductivity (k) value not more then 0.27 at 75° mean temperature difference with an installed R value of 6 or higher, with factory adhered reinforced foil faced flame resistant Kraft paper vapor barrier. Wrap around duct with minimum lap of 2 inches each way, staple with 1/2" outward clinch staples 2” on center, secure on bottom of duct with water based, fire retardant adhesive (Foster 85-60 or Childers CP-127). For ducts 24” to 30” wide, provide one row of pins on bottom of duct, 16” on center. For wider ducts provide one row on bottom of duct for each 16” of width.Trim pins flush with retainer disk. Seal all with tape with Foster 30-80AF vapor barrier coating. For ducts in mechanical rooms, reduce spacing to 12” on center for each 12” of dimension (all sides of duct). Seal joints and seams with 3" wide FSK foil tape, including termination of flex ducts, and coat tape with Foster 30-80AF vapor barrier coating. Where insulation terminates at equipment (AHU, fan coil, VAV box, etc) and where insulation is custom fitted to transitions and elbows, add glass cloth strip adhered with anti fungal Foster 30-80AF vapor barrier coating between equipment and insulation cover. Coating permeance shall be 0.013 perms or less at 43 mil (1.0922 mm) dry thickness as tested by ASTM E96 and meet ASTM D5590 with 0 growth rating.

C. EXPOSED DUCTWORK:

1. Ductwork in exposed locations is to be insulated with fiberglass rigid / semi-rigid board insulation.

a. Apply fabric and mastic to provide a smooth surface for painting

2. Standing Seams: Insulate standing seams and stiffeners which protrude through the insulation with 0.6 lb per cubic foot density, 1-1/2 inch thick, faced insulation. As a vapor seal, use glass cloth with vapor barrier coating. Insulation shall not prevent adjustment of damper operators.

3. Insulation shall be wrapped tightly on the ductwork. Adhere insulation to ductwork with adhesive. In addition, secure insulation to the bottom of rectangular ductwork by the use of either weld pins with washers or cup-head pins welded to the ductwork or perforated based insulation hangers glued to the duct on 12 inch centers to prevent sagging of insulation.

4. Cover all seams, joints, pin penetrations and other breaks with coating reinforced with glass fabric. Fabric shall not be visible after coating.

2.9 DUCT LINER

A. GENERAL: Liner shall only be installed where specifically noted on the drawings. Use is typically for return air ducts, return air elbows/boots and certain supply air ducts in quiet areas. Liner shall be installed per manufacturer’s recommendations.

B. MATERIAL: 1” thick, 1½ pound per cubic foot density, neoprene faced, "K" value not more than .27 at 75° F mean temperature difference. Material shall be or coated with anti-microbial agent and manufactured by one of the following companies:

1. CertainTeed Corporation’s ToughtGard R or R-EP with Enhanced Surface

2. Johns Manville’s Duct Liner PM or Linacoustic RC

3. Manson Insulation Products’ AKOUSTI-LINER R Rigid Duct Liner or Flexible Duct Liner

4. Owens Corning’s QuietR Textile Duct Liner

C. INSTALLATION: Adhere liner, with coated side toward air stream, to all interior sides of duct with 100% coverage of Foster 85-11. Further secure the liner with mechanical fasteners on maximum 12" centers. All edges and fasteners shall be coated with one brush coat of Foster 30-35.

D. PLENUMS: Plenum interiors exposed to view through louvers and grilles shall be lined and have pins painted flat black. Provide bullnose on all edges facing in coming air direction.

2.10 ACCEPTABLE MANUFACTURERS

A. Glass fiber rigid duct insulation.

1. Schuller 814 spin-glas FSK

2. Owens-Corning Type 703 board RKF

3. Knauf 3 PCF FSK

B. Glass fiber blanket duct insulation

1. Manville R-series Microlite FSKL

2. Owens-Corning ED100 RKF

3. Knauf 1.0 PCF FSK

C. Fiberglass reinforced cloth mesh

1. Perma Glass Mesh.
2. Alpha Glass Mesh
3. Childers Chil-Glas
4. Vimasco

D. Fiberboard insulation

1. Partak Insulation, Inc. Paroc Fireboard
2. Thermal Ceramics FireMaster 3M
3. Premier Refractories International, Pyroscat

E. Rigid Closed Cell Insulation

1. Dow Thymer
2. Phenolic Foam

F. Reinforced Foil Tape

1. Venture 1525
2. 3” FSK
3. Thickness 6.5 mils
4. Color: silver

G. Coating and Adhesive

1. Coating. Provide Childers CP-35 vapor barrier coating.
2. Adhesive. Provide Childers CP-82 vapor barrier adhesive.
3. Glass Cloth. Provide 10 x 10 white glass cloth.

END OF SECTION

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SECTION 23 73 13

INDOOR AIR HANDLING UNITS

PART 1 – GENERAL

1.1 REFERENCE STANDARDS

A. AMCA 204 - Balance Quality and Vibration Levels for Fans; 2020.

1.2 RELATED DOCUMENTS

A. The General Provisions of the Contract, including General, Supplementary and Special Conditions, apply to the work specified in this Section.

1.3 SUBMITTALS

A. Provide submittals as outlined in Section 23 00 00 General HVAC

B. Documentation

1. Product Data for TIPS: Documentation indicating that units comply with ASHRAE 62.1, Section 5 - "Systems and Equipment."

2. ASHRAE Compliance: Applicable requirements in ASHRAE 62.1, Section 5 - "Systems and Equipment" and Section 7 - "Construction and Startup."

3. ASHRAE/IESNA 90.1 Compliance: Applicable requirements in ASHRAE/IESNA 90.1, Section 6 - "Heating, Ventilating, and Air-Conditioning."

PART 2 – PRODUCTS

2.1 AIR HANDLING UNITS

A. CABINETS: Unit casing shall meet ASHRAE 111 Class 6 leakage and a maximum of 1% airflow at +/- 8” total static pressure. Unit shall be of double wall construction with encapsulated 2” thick, 1½ pound per cubic foot fiberglass or foam insulation in both fan and coil sections to prevent unit sweating. Exterior panels shall be an 18-gauge galvanized steel. Sections and panels shall be bolted together with insulating gasket to prevent sweating at the joints. The interior liner shall be 20-gauge galvanized steel and shall provide a smooth, cleanable surface with no exposed insulation. The unit base floor shall be heavy duty walk-on floor construction. Exterior wall panels shall be removable and constructed of 16 gage G90 mill galvanized steel. Interior surface shall be galvanized and exterior primed with rust inhibiting primer and painted with two heavy coats of enamel paint. Exterior panels of unit may be galvanized finish if unit is located in mechanical room or above ceiling. A rigid, welded framework shall support the panels, coils and fan. Coil casings shall be stainless steel. Drain pans shall be insulated, double wall type of 16 gage Type 304 stainless steel, sloped in two directions and extend a minimum of 12” beyond the coil. Provide extended drain pan for all coils, including heating coils. Provide minimum 10-gauge steel base rails on bottom of unit to ensure bottom plates do not contact floor or concrete pad. Rail shall be 6" minimum height. Coordinate drain location with mechanical room layout. Units with down discharge or return from below shall have a 3” high “water dam” around duct openings to prevent water from leaking through openings. All units shall be pre-assembled and balanced at the factory with knockdown construction capability, and then shipped to the site in that condition.

B. ARRANGEMENT AND COMPONENTS: Units shall be horizontal or vertical as shown on the Drawings. Provide face and bypass dampers, coil sequence or other item that is shown or described in the temperature controls sequence. Unless noted otherwise, heating coils shall be in the reheat position.

Where face and bypass dampers are specified, the bypass shall be internal to the unit, and not bypass the heating coil. Where outside air is shown connecting directly to the unit, provide manual return air damper to set return air/outside air ratio.

C. FANS: Direct-driven, single-width, single-inlet (SWSI) airfoil plenum fans. Fans for VAV air handling units shall be selected so that their peak efficiency is as close as possible to the 100% output point of the system without generating aerodynamic stall at 50% output. Fan shall be mounted on grease lubricated ball bearings having 200,000 hours average life. The fan/drive/motor assembly shall be internally mounted and factory isolated from the enclosing cabinet with 2” minimum deflection spring isolators and flexible connection to unit housing. Select spring isolators under conditions present when operating at 50% of full output. Provide extended grease lines to exterior of unit or grouped inside at access panel at the drive side of the fan assembly. Fan shaft shall be solid steel.

D. Fans shall be selected such that the operating speed at peak design airflow conditions is not greater than 20% above the associated motor synchronous speed.

1. Draw Through Air Handling Units – Variable Air Volume

a. Supply Fans shall be double width, double inlet, non-overloading, forward curve fan as required.

b. Stainless steel condensate pan with positive slope in all directions to outlet; condensate drain pan with a minimum of 1-1/2” waterproof insulation.

c. Units and coils are to be cleaned to as new condition when to be turned over to the District.

d. Filters are to be checked or replaced, and all bearings to be greased/oiled.

E. DRIVE: Provide direct drive plenum fan type units that meet the dimensional requirement of the unit. Add perforated liners in the fan section to contain noise. Add static pressure for filter resistance and unit coil, damper, casing and conversion losses to scheduled external static pressure to select motor size. Motor shall not overload if system static pressure drops 1/4" at selected RPM. See Motors Section for motor requirements.

F. ACCESS DOORS: Provide hinged, double wall, insulated and gasketed access doors with Ventlock 260 or equal handles on both inside and outside of casing, on each side of unit between fan and coil sections. Access door shall be 2" thick. Provide 18” wide access door in side of unit at drain pan connection to observe and clean drain pan. Provide access doors on both sides of the unit at the upstream and downstream side of the coils, filters and motor/fan assembly. Both side of coils shall be accessible.

G. WATER COILS: Shall be 1/2” or 5/8”, .020” thick wall copper tube, .006” or .008” thick aluminum fin with belled collars, tested at 300 PSI with ARI certified ratings. Coil connections shall be counterflow with supply at the very bottom and outlet at the very top of the coil. Coil casings shall be stainless steel. Provide resistance plate in hot deck of multizone units without heating coil. Mount coils on tracts for easy removal without requiring disassembly of the air handling unit. Coils shall be drainable, non-trapping circuits. Headers shall have drain and vent connections extended to the outside of the unit casing. Install rubber grommets at all pipe penetrations of the cabinet. Coils in outside air pre-treatment section shall have a flexible polymer e-coating (ElectroFin).

H. FILTERS: Provide filter rack for 2" thick filters, maximum velocity 350 FPM. See specification section 23 41 00 for HVAC Air Filters. Filter dimensions shall be per those listed in that section, NO EXCEPTION.

I. NAMEPLATE: Provide a durable, deep etched, 0.25” thick factory installed aluminum nameplate, permanently mounted with the following information: Unit ID as indicated on the contract drawings, Serial

Number, Model Number, CFM, SP, Motor HP, Unit Power Supply – V/PH/A, Supply Fan Type, Coil GPM and PD, Sales Order Number and Date of Manufacture.

J. SUBMITTAL: Provide a 1/4" scale drawing of each AHU room showing proposed unit placement, dashed-in access space required, drive location, coil piping connections and condensate drain connection. Provide side elevation drawing indicating fan placement/rotation, and discharge air opening, showing proper coordination of arrangement with the specified ductwork. Submittal shall include fan curve with efficiency and horsepower curves, and noise generated by octave. For VAV units, submit fan curves for operation at 50% and 100% of full output, while maintaining constant static pressure. Also include this data for the next larger and smaller fan for the unit. All submittals shall be prepared by the Salesman that calls on the Engineer from the successful supplier.

K. ACCEPTABLE MANUFACTURERS: Carrier, Temtrol, Trane and York/JCI

2.2 MOTORS

A. Refer to Section 23 05 13 for motor requirements.

B. All motor shall be TEFC and Premium Efficiency Inverter Duty type.

C. All AHU motors to have split bolt connectors. All other motors 10 HP and larger motors shall be provided and installed with copper alloy split bolt connectors, Tyco gelcap motor connector kit or other listed multi-tap connector. Insulated with rubber and electrical tapes. Wire nuts are not acceptable. Include shaft grounding rings on all motors that use VFDs.

2.3 WARRANTY

A. Warranty shall be for full 10-year term from substantial completion.

2.4 TESTING

A. Casing air leakage shall not exceed Leakage Class 6 per ASHRAE Standard 111 at +/- 8” w.g. Unit casing (wall/floor/roof panels and doors) shall be able to withstand up to 1.5 times design static pressure, or 8” w.g., whichever is less, and deflection shall not exceed 0.0042” per inch of panel span (L/240). Units submittals shall be provided with compliance to the above.

PART 3 – EXECUTION

3.1 INSTALLATION SHALL COMPLY WITH MANUFACTURER’S REQUIREMENTS AND INSTALLATION DETAILS ON THE DRAWINGS. AHU SUPPLIER AND MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING AHUS THAT WILL FIT THRU EXISTING DOORS AND STAIRS IN EITHER MODULES OR KNOCKED DOWN INTO COMPONENT PARTS (FANS, COILS, PANELS AND BASES) AS REQUIRED FOR EACH MECHANICAL ROOM. ALL FANS THAT ARE REQUIRED TO BE DISSEMBLED TO FIT THRU THE EXISTING DOORS WILL REQUIRE A CERTIFIED FIELD DYNAMIC BALANCE TO ANSI /AMCA 204-96 BV-3 STANDARDS AFTER FINAL ASSEMBLY. ALL UNITS WILL REQUIRE THE CONTRACTOR TO HAVE A FACTORY TRAINED & CERTIFIED PERSON RESPONSIBLE FOR DISSEMBLE AND REASSEMBLE OF EACH KNOCKED DOWN TYPE AHU. THE AHU MANUFACTURER SHALL INSPECT THE AHUS AFTER FINAL ASSEMBLE AND PROVIDE A

LETTER WITH THE STANDARD WARRANTY TO THE OWNER THAT THE ALL AHUS HAVE BEEN PROPERLY ASSEMBLED TO MEET ANSI /ASHRAE 111-88 AIR LEAKAGE CLASS 9.

3.2 PROVIDE 6” THICK CONCRETE PAD FOR EACH AIR HANDLING UNIT. CONCRETE PADS SHALL BE SIZED FOR THE EQUIPMENT TO BE SUPPLIED. PAD SHALL EXCEED BASE DIMENSIONS BY APPROXIMATELY 4" ALL AROUND. REINFORCE PADS REBAR INCLUDING #4 BAR AROUND PERIMETER. TOOL PAD TO FORM CHAMFERED EDGE.

3.3 ATTIC SHOCK

A. Provide an additional set of filters for each AHU after substantial completion.

3.4 IDENTIFICATION

A. Furnish each unit with a durable, deep etched, .025” thick, factory installed aluminum identification plate, permanently mounted with the following information:

1. Unit identification as indicated on Contract Drawings.
2. Serial Number.
3. Model Number
4. Capacity (CFM) and static pressure.
5. Motor HP.
6. Unit power supply: Volts / PH / Amps.
7. Supply Fan Type.
8. Coil GPM and pressure drop.
9. Sales Order #.
10. Date unit manufactured.

END OF SECTION

SECTION 275100

DISTRIBUTED COMMUNICATION SYSTEMS (PA)

PART 1 - GENERAL

1.1 SUMMARY

A. This section identifies the requirements, technical design, and specifications for the Distributed Communication Systems (PA) at Katy ISD Opportunity Awareness Center, located in Katy Texas. The Distributed Communication Systems (PA) as specified are Industry-Standard and include paging/public address systems.

B. Acceptable PA system manufacturers:

1. Rauland
2. Telecor

C. The Contractor shall provide a Manufacturer's Performance Certification for the installed PA Systems.

D. Contractor shall include materials, equipment, and labor necessary to provide a complete and functional PA System regardless of any items not listed or described in this specification or associated drawings.

E. In case of discrepancy between or within these specifications and the associated drawings, the Contractor will be assumed to have provided the greater quantity, higher quality, and/or more difficult and therefore higher cost option. Contractor is responsible to submit any questions that may arise in writing. Contractor is not to proceed with work in question without formal written approval from the design team.

1.2 REQUIREMENTS

A. Contractor Experience Requirements

B. Submittal Requirements

C. Acceptable Manufacturers

D. Codes, Standards and Regulations

E. General Requirements

F. System Requirements

G. Testing Requirements

H. Project Closeout Documentation

I. Attachments

06/17/2026

1.3 DESCRIPTION OF WORK

A. The Owner shall be provided a Public Address / Paging System.

B. Furnish and install a complete school communications system.

1. A complete traditional intercom system includes items such as wiring, handsets, control consoles, and main distribution equipment.
2. Integrate all components to provide a complete and functioning system.

C. Integrate the communications system with the following systems:

1. Clock and Bell System

2. Owner's phone system
3. Local sound reinforcement sound systems

D. Return air plenum cable shall be used. Wherever cabling is run exposed, conduit shall be used to cover and protect wiring.

E. The proposed system shall be a traditional intercom system, wired for 25v/70v configuration. All head end equipment is to be located in the building MDF, with cross-connect fields located in IDF (as required) and all termination fields shall connect to the MDF via Multi-Conductor (minimum of 25-pair per remote termination field).

F. The Public Address (PA) System shall be comprised of the Public Address System, with all speakers, horns, and volume controls unless otherwise noted are tied to this system.

G. The Public Address System shall consist of the Central Control Unit, Administrative Control Console(s), Speakers, Horns, volume controls and all other necessary auxiliary devices to provide a complete and operational communications system.

H. The system shall be capable of multiple open voice intercom paths used for intercom, paging, program distribution, or emergency paging.

I. Paging system contractor to coordinate interconnection with all other relevant systems and to provide interconnect equipment/interfaces/cabling as required to facilitate this interconnection. Systems that the paging contractor may need to interface may include (but not be limited to) systems such as local or large venue A|V system(s), building access control system(s), building fire alarm(s), digital signage systems or other building-wide or district-wide mass notification systems.

J. The public address system shall be compatible with and provide for integration with the school's Cisco Phone system.

K. Contractor shall coordinate layout and installation of ceiling-mounted speaker and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

L. The intent of this specification is to maximize communications between the classroom and administrative areas while enhancing school safety and reducing maintenance and operational cost.

M. Under this specification, the system shall provide a complete Communication System for the entire school including the outdoor recreational areas.

N. The Communication System shall provide distribution of intercom, overhead paging, class change time tones, and program material.

O. The Contractor shall furnish and install all equipment including, but not limited to, outlet boxes, wiring, speakers, and all other necessary equipment to provide a complete operating system as indicated with the contract documents. Provide all necessary wall plates, specialty boxes, etc., not provided by others.

P. Contractor is responsible to provide shop drawings of the as-installed system.

Q. Loudspeakers to be connected in parallel as appropriate. To facilitate future troubleshooting, no parallel speaker chain shall include more than eight (8) loudspeakers. Areas with more than eight (8) loudspeakers shall include home runs of sufficient quantity to ensure that no single run has more than eight loudspeakers.

1.4 RELATED REQUIREMENTS

A. The Drawings, Specifications, General Conditions, Supplementary General Conditions, and other requirements of Division 1 apply to the work specified in Division 27, and shall be complied with in every respect. The Contractor shall examine all of the items which make up the Contract Documents, and shall coordinate them with the work on the project.

B. Contractor Experience Requirements

1. The Contractor shall possess all relevant Manufacturer Certifications for both the company and individual technicians prior to submitting a bid for the work.
2. Submitting contractor must be a Certified Partner with full warranty privileges prior to submitting a proposal.
3. The Authorized Integrator must have installed a minimum of 3 (three) projects of this size and application or shall arrange for onsite factory assistance during system commissioning.
4. The Contractor shall have been in business for a minimum of five (5) years.
5. The contractor shall maintain an adequate parts inventory to perform necessary service and upgrades.
6. The Contractor shall have a local office with local technicians and an adequate workforce to complete this project within a 300-mile radius of the project site.
7. The Contractor shall have completed a minimum of five (5) projects similar in size and scope to the Owner's installation, where the systems have been in continuous satisfactory operation for at least one (1) year.
8. Subcontractors shall be identified at the time of bid and comply with the requirements and intentions of these specifications, associated drawings, and related contract documents.

1.5 WARRANTY

A. The Contractor shall provide a 1 year (5-days x 8 hours x NBD) parts and services warranty on the audio-visual systems and all installed components.

B. Contractor shall provide separate/broken out pricing for a 2-year support/maintenance/service plan beginning at the end of the standard warranty period. The extended support/maintenance/service plan shall cover all materials, labor, workmanship, and preventative maintenance.

1.6 SUBMITTAL REQUIREMENTS

A. Pre-Installation Submittal

1. Contractor shall not order, purchase, or install any equipment until pre-installation submittals have been accepted in writing by the Architect/Design Consultant.
2. Manufacturer product data sheets for each proposed system component.
   a. For product data sheets containing more than one (1) part number or product, the Contractor shall clearly identify the specific part number or product being submitted.

3. Shop drawings of the proposed system installation.
   a. Shop drawings shall be provided clearly depicting any proposed modification to the project drawings. Any modifications shall be highlighted on the shop drawings.

   b. Shop drawings shall be provided indicating proposed mounting arrangements and details of all equipment, including positioning devices, framework supports and interface with adjacent architecture.

   c. Shop drawings shall include equipment locations, equipment mounting method, wall elevations, outlet locations, preliminary cable numbers, proposed cable pathways, system schematics, wiring diagrams, and riser diagrams. Shop drawings shall be submitted on 30" X 42" bond paper.

      1) Shop drawings shall include equipment details. Detail equipment assemblies and indicate dimensions, weights, required clearances, field assembly methods, components, and location of each field connection.

      2) Wiring diagrams at a minimum shall include single-line diagram(s) showing interconnection of components along with cabling diagram(s) showing cable routing.

   d. Contractor shall maintain a set of shop drawings on site at all times and shall update the shop drawings on a weekly basis. Shop drawings shall be made available for inspection at the request of the Architect/Engineer.

4. Itemized list of all equipment, materials and labor required for the installation of the system as specified herein.
   a. This list shall be provided in printed and electronic format (Microsoft Excel) and shall contain: Part Number, Description, Unit of Measure, Unit Cost, Quantity, Labor Cost and Extended Cost to provide a complete and functional PA system.

5. Unit pricing for all equipment, materials and labor required for the installation of the systems as specified herein.
   a. This list shall be provided in printed and electronic format (Microsoft Excel) and shall contain: Part Number, Description, and Unit Price to Add/Deduct Each Item.

6. Manufacturer Product Certifications for Company.
7. Manufacturer Product Certifications for Installers.
8. Manufacturer Warranty letter.
9. Documentation indicating that Contractor has been in business for (5) years.
10. Address of Contractor's local office within a 75-mile radius of the project site.
11. Quantity of full time local technicians within a 75-mile radius of the project site.
12. List of five (5) contractor-installed projects of a similar size and scope in operation for at least (1) year. The Contractor shall provide the following information for each project: Project Name, Project Location, Project Start Date, Project Completion Date, Project Start Cost, Project Completion Cost, Brief Description of Project, Client Point of Contact Name and Phone Number.
13. List of completed and ongoing projects with the Owner. The Contractor shall provide the following information for each project: Project Name, Project Location, Project Start Date, Project Completion Date, Project Start Cost, Project Completion Cost, and Brief Description of Project.
14. System commissioning plan detailing the proposed testing and calibration to verify satisfactory system operation.

B. Post-Installation Submittal

1. The Contractor shall provide three (3) sets of comprehensive drawings accurately depicting the "as-built" condition of the audio-visual systems as it was installed to the Architect/Design Consultant at the time of substantial completion. Final payment will not be made until these as-built documents are received and approved by the Architect/Design Consultant.
   a. As-built drawings shall include but not be limited to:

      1) Equipment layouts

      2) Wall elevations

      3) System schematics

      4) Wiring diagrams

   b. As-Built drawings must be provided in original hardcopy format and on a CD-ROM in AutoCAD rel. 2018 or higher.

   c. The Contractor shall provide three (3) sets of as-built documentation for the audio-visual systems to the Architect/Design Consultant at the time of substantial completion. As-Built documentation shall be provided in original hardcopy format and on a CD-ROM. Documentation shall include but not be limited to:

      1) Equipment O & M manuals

      2) Installed equipment list (manufacturer model numbers, serial numbers, installed locations, etc.)

      3) Configuration information (MAC addresses, IP addresses, etc.)

      4) Warranty support information

      5) Documentation shall be bound, sectioned and tabbed in the following order (when applicable):

6) Equipment O&M Manuals

7) Installed Equipment List

8) Configuration Information

9) Warranty Support Information

a) The Contractor shall furnish the original Letter of Warranty to include the name, address and phone number contacts for warranty call outs to the Architect/Design Consultant at the time of substantial completion.

b) Contractor shall provide a “By Name” point of contact for contingencies during the one year warranty period.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS

A. The following sections specifically list the acceptable equipment types and items for this project.

B. Architect/Design Consultant will have final determination of acceptability of all proposed equipment and must approve submitted equipment prior to purchase or installation.

C. Proposed equivalent items must be approved in writing by the Architect/Design Consultant prior to submitting a bid. Proposed equivalent items must meet or exceed these specifications and the specifications of the specified item.

D. In the event a manufacturer’s specified product or part number has changed or is no longer available, Contractor shall substitute the appropriate equivalent manufacturer’s part number.

E. In the event of a discrepancy between the specifications and the drawings, the greater quantity and/or better quality will be furnished.

F. For listed products with no part number specified, Contractor shall provide a product that meets the performance requirements of these specifications, industry standard practices, and intended application.

G. All wiring, equipment, and installation materials shall be new and of the highest quality.

H. Labels on all wiring, materials, and equipment must indicate a nationally recognized testing laboratory.

I. Original Equipment Manufacturer (OEM) documentation must be provided to the Architect/Engineer which certifies performance characteristics and compliance with industry standards.

2.2 ACCEPTABLE MANUFACTURERS

A. Rauland – Telecenter U

B. Telecor – E Series

C. Atlas Sound – Speakers and Attenuators

D. Quam – Speakers and Attenuators

E. Sapling - Clocks

2.3 PUBLIC ADDRESS SYSTEM REQUIREMENTS

A. Provide a complete centralized analog Public Address / Intercom System utilizing traditional 25V/70V speaker distribution architecture. The system shall support:

1. All-call paging
2. ***Zoned paging consisting of the following paging zones:***
   a. ***Vestibule Zone***

   b. ***Instructional North Zone***

   c. ***Instructional South Zone***

   d. ***Administrative Zone***

   e. ***All-call Zone***

[ADDENDUM NO.4]

3. Two-way intercom communications
4. Bell scheduling
5. Emergency paging
6. Synchronized clock functions
7. Integration with the Owner's Cisco phone system

B. The system headend equipment shall be located within the MDF. Cross-connect termination fields may be located within IDF rooms as required.

C. The system shall provide paging to classrooms, corridors, offices, conference rooms, exterior areas, and other locations indicated on the drawings.

D. All speakers, amplifiers, clocks, attenuators, and associated accessories shall be compatible with the centralized paging system architecture. Complete and satisfactorily operating district-wide and individual school internal communication, notification, emergency notification, management, and classroom workflow enhancement system as described herein, using materials and equipment of types, sizes, ratings, and performances as indicated.

2.4 EQUIPMENT AND MATERIALS

A. CENTRAL CONTROL EQUIPMENT

1. The central equipment shall be mounted in a standard 19"two-post equipment rack, provided by network cabling contractor. Confirm rack location with Owner / Consultant team prior to installation. The central equipment shall consist of but not be limited to:
   a. The equipment housing.

   b. A power supply to provide operating DC power for the circuitry contained within the central equipment housing and all administrative control stations (ACSs) shall be provided.

   c. A central microprocessor unit containing all solid-state memory and components necessary to provide the features specified herein.

   d. Zone circuit boards as required to meet the system requirements for remote stations and/or communications linkage.

   e. The provision for terminating the cabling from up to 128 remote stations and 8 administrative control stations (ACSs) shall be provided.

f. The provisions to automatically activate a selectable program source between class changes.

g. Network IP communications to receive district wide mass notifications over Owner data communications network.

h. Telephone Type 66 blocks shall be mounted inside lockable, hinged panel with 3/4" painted plywood backboard.

i. The program sources shall be remotely located from the control equipment. The rack shall be mounted on rack rails within a cabinet as located by the Owner.

B. EXTERNAL PAGING AMPLIFIER

1. External paging amplifiers shall be provided as required to meet the load requirements of the system when activated in the all-page mode. The system shall be equipped with equipment required for (one) program channel.

2. Program/paging amplifiers shall have the following:
   a. Power output shall be capable of providing sufficient power for the speakers required to the project and include an additional 25% capacity.

   b. Maximum .5% harmonic distortion from 20-20KHz.

   c. Frequency response of 20Hz to 20KHz +/-1 dB.

   d. 90 dB signal to noise ratio at 20Hz to 20 KHz.

   e. 1V RMS input sensitivity at 1KHz.

   f. Master volume control.

C. SPEAKERS

1. Ceiling speakers:
   a. General Purpose Speaker and Rooms with wall mounted volume control (including offices and conference rooms): 8" speaker with 5 oz. magnet complete with line matching transformer. Program rating shall be 5 watts continuous. The speaker shall be a Quam System 12, 2x2 lay-in at grid ceilings and Quam Solution 1 at hard ceilings. 25/70V transformers shall have primary taps of 0.25, 0.5, 1, 2 and 5 watts. Tap speaker at 1 watt. White finish unless indicated otherwise.

   b. Offices, conference room and flexible workroom speakers with integral volume controls: 8 ohm speaker with 5 oz. magnet, complete with line matching transformer. Program rating shall be 4 watts continuous. The speaker shall be a Quam System 12/VC 2x2 lay-in at grid ceilings and Quam Solution 2 at hard ceilings, with integral volume control. 25/70V transformers shall have primary taps of 0.25, 0.5, 1, 2, 5 watts; tap speaker at 1 watt.

2. Recessed Vandal proof wall mounted paging horn:
   a. Atlas Sound APF-15T with 193-8-6 square recessed back box and VP161-APF aluminum alloy grille, white finish, neoprene gasket.

3. Surface Horn
   a. Surface mount speaker/horn: Quam H16 surface mount wide-angle loudspeaker with multitap line matching transformer. Tap at 2.0 watts

4. Wall mounted volume control:
   a. Atlas Sound AT-10PA or Quam QC-10P recessed autotransformer volume control. Volume control shall have public address (PA) emergency override of volume control.

5. Remote Source Output Volume Control: Rack mounted in remote source rack. Provide line level volume control of output of each remote source device. Label each volume control for each output device.

D. CALL-IN DEVICES

1. Wall mounted handset (Switch Hook): Intercom station telephone.
2. Desk mounted handset (Switch Hook): Staff telephone station. (Principal and Admin)
3. Administrative Control Station (ACS)
   a. The administrative control station (ACS) shall be the control center for communications, paging, and signaling functions for the system. The ACS shall contain control panel with buttons for functional control and user programming.

   b. For voice intercom, the ACS shall be equipped with a handset, keypad, speaker, microphone, and a TALK button.

   c. It shall be possible to manually activate and sound the time event signal to any of the 8 time zones from the ACS.

   d. The ACS shall be equipped with a built-in tone generator, which provides for both time signal tone and user accessible tones (single chime, repetitive chime, steady tone, hi-lo, alarm, wail, and warble) for use as manually activated emergency or other signals.

   e. All ACSs shall have a dedicated control labeled "ALL PAGE". The operation of this control shall gather all speakers for distribution of tone signaling distress or emergency signals, and emergency voice announcements. This control shall be defeatable as to restrict access into the all-page function only to assigned ACSs.

   f. A designated ACS within the system shall have the ability to enter the user accessible functions for data input and programming. A "Security Code" number shall be required to enter this programming mode.'

   g. Label all ACS buttons.

E. WALL MOUNTED VOLUME CONTROL (ATTENUATORS)

1. Attenuator(s) shall be Atlas Sound AT Series Model AT10-PA auto transformer or approved equal. The power rating shall be 10W and total attenuation shall be 33dB. Attenuation per step for AT10-PA shall be 8 steps of 3dB and 6dB each for the last two positions. Attenuator shall be a step type control with a positive off position. There shall be no stop between the maximum and off positions. Switch shall have silver plated contacts to eliminate noise and contact loss. All terminations must be made via a removable terminal
   block. Unit(s) shall be supplied with stainless steel single gang face plates (with dial scale to indicate attenuator position).

F. MASTER CLOCK SYSTEM

1. The system shall contain an integral Master Clock and Programmer that shall be capable of performing the following functions:
   a. Provide 500 discrete time event entries for programming functions based upon:

      1) The time of day in hours and minutes

      2) The day or combination of seven days of the week on which the event is to occur

      3) The selection of any one or any combination of 32 zones or (8) outputs to be activated

      4) The selection of any one or combination of 16 schedules to allow for maximum flexibility due to special circumstances or seasonal changes.

      5) The selection of 16 user-programmable Event Tones

a) Any combination of time schedules may be active simultaneously

b) Event Tones are programmable from a library of 25 Tone Types

2. Provide for Automatic Daylight Savings Time adjustment with Leap Year programming.

3. Provide momentary contact closures for external device operation. Provide four inputs, four outputs and four flex-puts.
   a. Inputs shall be programmable by the user to initiate any desired system activity (e.g. Page, Tone, Program, Event, System Reset, etc.)

   b. Outputs shall be programmable by user to activate during any desired system activity (e.g. Page, Tone, Program, Time of Day, etc.)

      1) Display the time of day in either 12 or 24-hour format at each Administrative telephone

      2) Master clock shall correct compatible secondary clocks, analog, digital, or both

4. The system shall provide for an editing and review routine to permit the user to change and edit time events, zones, and schedules.

5. The system shall allow pre-selected program material to be distributed according to pre-programmed schedules, i.e. March to Music, National Anthem, etc.

6. Synchronous single and double face 24VAC run/24 VAC/DC LED, digital. Provide vandal guards in high activity areas, gymnasiums.
   a. Wall or ceiling mounted as required.

   b. Provide vandal guards in athletic and high activity areas.

   c. Power input shall be 24VDC.

   d. Faraday clocks are not acceptable.

7. Clock power supply: Provide secondary clock 24VDC power supply. Power supply shall be sized in quantity to meet the load requirements of the system.

PART 3 - EXECUTION

3.1 CODES, STANDARDS, REGULATIONS

A. TIA-526-7 Measurement of Optical Power Loss of Installed Single-Mode Fiber Cable Plant – OFSTP-7

B. TIA-526-14-A Optical Power Loss Measurements of Installed Multimode Fiber Cable Plant – OFSTP-14

C. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 1: General Requirements

D. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 1: General Requirements - Addendum 1 – Minimum 4-Pair UTP and ScTP Patch Cable Bend Radius

E. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 1: General Requirements Addendum 2 – Grounding and Bonding Requirements for Screened Balanced Twisted-Pair Horizontal Cabling

F. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 1: General Requirements Addendum 3 – Supportable Distances and Channel Attenuation for Optical Fiber Applications by Fiber Type

G. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 1: General Requirements > Addendum 4 – Recognition of Category 6 and 850 nm Laser Optimized 50/125 µm Multimode Optical Fiber Cabling -

H. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 1: General Requirements Addendum 5 – Telecommunications Cabling for Telecommunications Enclosures

I. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 1: General Requirements Addendum 7 - Guidelines for Maintaining Polarity Using Array Connectors

J. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components

K. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components – Addendum 1 – Transmission Performance Specifications for 4-Pair 100 ohm Category 6 Cabling

L. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components – Addendum 2 – Revision of Sub-clauses

M. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components – Addendum 3 – Additional Considerations for Insertion Loss & Return Loss Pass/Fail Determination

N. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components – Addendum 4 – Solderless Connection Reliability Requirements for Copper Connecting Hardware

O. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components

P. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components – Addendum 6 – Category 6 Related Component Test Procedures

Q. TIA-568-D, Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components – Addendum 11 - Specification of 4-Pair UTP and SCTP Cabling

R. TIA-568-D, Optical Fiber Cabling Components Standard

S. TIA-569-E Commercial Building Standard for Telecommunications Pathways and Spaces -

T. TIA-606-D, Administration Standard for Commercial Telecommunications Infrastructure

U. ANSI J-STD-607-D Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications

V. TIA-758-E Customer-owned Outside Plant Telecommunications Infrastructure Standard

W. AIA

X. Local

Y. NEC

Z. ISO

AA. FCC

BB. UL

CC. OSHA

DD. NFPA

EE. NEMA

FF. Plenum Applications

GG. Applicable Flame Test: UL 910 (NFPA 262).

HH. Contract documents are detailed only to the extent required to show design intent. It shall be understood and agreed upon by the Contractor that all work described herein shall be complete in every detail. Contractor Shall:

II. Furnish additional items not mentioned herein to meet requirements as specified without claim for additional payments. Items, may include hardware, rack panels, 66 Blocks etc., and other devices that are required for installation.

JJ. Ensure that all labor furnished be manufacture trained and experienced in telecommunication and networked systems.

KK. Ensure that all equipment unless otherwise specified, shall be new, free from defects, and of the best craftsmanship in its class.

LL. Perform initial programming of system and audio level adjustments.

MM. Perform final programming of system and audio level adjustments.

NN. Provide system documentation including equipment manuals and drawings.

OO. Guarantee all equipment and components for their specified period from date of acceptance.

PP. Provide information on system requirements to any Contractor responsible for supplying related materials for this system.

QQ. Shall verify all ceilings with specified speaker types prior to installation. Contractor is responsible to provide speaker types as required to mount in the specified locations. If the speaker types are found to be incompatible with the ceiling types, the contractor shall notify the Architect / Design Consultant. If the contractor does not notify the Architect / Design Consult of any discrepancies, the installation will be assumed to be accounted for in the highest quality and most costly and/or difficult manner.

RR. Shall be responsible for, and repair all damage to buildings due to carelessness of workmen, including ceiling tiles, and exercise all reasonable care to avoid any damage to the Owner's property. The Contractor shall make note of all existing damage, and provide photographs of the damage, prior to beginning any work.

SS. In the event of any conflicts between documents referenced herein and the contents of this specification, the Contractor shall notify the Architect/Engineer in writing of any such occurrences before purchasing or installing any equipment or materials. The Architect/Design Consultant will notify the Contractor of any actions required to resolve these conflicts. Such actions may include but are not limited to: design changes, equipment, materials and/or installation changes. In any event Contractor shall not supersede specifications and standards from the latest NFPA and NEC publications.

3.2 GENERAL REQUIREMENTS

A. Contractor shall comply with the requirements of local Authority Having Jurisdiction (AHJ), State of Texas, the National Fire Protection Association (NFPA), and the National Electrical Code (NEC). If the Contractor identifies any item in the plans or specifications that will not strictly comply with the aforementioned laws,

ordinances, and rules, the matter shall be referred to the Architect/Design Consultant for direction before proceeding with that part of the work.

B. The Contractor shall install the materials in accordance with these specification and the manufacturer's installation guidelines.

C. No deviations from the plans or specifications shall be made without full consent in writing of the Architect/Engineer. The Contractor shall have written approval from the Architect/Design Consultant for any additional work beyond the Contract Documents prior to beginning such work. If the Contractor does not obtain written approval from the Architect/Design Consultant prior to proceeding with the work, the contractor shall not be reimbursed for the work.

D. The Contractor shall obtain written permission from the Architect/Design Consultant before proceeding with any work that would necessitate cutting into or through any part of the building structure such as, but not limited to girders, beams, floors, walls, roofs, or ceilings.

E. Contractor shall notify the Architect/Design Consultant a minimum of (2) weeks prior to beginning work and will participate in a pre-construction meeting with the Architect/Design Consultant to perform a walkthrough, review the scope of work, schedule, and escalation procedures.

F. The Contractor shall maintain a work area free of debris, trash, empty cable reels, scrap wire, etc., and dispose of such items on a daily basis and return the site to the original state of cleanliness. The Contractor shall not use Owner's facilities for the disposal of excess or scrap materials.

G. Equipment and materials installed by the Contractor shall be free of defects and damage.

H. Contractor shall be responsible for the repair of any damage caused by the contractor during the installation.

I. Contractor shall test all equipment prior to installation. By failing to perform this testing operation, the Contractor shall accept the equipment as compliant and assume all liability for the replacement of equipment at no cost to the Owner should it be found defective at a later date.

J. Contractor shall maintain a set of working specifications, design drawings, and shop drawings to be kept on site at all times and shall update the shop drawings on a weekly basis. Shop drawings shall be made available for inspection at the request of the Architect/Engineer.

K. Equipment and materials shall be consistent throughout the installation. Where multiple units of the same type of equipment and materials are required, these units shall be a standard product with the same manufacturer and model number.

L. Equipment and materials shall be delivered and stored in accordance with the manufacturer's guidelines at the Contractor's expense.

M. Contractor shall make all stored equipment and materials available for inspection at the request of the Architect/Engineer.

N. All equipment and material used in the installation shall be approved by the manufacturer for the environment in which it is being installed.

O. Cables shall be properly supported in accordance with industry standards at all times. Improperly supported cables shall be corrected by the Contractor at no cost to the Owner.

P. Contractor shall be responsible to properly protect equipment from damage by other trades during construction.

Q. Cables shall be routed at 90-degree angles to the building structure. At no time shall a diagonal pull be installed.

R. Any cabling installed in or passing through a ceiling space must be plenum rated.

S. Wiring within Enclosures: Bundle, lace, and train conductors to terminal points with no excess. Use lacing bars in cabinets.

T. Control-Circuit Wiring: Install number and size of conductors as recommended by system manufacturer for control functions indicated.

U. Separation of Wires: Separate speaker-microphone, line-level, speaker-level, and power wiring runs as specified by BICSI TDMM 15 Edition.

V. Match input and output impedances and signal levels at signal interfaces. Provide matching networks where required.

W. Weatherproof Equipment: For units that are mounted outdoors, in damp locations, or where exposed to weather, install consistent with requirements of weatherproof rating.

X. The Contractor shall not install cables in conduits or sleeves without nylon bushings. Cables installed through conduits or sleeves without nylon bushings shall be removed and replaced at no cost to the Owner.

Y. The Communication System shall provide at least the following functions and features:

Z. The central control unit shall have the capacity for expanding the system to 300 stations, 125 staff phones, and 4 Administrative Consoles with the addition of plug in modules, as required.

AA. It shall be complete with circuitry for accomplishing all functions for signaling and communications to all stations, page zones, and administrative control consoles. The unit shall contain all required electronics on modular, plug-in type boards for ease of service and future expansion.

BB. All programmable functions shall be stored in a non-volatile EEPROM memory and shall not be lost in event of a power failure.

CC. Programming functions shall be accomplished through the use of a standard Windows Internet browser. Any PC connected to the school network and provided with the proper authorization shall have multi-level access to the system for programming. Any off-site PC shall have multi-level access to the system through the use of the public Internet, provided they have been granted proper authorization by the school.

DD. Diagnostic functions shall be accomplished through any PC connected to the school network and provided with the proper authorization and diagnostic software. Any off-site PC shall have access to the system for diagnostics through the use of the public Internet, provided that they have been granted proper authorization and have been provided diagnostic software.

EE. The audio channel(s) shall be priority driven allowing for the highest priority signal type access to a voice channel. The system shall be user programmable to allocate, upon demand, either of the channel(s) to facilitate simultaneous intercom conversations, pages, program distributions, or combination thereof.

FF. The Central Control Unit shall provide a 0 dB signal for connections to an external amplifier for distribution of program audio, time signals and paging announcements.

GG. The system shall be capable of multiple open voice intercom paths used for intercom, paging, program distribution, or emergency paging.

HH. The system shall support direct-dialing, two-way communications between all locations equipped with Administrative Control Consoles or telephones to any location equipped with a speaker.

II. The system shall provide communications between telephone and public address/ intercom system. Systems providing broadcast only and are not capable of listening to rooms are not acceptable.

JJ. Pre-announce tones shall alert the classroom of incoming calls with distinct tones for each priority level.

KK. The system shall be integrated with customer phone system allowing the capability to page and conduct voice intercom with any speaker in the system.

LL. Provide emergency and All Call paging through All Call and a minimum of 24 zones of group paging. The paging zones shall be independent of the time tone and audio program distribution zones. Systems sharing zones for both paging and time tone shall not be acceptable.

MM. The system must have the capability of distributing audio program sources from any administrative control console, telephone system phone or intercom system DTMF phone. Program distribution shall be accomplished on an all rooms basis, selected rooms basis or an individual room.

NN. The paging system and the phone system must be integrated together to allow the phone system to call over the paging system.

OO. The system shall support the automatic distribution of user programmable, class change time signals (Bell Schedule) to all selected areas.

PP. Furnish and install a complete new Time Synchronization System using a Time Synchronization Systems.

QQ. Furnish and install all system equipment, devices, accessories, and material in accordance with these specifications and drawing to provide a complete and operating system.

RR. All bids shall be based on the equipment as specified herein. The model designations are that of Rauland Telecenter U The specifying authority must approve any alternate system.

SS. System shall continually synchronize clocks and/or timers, and shall be capable of clock readouts in multiple time zones where desired.

TT. The Master Time Source shall be NTP. Coordinate NTP server selection and configuration with PA system and District IT representative(s).

UU. P shall automatically adjust for Daylight Saving Time in locations where DST is observed.

VV. Each clock and/or timer and every other component in the system shall use both precise time and synchronized time.

WW. The system shall include an internal clock reference so that failure to detect the master time source shall not result in the clocks failing to indicate time.

XX. System shall incorporate a “fail-safe” design so that failure of any component shall not cause failure of the system. Upon restoration of power or repair of failed component, the system shall resume normal operation without the need to reset the system or any component thereof.

YY. Clock locations shall be as indicated in the technology drawings.

ZZ. Contractor shall coordinate with the owner the clock locations, sizes, clock mounting (single sided, double sided) requirements prior to purchase.

AAA. Contractor shall provide coordination and support to the owner, clock system connectivity with the owner provided / owner installed server system to ensure clock synchronization and bell scheduling is correct.

BBB. Cabling and Pathways

CCC. The Intercom contractor shall provide cabling and the means to support page ducking (override) in the Gym, Cafeteria, Library, breakout areas and all classrooms. If the intercom system is IP based it may mean providing additional IP relay modules.

3.3 SYSTEM REQUIREMENTS

A. Any quantities listed are for reference only. Contractor is responsible for furnishing materials as required to provide a complete and functioning system. Where quantities are not noted, they may be obtained from the drawings. In the event of a discrepancy between the specifications and the drawings, the greater quantity/quality shall be furnished.

B. Contractor shall provide installation in accordance with Manufacturer's installation instructions.

C. Contractor shall load the latest firmware updates on all equipment and components.

D. Contractor shall energize and commission equipment in accordance with manufacturer's instructions and guidelines.

E. Contractor shall provide final adjustments. Upon completion, the equipment shall be clean, adjusted and left in perfect operating condition.

F. Equipment shall be clean, adjusted and left in perfect operating condition.

G. Public Address System:

1. Contractor shall furnish and install the following as indicated on the technology drawings and associated equipment schedules and diagrams.
2. Contractor shall provide installation in accordance with Manufacturer's installation instructions.
3. Contractor shall load the latest firmware updates on all equipment and components.
4. Contractor shall energize and commission equipment in accordance with manufacturer's instructions and guidelines.
5. Contractor shall provide final adjustments. Upon completion, the equipment shall be clean, adjusted and left in perfect operating condition.

H. Attenuators (Volume Controls)

1. Contractor shall furnish and install the following as indicated on the technology drawings and associated equipment schedules and diagrams.
2. Contractor shall provide installation in accordance with Manufacturer's installation instructions.
3. Contractor shall energize and commission equipment in accordance with manufacturer's instructions and guidelines.
4. Contractor shall provide final adjustments. Upon completion, the equipment shall be clean, adjusted and left in perfect operating condition.

I. Loudspeaker(s)

1. Contractor shall furnish and install the following as indicated on the technology drawings and associated equipment schedules and diagrams.
2. Type 1: Ceiling Mounted Loudspeaker
3. Provide T-Bar as Required
4. Coordinate Finish with Architect.
5. Tie off to ceiling grid and building structure as required by site conditions and building codes.
6. Type 2: Exterior Horn Speaker
7. Coordinate Finish with Architect
8. Coordinate Finish with Architect.
9. Contractor shall provide a Horn Type loud speaker with protective cage for inside the Gym as well.
10. Contractor shall provide installation in accordance with Manufacturer's installation instructions.
11. Contractor shall energize and commission equipment in accordance with manufacturer's instructions and guidelines.
12. Contractor shall provide final adjustments. Upon completion, the equipment shall be clean, adjusted and left in perfect operating condition.

J. Paging System Cabling:

1. All indoor cabling shall be plenum rated. All outdoor cabling shall be outdoor rated and direct-burial rated when in contact with grade or within conduit in contact with grade. Coordinate all cable colors

with Owner/Consultant prior to ordering or installation. Provide connectors and termination as specified by manufacturer for each application.

2. The PA system shall be designed so the speakers in each applicable MDF and/or IDF wiring boundary are cabled from the applicable MDF and/or IDF.
3. The speaker cables shall maintain separation from all other cables (data, voice, video, clock, intrusion detection, Access Control/Data Gathering Panel, CCTV, etc.) and shall not share the same J-hook pathway or conduit.
4. Each PA system cable shall be provided with 10 foot service loop at each end and at each speaker where daisy-chained.
5. Speakers in large areas such as hallways, courtyard, or the exterior may be daisy-chained with the specific area. This cable shall be installed and terminated by the cable contractor in the MDF and/or IDF room.

K. Paging system and Infrastructure

1. Rack #1 within the MDF Room is reserved exclusively for the Public Address (PA) System. Provide and install the Page Control Unit in this rack, including all required power supplies and terminations. The PA system shall be cross-connected to the Cisco IP Phone System for integration. Refer to the Technology drawings for rack layout and coordination requirements.

L. Classroom, Hallway and Restroom:

1. Provide and install required self-amplified ceiling speakers throughout the classrooms, hallways and restrooms 1st floor and other floors as shown on the drawings . (20 feet between speakers at the hallways, 1 speaker at each classroom, 1 speaker at each restroom)

M. Outdoors:

1. Provide and install as necessary horns on the exterior of the school. All horns will be connected directly to the new Volume Control in the Front office.

N. Other:

1. Speakers must be connected, working and tested with controller system. Paging cable must be grey color. UTP Cat6 plenum class. J-Hook with Batwing necessary.
2. The Owner needs paging programming for zones with Cisco phone system. Paging system must be programed, configured paged by Cisco IP phone system. Certification and testing is necessary.
3. Refer to technology drawings for zoning requirements.

O. Cable Support

1. All cables shall be installed and supported in conduit systems, cable trays, cores, sleeves, etc. as indicated in the technology drawings.
2. When cables leave the main pathway systems as indicated on the technology drawings, they shall be installed and supported in Contractor furnished and installed j-hooks or saddle straps.
3. No cable pathway shall exceed 40% fill ratio.
4. The contractor shall furnish a separate j-hook or saddle strap pathway for each cable type (data, voice, video and security).
5. J-hooks and saddle straps shall be installed no more than five-feet (5’) apart on center, using only manufacturer-approved installation methods and hardware.
6. J-hooks shall be furnished with closure clips.
7. Maximum sag between supports shall not exceed twelve-inches (12”).
8. Contractor shall establish j-hook and saddle strap pathways and shall coordinate pathways with all other disciplines. Under no-circumstances shall these pathways be used to support other low-voltage applications not included in this specification.

P. Cable Dressing

1. No nylon cable ties shall be used at any time during the installation of the cable.

Q. Above Ceiling

1. Contractor shall furnish and install plenum-rated hook & loop straps in plenum-rated airspaces.
2. The Contractor shall install no more than (1) hook & loop strap between each j-hook or saddle strap or at service loop locations.

R. Equipment Rooms / Telecommunications Rooms

1. The Contractor shall bundle all visible cables with Contractor furnished and installed hook & loop straps.
2. Hook & loop straps shall be installed twenty-four (24) inches apart on center.

3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Service:

1. A factory representative shall be onsite to assist in system programming and commissioning.

B. Perform the following field tests and inspections:

1. Schedule tests with at least seven days' advance notice of test performance.
2. After installing school intercom and program equipment and after electrical circuitry has been energized, test for compliance with requirements.

C. Operational Test:

1. Test originating station-to-station, all-call, and page messages at each intercom station. Verify proper routing and volume levels and that system is free of noise and distortion. Test each available message path from each station on system.

D. Inspection:

1. Verify that units and controls are properly labeled and interconnecting wires and terminals are identified.
2. Verify the server and devices are running the latest software revisions.

E. Startup Service

1. Engage a factory-authorized service representative to perform startup service and initial system programming.
2. Verify that electrical wiring installation complies with manufacturer's submittal and installation requirements.

F. Adjusting

1. On-Site Assistance: Engage a factory-authorized service representative to provide on-site assistance in adjusting sound levels and for any initial troubleshooting.

G. Demonstration

1. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain school intercom and program equipment.

3.5 TRAINING REQUIRMENTS

A. Distributed Communication Systems Training

1. Contractor shall provide a proposed training schedule to the Architect/Design Consultant prior to substantial completion.
2. Contractor shall provide a proposed training syllabus for both administrative users and end-users prior to substantial completion.
3. Training shall include all aspects of the Audio/Visual System as specified and installed. Contractor shall include provisions within the total cost proposal for a minimum of two (2) System Administrator training sessions. Each session shall be planned for a minimum of 4 hours. It is anticipated this training will cover advanced functions of the system, basic trouble-shooting techniques and other subject matter pertinent to the on-going support of the PA Systems at the installed facility.
4. Contractor shall include provisions with the total cost proposal for a minimum of two (2) End-User training sessions. Each session shall be planned for a minimum of 4 hours. It is anticipated this training will cover basic function and operation of the system by faculty. This would include event display management, source control and general systems operation for all installed systems.

B. Programming:

1. Fully brief Owner on available programming options. Record Owner's decisions and set up initial system program. Prepare a written record of decisions, implementation methodology, and final results.
2. Once initial system programming is implemented, allow owner a 2 month period to utilize system and make comments.
3. After initial evaluation period coordinate with Owner. Record Owner's feedback and provide adjustments as requested.

3.6 TESTING REQUIREMENTS

A. Distributed Communication Systems Testing

1. Contractor shall un-pack and pre-test equipment prior to installation into the production environment. All configurations shall be re-verified prior to the units being placed into service.
2. Contractor shall test and commission each component per the specifications and manufacture's installation instructions.
3. Contractor shall test and verify for full operational and network support control functionalities and connections per the specifications and manufacturer's installation instructions.
4. All PA network devices shall be verified for link and auto negotiation to the highest connection rate.
5. Contractor shall test and verify all audio-visual functionalities as installed per the specifications and manufacturer's installation instructions.
6. Call Back Switches and speakers shall be checked tested by the installing contractor to ensure the system is free of grounds, opens and shorts. The test results shall be provided to the Architect and Owner for review.

3.7 PROJECT CLOSEOUT DOCUMENTATION

A. As-Built Drawings

1. Drawings shall be provided to the Architect/Design Consultant at the time of substantial completion. Final payment will not be recommended until drawings are received and approved by the Architect/Design Consultant.
2. Three (3) sets of drawings depicting the condition of the audio visual system as installed.
3. As-Built drawings shall be produced in AutoCAD 2022 or higher and provided in hardcopy and electronically in .dwg and PDF format.
4. Hardcopy drawings shall be provided in the original size as issued by the Architect/Design Consultant.
5. Drawings shall retain the formatting and title block of the original drawings as issued by the Architect/Design Consultant.
6. Drawings shall be provided utilizing the original scale and shall include the exact dimensions and locations of all projectors, projector mounts, projection screens, wall elevations, cable tray, sleeves, pathways, workstation locations, and labeling scheme.

B. Contactor's Statement of Warranty

1. Statement of warranty shall be provided to the Architect/Design Consultant at the time of substantial completion. Final payment will not be recommended until statement of warranty is received and approved by the Architect/Design Consultant.
2. Contractor shall furnish a minimum of a one (1) year warranty on all materials, labor and workmanship starting at final system acceptance.
3. One original and two copies of Contractor's warranty terms and conditions to include contact information (i.e. Contractor name, Point of Contact, address, phone number and email address) and start and end date for warranty call outs.

END OF SECTION

SECTION 32 18 16.13

PLAYGROUND PROTECTIVE SURFACING

06/17/2026

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Unitary, seamless poured in place playground protective surfacing and installation.
   2. Accessories.

B. Related Sections:
   1. Division 31 - EARTHWORK
   2. Division 32 - EXTERIOR IMPROVEMENTS; geotextiles for drainage/separation.

1.2 REFERENCE STANDARDS

A. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension; 2016 (Reapproved 2021).

B. ASTM D624 - Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers; 2000 (Reapproved 2020).

C. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2016 (Reapproved 2021).

D. ASTM E303 - Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester; 2022.

E. ASTM F1292 - Standard Specification for Impact Attenuation of Surfacing Materials Within the Use Zone of Playground Equipment; 2022.

F. ASTM F1951 - Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment; 2021.

G. ASTM F2223 - Standard Guide for ASTM Standards on Playground Surfacing; 2019.

1.3 DEFINITIONS

A. The surfacing system shall provide overall consistent fall protection and can be customized to meet any safety, design, and aesthetic requirements. ADA compliant surfacing shall be a resilient, monolithic pad, providing a safe, clean, maintenance-free space.

B. Definitions in ASTM F2223 apply to Work of this Section.

C. Critical Height: Standard measure of shock attenuation according to ASTM F2223; same as "critical fall height" in ASTM F1292. According to ASTM F1292, this approximates "the maximum fall height from which a life-threatening head injury would not be expected to occur."

D. SBR: Styrene-butadiene rubber.

E. Unitary Surfacing: A protective surfacing of one or more material components bound together to form a continuous surface; same as "unitary system" in ASTM F2223.

1.4 SUBMITTALS

A. General: Submit in accordance with Section 01 33 23 - SHOP DRAWINGS, PRODUCT DATA, SAMPLES.

B. Product Data:
   1. Provide for each type of product.
   2. Color chart.
   3. IPEMA Certification.
   4. Product liability Insurance Certificate

C. Shop Drawings:
   1. Include plans, sections, placement, penetration details, and attachment to substrates.
   2. Include accessories and edge terminations.
   3. Include patterns made by varying colors of surfacing and details of graphics.

D. Samples:
   1. Provide 6” x 6” sample(s) for each type of exposed finish.
   2. Provide 6” long by full width/cross section for accessories.

E. Warranty: Provide sample of manufacturer’s warranty.

1.5 QUALITY ASSURANCE

A. Qualification
   1. Surface must be IPEMA certified.
   2. Manufacturer must be in business at least 5 years.
   3. The Applicator/Installer shall be trained and approved by manufacturer and must have installed a minimum of 10 applications.

1.6 JOB CONDITIONS

A. Ambient air temperature shall be 45° F (0°C) or greater and rising at the time of installation of the surface and shall remain at 33° F (0°C) or greater for at least 24 hours after application.

B. Adjacent materials and the surface shall be protected during installation, while curing and unattended, from weather and other damage.

1.7 DELIVERY, STORAGE & HANDLING

A. Deliver all materials in good condition, in original unopened packages with labels intact.

B. Store all materials protected from weather and at temperature not less than 32° F (0°C) for any 12-hour duration.

1.8 WARRANTY

A. Special Warranty: Manufacturer and Installer agree to repair or replace components of protective surfacing that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Reduction in impact attenuation as measured by reduction of critical fall height.
      b. Deterioration of protective surfacing and other materials beyond normal weathering.
   2. Warranty Period: Five years from date of Substantial Completion.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Basis of Design: Provide DuraPlay Surfacing System as manufactured by DuraPlay, Inc. (phone: 512.847.2473, Website: www.duraplay.com) or approved equivalent.

B. All material components of the surfacing system shall be obtained from the same manufacturer or its authorized distributers. Proposed substitutions are required to provide product data demonstrating that they meet or exceed product specifications complying with this section.

2.2 UNITARY, DUAL-DENSITY, SEAMLESS SURFACING

A. Description: Manufacturer's standard, site-mixed and applied, two-layer material with wearing layer over cushioning layer, with combined, overall thickness as required, tested for impact attenuation according to ASTM F1292 and for accessibility according to ASTM F1951.
   1. Leveling and Patching Material: Portland cement-based grout or epoxy- or polyurethane-based
   2. Primer: Manufacturer's single-component moisture cured polyurethane primer.
   3. Cushioning Layer: DuraPlay formulation of recycled black SBR particles and binder. Base mat made of 100% recycled styrene butadiene rubber (SBR) mixed with high-grade polyurethane.
      a. Shall be recycled SBR Rubber
      b. Shall be cryogenically processed
      c. Shall be 3/8" shredded mesh or 6/20 mesh and contains less than 4% dust.
      d. Shall be packed in suitable bags to protect SBR from moisture
      e. Base mat thickness: minimum of 2.0", depending manufacturer's recommendation on critical fall height of 4'-0".
   4. Wearing Layer: DuraPlay formulation of EPDM rubber particles or Thermoplastic Vulcanizate (TPV, binder, and other organic and inorganic components.
      a. A manufactured rubber having a density of 1 to 4mm.
      b. Color as selected by Architect from manufacturer's full range of colors.
      c. Thickness is nominal 1/2" or 2.44 lb. per square foot.
   5. Binder: An elastic polyurethane pre-polymer, MDI based, low odor, capable of excellent weathering and binding characteristics. Binder shall contain no TDI Monomers.
   6. Critical Height: Critical height shall be calculated from equipment provided by Owner.

2.3 TECHNICAL INFORMATION

A. Applicable Standards
   1. Shock attenuation under ASTM F1292 – GMAX less than 200
   2. Head Injury Criteria – less than 1000
   3. Non-slip characteristics under ASTM E303.
   4. IPEMA Certified
   5. Flammability under 8S -5696 and ASTM D2859.
   6. Tensile strength (ASTM D412) - 60 psi
   7. Tear resistance (ASTM D624) – 140%
   8. Accessibility Standard: Minimum surfacing performance according to ASTM F1951.

B. Chemical Properties
   1. Base mat: 85% SBR Rubber Buffings, 15% Polyurethane Binder
   2. Top Surface: 78% EPDM or TPV Rubber Granules, 22% Polyurethane Binder

PART 3 EXECUTION

3.1 EXAMINATION

A. Prior to application of the playground system, the substrates shall be examined by manufacturers installation technician for compliance with specification and manufacturer requirements. Work shall not proceed until unsatisfactory conditions are corrected.
   1. Acceptable substrates for the playground system include asphalt, concrete and compacted stone. Other substrates shall be approved by manufacturer/installer prior to application.
   2. Conditions of all substrates with respect to structural and drainage performance must be evaluated and approved by the applicator prior to applying the surfacing system. General Contractor is responsible for drainage.

B. Hard-Surface Substrates: Verify that substrates are satisfactory for unitary, protective surfacing installation and that substrate surfaces are dry, cured, and uniformly, level, sloped to drain, and within recommended tolerances according to protective surfacing manufacturer's written requirements for cross-section profile.
   1. ~~**Asphalt Substrates: Verify that substrates are dry, sufficiently cured to bond with adhesive, and free from surface defects, dust, dirt, loose particles, grease, oil, and other contaminants incompatible with protective surfacing or that may interfere with adhesive bond.** ***[ADDENDUM NO. 4]***~~

2. Concrete Substrates: Verify that substrates are dry and free from surface defects, laitance, glaze, efflorescence, curing compounds, form-release agents, hardeners, dust, dirt, loose particles, grease, oil, and other contaminants incompatible with protective surfacing or that may interfere with adhesive bond. Determine adhesion, dryness, and acidity characteristics by performing procedures recommended in writing by protective surfacing manufacturer.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Prepare substrates to receive surfacing products according to protective surfacing manufacturer's written instructions.

B. Hard-Surface Substrates: Clean surface free of laitance, efflorescence, curing compounds, and other contaminants incompatible with protective surfacing.
1. Repair: Fill holes and depressions in unsatisfactory surfaces with leveling and patching material.
2. Treatment: Mechanically abrade or otherwise prepare concrete substrates according to protective surfacing manufacturer's written instructions to achieve adequate roughness.
3. Terminal Edges: Saw cut asphalt for terminal edges of protective surfacing.
4. Treat control joints and other nonmoving substrate cracks to prevent telegraphing through protective surfacing.

3.3 INSTALLATION

A. Substrate Primer:
1. Apply over prepared substrate at manufacturer's standard spreading rate for type of substrate and with equipment as recommended by manufacturer.
2. Do not over saturate substrate.
3. Prime area 1.5 - 2.0 feet around perimeter and any adjacent vertical barriers such as playground equipment support legs, curbs or edging that will contact the surfacing system.
4. Do not use primer over compacted stone.

B. Poured Cushioning Layer: Spread evenly over primed substrate to form a uniform layer applied at manufacturer's standard spreading rate in one continuous operation, with a minimum of cold joints
1. Apply mixed binder/SBR at desired thickness 1/8” higher than measuring bar.
2. Using a steel pool trowel, even binder/SBR mixture. Be sure to continuously lubricate trowel. Do not saturate surface with these lubricants.
3. As the mixture is leveled apply a downward pressure onto the surface so that the mixture compacts tightly.
4. Check surface to be level.
5. Allow to dry for 10 to 12 hours or until no indentations can be made by foot traffic.

C. Intercoat Primer: When required by manufacturer, apply primer at manufacturer’s standard spread rate over cured cushioning layer.

D. Wearing Layer: Spread over primed base course to form a uniform layer applied at manufacturer's standard spreading rate in one continuous operation and, except where color changes, with no, or a minimum of cold joints. Finish surface to produce manufacturer's standard wearing-surface texture.
1. Apply mixed binder/granule at a nominal 1/2” thickness.
2. Using a steel pool trowel, spread even rubber/granule mixture. Be sure to continuously lubricate trowel. Do not saturate surface with these lubricants.
3. Design: Where colored pattern or graphic design is required, place colored, design material as soon as previously placed material is sufficiently cured, using primer or adhesive if required by manufacturer's written instructions.
4. As the mixture is leveled apply a downward pressure onto the surface so that the mixture compacts tightly.
5. Check surface to be level.
6. Cold joints must be cut and primed prior to installing a different color surface.
7. Allow to cure for a minimum of 24 to 48 hours prior to usage. At the end of the minimum curing period, verify that the top surface is sufficiently dry and firm to allow foot traffic and use without damage to the surface. Do not allow foot traffic or use of the surface until it is sufficiently cured.

E. Edge Treatment: As indicated on Drawings. Fully adhere edges to substrate with full coverage of substrate. Maintain fully cushioned thickness required to comply with performance requirements.

3.4 PROTECTION

A. Protect the surface from foot traffic or vandalism during the 48 hour cure period.

END OF SECTION

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NEW OPPORTUNITY AWARENESS CENTER

Katy ISD

Katy, TX

ABBREVIATIONS

A	
AFF	ABOVE FINISH FLOOR
ACT	ACOUSTICAL CEILING TILE
ADDL	ADDITIONAL
AB	AIR BARRIER
ACM	ALUMINUM COMPOSITE PANEL
ADA	AMERICANS WITH DISABILITIES ACT
AL/ALUM	ALUMINUM
APPROX	APPROXIMATE OR APPROXIMATELY
ARCH	ARCHITECT OR ARCHITECTURAL
B	
BD	BOARD
BOW	BOTTOM OF WALL
BUR	BUILT-UP ROOFING
BLDG	BUILDING
C	
℄	CENTER LINE
CR	CLASSROOM
CFS	COLD-FORMED STEEL
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CM	CONSTRUCTION MANAGER
CONT	CONTINUOUS
CI	CONTINUOUS INSULATION
CJ	CONTROL JOINT
COORD	COORDINATE
CORR	CORRIDOR
D	
DIA	DIAMETER
DO.	DOOR OPENING
DN	DOWN
DS	DOWNSPOUT
E	
EA	EACH
EW	EACH WAY
ELEC	ELECTRICAL
EWC	ELECTRIC WATER COOLER
ELEV	ELEVATION
EQ	EQUAL
EQPT	EQUIPMENT
EXIST	EXISTING
EJ	EXPANSION JOINT
EXT	EXTERIOR
EIFS	EXTERIOR INSULATION & FINISH SYSTEM
F	
FT	FEET or FOOT
FRP	FIBERGLASS REINFORCED PLASTIC
FV	FIELD-VERIFY
FIN	FINISH
FF	FINISH FLOOR
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER & CABINET
FHC	FIRE HOSE CABINET
FHCS	FLAT-HEAD COUNTERSUNK
FL	FLOOR
FD	FLOOR DRAIN
FLR	FLUORESCENT
G / H	
GALV	GALVANIZED
GA	GAGE
GC	GENERAL CONTRACTOR
GO	GLAZED OPENING
GYP	GYPSUM
HT	HEIGHT
HP	HIGH POINT
HM	HOLLOW METAL
HORZ	HORIZONTAL
HB	HORIZONTAL BLINDS
HDG	HOT-DIP GALVANIZED
HR	HOUR
I / J / K	
ID	INSIDE DIAMETER
INSUL	INSULATION
IFP	INTERACTIVE FLAT PANEL
IMB	INTERACTIVE MARKERBOARD
INT	INTERIOR
IBC	INTERNATIONAL BUILDING CODE
L	
LAV	LAVATORY
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LP	LOW POINT
LVT	LUXURY VINYL TILE
M	
MFR	MANUFACTURER
MFG	MANUFACTURING
MB	MARKER BOARD
MO	MASONRY OPENING
MAX	MAXIMUM
MECH	MECHANICAL

M (CONT.)	
MOD BIT	MODIFIED BITUMEN
MULL	MULLION
MEP	MECHANICAL-ELECTRICAL-PLUMBING
MCM	METAL COMPOSITE MATERIAL
MIN	MINIMUM
MISC	MISCELLANEOUS
N	
NOM	NOMINAL
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO. /#	NUMBER
O	
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
OHD	OVERHEAD
OFCI	OWNER-FURNISHED, CONTRACTOR-INSTALLED
OFOI	OWNER-FURNISHED, OWNER INSTALLED
P / Q	
PR	PAIR
P.LAM.	PLASTIC LAMINATE
PLT	PLATE
PLMB	PLUMBING
PT	POINT
PCF	POUNDS PER CUBIC FOOT
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PREFAB	PREFABRICATED
PROJ	PROJECTOR or PROJECTION
QT	QUARRY TILE
R	
R.	RADIUS
REBAR	REINFORCING BAR
REF.	REFERENCE or REFER TO
RCP	REFLECTED CEILING PLAN
RE:	REGARDING
REFG	REFRIGERATOR
REINF	REINFORCE or REINFORCING
REQD	REQUIRED
R.	RISER (STAIR)
RWS	ROLLING WINDOW SHADES
RD	ROOF DRAIN
RO	ROUGH OPENING
S	
SIM.	SIMILAR
SC	SOLID CORE
SAB	SOUND ATTENUATION BLANKET
SAFB	SOUND ATTENUATION FIRE BLANKET
STC	SOUND TRANSMISSION CLASS
SPEC	SPECIFICATION
SQ	SQUARE
SF	SQUARE FOOT
SS	STAINLESS STEEL
STRUC.	STRUCTURAL
SUSP.	SUSPENDED
T	
TB	TACKBOARD
TS	TACKSTRIP
TW	TACK WALL
TC	TEACHER'S CABINET
TAS	TEXAS ACCESSIBILITY STANDARDS
T.	TREAD (STAIR)
T&B	TOP & BOTTOM
TO.	TOP OF
TC	TOP OF CURB
TOD	TOP OF DECK
TOJ	TOP OF JOIST
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP.	TYPICAL
U / V	
UC	UNDER COUNTER
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
VIF	VERIFY IN FIELD
VERT	VERTICAL
VCT	VINYL COMPOSITION TILE
VWC	VINYL WALL COVERING
W / X / Y / Z	
WC	WATER CLOSET
WRB	WATER-RESISTIVE BARRIER
WT	WEIGHT
W	WIDE
W/	WITH
W/O	WITHOUT
WP	WORKING POINT
WWF	WELDED WIRE FABRIC

SYMBOLS LEGEND

ROOM NAME / 101 — ROOM NAME & NUMBER

101 — DOOR NUMBER

AC — ACCESS CONTROL

X — SIGNAGE

HB — HORIZONTAL BLINDS

1 — DEMO/PLAN NOTE

XXX-01 — ROOF TYPE

XXX-01 — ASSEMBLY TYPE

1/ A101 — DETAIL SECTION

X1 — PLUMBING TAG

1 / A101 — BUILDING SECTION

1 / A101 — WALL SECTION

1 / A101 — CALLOUT HEAD

SFX — ALUMINUM-FRAMED GLAZED OPENING SYSTEM

GD — HOLLOW METAL-FRAMED GLAZED OPENING SYSTEM

X1 — PARTITION TYPE

X1 — TOILET ACCESSORY/ SPECIALTY EQUIPMENT

X1 — PLUMBING FIXTURE

XXX-01 — FLOOR TYPE

11 / 1' - 0" — CEILING TYPE & HEIGHT

Type X-X / X HR — FIRE RESISTANCE

←C→ — FLOOR TRANSITION

A101 — BUILDING ELEVATION

1/ A101 — INTERIOR/ CASEWORK ELEVATION

N — PLAN NORTH/ TRUE NORTH

DATUM ELEVATION

MATERIAL LEGEND

- EARTH
- POROUS FILL
- CONCRETE/ GROUT
- BRICK
- CMU (LARGE SCALE)
- MARBLE
- METAL (LARGE SCALE)
- METAL (SMALL SCALE)
- RESILIENT FLOORING
- ACOUSTICAL TILE
- TERRAZZO
- PLASTER, SAND, GROUT, GYPSUM BOARD
- CERAMIC TILE
- GLASS (LARGE SCALE)
- INSULATION (RIGID FOAM BOARD)
- INSULATION (EPS FOAM BOARD)
- INSULATION (BATT/ BLANKET)
- INSULATION (SEMI-RIGID BOARD)
- WOOD, ROUGH (CONTINUOUS)
- WOOD, ROUGH (BLOCKING)
- WOOD, FINISH
- PLYWOOD (LARGE SCALE)
- FIBER CEMENT PANEL
- METAL LATH
- GYPSUM BOARD

PROJECT INFORMATION

TDLR PROJECT REGISTRATION NUMBER: TABS2026021354 ⚠1

APPROXIMATE BUILDING AREAS

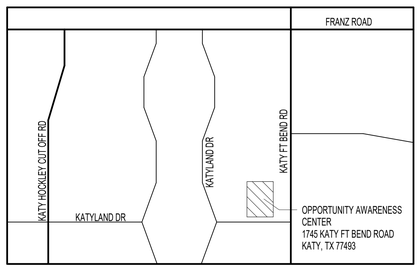
GROUND LEVEL AREA.:	19,851 S.F.
TOTAL BLDG AREA.:	19,851 S.F.
LEGAL DESCRIPTION:	1745 KATY FT BEND ROAD KATY, TX 77493 ⚠1

BUILDING CONSTRUCTION INFORMATION

TYPE OF CONSTRUCTION (TABLE 601 - IBC):	TYPE II-B
FIRE PROTECTION SYSTEM:	AUTOMATIC SPRINKLER SYSTEM THROUGHOUT

GENERAL NOTES

1. Refer to the CODE-series sheets tor Code Information, Design Criteria and Fire Protection Requirements.
2. Verify and document existing dimensions and conditions at the site before beginning construction. Notify the Architect of conflicts or variations prior to commencement of construction.
3. Based on the applicable design criteria, submit Shop Drawings of the proposed pattern of control joints in masonry veneer, CMU, gypsum board, plaster and stucco to the Architect for review and approval prior to construction.
4. In case of discrepancies in or between the Contract Documents, the greater quantity or better quality shall be bid. Clarifications regarding the discrepancies shall be requested from the Architect prior to construction, and the resulting interpretations implemented in accordance with the Contract Documents.



SITE LOCATION MAP

INDEX OF DRAWINGS

INDEX OF DRAWINGS

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Matrix Structural
5177 Richmond Avenue, Ste 670
Houston, TX 77056
Main Phone: 713.664.0130
www.matrixstructural.com

M.E.P. ENGINEER

LTY Engineers
840 Gessner Road, Ste 325
Houston, TX 77024
Main Phone: 281.945.8888
www.lty-engineers.com

TECHNOLOGY ENGINEER

COMBS Group
2245 Texas Drive, Suite 300
Sugar Land, TX 77497
Main Phone: 832.252.9755
www.combs-group.com

Katy ISD
Katy, TX

NEW OPPORTUNITY AWARENESS CENTER

REGISTERED ARCHITECT — JAMES H. JOHNSON — 20944 — STATE OF TEXAS

06/17/2026

ISSUED: May 26, 2026

REVISIONS

Revision No.	Revision Date
1 ADDENDUM 3	06/11/2026
2 ADDENDUM 4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	Brad Ewing
Drawn By	CLP

PROJECT NO.

25-0067.00

SHEET TITLE

INDEX, GENERAL NOTES AND ABBREVIATIONS

SHEET NO.

INDEX

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PROFESSIONAL
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06-17-2026

ISSUED: April 20, 2026

REVISIONS

Revision No.	Revision Date
3 ADDENDUM 3	06-11-26
4 ADDENDUM 4	06-17-26

Principal DINH H.

Proj. Eng. PHASITH N.

PROJECT NO.

25-0067.00

SHEET TITLE

OVERALL
SITE UTILITY PLAN

SHEET NO.

C4.00

1745 KATY FORT BEND ROAD
KATY, TEXAS 77493

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1745 KATY FORT BEND ROAD
KATY, TEXAS 77493

NEW OPPORTUNITY AWARENESS CENTER

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PROFESSIONAL ENGINEER
06-17-2026

ISSUED: June 17, 2026

REVISIONS

Revision No.	Revision Date

Principal DINH H.

Proj. Eng. PHASITH N.

PROJECT NO.

25-0067.00

SHEET TITLE

OVERALL
SITE UTILITY PLAN
ALTERNATE NO. 7A

SHEET NO.

C4.01

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1745 KATY FORT BEND ROAD
KATY, TEXAS 77493

NEW OPPORTUNITY AWARENESS CENTER

ADICO, LLC
TBPE FIRM NO. F-16423

ISSUED: June 17, 2026

REVISIONS

Revision No.	Revision Date

Principal DINH H.

Proj. Eng. PHASITH N.

PROJECT NO.

25-0067.00

SHEET TITLE

OVERALL
SITE UTILITY PLAN
ALTERNATE NO. 7B

SHEET NO.

C4.02

100-YEAR FLOOD PLAIN INFORMATION:
ACCORDING TO THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, HARRIS COUNTY, TEXAS, AND INCORPORATED AREAS, COMMUNITY PANEL NO. 48473C0375E MAP REVISED DATED FEBRUARY 18, 2009, THE SUBJECT PROPERTY LIES WITHIN THE AREA DESIGNATED AS ZONE "X" UNSHADED. DETERMINE TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD.

BENCHMARK INFORMATION:
1. RM190195 – NGS STAINLESS STEEL ROD W/ LOGO CAP STAMPED "HGCSD24 1986" AT BUSINESS US 90, NORTH OF IH 10 LOCATED IN GROUND, IN FRONT OF HOUSTON LIGHTING & POWER, SOUTH MEDIAN BETWEEN DRIVEWAYS IN KEY MAP 444Y IN THE BARKER WATERSHED NEAR STREAM T101-03-00. ELEVATION = 140.44' (NAVD 1988, 2001 ADJ.)
2. TBM "A" – BOX CUT ON CONCRETE BASE OF LIGHT STANDARD LOCATED IN THE MEDIAN OF THE MOST EASETERLY DRIVE CONNECTING RHODES STADIUM AND LEGACY STADIUM. ELEVATION = 144.39'
3. TBM "F" – BOX CUT ON TOP OF "C" INLET LOCATED ON THE WEST SIDE OF KATY FORT BEND ROAD ±1765 FEET SOUTH OF FRANZ ROAD AND ±875' NORTH OF COLONIAL PARKWAY. ELEVATION = 138.22'

PERMIT NOTES:

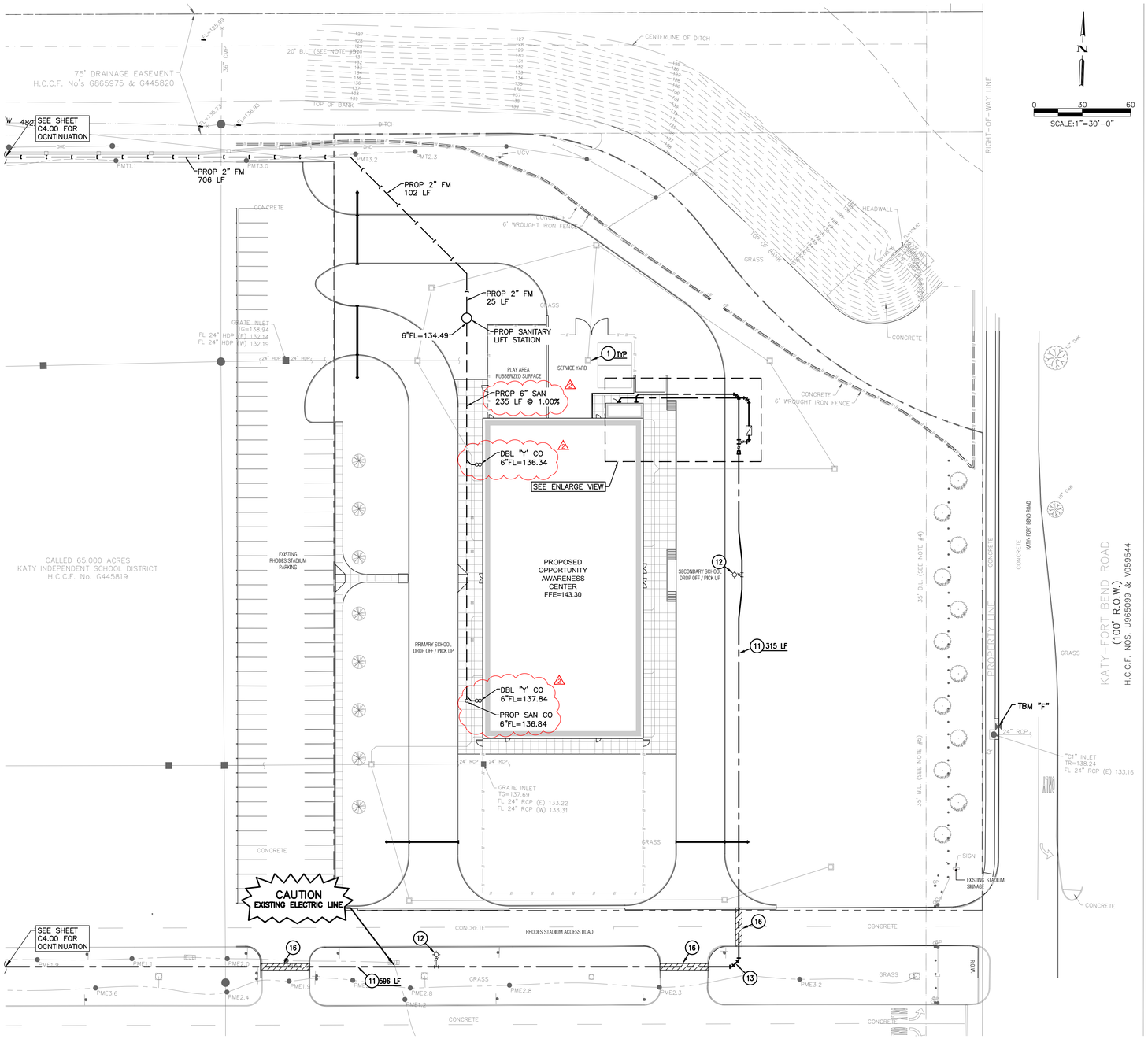
1. OWNER OR OWNER'S AGENT TO OBTAIN ALL APPLICABLE PERMITS REQUIRED BY THE "REGULATIONS OF WALLER COUNTY AND CITY OF KATY TEXAS" PRIOR TO STARTING CONSTRUCTION.
2. OWNER OR OWNER'S AGENT TO OBTAIN ALL NOTIFICATIONS REQUIRED BY CITY OF KATY, TEXAS PRIOR TO STARTING CONSTRUCTION OF UTILITIES AND/OR CULVERTS WITHIN WALLER COUNTY.
3. THE CONTRACTOR(S) SHALL NOTIFY CITY OF KATY BUILDING AND PERMITS DEPARTMENT OFFICE TWENTY-FOUR (24) HOURS IN ADVANCE OF COMMENCING UTILITY AND/OR PAVING CONSTRUCTION AT (281) 391-4830 AND WRITTEN NOTIFICATION FORTY-EIGHT (48) HOURS IN ADVANCE OF COMMENCING CONSTRUCTION AT 901 AVENUE C, KATY, TX 77493.

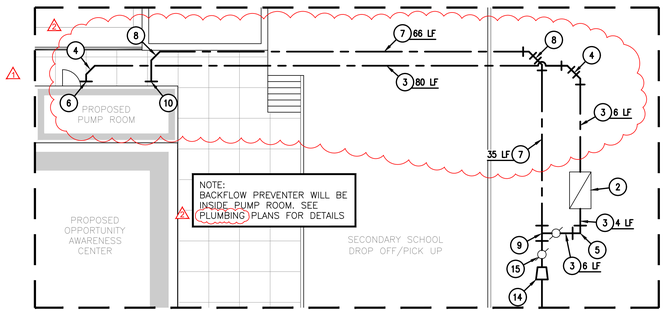
UTILITY NOTES:

1. UTILITIES SHOWN ARE APPROXIMATE. CONTRACTOR TO FIELD VERIFY EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY CONFLICT OR DISCREPANCIES.
2. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES FOR SERVICE ORIGINATION AND CONNECTION.
3. CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY EXISTING ITEMS ONSITE.
4. CONTRACTOR SHALL KEEP THE SITE CLEAN OF DEBRIS AND ANY EROSION CONTROL MEASURES ARE ADEQUATELY PLACED.
5. CONTRACTOR TO COORDINATE LOCATIONS OF UNDERGROUND IRRIGATION SLEEVING PRIOR TO PAVING. SEE LANDSCAPE PLANS.
6. CONTRACTOR TO COORDINATE LOCATIONS OF UNDERGROUND CONDUIT FOR SITE LIGHTING PRIOR TO PAVING.
7. ALL CONSTRUCTION OPERATIONS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH APPLICABLE REGULATIONS OF THE U.S. OCCUPATIONAL HEALTH AND SAFETY ADMINISTRATION. COPIES OF OSHA STANDARDS MAY BE PURCHASED FROM THE U.S. GOVERNMENT PRINTING OFFICE. INFORMATION AND RELATED REFERENCE MATERIALS MAY BE PURCHASED FROM OSHA, 903 SAN JACINTO, RM 319, AUSTIN, TX. 78701. TEL: (512) 916-5783.
8. REFERENCE MEP PLANS FOR UTILITY CONDUIT LOCATIONS.
9. GAS LINE SHALL BE POLYETHYLENE (PE) PIPE ASTM D 2513 SDR 11 WITH FITTINGS POLYETHYLENE ASTM D 2683, SOCKET FUSION TYPE OR ASTM D 3261 BUTT FUSION TYPE WITH DIMENSIONS MATCHING PE PIPE. PE TRANSITION FITTINGS: FACTORY FABRICATED FITTINGS WITH PE PIPE COMPLYING WITH ASTM D 2513, SDR 11; AND STEEL PIPE COMPLYING WITH ASTM A 53/A 53M, BLACK STEEL, SCHEDULE 40 TYPE E OR S, GRADE B. TRANSITION SERVICE RISER: PE TRANSITION FITTING WITH CORROSION PROTECTIVE COATING FOR ABOVE GROUND STEEL PIPE.

WATER LINE AND SANITARY SEWER NOTES:

1. CONTRACTOR TO ALLOW A MINIMUM OF 12 INCHES VERTICAL CLEARANCE BETWEEN PROPOSED WATER LINE AND OTHER EXISTING OR PROPOSED UTILITIES. MINIMUM 2 FT CLEAR FROM SANITARY SEWER.
2. ALL WATER LINES TO HAVE A MINIMUM COVER OF 4' BELOW FINISHED GRADE. VARY THE FLOWLINE UNIFORMLY FROM DEPTH AND LOCATION SHOWN TO ACHIEVE COVER.
3. ALL WATER LINE FITTINGS TO BE EITHER: BRONZE, PVC, OR DUCTILE IRON.
4. ALL WATER LINE FITTINGS TO BE INSTALLED WITH ADEQUATE CONCRETE THRUST BLOCKS.
5. ALL WATER LINES TO BE TESTED AS PER THE CITY OF KATY SPECIFICATIONS, DETAILS AND FIRE MARSHALL AS APPLICABLE.
6. ALL WATER LINES TO BE WRAPPED IN A MINIMUM OF 6-INCHES OF CLEAN BANK SAND, OR ONSITE SUITABLE FILL MATERIAL, UNLESS OTHERWISE NOTED. REMAINING BACKFILL TO BE MADE WITH COMPACTED SELECT MATERIAL UNLESS OTHERWISE NOTED.
7. WHENEVER NEW WATER LINES CROSS SANITARY SEWER LINES WITH LESS THAN TWENTY FOUR (24) INCHES OF VERTICAL CLEARANCE, THE SEWER LINE SHALL BE CONSTRUCTED IN A CONTINUOUS CAST IRON CASING FOR A DISTANCE OF NINE (9) FEET EACH SIDE OF THE WATER LINE. MINIMUM VERTICAL CLEARANCE TO BE SIX (6) INCHES WITH THE SEWER LINE LOCATED LOWER THAN THE WATER LINE.
8. REFER TO GENERAL NOTES SHEET C02.00 FOR WATER AND SANITARY SEWER PIPE MATERIAL AND SPECIFICATIONS REQUIRED BY CITY OF KATY





ENLARGE VIEW
SCALE:1"=10'

CONSTRUCTION KEY NOTES	
KEY	NOTE
1	PROP STORM INLET, SEE SHEET C15.00 FOR DETAILS.
2	PROP 3" RPZ WITH INSULATED ENCLOSURE.
3	PROP 3" SCH 40 PVC DOMESTIC WATER LINE.
4	PROP 2-3"x45 DEGREE BEND W/ FITTINGS AND CONCRETE THRUST BLOCK.
5	PROP 3"x90 DEGREE BEND W/ FITTINGS AND CONCRETE THRUST BLOCK.
6	PROP 3" CONNECTION TO DOMESTIC WATER LINE. SEE PLUMBING PLANS FOR CONTINUATION INSIDE BUILDING.
7	PROP 6" C900 PVC WATER LINE.
8	PROP 2-6"x45 DEGREE BEND W/ FITTINGS AND CONCRETE THRUST BLOCK.
9	PROP 6"x3" TEE W/ FITTINGS, CONCRETE THRUST BLOCK AND 3" GATE VALVE W/BOX.
10	PROP 6" CONNECTION TO RISER ROOM. SEE FIRE ENGINEER PLANS FOR CONTINUATION INSIDE BUILDING.
11	PROP 8" C900 PVC WATER LINE.
12	PROP FIRE HYDRANT ASSEMBLY INCLUDING, 8"x6" TEE, 6" 90 DEGREE ELBOW 6" G.V. W/ BOX. SEE DETAILS SHEET C16.00.
13	PROP 2-8"x45 DEGREE BEND W/ FITTINGS AND CONCRETE THRUST BLOCK.
14	PROP 8"x6" REDUCER.
15	PROP 6" GATE VALVE W/BOX.
16	PROP OPEN CUT FOR 8-INCH WATER LINE.

Texas 811

WARNING:
CONTRACTOR SHALL VERIFY LOCATION OF UNDERGROUND UTILITY LINES BY CONTACTING "TEXAS 811" AT 811 OR 713-223-4567 AT LEAST 48 HOURS BEFORE YOU DIG, DRILL OR BLAST.

EXISTING, WATER, SANITARY, GAS, ELECTRICAL, TELECOMMUNICATIONS AND ALL OTHER UTILITY LINES ARE SHOWN PER RECORD DRAWINGS. CONTRACTOR SHALL VERIFY LOCATION AT THE SITE PRIOR TO CONSTRUCTION.

LEGEND:
- PROPOSED STORM SEWER LINE
- PROPOSED SANITARY SEWER LINE
- PROPOSED WATER LINE
- PROPOSED FIRE HYDRANT
- PROPOSED GATE VALVE
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY/ STORM CLEAN OUT
- PROPOSED STORM MANHOLE W/GRATE TOP
- PROPOSED STORM INLET
- PROPOSED REDUCED PRESSURE ZONE BACKFLOW PREVENTER

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ADICO, LLC
TBPE FIRM NO. F-16423

ISSUED: April 20, 2026

REVISIONS

Revision No.	Revision Date
3 ADDENDUM 3	06-11-26
4 ADDENDUM 4	06-17-26

Principal DINH H.
Proj. Eng. PHASITH N.

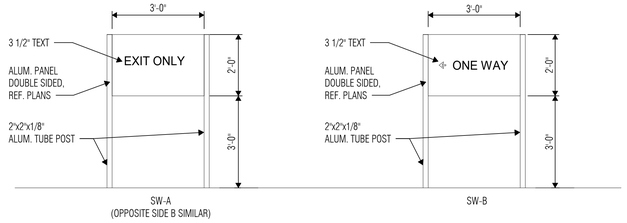
PROJECT NO.
25-0067.00

SHEET TITLE
SITE UTILITY PLAN

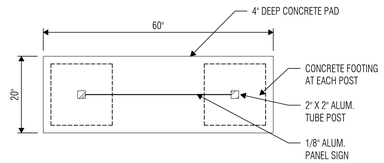
SHEET NO.
C5.00

1745 KATY FORT BEND ROAD
KATY, TEXAS 77493

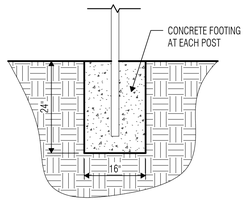
NEW OPPORTUNITY AWARENESS CENTER



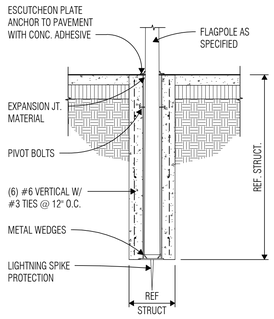
1 SITE WAYFINDING - SIGNAGE TYPES
SCALE: 1/2" = 1'-0"



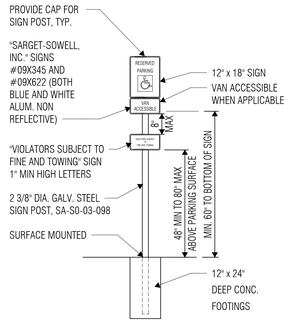
2 SITE WAYFINDING - TYP. PLAN
SCALE: 3/4" = 1'-0"



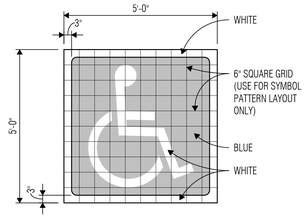
3 SITE WAYFINDING - TYP. FOOTING
SCALE: 3/4" = 1'-0"



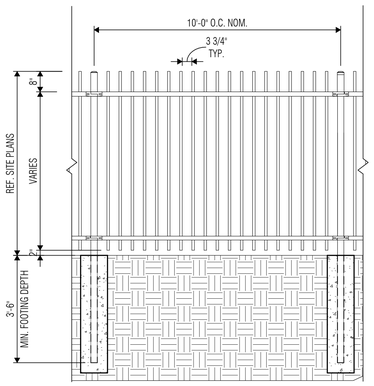
4 FLAGPOLE FOUNDATION DETAIL
SCALE: 1/2" = 1'-0"



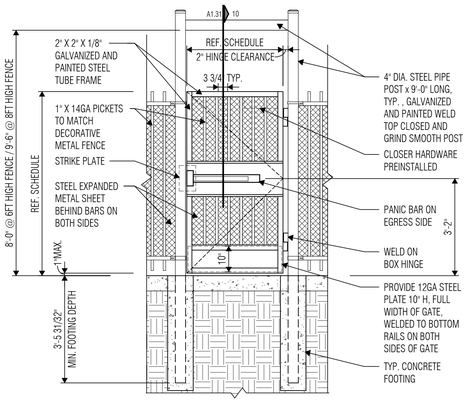
5 ACCESSIBLE PARKING SIGN
SCALE: 1/2" = 1'-0"



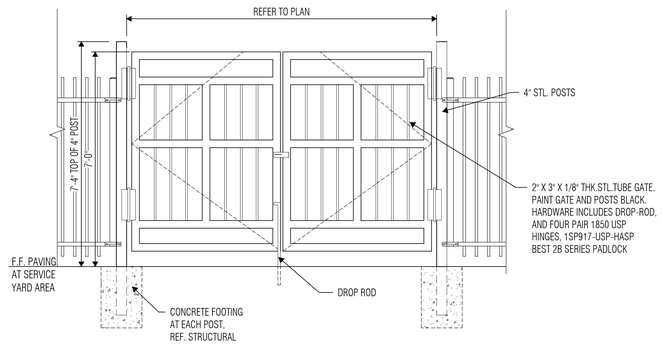
6 PLAN/DETAIL AT H.C. SYMBOL
SCALE: 1/2" = 1'-0"



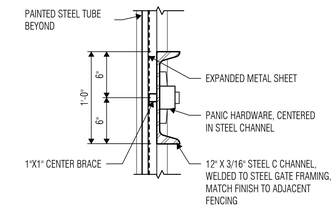
7 ORNAMENTAL METAL FENCE
SCALE: 1/2" = 1'-0"



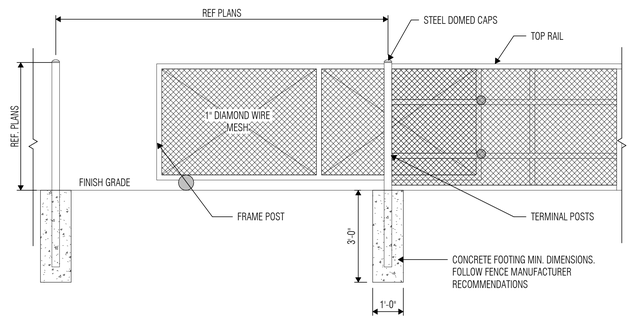
8 PEDESTRIAN SINGLE - ORNAMENTAL - GATE TYPE 1
SCALE: 1/2" = 1'-0"



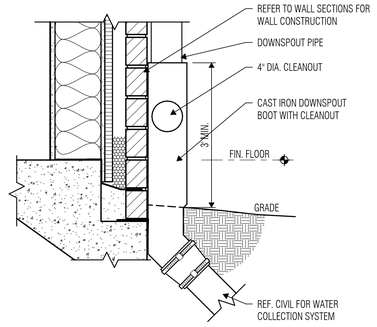
9 180 DEGREE SWINGING GATE - GATE TYPE 2
SCALE: 1/2" = 1'-0"



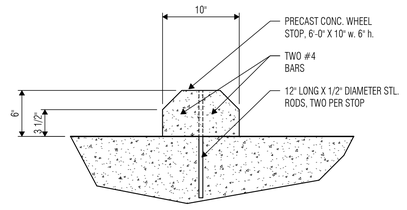
10 GATE HARDWARE DETAIL
SCALE: 1 1/2" = 1'-0"



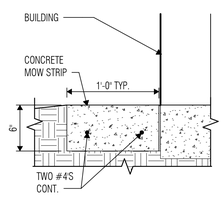
11 ROLLING GATE - GATE TYPE 4
SCALE: 1/2" = 1'-0"



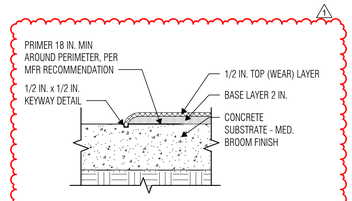
12 TYP. DOWNSPOUT BOOT
SCALE: 1 1/2" = 1'-0"



13 WHEEL STOP DETAIL
SCALE: 1 1/2" = 1'-0"



14 CONCRETE MOW STRIP
SCALE: 1 1/2" = 1'-0"



15 PLAY AREA SURFACE
SCALE: 1 1/2" = 1'-0"

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NEW OPPORTUNITY AWARENESS CENTER

REGISTERED ARCHITECT CHARLES W. JOHNSON 23044 STATE OF TEXAS
06/17/2026

ISSUED: May 26, 2026

REVISIONS

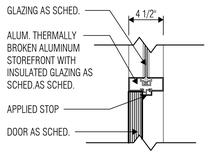
Revision No.	Revision Date
1 ADDENDUM 4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	Brad Ewing
Drawn By	AHT/JGH

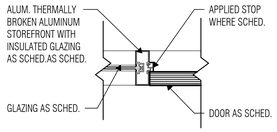
PROJECT NO.
25-0067.00

SHEET TITLE
ARCHITECTURAL SITE PLAN DETAILS

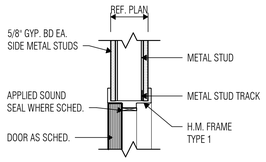
SHEET NO.
A1.31



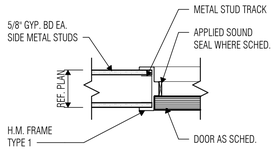
1 INT. ALUM HEAD AT GLAZING
SCALE: 1 1/2" = 1'-0"



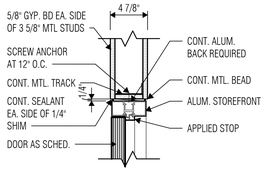
2 INT. ALUM JAMB AT GLAZING
SCALE: 1 1/2" = 1'-0"



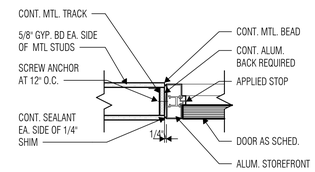
3 INT. HM DOOR HEAD AT STUD
SCALE: 1 1/2" = 1'-0"



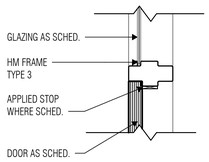
4 INT. HM DOOR JAMB AT STUD
SCALE: 1 1/2" = 1'-0"



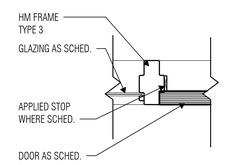
5 INT. ALUM HEAD AT STUD
SCALE: 1 1/2" = 1'-0"



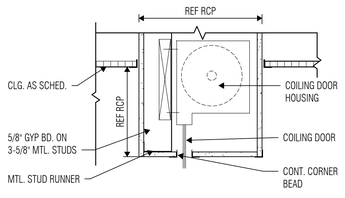
6 INT. ALUM JAMB AT STUD
SCALE: 1 1/2" = 1'-0"



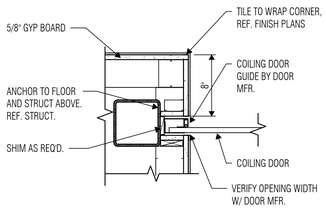
7 INT. HM DOOR HEAD AT GLAZING
SCALE: 1 1/2" = 1'-0"



8 INT. HM DOOR JAMB AT GLAZING
SCALE: 1 1/2" = 1'-0"



12 HEAD DETAIL AT GRILLE
SCALE: 1 1/2" = 1'-0"



13 JAMB DETAIL AT GRILLE
SCALE: 1 1/2" = 1'-0"

DOOR SCHEDULE

DOOR	DOOR TYPE	PANEL MATERIAL	FRAME TYPE	DOOR OPENING WIDTH	DOOR OPENING HEIGHT	DETAIL HEAD	DETAIL JAMB	DETAIL SILL	FIRE RATING	HARDWARE SET	KEYED NOTES
100A	6	3	Aluminum	6'-0"	7'-0"	1	2			CV710AM	2,4,5
100AA	SFD-S	3	Aluminum	6'-0"	7'-0"					C714ACM	1,2,4,5,7
100AC	C	1	H.M.	3'-0"	7'-0"	3	4			C201	4,5
100BA	SFD-S	3	Aluminum	6'-0"	7'-0"					C714ACM	1,4,5,7
100BB	SFD-S	3	Aluminum	6'-0"	7'-0"					E714ACM	1,2,5,7
100BC	6	3	Aluminum	6'-0"	7'-0"	1	2			CV710AM	4,5
100BD	6	3	Aluminum	6'-0"	7'-0"	1	2			EV710AM	2,5
100C	A	1	H.M.	3'-0"	7'-0"	3	4			201	
100D	A	1	H.M.	3'-0"	7'-0"	3	4			201	
101	C	1	H.M.	3'-0"	7'-0"	3	4			2 101	
101A	G	3	H.M.	3'-0"	7'-0"	3	4,8			103	
101B	A	1	H.M.	3'-0"	7'-0"	3	4			341	
102	C	1	H.M.	3'-0"	7'-0"	3	4			553	
103	L	5		21'-6"	8'-0"					001KS1	
104	A	1	H.M.	3'-0"	7'-0"	3	4		45 MIN	201	
105	A	1	H.M.	3'-0"	7'-0"	3	4			201H	
200	SFD-Q	3	Aluminum	3'-0 3/16"	7'-0"					C715AC	4,5,7
201	A	1	H.M.	3'-0"	7'-0"	3	4			341	
202	C	1	H.M.	3'-0"	7'-0"	3	4			103	
203	A	1	H.M.	3'-0"	7'-0"	3	4			341	
204	C	1	H.M.	3'-0"	7'-0"	3	4			553	
205	C	1	H.M.	3'-0"	7'-0"	3	4			553	
206	C	1	H.M.	3'-0"	7'-0"	3	4			553	
206A	P	4		27'-4"						003FL2	8
207	C	1	H.M.	3'-0"	7'-0"	3	4			553	
208	C	1	H.M.	3'-0"	7'-0"	3	4			553	
210	A	1	H.M.	3'-0"	7'-0"	3	4			341	
211	C	1	H.M.	3'-0"	7'-0"	3	4			553	
212	A	1	H.M.	3'-0"	7'-0"	3	4			341	
214	C	1	H.M.	3'-0"	7'-0"	3	4			553	
262	A	1	H.M.	3'-0"	7'-0"	3	4			341-STF	
300	SFD-Q	3	Aluminum	3'-0"	7'-0"					C715AC	4,5,7
301	C	3	H.M.	3'-0"	7'-0"	3	4,8			101A	
302	C	1	H.M.	3'-0"	7'-0"	3	4			101	
304	C	1	H.M.	3'-0"	7'-0"	7	4			553	
304A	P	4		27'-4"						003FL2	8
305	C	1	H.M.	3'-0"	7'-0"	7	4			553	
306	C	1	H.M.	3'-0"	7'-0"	3	4			553	
308	C	1	H.M.	3'-0"	7'-0"	3	4			553	
309	C	1	H.M.	3'-0"	7'-0"	7	4			553	
310	A	1	H.M.	3'-0"	7'-0"	3	4			341	
311	A	1	H.M.	3'-0"	7'-0"	3	4			341	
313	C	1	H.M.	3'-0"	7'-0"	3	4			553	
400A	7	3	Aluminum	3'-1"	7'-0"	7	8			CR711A	4,5
400B	SFD-Q	3	Aluminum	3'-0"	7'-0"					C715AC	4,5,7
401	C	1	H.M.	3'-0"	7'-0"	3	4			101	
402	C	1	H.M.	3'-0"	7'-0"	3	4			553	
402A	P	4		29'-10"						003FL2	8
403	C	1	H.M.	3'-0"	7'-0"	3	4			553	
404	C	1	H.M.	3'-0"	7'-0"	3	4			553	
404A	A	1	H.M.	3'-0"	7'-0"	3	4			343S	
405	C	1	H.M.	3'-0"	7'-0"	3	4			403	
406	C	1	H.M.	3'-0"	7'-0"	3	4			553	
406A	A	1	H.M.	3'-0"	7'-0"	3	4			343S	
A100	SFD-Q	3	Aluminum	3'-1 5/8"	7'-0"					C715AC	4,5,7
A100A	C	1	H.M.	3'-0"	7'-0"	3	4			101	
A100B	C	1	H.M.	3'-0"	7'-0"	3	4			C711	4,5
A100BA	A	1	H.M.	3'-0"	7'-0"	3	4			341-STF	
A102A	C	1	H.M.	3'-0"	7'-0"	3	4			103	
A102B	C	1	H.M.	3'-0"	7'-0"	3	4			103	
A103	C	1	H.M.	3'-0"	7'-0"	3	4			103	
A104	C	1	H.M.	3'-0"	7'-0"	3	4			103	4
A105	C	1	H.M.	3'-0"	7'-0"	3	4			103	
A105A	C	1	H.M.	3'-0"	7'-0"	3	4			103	
A106	C	1	H.M.	3'-0"	7'-0"	3	4			103	
A107	C	1	H.M.	3'-0"	7'-0"	3	4			103	
A108	C	3	H.M.	3'-0"	7'-0"	3	4,8			101	
A108A	A	1	H.M.	3'-0"	7'-0"	3	4			203	
M1	A	2	H.M.	3'-0"	7'-0"	3	4			205	5
M3	A	2	H.M.	3'-0"	7'-0"	3	4			201	
M4	B	2	H.M.	6'-0"	7'-0"	3	4		45 MIN	710MEL-SM	

DOOR SCHEDULE NOTES

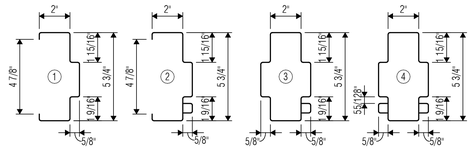
1. At Doors marked 'SMK', provide smoke seals at frame and door bottom to resist the passage of smoke. Provide threshold if required by code or if necessary for proper function of door bottom seal.
2. At Doors marked 'SND', frames to be stuffed with mineral fiber insulation prior to installation and the perimeter of the frame sealed to the surrounding wall with non-hardening acoustical sealant on both sides of the partition. Threshold, where used, shall be sealed to the floor with acoustical sealant.
3. At Doors without a Frame Type designation, the door frame is part of a Glazing System, Sound-Control Door Assembly, Tornado-Resistant Door Assembly, etc.
4. At Doors with a Frame Type designation "AL", the door frame is an interior aluminum frame that is not part of a glazing system
5. At Doors with a Frame Type designation "N/A", there is no door frame required (e.g. all-glass doors, gates, etc.).
6. At Doors with a Frame Type designation "REF DET", refer to the referenced Head and Jamb detail for frame information.
7. At Doors with a Door Type or Frame Type designation "EX", the door or door frame is existing to remain.
8. Refer to Hardware Schedule for additional information regarding hardware.
9. Vision panels at non-rated interior doors shall be 1/4" clear tempered glass (CT4) U.N.O. Vision panels at interior fire-rated glass (CC4) U.N.O. Vision panels at exterior doors shall be 1" tinted tempered insulating glass (TT1) U.N.O.
10. Refer to Glazing System Elevation Sheets for Glass Types.

DOOR KEYED NOTES

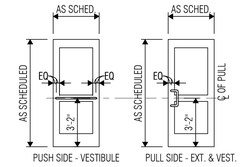
KEY NUMBER	KEYED NOTES
1	Double Egress Doors
2	Keyed Removable Mullion
4	Access Control / Card Reader
5	Door Position Switch
7	Weatherstripping All Sides
8	Folding Partition
9	Chain Link Gate with Maintenance Lock

PANEL MATERIAL NOTES

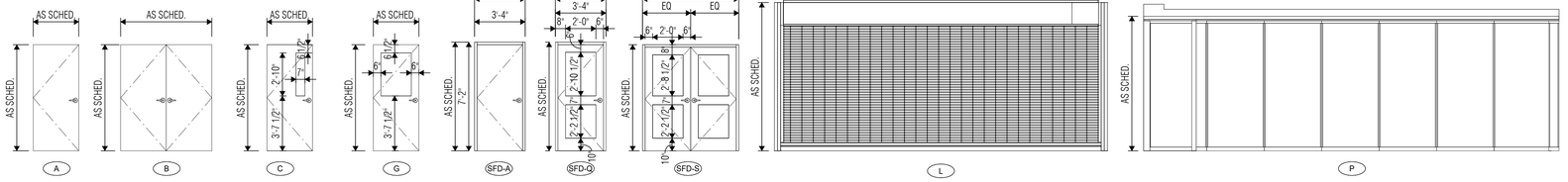
TYPE MARK	PANEL MATERIAL
1	Plastic Laminate
2	Painted Hollow Metal
3	Wide Stile Storefront Panel
4	Dry Erase Marker Surface Operable Partition
5	Manual Non Insulated Stainless Steel



9 HOLLOW METAL FRAME TYPES
SCALE: 3" = 1'-0"



10 PUSH/ PULL HEIGHTS
SCALE: 1/4" = 1'-0"



11 DOOR TYPES
SCALE: 1/4" = 1'-0"

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REGISTERED ARCHITECT JAMES W. JOHNSON 20544 STATE OF TEXAS

06/17/2026

ISSUED: May 26, 2026

REVISIONS

Revision No.	Revision Date
1 ADDENDUM 3	06/11/2026
2 ADDENDUM 4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	Brad Ewing
Drawn By	AHT/MCA

PROJECT NO.

25-0067.00

SHEET TITLE

DOOR SCHEDULE, DOOR TYPE ELEVATIONS, & DETAILS

SHEET NO.

A7.01

MATERIAL FINISH SCHEDULE

NOTE: ALL MATERIALS, PRODUCTS, SIZES, COLORS AND PATTERNS ARE THE BASIS OF DESIGN. REFERENCE PROJECT MANUAL FOR ADDITIONAL APPROVED MANUFACTURERS MEETING THE DESIGN INTENT. SUBSTITUTIONS WILL BE CONSIDERED WHEN SUBMITTED IN COMPLIANCE WITH SECTION 01 62 00 – PRODUCT OPTIONS.

MATERIAL: MARK	DESCRIPTION	SPEC SECTION	MANUFACTURER INFO: MANUFACTURER	SERIES/STYLE	COLOR/FINISH	SIZE	COMMENTS
CEILING FINISH							
ACT-01	Acoustic Ceiling Tile (24X24)	09 51 00					
ACT-02	Acoustic Ceiling Tile - Vinyl Coated	09 51 00					
ACT-03	Acoustic Ceiling Tile (24X24) - Batt Insulation Above	09 51 00					
AP-01	Acoustical Wood Fiber Panels	09 84 13	Armstrong	Tectum Direct Attach High NRC	Match PT-01	12"x48"x2"	D-20 - Hat channels to run perpendicular to roof purlins. NRC 0.70. Full coverage. 2
ES-01	Exposed to Structure Paint	09 91 00	Sherwin Williams	--	SW 7551 Greek Villa		All exposed structure
EXTERIOR FINISH							
CMU-01	CMU - Burnished	04 20 00	Best Block	Burnished	704 - White Terrazo	16" x 24" x 4	Running Bond
CMU-02	CMU - Burnished Accent	04 20 00	Best Block	Burnished	704 - White Terrazo	4" x 24" x 4	
CS-01	Cast Stone Sill	04 72 00	Advanced Architectural Stone	Smooth	Classic White		Random Ashlar pattern size 4/6/8
MRP-01	Metal Roof Panel	07 41 20	Berridge	Double-Lock / Zee-Lock	Cityscape		
MSP-01	Metal Soffit Panel	07 41 20	Berridge	Vee-Panel	Cityscape		Provide Vented Panel around soffit perimeter 1
MWP-01	Metal Wall Panel	07 42 13	Berridge	HR-16	Zinc-Cote		Horizontal Orientation
FLOOR FINISH							
CO-01	Concrete - Polished	03 35 43	As Specified	--	--	--	
CO-02	Concrete - Sealed	03 30 00	As Specified	--	--	--	
CPT-01	Carpet - Field	09 68 13	Tarkett	Create Balance 11770	Resourceful 32813	Powerbond Roll	
CPT-02	Carpet - Walk-Off	09 68 13	Tarkett	Assertive Stria 04839	Forge 26213	Powerbond Roll	Install pattern to run Plan East / West
LVT-01	Luxury Vinyl Tile - Field	09 65 00	Shaw Contract	Solitude	French Grey 48599	6" x 48"	Install planks to run Plan East / West
PF-01	Poured Floor - Fluid Applied	09 67 23	Sherwin Williams	Resuflor Deco Quartz	Winter Sky BC23	--	With Integral Cove Base
MILLWORK & ARCHITECTURAL FINISHES							
PL-01	Plastic Laminate - Doors & Cabinets	12 32 16	Arborite	A3 - Vertical Laminate	Essential Artisan Walnut W2011 AW	--	Vertical Grain
PL-02	Plastic Laminate - Countertops	12 32 16	Arborite	A4 - Horizontal Laminate	Chambray Gris P399-CA	--	
PT-03	Paint - H.M Doors & Frames	09 91 00	Sherwin Williams	--	SW 7064 Passive	--	
SS-01	Solid Surface - Countertops	12 32 16	LX Hauseys	Solid Surface	Glitz GP313	--	To be used at Reception & Conference Room
T-07	Tile - Serving Line Face	09 30 00	Stone Source	Studio Elements Artisan	Ink Hexagon	6" x 7"	Ref. Food Service
WALL FINISH							
AWP-01	Acoustic Wall Panel - Blue	09 84 13	Acoufelt	Fracture Two-Tone; Raindrop	Backing: Almond; Face: Denim	14mm w/ 50mm air gap	Run Pattern Horizontal ; NRC 0.75
FRP	Fiberglass Reinforced Panels	09 77 00	Marlite	Standard FRP	P151 Light Gray	--	To be used at janitor closets.
PT-01	Paint - Field	09 91 00	Sherwin Williams	--	SW 7551 Greek Villa	--	
PT-02	Paint - Blue Accent	09 91 00	Sherwin Williams	--	SW 6229 Tempe Star	--	
RB-01	Rubber Base	09 65 44	Johnsonite	Traditional Vinyl, Type TV	Pebble 32	4"	
T-01	Tile - Field	09 30 00	Stone Source	Sassuolo Aggregate Stone	White; Natural	12" x 24"	Ref. WTP-01
T-02	Tile - Accent	09 30 00	Stone Source	Palermo Terra Ferma	Berry; Natural	12" x 24"	Ref. WTP-01; WTP-02
T-03	Tile - Drinking Fountain	09 30 00	Stone Source	Palma Craft	Marine; Satin	2.5" x 15"	Ref. WTP-03
T-04	Tile - Backsplash	09 30 00	Stone Source	Sienna Stone	Bianco; Glossy	2.5" x 10"	Installation: Horizontal Stack Bond
T-05	Tile - Serving Line Accent 01	09 30 00	Stone Source	Fiorano USA City Lights	Pure; Glossy	6" x 24"	Ref. WTP-05
T-06	Tile - Serving Line Accent 02	09 30 00	Stone Source	Fionrano USA City Lights	Essential Gray; Glossy	6" x 24"	Ref. WTP-05
VWC-01	Vinyl Wallcovering - Field	09 72 16	Koroseal	Axis II	Urban White 1920-08	--	
VWC-02	Vinyl Wallcovering - Classroom Accent	09 72 16	Koroseal	Axis II	Ancient Lake 1920-09	--	
VWC-03	Vinyl Wallcovering - Admin Accent	09 72 16	Koroseal	Vive	Electric Blue SG14-09	--	

FINISH ACCESSORY, FURNITURE AND EQUIPMENT SCHEDULE

NOTE: ALL MATERIALS, PRODUCTS, SIZES, COLORS AND PATTERNS ARE THE BASIS OF DESIGN. REFERENCE PROJECT MANUAL FOR ADDITIONAL APPROVED MANUFACTURERS MEETING THE DESIGN INTENT. SUBSTITUTIONS WILL BE CONSIDERED WHEN SUBMITTED IN COMPLIANCE WITH SECTION 01 62 00 – PRODUCT OPTIONS.

MARK	DESCRIPTION	SPEC SECTION	MANUFACTURER INFO: MANUFACTURER	SERIES/STYLE	COLOR/FINISH	SIZE	COMMENTS
FLOOR FINISH ACCESSORY							
FFA-01	Floor Transition	09 68 00	Schluter	Schiene	Satin Anodized Aluminum		
FFA-02	Floor Transition	09 68 00	Schluter	Reno-U	Satin Anodized Aluminum		
FFA-03	Floor Transition	09 68 00	Tarkett Johnsonite	Slim Line Transition - EG-XX-J	55 Silver Grey WG		
SPECIALTY EQUIPMENT							
ATH	Athletic Equipment - Wall Pads	11 66 00	PSS Performance	Wall Pads	Grey	4'-0" x 8'-0"	To be used at sensory room
HB	Horizontal Blinds	12 21 13	SWF Contract	Mini Blinds	Silver 737	1"	
ID	Identifying Devices	10 14 00	STGS	Wilsonart; Standard Laminate	BLUE TBD		
LK-01	Lockers - Metal	10 51 13	Penco	As Specified	826 Slate Blue	-	Ref. 5/A2.21
LK-02	Lockers - Metal	10 51 13	Penco	As Specified	826 Slate Blue	-	Ref. 5/A2.21
MB	Markerboard - Premanufactured	10 11 16	Claridge	LCS Porcelain Dry Erase Whiteboard	White	Clear Anodized Frames	
PC-01	Privacy Curtain	10 21 23	Construction Specialties	CSelect Fabric; Bark	Rain Clouds	-	
RS	Roller Shades	12 24 13	Mechoshade Systems	1500 Series	1519 Silver Birch	-	
TB	Tackboard	10 11 16	Claridge	Claridge Cork	1113 Steel Gray	Clear Anodized Frames	
TC	Toilet Compartment	10 21 13	ASI	Black Core Phenolic	Weathered Ash #9842	-	
WALL FINISH ACCESSORY							
CG-01	Corner Guard	10 26 13					
CR-01	Chair Rail	10 26 13	Construction Specialties	SCR-40	Smokey Elm #1351	4"	To be used at large conference
G-01	Grout - Color A	09 30 13	Mapei	--	5093 Warm Gray	--	To be used with T-01 & T-04
G-02	Grout - Color B	09 30 13	Mapei	--	5231 Deep Ocean	--	To be used with T-02, T-03, T-05, & T-06
WFA-01	Tile Edge/Corner Trim - Metal	09 30 00	Schluter	Quadec	Anodized Aluminum	--	Top & Exposed Edges; Refer to Interior Details
WFA-02	Tile Edge/Corner Trim - Metal	09 30 00	Schluter	Jolly	Anodized Aluminum	--	Bottom Edges at Recessed Wall Tile Patterns; Top & Sides

ROOM FINISH SCHEDULE

ROOM NAME	ROOM NUMBER	FLOOR	BASE	WALL	REMARKS
CORRIDOR	100	CO-01	RB-01	VWC-01/WTP-01	
VESTIBULE	100A	CPT-02	RB-01	VWC-01/PT-01/WTP-01	
EXCHANGE SPACE	100B	CPT-02	RB-01	VWC-01/PT-01/WTP-01	
STORAGE	100C	CO-02	RB-01	PT-01	
STORAGE	100D	CO-02	RB-01	PT-01	
CLINIC	101	PF-01	PF-01	VWC-01/T-04	REF. ACCESSORY SCHEDULE FOR PRIVACY CURTAINS
CLINIC OFFICE/STOR.	101A	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
CLINIC RR	101B	PF-01	PF-01	VWC-01	
I.S.S.	102	CO-01	RB-01	VWC-01	
FOOD SERVICE	103	CO-01	RB-01	T-05/T-06	REF. WTP-05
MECH.	104	CO-02	RB-01	PT-01	
CUST.	105	CO-02	RB-01	PT-01/FRP	
CORRIDOR	200	CO-01/CPT-02	RB-01	VWC-01/WTP-01/WTP-02	REF. INTERIOR ELEVATIONS FOR AWP-01 LAYOUT
RR	201	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
FLEX	202	CPT-01	RB-01	VWC-01/VWC-03	
RR	203	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
RESOURCE	204	CO-01	RB-01	VWC-01/VWC-02	
RISE	205	CO-01	RB-01	VWC-01/VWC-02/PT-01	
RESOURCE	206	CO-01	RB-01	VWC-01/VWC-02	
CLASS - SECONDARY	207	CO-01	RB-01	VWC-01/VWC-02/PT-01	
CLASS - SECONDARY	208	CO-01	RB-01	VWC-01/VWC-02	
RR	210	PF-01	PF-01	WTP-0/WTP-04	REF. 3/A3.31 & 4/A3.31
CLASS - SECONDARY	211	CO-01	RB-01	VWC-01/VWC-02/PT-01	
RR	212	PF-01	PF-01	WTP-0/WTP-04	REF. 3/A3.31 & 4/A3.31
CLASS - SECONDARY	214	CO-01	RB-01	VWC-01/VWC-02/PT-01	
CORRIDOR	300	CO-01/CPT-02	RB-01	VWC-01/WTP-01/WTP-02	REF. INTERIOR ELEVATIONS FOR AWP-01 LAYOUT
POLICE OFFICE	301	CO-01	RB-01	VWC-01/VWC-03	
FLEX	302	CPT-01	RB-01	VWC-01/VWC-03	
STAFF RR	303	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
RESOURCE	304	CO-01	RB-01	VWC-01/VWC-02	
CLASS - SECONDARY	305	CO-01	RB-01	VWC-01/VWC-02/PT-01	
RESOURCE	306	CO-01	RB-01	VWC-01/VWC-02	
CLASS - SECONDARY	308	CO-01	RB-01	VWC-01/VWC-02	
CLASS - SECONDARY	309	CO-01	RB-01	VWC-01/VWC-02/PT-01	
RR	310	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
RR	311	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
CLASS - SECONDARY	313	CO-01	RB-01	VWC-01/VWC-02/PT-01	
CORRIDOR	400	CO-01/CPT-02	RB-01	VWC-01/PT-01/WTP-01	REF. INTERIOR ELEVATIONS FOR AWP-01 LAYOUT
FLEX	401	CO-01	RB-01	VWC-01/VWC-03	
RESOURCE	402	CO-01	RB-01	VWC-01/VWC-02	
RESOURCE	403	CO-01	RB-01	VWC-01/VWC-02	
CLASS - ELEMENTARY	404	CO-01	RB-01	VWC-01/VWC-02/T-04	
RR	404A	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
SENSORY	405	LVT-01	CO-01	VWC-01/ATH	REF. ACCESSORY SCHEDULE FOR ATHLETIC WALL PADS
CLASS - ELEMENTARY	406	CO-01	RB-01	VWC-01/VWC-02/PT-01/T-04	
CORRIDOR	A100	CO-01/CPT-02	RB-01	VWC-01	
RECEPTION	A100A	CPT-01	RB-01	VWC-01/VWC-03/PT-01	
WRK RM	A100B	LVT-01	RB-01	VWC-01	
RR	A100BA	PF-01	PF-01	WTP-03/WTP-04	REF. 3/A3.31 & 4/A3.31
CONFERENCE RM	A102	CPT-01	RB-01	VWC-01/VWC-03/PT-01	
FLEX	A103	CPT-01	RB-01	VWC-01/PT-02	
FLEX	A104	CPT-01	RB-01	VWC-01/VWC-03	
FLEX	A105	CPT-01	RB-01	VWC-01/PT-02	
FLEX	A106	CPT-01	RB-01	VWC-01/VWC-03	
LARGE FLEX	A107	CPT-01	RB-01	VWC-01/PT-02	
BREAK ROOM	A108	LVT-01	RB-01	VWC-01/VWC-02/PT-01/T-04	
TEST STORAGE	A108A	CO-02	RB-01	VWC-01	
CORRIDOR	A200	CO-01	RB-01	VWC-01	
RISER	M1	CO-02	RB-01	PT-01	
MECHANICAL PLATFORM	M2	CO-02	RB-01	PT-01	
MDF	M3	CO-02	RB-01	PT-01	
BOILER RM	M4	CO-02	RB-01	PT-01	

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NEW OPPORTUNITY AWARENESS CENTER

REGISTERED ARCHITECT CHARLES W. JOHNSON 20944 STATE OF TEXAS

06/17/2026

ISSUED: May 26, 2026

REVISIONS

Revision No.		Revision Date
1	ADDENDUM 3	06/11/2026
2	ADDENDUM 4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	Brad Ewing
Drawn By	HEF/LY

PROJECT NO.

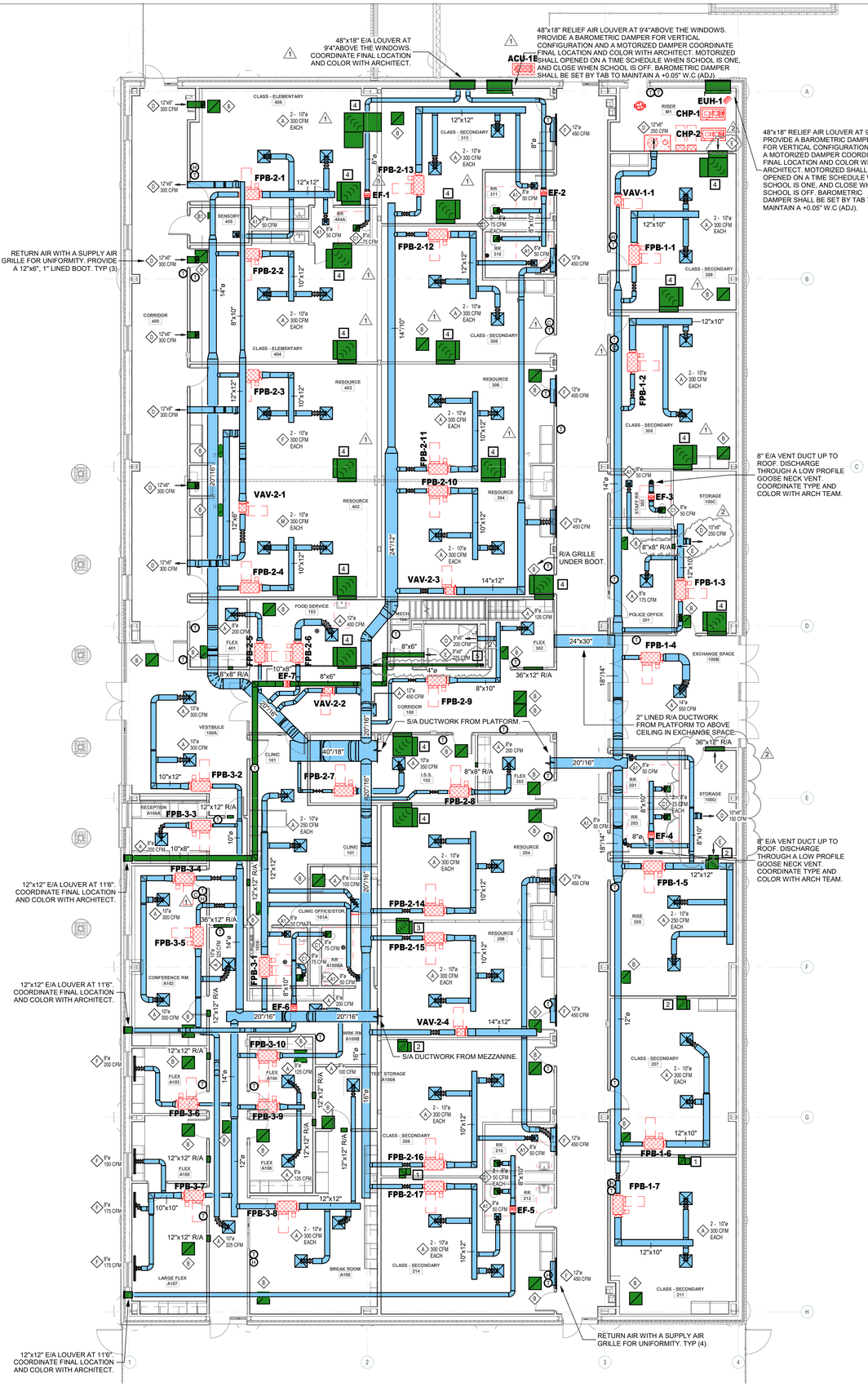
25-0067.00

SHEET TITLE

MATERIAL FINISH SCHEDULES

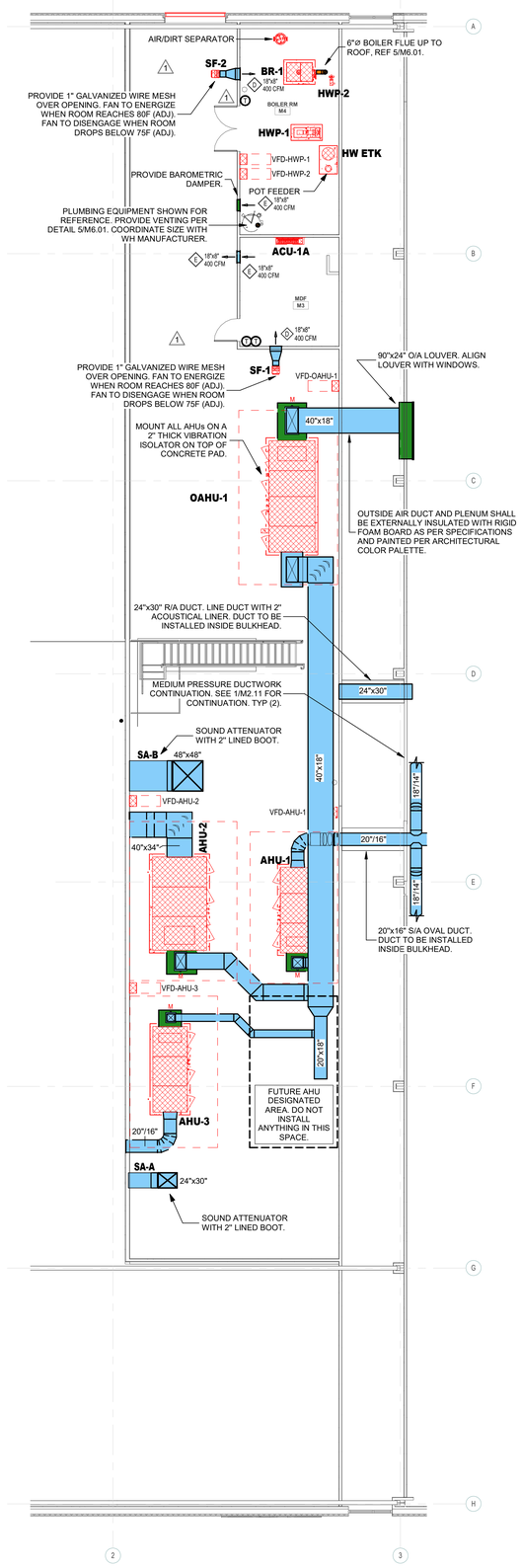
SHEET NO.

A9.01



1 MECHANICAL LEVEL ONE FLOOR PLAN

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



2 MECHANICAL PLATFORM

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

MECHANICAL KEY NOTES

1. 12"X12", 1" ACOUSTICALLY LINED, RETURN AIR BOOT.
2. 18"X12", 1" ACOUSTICALLY LINED, RETURN AIR BOOT.
3. 24"X12", 1" ACOUSTICALLY LINED, RETURN AIR BOOT.
4. 36"X12", 1" ACOUSTICALLY LINED, RETURN AIR BOOT.
5. PROVIDE A DRYER VENTILATOR MODEL DEDPV AS MANUFACTURED BY FANTECH, 150 CFM, 78WATTS, 0.58 AMPS, 115V, 4" DUCT ONNECTION. INSTALL AT 48" A.F.F. AND PLUG INTO NEAREST WALL ELECTRIC OUTLET. INSTALL VENTILATOR PER MANUFACTURER RECOMMENDED INSTRUCTION. SEE 7/M6.01 FOR MORE INFORMATION.

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NEW OPPORTUNITY AWARENESS CENTER

STATE OF TEXAS
MIGUEL A. HANZE
151421
LICENSED
PROFESSIONAL ENGINEER

1 06/17/2026

ISSUED: May 26, 2026

REVISIONS

Revision No.	Revision Date
1 Addendum No.3	06/11/2026
2 Addendum No.4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	MH
Drawn By	MH

PROJECT NO.
25-0067.00

SHEET TITLE
MECHANICAL LEVEL ONE FLOOR PLAN

SHEET NO.
M2.11

AIR HANDLING UNIT SCHEDULE

	MARK	AHU-1	AHU-2	AHU-3	OAHU-1
CABINET	TYPE	VAV-HDT	VAV-HDT	VAV-HDT	SZ-HDT
	FAN TYPE / DISCHARGE	VFD / HORIZONTAL	VFD / HORIZONTAL	VFD / HORIZONTAL	VFD / HORIZONTAL
	TOTAL CFM	4,000	11,000	4,000	8,000
	O/A CFM	1,700	3,700	600	8,000
	EXT. STATIC WG	2.0"	2.5"	2.0"	1.0"
	FAN QUANTITY	1	1	1	1
	EQUIPMENT HP	3.5	10	3.5	7.5
	VOLTAGE	460/3/60	460/3/60	460/3/60	460/3/60
COOLING	COIL CFM	4,000	11,000	4,000	8,000
	MIN. ROWS	6	6	6	6
	MAX FINS / INCH	12	12	12	12
	FACE VELOCITY	500 FPM	500 FPM	500 FPM	450 FPM
	EAT db, °F	74	74	74	98.9
	EAT wb, °F	62.5	62.5	62.5	80
	LAT db, °F	50.9	51.2	50.9	48.3
	LAT wb, °F	50.8	51	50.8	48.2
	GSH MBH	99.1	270	99.1	409
	GTH MBH	130	352	130	806
	GPM	16.2	44.0	16.2	101
	LINE SIZE	1.25"	2"	1.25"	3"
	EWT °F	42	42	42	42
	LWT °F	57	57	57	57
	MAX. PD. FEET	12	12	12	12
	CONTROL VALVE CONF	3-WAY	3-WAY	3-WAY	3-WAY
	COND. DRAIN SIZE	1.0"	1.0"	1.0"	1.0"
HEATING	COIL POSITION	NO HEAT	NO HEAT	NO HEAT	PRE - HEAT
	COIL CFM				8,000
	MIN. ROWS				1
	FINS/INCH				10
	FACE VELOCITY				450 FPM
	EAT, °F				27.9
	LAT, °F				55
	GTH MBH				235
	EWT, °F				140
	LWT, °F				100
	GPM				12
	LINE SIZE				1.25"
	MAX. P.D. FEET				6

NOTES:
1. REFERENCE SHEET M7.01 FOR CONTROL SCHEMATICS.
2. EXT. SP DOES NOT INCLUDE FILTERS, COILS, CASING, CONVERSIONS OR MIXING DAMPER LOSSES.
3. INCLUDE 0.25" SP FOR LOADED FILTERS.
4. MOTORS SHALL BE COPPER WOUND, PREMIUM EFFICIENCY TYPE (+90% MINIMUM).
5. ECM MOTORS ARE NOT ACCEPTABLE.
6. PROVIDE 2" THICK MERV 13 FILTERS WITH MAXIMUM FILTER VELOCITY AT 350 FT / MIN.
7. ALL UNITS SHALL BE INTERNALLY ISOLATED.
8. DESIGN FAN HP IS MOTOR SIZE WIRED BY ELECTRICAL. MANUFACTURERS REQUIRING LARGER MOTORS MUST PAY FOR INCREASED CIRCUIT COSTS. SMALLER MOTORS MAY BE PROVIDED IF BHP IS LESS THAN SCHEDULED AND A 1/4" WG PRESSURE DROP DOES NOT OVERLOAD MOTOR.
9. PROVIDE 2" VIBRATION ISOLATORS BETWEEN AHU AND CONCRETE PAD.
10. MIXING BOX SHALL BE PROVIDED BY MANUFACTURER. COORDINATE WITH DUCTWORK SIZE FOR OPENINGS.
11. TEMTROL IS BOD. 1

AIR-COOLED CHILLER SCHEDULE

	MARK	CH-1	CH-2
CHILLER	CAPACITY TONS, NOMINAL	110	110
	CAPACITY TON, ACTUAL	104.6	104.6
	COOLER FLOW RATE, GPM	166 GPM	166 GPM
	MINIMUM FLOW RATE, GPM	136 GPM	136 GPM
	EWT, ° F	57°F	57°F
	LWT, ° F	42°F	42°F
	MAX. P.D.	12 FT	12 FT
	FOUL'G FACTOR	0.0001	0.0001
MISC	COMPRESSOR TYPE	SCROLL	SCROLL
	REFRIGERANT	R-454B	R-454B
	EER/IPLV (AHRI)	10.62 / 16.06	10.62 / 16.06
	VOLTAGE	460V / 3 PH	460V / 3 PH
	MCA / MOCP, AMPS	227 / 300	227 / 300
	TRANE #	CGAM	CGAM

NOTES:
1. CHILLERS SHALL HAVE ONE (1) POINT POWER CONNECTION.
2. PROVIDE CONDENSER COILS WITH PHENOLIC COATING USING A DIP AND BAKE PROCESS. THE ENTIRE TUBES, FINS AND HEADERS SHALL BE COATED.
3. AMBIENT AIR = 100°F.
4. PROVIDE EXTRA HIGH EFFICIENCY/PERFORMANCE & HIGH AMBIENT OPTIONS TO OPERATE AT 115°F.
5. PROVIDE HEAD PRESSURE CONTROLS FOR OPERATION DOWN TO 20°F AMBIENT.
6. PROVIDE 10-YEAR PARTS, LABOR, AND REFRIGERANT WARRANTY.
7. LOUVERED COIL GUARDS AND COMPRESSOR ACCESS WIRE GUARDS.
8. PROVIDE LOW NOISE CONDENSER FANS AND COMPRESSORS SOUND TREATMENT.
9. PROVIDE LOW AMBIENT KIT AND BARREL HEATER ON EMERGENCY GENERATOR.

1

CONDENSING BOILER SCHEDULE

MARK	BR-1
INPUT MBH	1,000
OUTPUT MBH	977
MIN. EFFICIENCY	98%
MAX OPERATING PRESSURE	80 PSI
GAS PRESSURE	3" - 14" WC
SYSTEM GPM	49 GPM
EWT / LWT, °F	100°F / 140°F
MAX. PD, FT	10 FT.
VOLTAGE	120V / 1 PH / 60 HZ
MCA / MOCP	12.7 A / 20 A
MANUFACTURER	VIESSMANN
MODEL #	VITOCROSSAL 200 CI2-1000

NOTES:
1. BOILER MANUFACTURER TO PROVIDE CATEGORY IV FLUE VENT, ACID NEUTRALIZING KIT, CO MONITOR, GAS PRESSURE REDUCING VALVES VENTED TO THE OUTSIDE FOR EACH BOILER.
2. MECHANICAL CONTRACTOR SHALL COORDINATE WITH THE BOILER MANUFACTURER PRIOR TO COMMENCING INSTALLATION OF PIPING AND FLUE VENT.

PUMP SCHEDULE

MARK	CHP- 1 & 2	HWP- 1	HWP- 2
SERVES	CHILLED WATER	HOT WATER	HOT WATER CIRCULATION
TYPE	END SUCTION	END SUCTION	INLINE
GPM	166 GPM	49 GPM	49 GPM
HEAD FT.	50 FT	70 FT	20 FT
MIN. EFF. %	75%	66%	70%
MAX. RPM	1760 RPM	1750 RPM	1750 RPM
DESIGN H.P.	3 HP	3 HP	1 HP
MOTOR ENCLOSURE	TEFC	TEFC	TEFC
VOLTAGE	460V / 3 PH	460V / 3 PH	460V / 3 PH
S/D SIZE	3" X 2.5"	1.5" X 1.25"	2" X 2"
ARMSTRONG MODEL	4280	4280	4360

NOTE: SEE DRAWING 3/M6.02 FOR DETAIL

MOTOR STARTER REQUIREMENTS

EQUIPMENT	STARTER TYPE	PROVIDED UNDER
CHW-1 & 2	VARIABLE FREQUENCY	MECHANICAL
HWP-1& 2	VARIABLE FREQUENCY	MECHANICAL
ALL AHUS	VARIABLE FREQUENCY	MECHANICAL
ALL EXHAUST FANS	STANDARD	MECHANICAL
ALL FPB BOXES	STANDARD	MECHANICAL
ALL VAV BOXES	STANDARD	MECHANICAL
ALL OTHER MOTORS	STANDARD	MECHANICAL

NOTES:
1. MECHANICAL CONTRACTOR TO COORDINATE WITH ELECTRICAL CONTRACTOR FOR MOTOR STARTER PROCUREMENT.

MDF A/C UNITS (ACU)

ACU-1A (INDOOR UNIT): MITSUBISHI MSY-D36NA, 36.0 MBH COOLING CAPACITY, 15.1 SEER, WIRED CONTROLLER

ACU-1B (OUTDOOR UNIT): MITSUBISHI MUY-D36NA, 36.0 MBH COOLING CAPACITY, E-COATED COIL.

POWER SUPPLY: 208V / 1PH / 60HZ, 25A MCA / 35A MOCP.

ACCESSORIES: LOW AMBIENT KIT & CRANKCASE HEATER

REFRIGERANT PIPING SIZE SHALL BE AS REQUIRED BY THE MANUFACTURER

1

SOUND ATTENUATOR SCHEDULE

MARK	DIMENSIONS WIDTH X HEIGHT	DIMENSIONS LENGTH	MAXIMUM PD W.G	UNITED McGILL MODEL NUMBER
SA-A	48" x 24"	3 ft	0.12	RSF-PV-L45
SA-B	24" x 30"	3 ft	0.12	RSF-PV-L45

NOTES:
1. ATTENUATOR SHALL BE EQUIPPED WITH EROSION-RESISTANT INTERNAL SOUND ABSORBING BODIES.

AIR DEVICE SCHEDULE

MARK	DESCRIPTION
A A1	CEILING SUPPLY DIFFUSER - 24" X 24" FACE, PATTERN TYPE, ALUMINUM CONSTRUCTION, WHITE FINISH PRICE SPD A1 = 12" X 12" FACE
B B1	CEILING RETURN GRILLE - 24" X 24" PERFORATED FACE, ALUMINUM CONSTRUCTION, WHITE FINISH PRICE PDDR B1 = 12" X 12" FACE
C	CEILING EXHAUST GRILLE - 24" X 24" PERFORATED FACE, ALUMINUM CONSTRUCTION, WHITE FINISH PRICE PDDR
D	SIDEWALL SUPPLY GRILLE - DOUBLE DEFLECTION, ALUMINUM CONSTRUCTION, ADJUSTABLE BLADES, WHITE FINISH UNLESS OTHER OTHERWISE ON DRAWINGS. SIZE SPECIFIED ON DRAWINGS. PRICE 600.
E	SIDEWALL RETURN GRILLE - DOUBLE DEFLECTION, ALUMINUM CONSTRUCTION, ADJUSTABLE BLADES, WHITE FINISH UNLESS OTHER OTHERWISE ON DRAWINGS. SIZE SPECIFIED ON DRAWINGS. PRICE 600.
F	CUSTOM FLOW LINEAR SLOT DIFFUSER - 60" LONG, 2-SLOT, 1.5" WIDE SLOT, 12"Ø INLET, W/ INSULATED PLENUM, ADJUSTASLOT PATTERN CONTROLLER. PRICE 600.

NOTES:
1 REFER TO ARCHITECTURAL REFLECTED CEILING PLAN TO VERIFY CEILING TYPE FOR EACH AIR DEVICE.
2. AIR DEVICES TO HAVE COLOR/FINISH INDICATED ON SCHEDULE UNLESS NOTED OTHERWISE ON DRAWINGS. ALL AIR DEVICES SHALL COME FACTORY PAINTED. FIELD PAINTING IS NOT ACCEPTABLE.

FAN POWERED BOX SCHEDULE

MARK	COOLING MAX	COOLING MIN	REHEAT	DIAMETER	E.S.P (W.G)	VELOCITY	HP	MCA	MOCP	VOLTS	HEATING MBH	HEATING GPM	PIPE SIZE & CONN. SIDE	PRICE MODEL #
FPB-1-1	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", RH	FDC
FPB-1-2	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", RH	FDC
FPB-1-3	475	143	285	8	0.3"	1361	0.75 HP	1.91	15	277V	10.8	0.5	3/4", RH	FDC
FPB-1-4	550	165	330	8	0.3"	1576	0.75 HP	1.91	15	277V	12.5	0.6	3/4", RH	FDC
FPB-1-5	750	225	450	10	0.3"	1375	0.75 HP	1.91	16	277V	17.0	0.9	3/4", RH	FDC
FPB-1-6	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", LH	FDC
FPB-1-7	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", LH	FDC
FPB-2-1	700	210	420	10	0.3"	1283	0.75 HP	1.91	15	277V	15.9	0.8	3/4", LH	FDC
FPB-2-2	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", RH	FDC
FPB-2-3	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", RH	FDC
FPB-2-4	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", LH	FDC
FPB-2-5	200	60	120	6	0.3"	1019	0.75 HP	1.91	15	277V	4.5	0.2	3/4", RH	FDC
FPB-2-6	400	120	240	8	0.3"	1146	0.75 HP	1.91	15	277V	9.1	0.5	3/4", LH	FDC
FPB-2-7	350	105	210	6	0.3"	1783	0.75 HP	1.91	15	277V	7.9	0.4	3/4", LH	FDC
FPB-2-8	200	60	120	6	0.3"	1019	0.75 HP	1.91	15	277V	4.5	0.2	3/4", LH	FDC
FPB-2-9	325	98	195	6	0.3"	1655	0.75 HP	1.91	15	277V	7.4	0.4	3/4", RH	FDC
FPB-2-10	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", RH	FDC
FPB-2-11	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", LH	FDC
FPB-2-12	650	195	390	8	0.3"	1862	0.75 HP	1.91	15	277V	14.7	0.7	3/4", RH	FDC
FPB-2-13	650	195	390	8	0.3"	1862	0.75 HP	1.91	15	277V	14.7	0.7	3/4", LH	FDC
FPB-2-14	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", LH	FDC
FPB-2-15	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", RH	FDC
FPB-2-16	650	195	390	8	0.3"	1862	0.75 HP	1.91	15	277V	14.7	0.7	3/4", LH	FDC
FPB-2-17	650	195	390	8	0.3"	1862	0.75 HP	1.91	15	277V	14.7	0.7	3/4", RH	FDC
FPB-3-1	700	210	420	10	0.3"	1283	0.75 HP	1.91	15	277V	15.9	0.8	3/4", RH	FDC
FPB-3-2	600	180	360	8	0.3"	1719	0.75 HP	1.91	15	277V	13.6	0.7	3/4", RH	FDC
FPB-3-3	200	60	120	6	0.3"	1019	0.75 HP	1.91	15	277V	4.5	0.2	3/4", LH	FDC
FPB-3-4	600	180	360	8	0.3"	1719	0.75 HP	1.91	16	277V	13.6	0.7	3/4", LH	FDC
FPB-3-5	650	195	390	8	0.3"	1862	0.75 HP	1.91	17	277V	14.7	0.7	3/4", RH	FDC
FPB-3-6	200	60	120	6	0.3"	1019	0.75 HP	1.91	18	277V	4.5	0.2	3/4", RH	FDC
FPB-3-7	500	150	300	8	0.3"	1432	0.75 HP	1.91	19	277V	11.3	0.6	3/4", LH	FDC
FPB-3-8	700	210	420	10	0.3"	1283	0.75 HP	1.91	20	277V	15.9	0.8	3/4", RH	FDC
FPB-3-9	250	75	150	6	0.3"	1273	0.75 HP	1.91	21	277V	5.7	0.3	3/4", LH	FDC
FPB-3-10	200	60	120	6	0.3"	1019	0.75 HP	1.91	22	277V	4.5	0.2	3/4", RH	FDC

NOTES:
1. FAN POWERED BOXES SHALL HAVE DIRECT DRIVE MOTOR WITH SPEED CONTROLLER, 277V/1PH POWER. ECM MOTORS ARE NOT ACCEPTABLE.
2. ALL UNITS REQUIRING HEAT SHALL BE EQUIPPED WITH HOT WATER HEATING COIL.
3. STATIC PRESSURES SHOWN ARE EXTERNAL TO UNITS. MANUFACTURER SHALL ADD DAMPER, HEATING COIL, CASING, FILTER, AND OTHER UNIT LOSSES BEFORE SELECTING FAN.
4. HEATING CAPACITY IS BASED ON COLD AIR AT 55°F AND VALVE AT 50% OPENED MIXING WITH PLENUM AIR AT 68°F.
5. REFERENCE 13/M6.00 FOR DETAIL AND WRITTEN SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
6. TERMINAL UNIT MANUFACTURER MUST FACTORY MOUNT, WIRE, AND PROGRAM DDC CONTROLLER AND CONTROL DEVICES.
7. ENTERING WATER TEMPERATURE IS 140°F

EXHAUST AND SUPPLY FANS SCHEDULE

MARK	SERVES	INTERLOCK	TYPE	DRIVE	CFM	STATIC PRESSURE	RPM	DESIGN H.P.	VOLTAGE	MANUFACTURER	MODEL #	NOTES
EF-1	RESTROOMS	BAS	INLINE	DIRECT	75 CFM	0.375"	1565	0.05 HP	120V	GREENHECK	SQ-70-VG	1,2,3
EF-2	RESTROOMS	BAS	INLINE	DIRECT	150 CFM	0.375"	1683	0.04 HP	120V	GREENHECK	SQ-70-VG	1,2,3
EF-3	RESTROOMS	BAS	INLINE	DIRECT	75 CFM	0.375"	1565	0.05 HP	120V	GREENHECK	SQ-70-VG	1,2,3
EF-4	RESTROOMS	BAS	INLINE	DIRECT	150 CFM	0.375"	1683	0.04 HP	120V	GREENHECK	SQ-70-VG	1,2,3
EF-5	RESTROOMS	BAS	INLINE	DIRECT	150 CFM	0.50"	1397	0.09 HP	120V	GREENHECK	SQ-97-VG	1,2,3
EF-6	RESTROOMS	BAS	INLINE	DIRECT	150 CFM	0.375"	1683	0.04 HP	120V	GREENHECK	SQ-70-VG	1,2,3
EF-7	CUSTODIAL STORAGE	BAS	INLINE	DIRECT	225 CFM	0.50"	1226	0.07 HP	120V	GREENHECK	SQ-98-VG	1,2,3
SF-1	MDF ROOM	THERMOSTAT	INLINE	DIRECT	400 CFM	0.375"	1475	0.05 HP	120V	GREENHECK	SQ-90-VG	1,2,3
SF-2	BOILER ROOM	THERMOSTAT	INLINE	DIRECT	400 CFM	0.375"	1475	0.05 HP	120V	GREENHECK	SQ-90-VG	1,2,3

NOTES:
1. STATIC PRESSURE SHOWN IS EXTERNAL TO UNIT. MANUFACTURER SHALL ADD DAMPER AND ACCESSORY LOSSES TO THIS VALUE BEFORE SELECTING FAN.
2. DISCONNECT SWITCH WITH SPEED CONTROLLER AND HORIZONTAL VERTICAL BACKDRAFT DAMPER.
3. ECM FANS ARE NOT ACCEPTABLE. ONLY DIRECT DRIVE FANS WITH SPEED CONTROLLER ALLOWED.

VARIABLE AIR VOLUME BOX SCHEDULE

MARK	COOLING MAX	COOLING MIN	REHEAT	DIAMETER	E.S.P (W.G)	VELOCITY	VOLTS	HEATING MBH	HEATING GPM	PIPE SIZE & HAND SIDE	PRICE MODEL #
VAV-1-1	250	75	150	6	0.3"	1273	120V	5.7	0.3	3/4", RH	SDV
VAV-2-1	900	270	540	10	0.3"	1650	120V	20.4	1.0	3/4", RH	SDV
VAV-2-2	450	135	270	8	0.3"	1289	120V	10.2	0.5	3/4", RH	SDV
VAV-2-3	900	270	540	10	0.3"	1650	120V	20.4	1.0	3/4", LH	SDV
VAV-2-4	900	270	540	10	0.3"	1650	120V	20.4	1.0	3/4", LH	SDV

NOTES:
1. PROVIDE 120V TO VAV BOXES. BUILT IN TRANSFORMER TO STEP DOWN TO 24V FOR DAMPER CONTROL.
2. ALL UNITS REQUIRING HEAT SHALL BE EQUIPPED WITH HOT WATER HEATING COIL.
3. STATIC PRESSURES SHOWN ARE EXTERNAL TO UNITS. MANUFACTURER SHALL ADD DAMPER, HEATING COIL, CASING, FILTER, AND OTHER UNIT LOSSES BEFORE SELECTING...
4. HEATING CAPACITY IS BASED ON COLD AIR AT 55°F AND AIR VALVE AT 50% OPENED FOR VAV.
5. REFERENCE 16/M6.00 FOR DETAIL AND WRITTEN SPECIFICATION FOR ADDITIONAL REQUIREMENTS.
6. TERMINAL UNIT MANUFACTURER MUST FACTORY MOUNT, WIRE, AND PROGRAM DDC CONTROLLER AND CONTROL DEVICES.
7. ENTERING WATER TEMPERATURE IS 140°F

ELECTRIC UNIT HEATER

MARK	EUH-1
SERVES	FIRE RISER B119
HEATING CAPACITY, KW	5.0 KW
AIR FLOW RATE	400 CFM
AIR TEMP. RISE	40°F
MAX. MOUNTING HEIGHT	9FT.
VOLTAGE	480V / 3PH
AMPS	6.1 A
MARKEL MODEL#	P3P5105CA1N

NOTE: PROVIDE WALL MOUNTING ACCESSORIES AND THERMOSTAT.
SOO: EUH SHALL ENERGIZE WHEN ROOM TEMP DROPS BELOW 45F AND SHALL DE-ENERGIZE WHEN ROOM TEMP REACHES 68F.

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1 06/17/2026

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Katy, TX

NEW OPPORTUNITY AWARENESS CENTER

ISSUED: May 26, 2026

REVISIONS

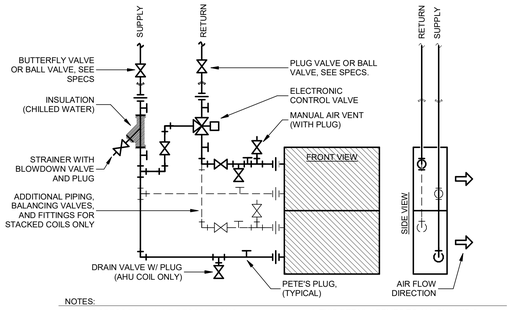
Revision No.	Revision Date
1 Addendum No.3	06/11/2026
2 Addendum No.4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	MH
Drawn By	MH

PROJECT NO.
25-0067.00

SHEET TITLE
MECHANICAL SCHEDULES

SHEET NO.
M5.00

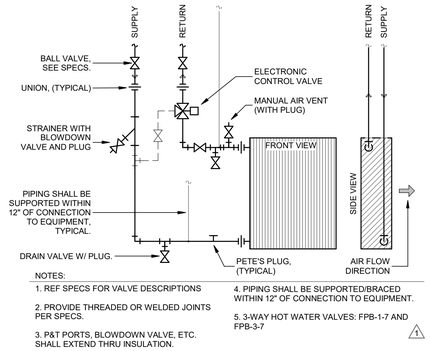


NOTES:

1. EF SPECS FOR VALVE DESCRIPTIONS.
2. PROVIDE THREADED OR WELDED JOINTS PER SPECS.
3. P&T PORTS, BLOWDOWN VALVE, ETC. SHALL EXTEND THROUGH INSULATION
4. THIS DETAIL APPLIES TO ALL CHILLED & HOT WATER COILS FOR AHU ONLY.
5. 3-WAY CHILLED WATER VALVES: ALL AHUs. 1

1 AHU COIL PIPING DETAIL

NO SCALE

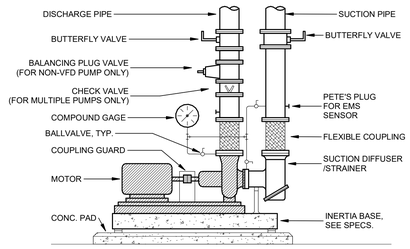


NOTES:

1. REF SPECS FOR VALVE DESCRIPTIONS
2. PROVIDE THREADED OR WELDED JOINTS PER SPECS.
3. P&T PORTS, BLOWDOWN VALVE, ETC. SHALL EXTEND THRU INSULATION.
4. PIPING SHALL BE SUPPORTED/BRACED WITHIN 12" OF CONNECTION TO EQUIPMENT.
5. 3-WAY HOT WATER VALVES: FPB-1-7 AND FPB-3-7 1

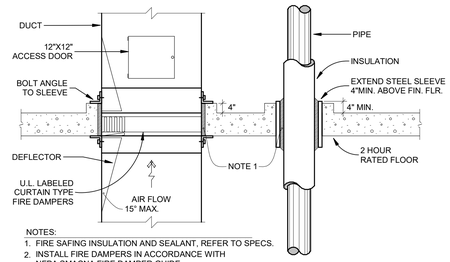
2 CVB/VAV COIL PIPING DETAIL

NO SCALE



3 END SUCTION PUMP

NO SCALE



NOTES:

1. FIRE SAFING INSULATION AND SEALANT, REFER TO SPECS.
2. INSTALL FIRE DAMPERS IN ACCORDANCE WITH NFPA SMACNA FIRE DAMPER GUIDE.

4 FLOOR PENETRATION FIRE BARRIER DETAIL

NO SCALE

NOTE: VENT AND COMBUSTION AIR DUCT MATERIAL TO BE UL 1738-LISTED CPVC, UNLESS OTHERWISE REQUIRED OR RECOMMENDED BY MANUFACTURER. PVC VENTING IS NOT PERMITTED.

5 CONCENTRIC VENT DETAIL

NO SCALE

6 MECHANICAL - ELECTRICAL COORDINATION DETAIL

NO SCALE

7 CLOTHES DRYER DETAIL

NO SCALE

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1 06/17/2026

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Proj. Arch.	Lynn Rabatsky
Designer	MH
Drawn By	MH

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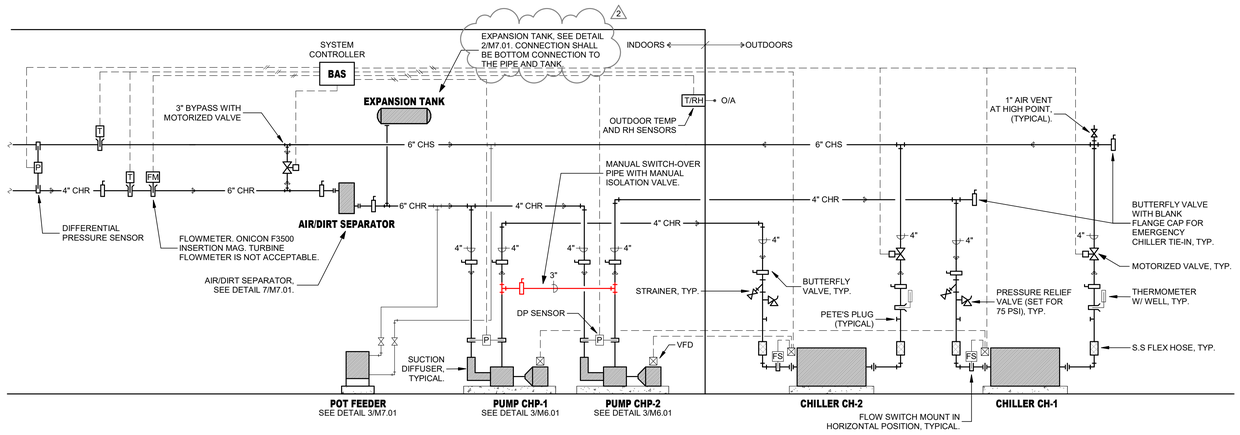
SHEET TITLE

MECHANICAL DETAILS

SHEET NO.

M6.01

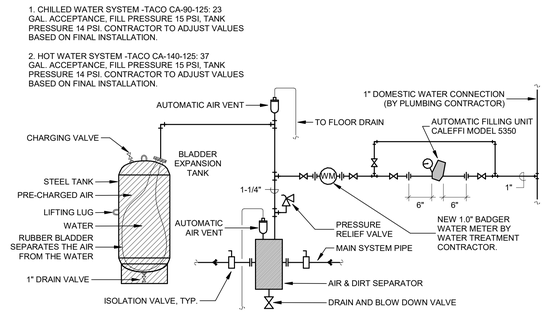


1 AIR-COOLED CHILLED WATER SYSTEM PIPING AND CONTROL SCHEMATIC

NO SCALE

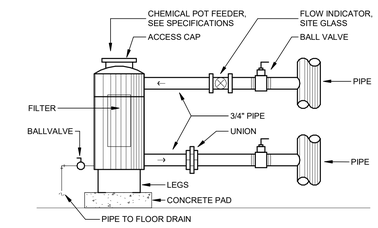
1. CHILLED WATER SYSTEM -TACO CA-90-125: 23 GAL. ACCEPTANCE, FILL PRESSURE 15 PSI, TANK PRESSURE 14 PSI. CONTRACTOR TO ADJUST VALUES BASED ON FINAL INSTALLATION.

2. HOT WATER SYSTEM -TACO CA-140-125: 37 GAL. ACCEPTANCE, FILL PRESSURE 15 PSI, TANK PRESSURE 14 PSI. CONTRACTOR TO ADJUST VALUES BASED ON FINAL INSTALLATION.



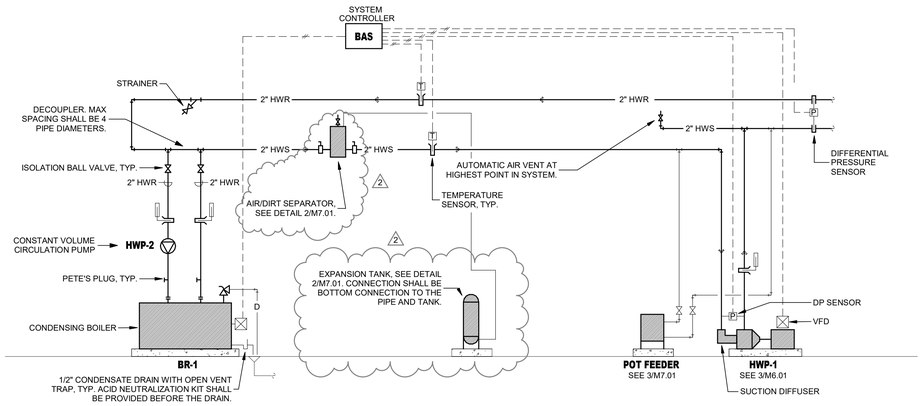
2 AIR SEPARATOR AND EXPANSION TANK DETAIL

NO SCALE



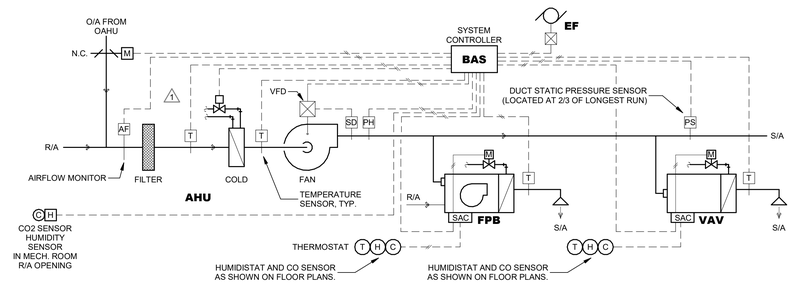
3 CHEMICAL POT FEEDER / FILTER

NO SCALE



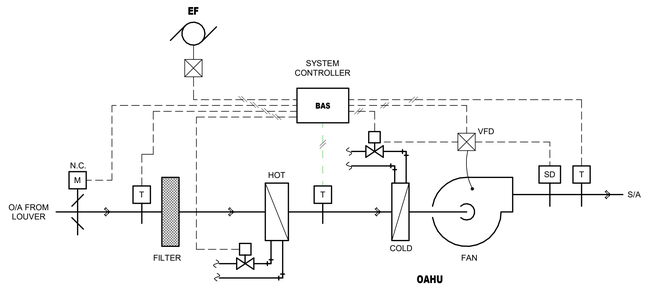
4 HOT WATER PIPING AND CONTROL SCHEMATICS

NO SCALE



5 VAV AHU CONTROL SCHEMATICS

NO SCALE



6 OAHU CONTROLS SCHEMATIC

NO SCALE

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Designer	MH
Drawn By	MH

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SHEET TITLE

MECHANICAL SCHEMATICS

SHEET NO.

M7.01

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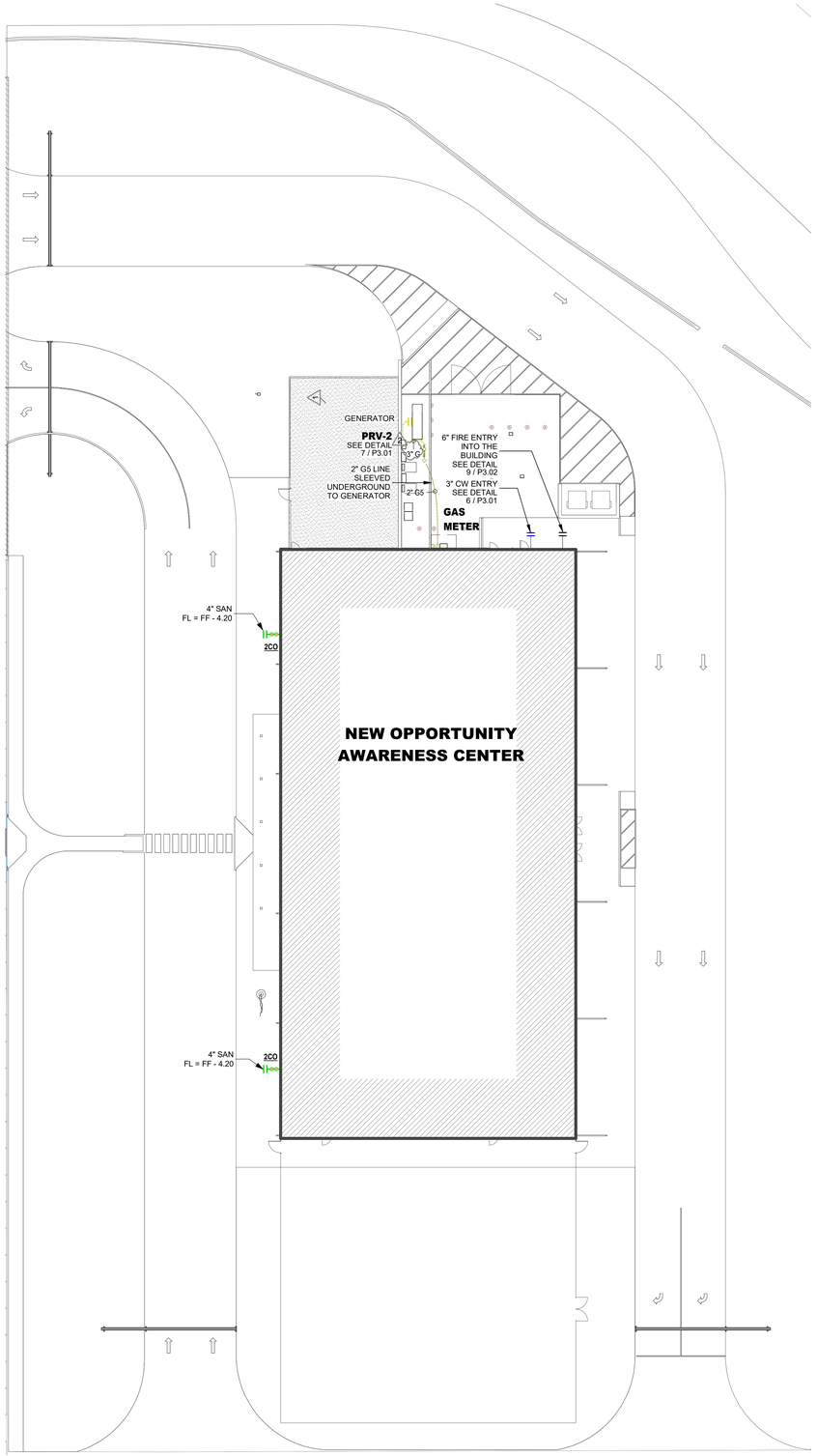
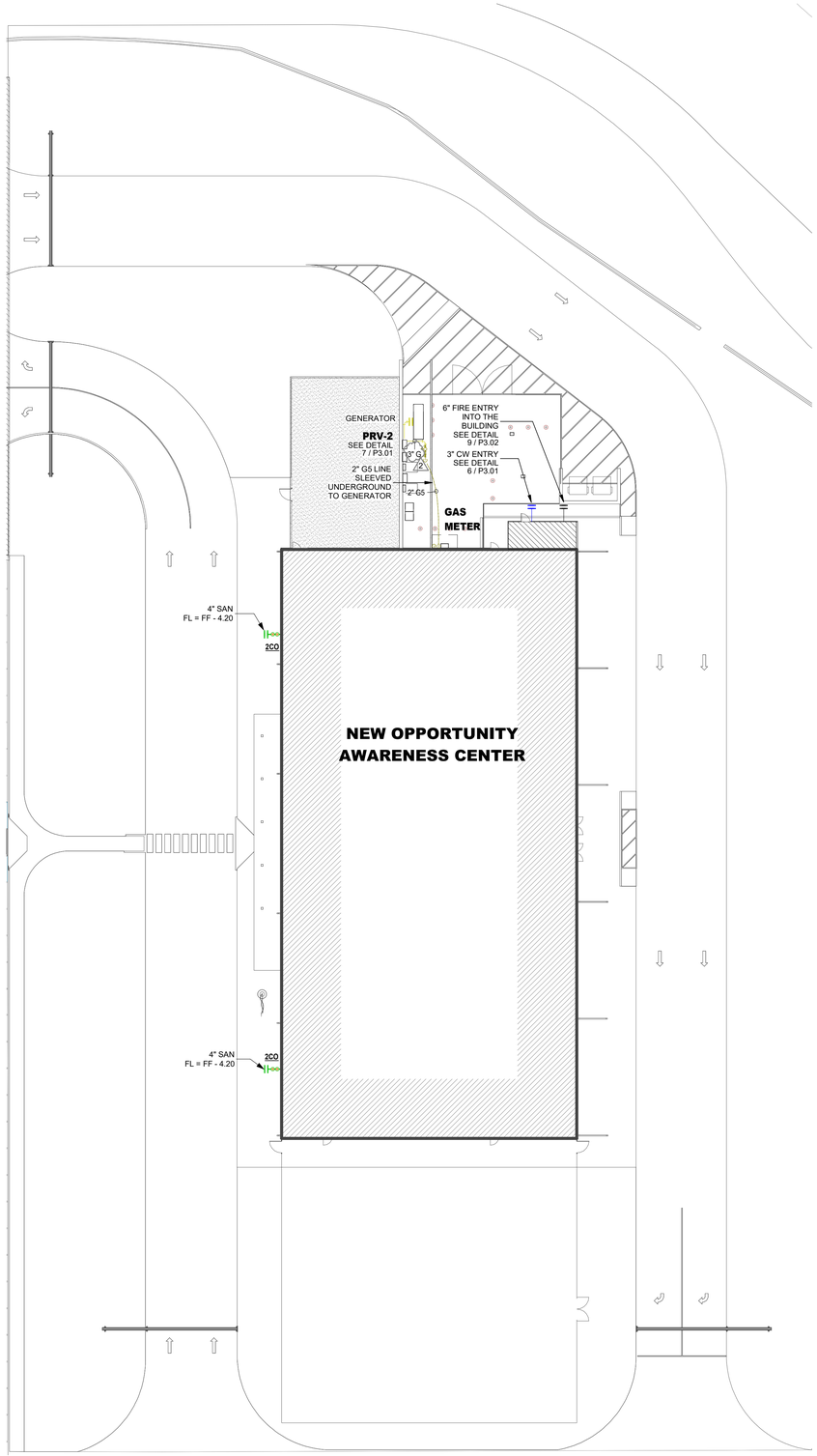


1 **PLUMBING SITE PLAN**
SCALE= 1" = 20'-0"



2 **PLUMBING SITE PLAN - ALTERNATE**
SCALE= 1" = 20'-0"

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Proj. Arch.	Lynn Rabatsky
Designer	AM
Drawn By	AM

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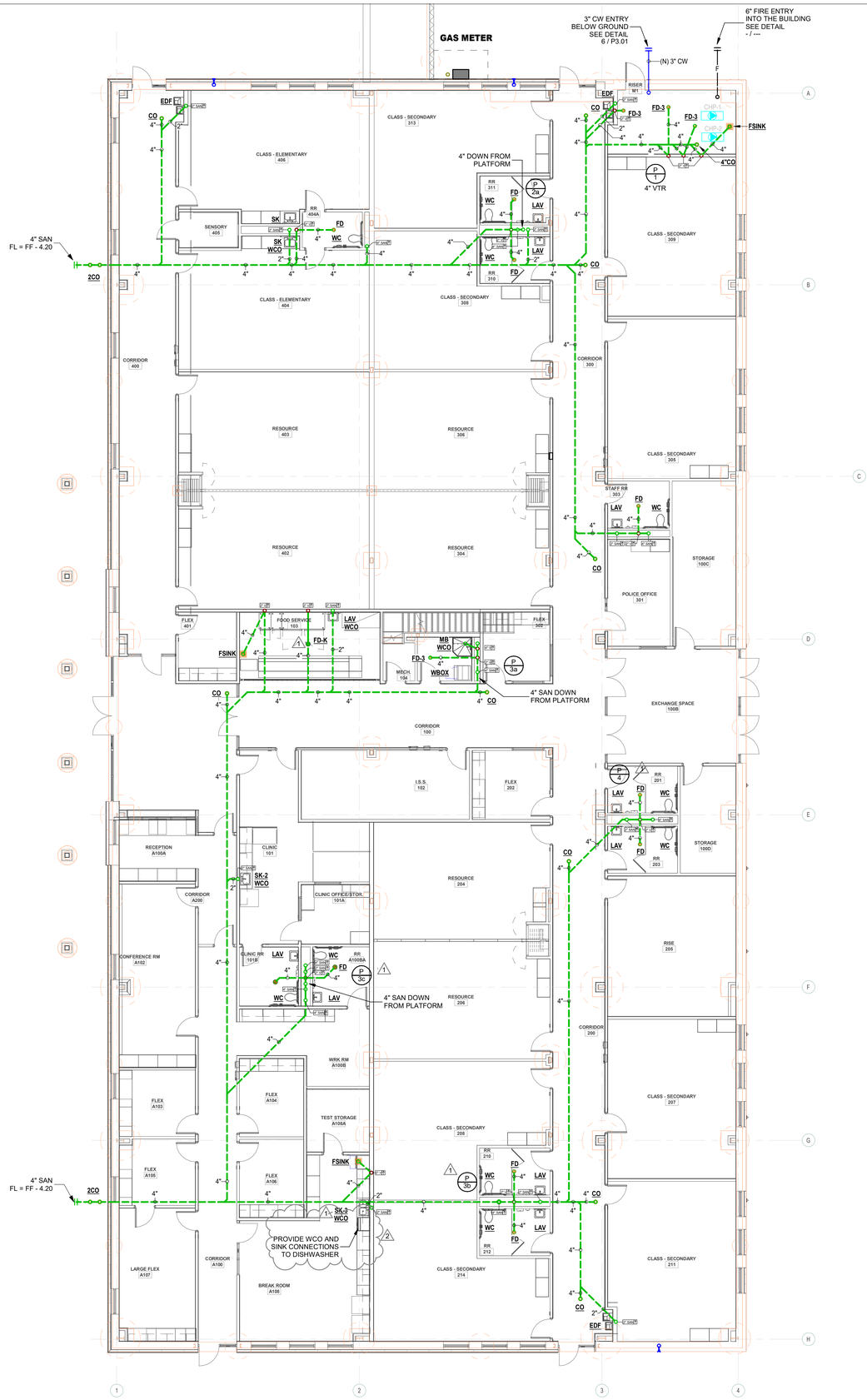
SHEET TITLE
PLUMBING SITE PLAN

SHEET NO.
P1.11



1 PLUMBING UNDERGROUND FLOOR PLAN

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

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Drawn By	AM

PROJECT NO.
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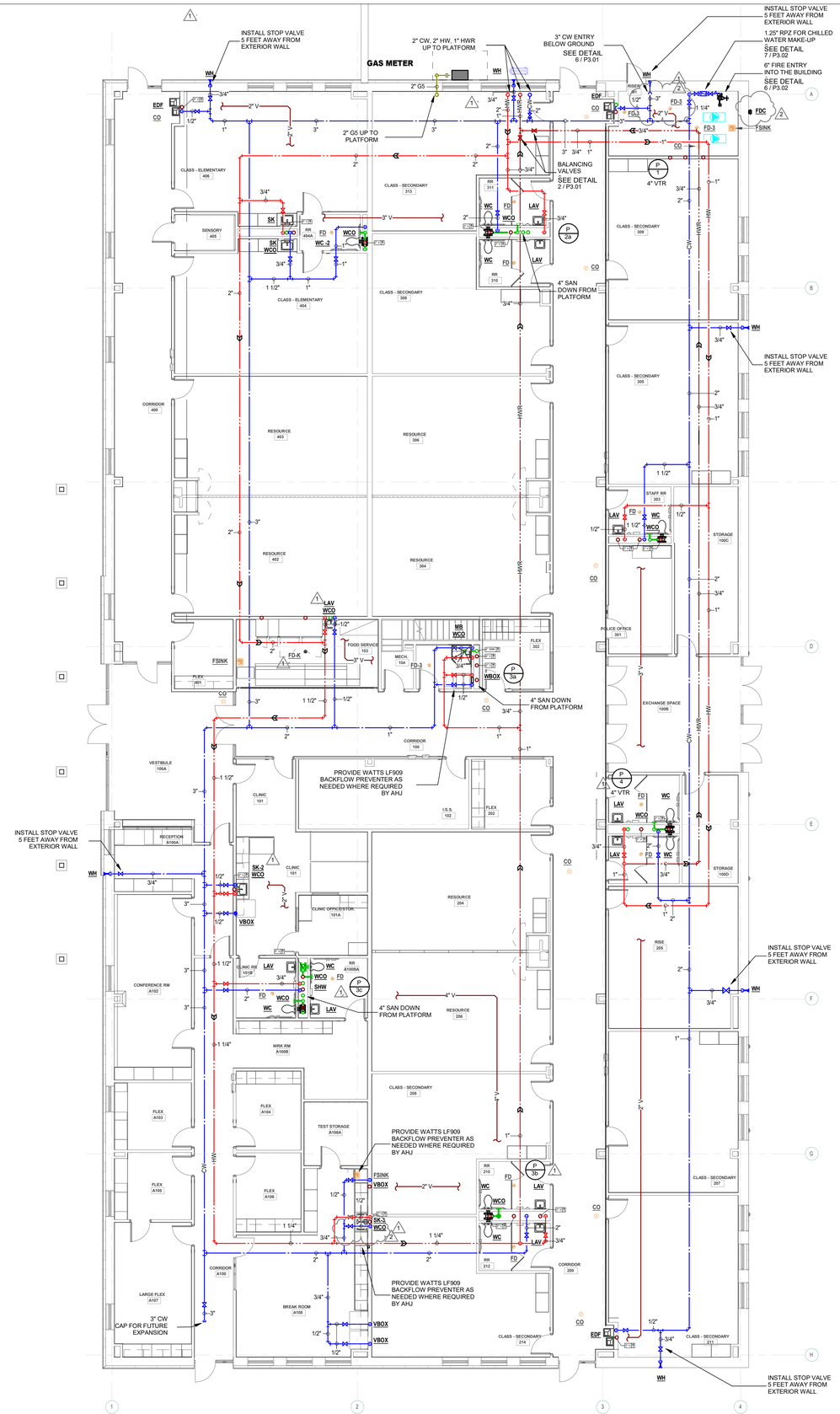
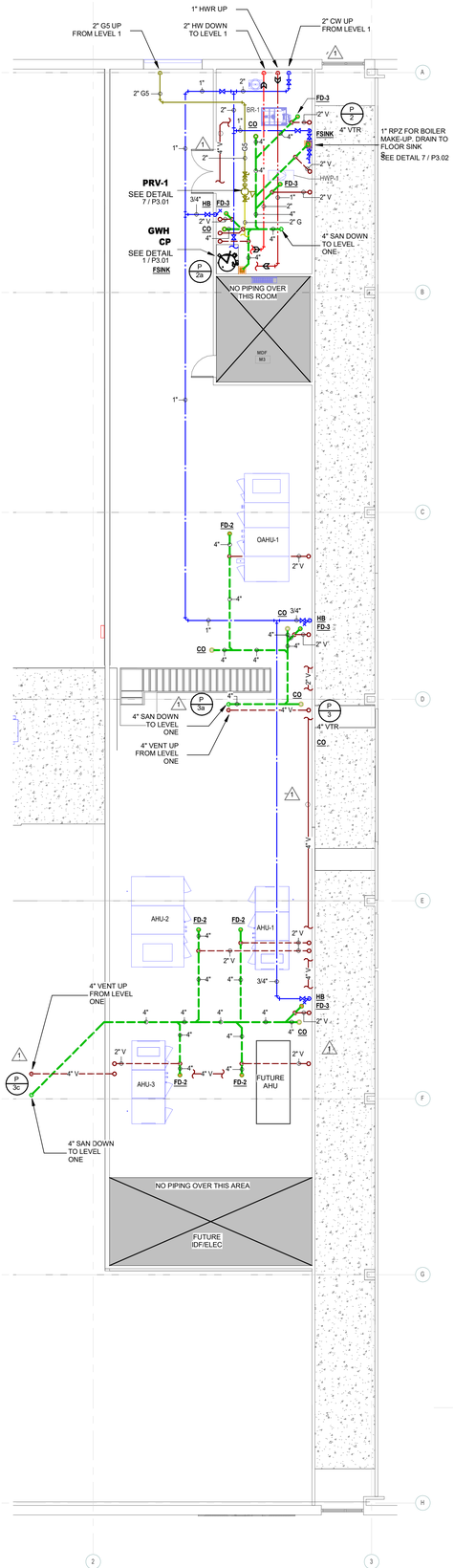
SHEET TITLE
PLUMBING UNDERGROUND FLOOR PLAN

SHEET NO.
P2.10



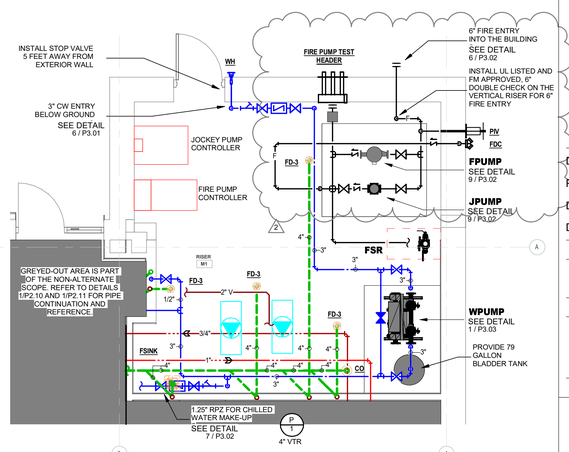
1 **PLUMBING LEVEL ONE FLOOR PLAN**

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



2 **PLUMBING PLATFORM PLAN**

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



3 **PLUMBING LEVEL ONE FLOOR PLAN - ALTERNATE**

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

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PROJECT NO.

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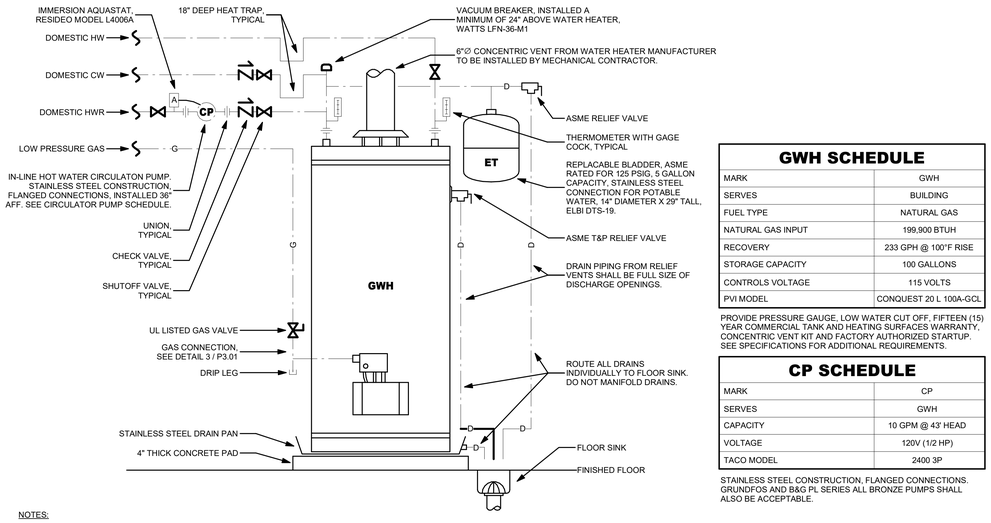
SHEET TITLE

PLUMBING LEVEL ONE FLOOR PLAN

SHEET NO.

P2.11



GWH SCHEDULE

MARK	GWH
SERVES	BUILDING
FUEL TYPE	NATURAL GAS
NATURAL GAS INPUT	199,900 BTUH
RECOVERY	233 GPH @ 100°F RISE
STORAGE CAPACITY	100 GALLONS
CONTROLS VOLTAGE	115 VOLTS
PVI MODEL	CONQUEST 20 L 100A-GCL

PROVIDE PRESSURE GAUGE, LOW WATER CUT OFF, FIFTEEN (15) YEAR COMMERCIAL TANK AND HEATING SURFACES WARRANTY, CONCENTRIC VENT KIT AND FACTORY AUTHORIZED STARTUP. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CP SCHEDULE

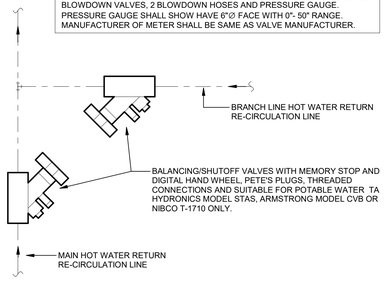
MARK	CP
SERVES	GWH
CAPACITY	10 GPM @ 43' HEAD
VOLTAGE	120V (1/2 HP)
TACO MODEL	2400 3P

STAINLESS STEEL CONSTRUCTION, FLANGED CONNECTIONS. GRUNDFOS AND B&G PL SERIES ALL BRONZE PUMPS SHALL ALSO BE ACCEPTABLE.

NOTES:

1. ALL WATER HEATERS SHALL HAVE FIFTEEN (15) YEAR COMMERCIAL WARRANTY ON TANK AND ALL PARTS. ANY ITEMS NOT COVERED BY WATER HEATER MANUFACTURER'S WARRANTY SHALL BE COVERED BY THE PLUMBING CONTRACTOR. SUBMITTAL SHALL INCLUDE WRITTEN DOCUMENTATION STATING THAT TANK AND PARTS OF ALL WATER HEATERS SHALL BE COVERED FOR FIFTEEN (15) FULL YEARS FROM DATE OF OWNER ACCEPTANCE OF BUILDING. WARRANTY DOCUMENTATION SHALL ALSO LIST WHO IS PROVIDING THE WARRANTY COVERAGE.
2. PROVIDE PRESSURE GAUGE, LOW WATER CUT OFF, CONCENTRIC VENT KIT, NECESSARY VALVES AND UNIONS, 4" CONCRETE PAD. AND FACTORY AUTHORIZED STARTUP. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
3. ALL CIRCULATOR PUMPS ALSO CONTROLLED BY TIMECLOCK PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. CIRCULATOR PUMPS SHALL ALSO BE WIRED TO AN IMMERSION TYPE AQUASTAT (SURFACE MOUNT IS NOT ACCEPTABLE) MOUNTED ON THE HWR, RESIDEO MODEL L4006A.
4. ALL HW AND HWR PIPING INSULATED WITH 1.5" THICK FIBERGLASS MEETING ALL REQUIREMENTS OF THE INTERNATIONAL ENERGY CODE.
5. ALL HW SYSTEMS SHALL STORE AND SUPPLY 140°F WATER.

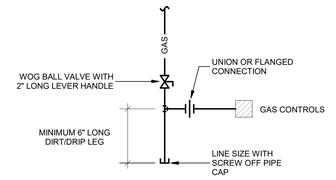
1 GAS WATER HEATER (GWH)
NO SCALE



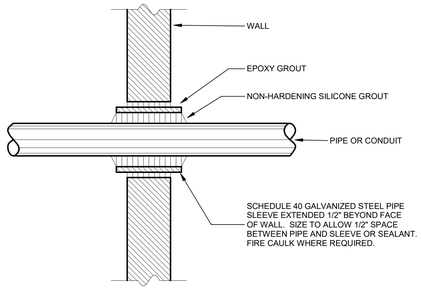
NOTES:

1. PROVIDE AT EACH JUNCTION OF BRANCH HOT WATER RETURN LOOPS TO MAIN CIRCULATING HOT WATER LINE. SEE PLUMBING PLANS.
2. PLUMBING CONTRACTOR SHALL CONTRACT A CERTIFIED TESTING AND BALANCING FIRM TO BALANCE EACH HOT WATER STATION SUCH THAT HOT WATER IS PROVIDED AT EVERY HOT WATER FIXTURE IN A TIMELY MANNER (15 SECONDS OR LESS).
3. AFTER BALANCING CONTRACTOR COMPLETES BALANCING OF THE HW SYSTEM AND OWNER IS SATISFIED WITH THE HOT WATER DELIVERY THROUGHOUT THE BUILDING, THE TAB CONTRACTOR SHALL PROVIDE OWNER WITH LAMINATED 11X17 FLOOR PLAN OF BUILDING FLOORS SHOWING LOCATION OF EACH HW BALANCING VALVE AND SETTING FOR EACH HW BALANCING VALVE. A COPY OF THESE PLANS SHALL BE INCLUDED IN CLOSE-OUT DOCUMENTS BY CONTRACTOR.

2 HOT WATER BALANCING STATION
NO SCALE



3 TYPICAL GAS CONNECTION
NO SCALE



THIS DETAIL APPLIES TO ALL PIPING THROUGH WALLS OR FLOORS, INCLUDING FIRE SPRINKLER PIPING.

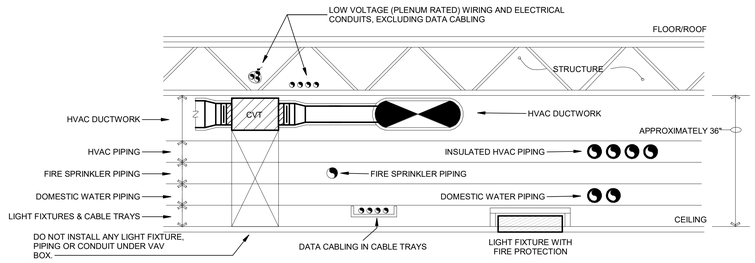
4 WALL PENETRATION DETAIL
NO SCALE

GAS PRV SCHEDULE

MARK	PRV-1	PRV-2
LOCATION	PLATFORM	MECH. YARD
SERVES	GWH	GENERATOR
GAS LOAD	199 CFH	1,915 CFH
DISTANCE FROM METER	50 FEET	35 FEET 2
DISTANCE TO LAST OUTLET	10 FEET	15 FEET
INLET (SIZE/PRESSURE)	2" / 5 PSIG 1	2" / 5 PSIG
OUTLET (SIZE/PRESSURE)	2" / 4-8 OZ.	3" / 4-8 OZ. 2

VENT ALL REGULATORS TO OUTDOORS. THIS INCLUDES PRVs PROVIDED WITH BOILERS AND GWHs.

7 GAS PRESSURE REGULATOR DETAIL
NO SCALE



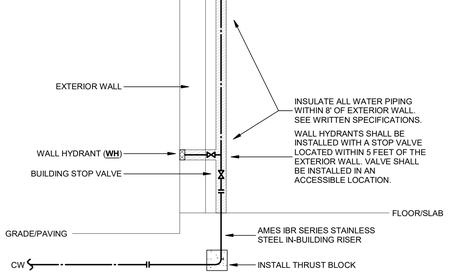
PLENUM PRIORITY NOTES

ELECTRICAL CONDUIT	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING. IF FRAMING IS USED FOR SUPPORT OF CONDUIT, A SADDLE SHALL BE REQUIRED FOR ISOLATION AT EACH SUPPORT POINT.
LOW VOLTAGE WIRING (EXCEPT DATA CABLING)	INSTALLED WITHIN OPEN WEBS OF JOIST FRAMING AND RUN PARALLEL OR PERPENDICULAR TO BUILDING WALLS. ALL INDIVIDUAL WIRES SHALL BE BUNDLED TOGETHER WITH PLASTIC TIE STRAPS AT 6 FOOT MAXIMUM INTERVALS AND EACH WIRE SHALL BE IDENTIFICATION TAGGED AT 25 FOOT MAXIMUM INTERVALS.
HVAC DUCTWORK	INSTALLED AS SNUG TO BOTTOM OF STRUCTURE AS POSSIBLE, ALLOWING ONLY ENOUGH SPACE FOR INSULATION WRAP. OFFSET HOT AND COLD MEDIUM PRESSURE DUCTS FOR TAKE-OFFS FOR DOUBLE DUCT VAV BOXES.
HVAC PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC DUCTWORK. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW.
FIRESPRINKLER PIPING	INSTALLED IN PLANE DIRECTLY BELOW HVAC PIPING.
DOMESTIC WATER PIPING	INSTALLED IN PLANE DIRECTLY ABOVE LIGHT FIXTURES. ALL VALVES AND INSTRUMENTS SHALL BE ACCESSIBLE AND EASILY OPERATED FROM BELOW. BALL VALVES INSTALLED WITH STEM HORIZONTAL SHALL BE USED IN LIEU OF WHEEL HANDLE VALVES OR OTHER TYPES EXCEPT IN SITUATIONS WHERE BALL VALVES ARE NOT APPROPRIATE.
LIGHT FIXTURES	TAKE PRIORITY IN SPECIAL LAYOUT. ALL OTHER SYSTEMS (DOUBLE DUCT UNITS, DUCTWORK, PIPING, CONDUITS, ETC.) SHALL BE ROUTED IN PLENUM SPACE TO AVOID PASSING DIRECTLY (LOW) OVER LIGHTING FIXTURES PREVENTING THEIR INSTALLATION, SERVICING AND/OR REMOVAL.
GRAVITY FED PLUMBING	THIS INCLUDES PLUMBING WASTE/VENT AND ROOF DRAIN SYSTEMS. THESE SYSTEMS TAKE PRIORITY OVER ALL OTHER SYSTEMS BUT MUST BE INSTALLED TAKING OTHER SYSTEMS INTO CONSIDERATION. IN GENERAL, ROOF DRAIN PIPING SHALL START AS HIGH AS POSSIBLE. WASTE/VENT PIPING SHALL BE INSTALLED IN VAC PIPING SPACE (IF AVAILABLE) IN AREAS WHERE CROSSING DUCTWORK. DO NOT INSTALL WASTE/VENT OR ROOF DRAIN PIPING UNDER DOUBLE DUCT VAV BOXES IF AVOIDABLE.

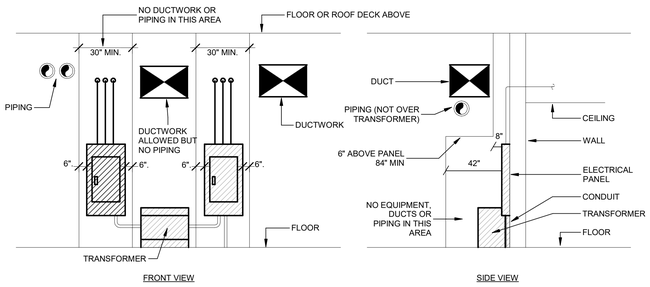
NOTES:

1. PIPING, CONDUIT AND DUCTWORK SUPPORTS ARE NOT SHOWN ON THIS DETAIL. SUPPORT ALL ENTITIES AS REQUIRED BY THE WRITTEN SPECIFICATIONS.
2. DO NOT INSTALL ANY PIPE OVER TOP OF ANY ELECTRICAL EQUIPMENT. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.
3. DO NOT INSTALL ANY PIPE OVER TOP OF ANY IDF/MDF/SERVER/NETWORK EQUIPMENT. THIS INCLUDES EQUIPMENT PROVIDED BY OWNER. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.

5 PLENUM SPACE PRIORITY DETAIL
NO SCALE



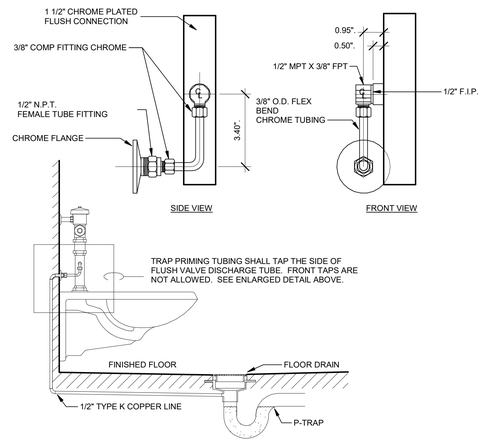
6 BUILDING WATER ENTRY/EXIT DETAIL
NO SCALE



NOTES:

1. DO NOT INSTALL ANY PIPING BENEATH CVT BOXES.
2. DO NOT INSTALL ANY PIPE OVER TOP OF ANY ELECTRICAL EQUIPMENT. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.
3. DO NOT INSTALL ANY PIPE OVER TOP OF ANY IDF/MDF/SERVER/NETWORK EQUIPMENT. THIS INCLUDES EQUIPMENT PROVIDED BY OWNER. THIS INCLUDES FIRE SPRINKLER PIPING. NO EXCEPTIONS.

8 MECHANICAL - ELECTRICAL COORDINATION DETAIL
NO SCALE



SLOAN ROYAL OR PPP FLUSH VALVE TRAP PRIMER MODELS ONLY.

9 FLUSH VALVE TRAP PRIMING TUBE DETAIL
NO SCALE

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06/17/2026 1

ISSUED: May 26, 2026

REVISIONS

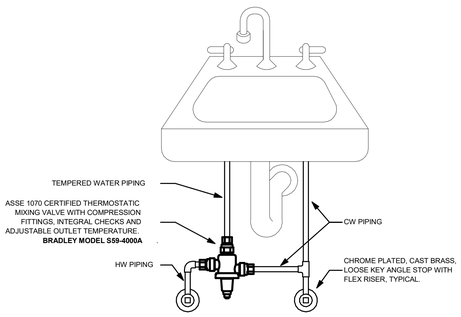
Revision No.		Revision Date
1	Addendum No.3	06/11/2026
2	Addendum No.4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	AM
Drawn By	AM

PROJECT NO.
25-0067.00

SHEET TITLE
PLUMBING SCHEDULES AND DETAILS

SHEET NO.
P3.01

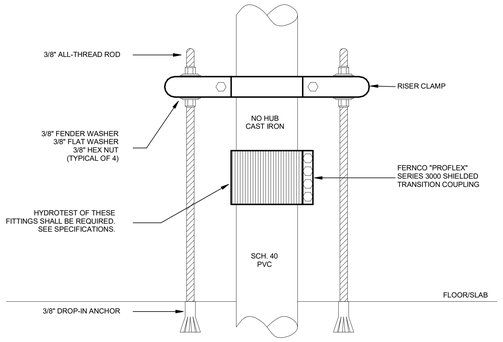


NOTES:

1. THIS DETAIL ONLY APPLIES TO ALL LAVATORIES AND SINKS THAT HAVE HOT WATER.
2. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
3. TMV SHALL BE INSTALLED IN A EASILY/READILY ACCESSIBLE LOCATION WITH MOUNTING BRACKET.
4. DELIVERY TEMPERATURES SHALL NOT EXCEED 110°F. VARIANCE OF TEMPERATURE RANGE OF MIXING VALVE SHALL BE CONSIDERED. REFER TO MANUFACTURERS TEMPERATURE PERFORMANCE OF VALVE AT HIGHEST FLOW RATE OF FAUCET.

1 KNEESPACE TMV DETAIL

NO SCALE

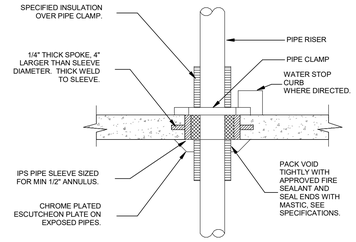


NOTES:

1. PROVIDE FERNCO "PROFLEX" SERIES 3000 SHIELDED TRANSITION COUPLING LISTED FOR PVC TO NO-HUB CAST IRON APPLICATIONS. HYDROTEST OF COUPLING SHALL BE REQUIRED.
2. ALL-THREAD RODS AND RISER CLAMP INSTALLATION REQUIRED AS SHOWN ABOVE.

2 PVC-TO-CAST IRON INSTALLATION DETAIL

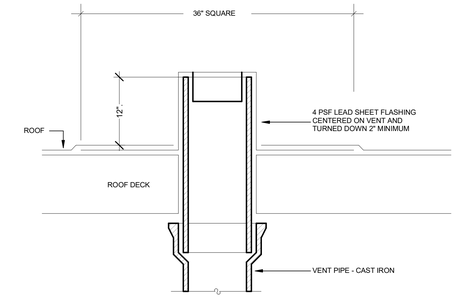
NO SCALE



THIS DETAIL APPLIES TO ALL PIPING THROUGH FLOORS, INCLUDING FIRE SPRINKLER PIPING.

3 PIPE THROUGH FLOOR SLAB DETAIL

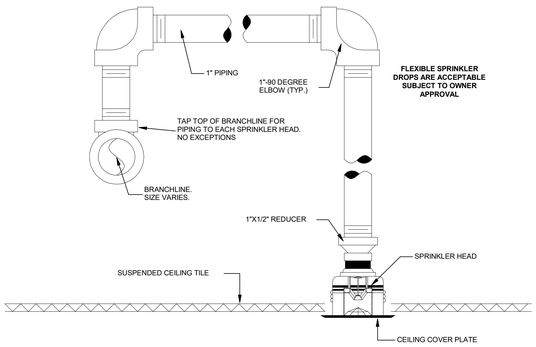
NO SCALE



COORDINATE WITH ARCHITECTURAL DRAWINGS AND SPECIFICATIONS. DO NOT INSTALL VENTS WITHIN 10 FEET OF MECHANICAL AIR INTAKES

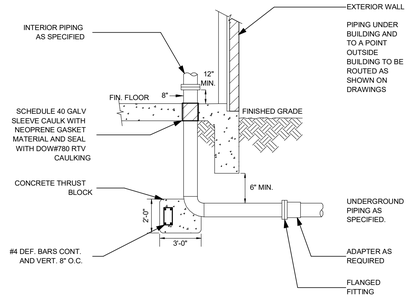
4 ROOF VENT DETAIL

NO SCALE



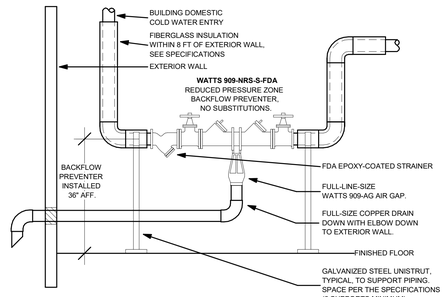
5 FIRE SPRINKLERHEAD INSTALLATION DETAIL

NO SCALE



6 SPRINKLER SYSTEM ENTRY RISER

NO SCALE

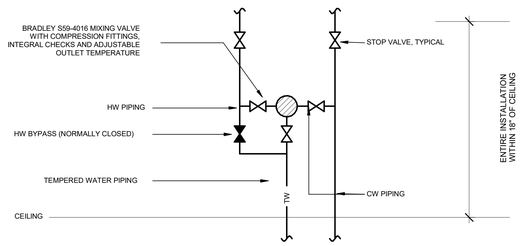


NOTES:

ALL BACKFLOW PREVENTION DEVICES, SHALL BE INSTALLED NO HIGHER THAN 36" ABOVE FINISHED FLOOR AND SHALL BE READILY ACCESSIBLE FOR TESTING AND REPAIR.

7 BACKFLOW PREVENTER INSTALLATION DETAIL

NO SCALE

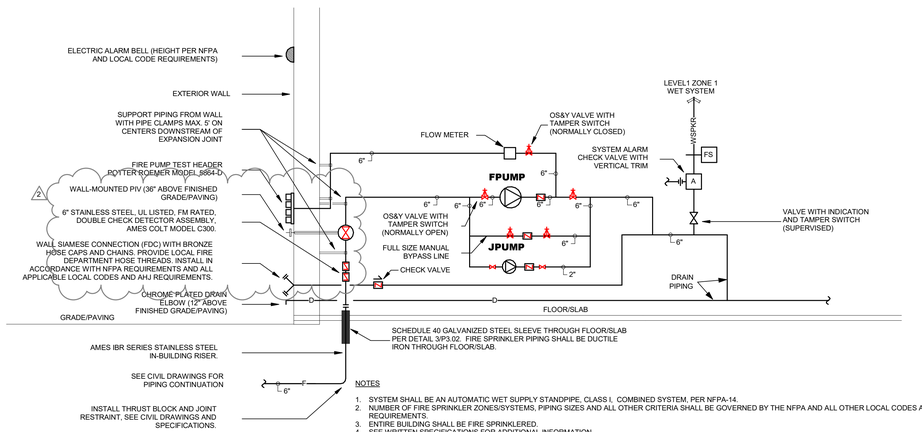


NOTES:

1. THIS DETAIL APPLIES TO KITCHEN PLUMBING CONNECTIONS AND SCULLERY SINKS SEE KITCHEN PLUMBING CONNECTION SCHEDULE AND PLUMBING FIXTURE SCHEDULE.
2. ALL CW AND HW CONNECTIONS SHALL HAVE COMPRESSION TYPE FITTINGS.
3. TMV SHALL BE INSTALLED IN A EASILY/READILY ACCESSIBLE LOCATION.

8 ABOVE CEILING TMV DETAIL

NO SCALE



NOTES

1. SYSTEM SHALL BE AN AUTOMATIC WET SUPPLY STANDPIPE, CLASS I, COMBINED SYSTEM, PER NFPA-14.
2. NUMBER OF FIRE SPRINKLER ZONES/SYSTEMS, PIPING SIZES AND ALL OTHER CRITERIA SHALL BE GOVERNED BY THE NFPA AND ALL OTHER LOCAL CODES AND REQUIREMENTS.
3. ENTIRE BUILDING SHALL BE FIRE SPRINKLERED.
4. SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.
5. TEST VALVES SHALL NOT BE LOCATED EXPOSED IN FINISHED ROOMS AND SHALL NOT DISCHARGE TO EXTERIOR OF BUILDING WHERE CONCRETE IS LOCATED (I.E. SIDEWALK OR DRIVE). INSTALL DISCHARGE IN GRASSY AREAS.
6. ALL SPRINKLER HEADS IN AREAS WITH CEILING GRID SHALL BE CONCEALED TYPE AND SHALL BE CENTERED IN CEILING TILES.
7. SYSTEM SHALL BE DESIGNED TO PROVIDE THE SYSTEM DEMAND FOR A MINIMUM OF 30 MINUTES IN ACCORDANCE WITH NFPA REQUIREMENTS.

9 FIRE SPRINKLER SYSTEM PIPING SCHEMATIC

NO SCALE

FIRE PUMPS

FIRE PUMP SHALL BE VERTICAL INLINE PUMP WITH ODP MOTOR. PUMP SHALL DELIVER 500 GPM @ 50 PSI HEAD. PUMP SHALL BE UL LISTED AND FM APPROVED FOR FIRE SERVICE. 25 HP, 460V/3-PHASE. PENTAIR AURORA 4-383-7C.

FIRE PUMP CONTROLLER SHALL BE TORNATECH MODEL QPA-GPU. FULL VOLTAGE ACROSS-THE-LINE FIRE PUMP CONTROLLER/UL/FM APPROVED CONTROLLER WITH NEMA-2 ENCLOSURE, PRESSURE TRANSDUCER, RUN TEST SOLENOID VALVE, POWER FAIL/PHASE REVERSAL MONITOR, MODBUS TCP/IP COMMUNICATIONS, VISUAL AND AUDIBLE ALARMS, AND 100,000 AMP SHORT CIRCUIT WITHSTAND RATING.

JOCKEY PUMP SHALL BE VERTICAL, MULTI-STAGE PUMP WITH TEFC MOTOR AND 1.25" FLANGE KIT. PUMP SHALL DELIVER 5 GPM @ 60 PSI HEAD. PUMP SHALL BE UL LISTED AND FM APPROVED FOR FIRE SERVICE. 0.75 HP, 460V/3-PHASE. PENTAIR PVM1-6.

JOCKEY PUMP CONTROLLER SHALL BE TORNATECH MODEL JPLT. ACROSS-THE-LINE START JOCKEY PUMP CONTROLLER WITH CIRCUIT BREAKER, MINIMUM RUN TIMER, OVERLOAD PILOT LIGHT, ELAPSED TIME METER, PRESSURE TRANSDUCER, AND NEMA-2 ENCLOSURE.

FIRE PUMP SYSTEM SHALL BE CONNECTED TO STANDBY GENERATOR POWER. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.

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1	Addendum No.3	06/11/2026
2	Addendum No.4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	AM
Drawn By	AM

PROJECT NO.

25-0067.00

SHEET TITLE

PLUMBING SCHEDULES AND DETAILS

SHEET NO.

P3.02

PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	CONNECTION SIZE				SPECIFICATION
		SS	SV	CW	HW	
WC	STANDARD WATER CLOSET WITH FLUSH VALVE TRAP PRIMER	4"	2"	1"	-	WALL MOUNTED, WHITE VITREOUS CHINA, SIPHON JET ACTION, 1.28 GPF, WATERSENSE LABELED, ELONGATED BOWL, CERAMIC GLAZING, TOP SPUD, ADA/TAS COMPLIANT AMERICAN STANDARD MILLENIUM FLOWISE MODEL 2257.101; SLOAN ROYAL 111 MANUAL OPERATED, NON-HOLD OPEN HIGH-EFFICIENCY FLUSH VALVE WITH FLUSH VALVE TRAP PRIMER, 1.28 GPF, COMPLETE WITH VACUUM BREAKER AND ANGLE STOP SET, AND ADA/TAS COMPLIANT LEVER ACTUATOR WITH LEVER INSTALLED ON LEFT SIDE (FOR FIXTURES DESIGNATED AS "ACCESSIBLE", INSTALL LEVER ON "WIDE-SIDE" OF TOILET STALL) AND, FLOOR MOUNTED CARRIER; BEMIS 1655-SSCT, WHITE, OPEN FRONT SEAT LESS COVER WITH SELF-SUSTAINING, STAINLESS STEEL CHECK HINGE.
LAV	STANDARD RESTROOM LAVATORY	1-1/2"	2"	1/2"	1/2"	WALL HUNG, WHITE VITREOUS CHINA, 4" CENTERS, FRONT OVERFLOW, SELF-DRAINING DECK AREA, 21" X 18", 4" MAXIMUM FRONT LIP DEPTH, ADA/TAS COMPLIANT AMERICAN STANDARD MODEL 0355.012; CHROME PLATED, ALL CAST BRASS CONSTRUCTION, ADA/TAS COMPLIANT, VANDAL-PROOF, MANUAL NON-METERING FAUCET WITH USER TEMPERATURE CONTROL, HIGH TEMPERATURE LIMIT STOP, LEVER HANDLE OPERATION, 0.5 GPM NON-AERATING LAMINAR SPRAY, CENTERSHANK, DECK MOUNTED WITH 4" CENTERS, COPPER SUPPLIES, WITH 3/8" COMPRESSION FITTING, CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9, CHICAGO MODEL 2200-4E3905ABCP, ASSE1070 CERTIFIED THERMOSTATIC MIXING VALVE, BRADLEY MODEL 959-4000A; CHROME PLATED, 17-GAUGE CAST BRASS GRID DRAIN WITH WHEELCHAIR OFFSET FITTING; CHROME PLATED, 17-GAUGE, CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS, TRUEBRO HANDI LAV-GUARD VANDAL-PROOF, WHITE INSULATION KITS; AND, FLOOR MOUNTED, CONCEALED ARMS CARRIER. INSTALL UNDER LAV MIXING VALVE ON HW SUPPLY SIDE OF FAUCET. TEMPERED SUPPLY ONLY TO EACH FAUCET. SEE DETAIL 1/P3.02. SEE ARCHITECTURE FOR MOUNTING HEIGHTS.
SK	CLASSROOM ELEMENTARY SINK	1-1/2"	2"	1/2"	1/2"	SINGLE BOWL DROP-IN SINK, 18-GAUGE STAINLESS STEEL WITH STAINLESS STEEL CHANNELS, ADA/TAS COMPLIANT, DRAINS IN REAR CENTER OF BOWLS, FULLY UNDERCOATED AND SOUND DEADENED, THREE (3) FAUCET HOLES, 22" X 19" X 4-1/2" DEEP ELKAY MODEL LRAD-221945, 8" CENTERS CONCEALED DECK MOUNT, 1.5 GPM ADA/TAS COMPLIANT, HIGH ARC FAUCET, QUARTER TURN CERAMIC CARTRIDGES, LEVER HANDLES, COMPLETELY VANDAL PROOF INCLUDING AERATOR (CHICAGO E12VP), WITH COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9, CHICAGO MODEL 201-RSHA8AE35VXKAB; ELKAY LK-99 DRAIN OUTLET WITH HEAVY-GAUGE STAINLESS STEEL BODY, REMOVABLE STAINLESS STEEL BASKET WITH LOCKING SHELL AND RUBBER STOPPER ON BOTTOM; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS; AND, TRUEBRO HANDI LAV-GUARD, VANDAL-PROOF, WHITE INSULATION KITS WHERE KNEESPACE MILLWORK SCREEN IS NOT PROVIDED. INSTALL ASSE 1070 TEMPERED MIXING VALVE ON HW SUPPLY SIDE OF FAUCET. PER DETAIL 1/P3.02
SK-2	CLINIC SINK	1-1/2"	2"	1/2"	1/2"	SINGLE COMPARTMENT, 18-GAUGE STAINLESS STEEL WITH STAINLESS STEEL CHANNELS, DRAINS IN REAR-CENTER OF BOWLS, FULLY UNDERCOATED AND SOUND DEADENED, THREE (3) FAUCET HOLES; ADATAS COMPLIANT, 22" X 19" X 6-1/2" ELKAY MODEL LRAD2219; 8" CENTERS CONCEALED DECK MOUNT, 1.5 GPM ADA/TAS COMPLIANT, HIGH ARC FAUCET, QUARTER TURN CERAMIC CARTRIDGES, LEVER HANDLES, COMPLETELY VANDAL PROOF INCLUDING AERATOR (CHICAGO E12VP), WITH COPPER SUPPLIES AND CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9, CHICAGO MODEL 201-RSHA8AE35VXKAB; ELKAY LK-99 DRAIN OUTLET WITH HEAVY-GAUGE STAINLESS STEEL BODY, REMOVABLE STAINLESS STEEL BASKET WITH LOCKING SHELL AND RUBBER STOPPER ON BOTTOM; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOPS WITH CHROME PLATED COPPER RISERS; AND, TRUEBRO HANDI LAV-GUARD, VANDAL-PROOF, WHITE INSULATION KITS WHERE KNEESPACE MILLWORK SCREEN IS NOT PROVIDED. INSTALL ASSE 1070 TEMPERED MIXING VALVE ON HW SUPPLY SIDE OF FAUCET PER DETAIL 1/P3.02
SK-3	BREAK ROOM SINK	1-1/2"	2"	1/2"	1/2"	SAME AS TYPE "SK-2" EXCEPT WITH DOUBLE BOWL DROP-IN SINK, 18-GAUGE STAINLESS STEEL WITH STAINLESS STEEL CHANNELS, ADA/TAS COMPLIANT, DRAINS IN REAR CENTER OF BOWLS, FULLY UNDERCOATED AND SOUND DEADENED, THREE (3) FAUCET HOLES, 33" X 19" X 6-1/2" ELKAY MODEL LRAD-331965. FOR DISHWASHER, TIE WASTE INTO TAILPIECE OF SINK P-TRAP AND INSTALL CHROME PLATED AIR GAP FITTING ON FAUCET LEDGE. INSTALL SEPARATE/DEDICATED WATER STOPS FOR DISHWASHER. SEE ARCHITECTURAL DRAWINGS. 2
MB	MOP BASIN	3"	2"	3/4"	3/4"	28" X 28" X 12" DEEP TERRAZZO, TWO (2) STAINLESS STEEL SPLASH CATCHER PANELS, 6" DROP FRONT WITH STAINLESS STEEL CAP, CAST BRASS DRAIN WITH STAINLESS STEEL STRAINER, STERN WILLIAMS HLOW MODEL HL-1900-BP; FAUCET SHALL BE POLISHED CHROME PLATED SERVICE SINK TYPE WITH VACUUM BREAKER, INTEGRAL SUPPLY CHECK STOPS, SPOUT WITH PAIL HOOK, HOSE END AND TOP BRACE, CHICAGO MODEL 897-CP ONLY (INSTALL BACKING/BRACING INSIDE WALL TO SUPPORT FAUCET AND TOP BRACE).
EDF	DUAL DRINKING FOUNTAIN WITH BOTTLE FILLER	1-1/2"	1-1/2"	1/2"	-	DUAL STATION, MOUNTED ON WALL WITH CARRIER, ALL STAINLESS STEEL, 0.7 GPM MAX, ADA/TAS COMPLIANT, BARRIER FREE, SENSOR ACTIVATED, 8 GPH AT ARI STANDARDS, 2-STREAM METAL BUBBLER, VANDAL-PROOF KITS, LEAD-FREE (CERTIFIED FOR MEETING ALL REQUIREMENTS OF NSF 61 SECTION 9), REFRIGERANT HFC-134a, MECHANICAL ACTUATION VALVE (NO ELECTRONIC SOLENOID VALVE), FILTERED, WITH VISUAL FILTER MONITOR AND BOTTLE FILLER. HALSEY TAYLOR MODEL HTHB-HVRGRNWBL-WF; CHROME PLATED, 17-GAUGE CAST BRASS P-TRAP WITH CLEANOUT PLUG; CHROME PLATED, CAST BRASS, LOOSE KEY ANGLE STOP WITH CHROME PLATED COPPER RISER; CHAIR CARRIERS; AND, STAINLESS STEEL ADA APRON WHERE REQUIRED BY ADA/TAS.

FIRE PROTECTION SYMBOLS LEGEND

F	FIRE PROTECTION PIPING	(E)	EXISTING
AWSP	AUTOMATIC WET STANDPIPE	(N)	NEW
MWSP	MANUAL WET STANDPIPE	FDC	FIRE DEPARTMENT CONNECTION
ADSP	AUTOMATIC DRY STANDPIPE	FHV	FIRE HOSE VALVE
MDSP	MANUAL DRY STANDPIPE	FPTH	FIRE PUMP TEST HEADER
AWS	AUTOMATIC WET SPRINKLERS	PIV	POST INDICATOR VALVE
ADS	AUTOMATIC DRY SPRINKLERS	FSR	FIRE SPRINKLER RISER(S)
D	DRAIN PIPING	FPUMP	FIRE PUMP
	STOP VALVE (NORMALLY OPEN)	JPUMP	JOCKEY PUMP
	STOP VALVE (NORMALLY CLOSED)		
OS	OS&Y VALVE (NORMALLY OPEN)		
	OS&Y VALVE (NORMALLY CLOSED)		
F-1	RISER F-1		

PLUMBING SYMBOLS LEGEND

SAN	SANITARY WASTE BELOW SLAB (SAN)	(E)	EXISTING	GT	GREASE TRAP
SAN	SANITARY WASTE ABOVE SLAB (SAN)	(N)	NEW	ANT	ACID NEUTRALIZATION TANK
V	VENT PIPING BELOW SLAB (V)	SAN.	SANITARY	SO	SAND/OIL SEPARATOR
V	VENT PIPING ABOVE SLAB (V)	CW	DOMESTIC COLD WATER	STW	SAMPLING TEST WELL
	DOMESTIC COLD WATER PIPING (CW)	HW	DOMESTIC HOT WATER	GM	GAS METER
	DOMESTIC HOT WATER PIPING (HW)	HWR	DOMESTIC HOT WATER RETURN	EWH	ELECTRIC WATER HEATER
	DOMESTIC HOT WATER RETURN PIPING (HWR)	WC	WATER CLOSET	GWH	GAS WATER HEATER
G50	GAS SERVICE (BY UTILITY PROVIDER) (G50)	LAV	LAVATORY	CP	HOT WATER CIRCULATOR PUMP
G5	INTERMEDIATE PRESSURE GAS PIPING (5 PSIG) (G5)	UR	URINAL	SP	SUMP PUMP
G	LOW PRESSURE GAS PIPING (4-8 OZ.) (G)	SK	SINK	FD	FLOOR DRAIN
D	DRAIN/RELIEF VENT PIPING	MB	MOP BASIN	FSINK	FLOOR SINK
	STOP VALVE (NORMALLY OPEN)	EDF	ELECTRIC DRINKING FOUNTAIN	TD	TRENCH DRAIN
	STOP VALVE (NORMALLY CLOSED)	WH	WALL HYDRANT	2CO	DOUBLE SAN. CLEANOUT (2-WAY)
	GAS VALVE (NORMALLY OPEN)	HB	HOSEBIBB	CO	SANITARY SEWER CLEANOUT
	GAS VALVE (NORMALLY CLOSED)	WBOX	CLOTHES WASHER DRAIN/VALVE BOX	WCO	WALL CLEANOUT
	SOLENOID VALVE (NORMALLY OPEN)	VBOX	RECESSED WATER VALVE BOX	ACO	ACID WASTE CLEANOUT
	SOLENOID VALVE (NORMALLY CLOSED)			AWCO	ACID WASTE WALL CLEANOUT
	BACKFLOW PREVENTER (WATTS 909 ONLY)				
P-1 2" VTR	RISER P-1, 2" VENT THROUGH ROOF				
	GAS PRESSURE REDUCING/REGULATING VALVE				

PLUMBING PIPING MATERIALS

SANITARY WASTE AND VENT

BELOW SLAB: SCHEDULE 40, DWV PVC.

ABOVE SLAB: STANDARD WEIGHT, CAST IRON, NO-HUB PIPING.

DOMESTIC WATER

INTERIOR: TYPE L COPPER WITH SOLDER TYPE WROUGHT COPPER FITTINGS, MADE UP WITH LEAD-FREE SOLDER.

TRAP PRIMER: 1/2" TYPE K COPPER LINE

EXTERIOR: TYPE K COPPER WITH NO FITTINGS AND PVC SLEEVE. SLEEVE SHALL BE 2 PIPE SIZES LARGER THAN PIPE AND BE MINIMUM 2". BEYOND 5 FEET FROM BUILDING, SEE CIVIL DRAWINGS AND SPECIFICATIONS.

NATURAL GAS

INTERIOR: SCHEDULE 40 BLACK STEEL WITH WELDED JOINTS.

EXTERIOR ABOVE GRADE: SCHEDULE 40 BLACK STEEL WITH WELDED JOINTS. ALL PIPING PAINTED WITH INDUSTRIAL GRADE PAINT.

EXTERIOR BELOW GRADE: U.L. LISTED POLYETHYLENE GAS PIPING WITH SOCKET WELD JOINTS.

SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

SEE WRITTEN SPECIFICATIONS FOR ADDITIONAL INFORMATION.

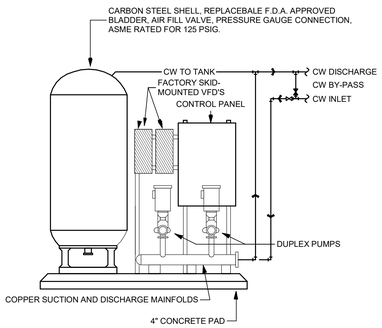
PLUMBING FIXTURE NOTES

1. ALL FIXTURES SHALL MEET WATER CONSERVATION PERFORMANCE STANDARDS MANDATED BY SENATE BILL 587. ALL FIXTURES SHALL HAVE FLOW RESTRICTION DEVICES (DRINKING FOUNTAINS SHALL BE SELF-CLOSING) TO COMPLY WITH THESE REQUIREMENTS.
2. ALL FIXTURES SHALL HAVE CONTROLS REQUIRING OPERATING FORCE NO GREATER THAN FIVE (5) POUNDS.
3. FOR LAVATORIES AND SINKS, ALL FAUCETS SHALL BE NO-LEAD SOLID BRASS, MEETING ALL REQUIREMENTS OF ANSI/NSF 61, SECTION 9 AND CERTIFIED BY U.L. AS SUCH. ALSO, INSTALL BRADLEY MODEL S59-4000A MIXING VALVE ON HOT WATER SUPPLY SIDE OF ALL FAUCETS UNLESS HIGH TEMPERATURE LIMIT IS PROVIDED WITH FAUCET. AND, INSTALL TRUEBRO HANDI LAV-GUARD VANDAL-PROOF INSULATION KITS OVER P-TRAP, SUPPLIES, STOPS AND ALL SHARP EDGES FOR ALL SINKS AND LAVATORIES WHERE CASEWORK KNEESPACE SCREEN IS NOT INSTALLED.
4. ALL PLUMBING FIXTURES REFERENCED AS "ADA" OR "HANDICAP" SHALL MEET ALL REQUIREMENTS OF THE ADA AND THE TEXAS ACCESSIBILITY STANDARDS. IT SHALL BE THE PLUMBING CONTRACTORS RESPONSIBILITY TO MEET THESE REQUIREMENTS.
5. IN MANY CASES, FIXTURES WITH THE SAME PLUMBING DESIGNATION HAVE DIFFERENT INSTALLATION HEIGHTS - REFERENCE ARCHITECTURAL DRAWINGS FOR ALL INSTALLATION HEIGHTS AND HANDICAP FIXTURE DESIGNATIONS. FIXTURES DESIGNATED AS ADULT HANDICAP SHALL MEET ALL REQUIREMENTS OF THE ADA. FIXTURES DESIGNATED AS CHILD HANDICAP SHALL MEET ALL REQUIREMENTS OF THE TEXAS ACCESSIBILITY STANDARDS FOR THE SPECIFIED CHILD AGE GROUP (SPECIFIED BY ARCHITECT).
6. FOR ALL PLUMBING FIXTURES, WHERE COPPER PIPING IS STUBBED THROUGH WALL FOR DRAIN CONNECTION, INSTALL MARVEL FITTING FOR EASE OF SERVICE AND REPAIRS.

DRAINS, CLEANOUTS AND HYDRANTS

MARK	DESCRIPTION	CONNECTION SIZE				SPECIFICATION
		SS	SV	CW	HW	
FD	FLOOR DRAIN W/ TRAP PRIMER	4"	2"	1/2"	-	TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 1/2" TRAP PRIMER CONNECTION, 6" ROUND HEAVY-DUTY SOLID STAINLESS STEEL STRAINER. ZURN MODEL ZS415BS-P.
FD-2	EQUIPMENT FLOOR DRAIN	4"	2"	-	-	CAST IRON, MEDIUM DEPTH DRAIN WITH FLANGE, CLAMPING DEVICE, SEEPAGE OPENINGS, DUCTILE IRON TRUE-FIT SEDIMENT BUCKET , PROSET TRAP GUARD. ZURN MODEL ZS540-LG. DRAIN SHALL BE DESIGNED SUCH THAT GRATE CANNOT BE INSTALLED WITHOUT SEDIMENT BUCKET.
FD-3	GRATED MECHANICAL ROOM FLOOR DRAIN	4"	2"	-	-	CAST IRON WITH FLANGE, SEEPAGE OPENINGS, 9" HEAVY-DUTY DUCTILE IRON GRATE WITH STAINLESS STEEL VENEER, CLAMPING DEVICE AND PROSET TRAP GUARD. ZURN MODEL ZS550-PROSET.
FD-K	KITCHEN FLOOR DRAIN	4"	2"			TWO-PIECE CAST IRON WITH SEEPAGE FLANGE, REVERSIBLE CLAMPING COLLAR, 7" ROUND HEAVY-DUTY SOLID STAINLESS TRACTOR DUTY GRATE. ZURN MODEL ZS415-7N
FSINK	3/4 GRATE, 12" FLOOR SINK	4"	2"	-	-	CAST IRON, 8" DEEP SUMP, A.R.E. INTERIOR. INTEGRAL FLANGE FOR SUPPORT, CLAMPING DEVICE WHERE VAPOR BARRIER IS INSTALLED BETWEEN SLAB AND CONCRETE BEDDING FOR FLOOR, ALUMINUM SECONDARY DOME STRAINER AND 12" SQUARE HEAVY DUTY STAINLESS STEEL TRACTOR DUTY FRAME WITH 3/4-TRACTOR GRATE. ZURN MODEL ZS1901-K-3-32-PROSET.
CO	FLOOR CLEANOUT	VARIES	-	-	-	ADJUSTABLE EXTENSION HOUSING, CAST IRON FERRULE WITH FULL-LINE-SIZE ABS PLUG (UP TO 4"), 5" DIAMETER STAINLESS STEEL ACCESS COVER WITH VANDAL-PROOF SECURITY SCREWS, ROUND FRAME AND TOP STYLE COMPATIBLE WITH FLOOR TYPE (REFERENCE ARCHITECTURAL DRAWINGS FOR FLOOR TYPES). ZURN MODEL ZS1400-VP. OUTDOOR CLEANOUT - SAME AS TYPE "CO" EXCEPT WITH HEAVY-DUTY DUCTILE IRON, NICKEL BRONZE TOP. ZURN MODEL ZN1400-VP-HD. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WCO	WALL CLEANOUT	VARIES	-	-	-	CAST IRON FERRULE WITH COUNTERSUNK HEAD (FULL-LINE-SIZE ABS PLUG UP TO 4"), ZURN MODEL Z1440. ACCESS COVER SHALL BE 8" SQUARE, 16 GAUGE STEEL HINGED ACCESS DOOR WITH SCRE DRIVER LOCK, ACUDOR UF-500 MODEL OR APPROVED EQUAL. PAINT COLOR SPECIFIED BY ARCHITECT. INSIDE CABINETWORK WHERE CLEANOUT IS **NOT** VISIBLE, ACCESS PANEL MAY BE ROUND STAINLESS STEEL TYPE WITH SCREWDRIVER ACCESS, ZURN MODEL ZS1469-VP
2CO	DOUBLE CLEANOUTS	4"	-	-	-	SAME AS OUTDOOR CLEANOUTS. INSTALLED FOR TWO-WAY RODDING. SINGLE CLEANOUT WITH 2-WAY FITTING IS NOT ACCEPTABLE, PROVIDE TWO SEPARATE CLEANOUTS. INSTALL 18" X 18" X 6" THICK CONCRETE PAD AROUND EACH OUTDOOR CLEANOUT.
WBOX	CLOTHES WASHER DRAIN/VALVE BOX	2"	2"	1/2"	1/2"	HEAVY-GAUGE GALVANIZED STEEL CONSTRUCTION, RECESSED IN WALL, VALVE AND DRAIN CONNECTIONS, WATTS DUO-CLOZ VALVE, GUY GRAY MODEL WB-200.
VBOX	CW VALVE BOX	-	-	1/2"	-	RECESSED WITH ANGLE VALVE FOR CONNECTION TO VENDING MACHINE OR REFRIGERATOR ICE MAKER GUY GRAY MODEL BIM-875.
WH	EXTERIOR WALL HYDRANT	-	-	3/4"	-	NON-FREEZE HOSE BOX, QUARTER-TURN WHEEL HANDLE, ASSE APPROVED ANTI-SIPHON INTEGRAL VACUUM BREAKER AND DUAL CHECK VALVE, 3/4" STRAIGHT INLET HOSE CONNECTION, CAST STAINLESS STEEL HYDRANT BOX, FLUSH MOUNTED 16-GAUGE STAINLESS STEEL FRAME AND 180° DROP DOWN DOOR AND WALL CLAMP JAY R. SMITH MODEL 5519-WC.
HB	HOSE BIBB	-	-	3/4"	-	3/4" HOSE THREAD, INTEGRAL VACUUM BREAKER SPOUT, ROUGH CHROME FINISH WITH REMOVABLE KEYED HANDLE, WALL FLANGE; CHICAGO MODEL 952.

1



CW BOOSTER PUMP SCHEDULE (CWPUMP)

VC SYSTEMS DUPLEX VARIABLE SPEED, VARIABLE FLOW, FACTORY ASSEMBLED DOMESTIC WATER BOOSTER SYSTEM. THE SYSTEM SHALL BE RATED FOR A SYSTEM CAPACITY OF 77 GPM AT A SYSTEM PRESSURE OF 55 PSIG WITH A MINIMUM SUCTION PRESSURE OF 15 PSIG AND A MAXIMUM SUCTION RESSURE OF 45 PSIG. FACTORY ASSEMBLED AND TESTED INCLUDING PUMPS, MOTORS, VALVES, DISCHARGE PRESSURE GAUGES, PRESSURE TRANSDUCERS, CONTROLS, AND STAINLESS STEEL PIPING HEADERS. ALL COMPONENTS SHALL BE FACTORY FINISHED IN A HIGH-QUALITY ENAMEL PAINT. VC SYSTEMS MODEL 2VC-PMC-V-3-320-460

EACH PUMP SHALL BE CLOSE COUPLED END SUCTION CENTRIFUGAL TYPE WITH DUCTILE IRON CASING, 304 STAINLESS STEEL IMPELLER, STAINLESS STEEL SHAFT SLEEVE, AND STAINLESS STEEL TRIM. EACH PUMP SHALL BE RATED FOR 50 GPM AT 105 FEET TDH. MOTOR SHALL BE PREMIUM EFFICIENCY, 3 HP, 3500 RPM, 460V/3-PHASE/60HZ, SUITABLE FOR INVERTER DUTY OPERATION. SYSTEM SHALL UTILIZE TWO PUMPS OPERATING IN DUPLEX CONFIGURATION.

PROVIDE AND MOUNT ON THE SYSTEM SKID TWO VARIABLE FREQUENCY DRIVES. DRIVES SHALL BE SIZED FOR MAXIMUM POSSIBLE AMP DRAW THROUGHOUT THE PROGRAMMED SEQUENCE OF PUMP OPERATION. DRIVES SHALL BE UL LISTED AND RATED FOR A MINIMUM 100 KAIC.

CONTROL PANEL SHALL BE UL508A LISTED, FACTORY MOUNTED AND WIRED. CONTROL PANEL SHALL INCLUDE MAIN DISCONNECT, INDIVIDUAL BRANCH PROTECTION, PROGRAMMABLE LOGIC CONTROLLER, COLOR HMI DISPLAY, AUTOMATIC AND MANUAL PUMP ALTERNATION, LEAD/LAG CONTROL, PRESSURE TRANSDUCERS, RUN STATUS INDICATION, ALARM INDICATION, BACNET MS/TP, BACNET IP, MODBUS TCP COMMUNICATIONS, COMMON ALARM CONTACTS, REMOTE DISABLE CONTACTS, AND GENERATOR INTERLOCK CAPABILITY.

PROVIDE 79 GALLON ASME BLADDER TANK. TANK SHALL BE INSTALLED ON A 4" CONCRETE HOUSEKEEPING PAD, SECURED TO THE FLOOR, AND LOCATED ADJACENT TO A FLOOR DRAIN.

DOMESTIC WATER PUMPS SYSTEM SHALL BE CONNECTED TO STANDBY GENERATOR POWER. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.

1 **DOMESTIC WATER BOOSTER PUMP (CWPUMP)**

NO SCALE

1

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Katy ISD
Katy, TX

NEW OPPORTUNITY AWARENESS CENTER

ISSUED: May 26, 2026

REVISIONS

Revision No.		Revision Date
1	Addendum No.3	06/11/2026
2	Addendum No.4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	AM
Drawn By	AM

PROJECT NO.

25-0067.00

SHEET TITLE

PLUMBING SCHEDULES AND DETAILS

SHEET NO.

P3.03

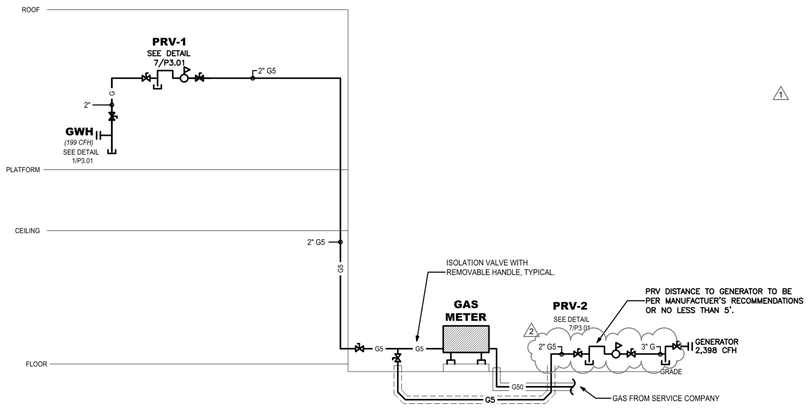
NATURAL GAS LOAD

METER OUTLET PRESSURE SHALL BE 5 PSI.

FURTHEST PIPING RUN FROM METER IS 50 FEET.

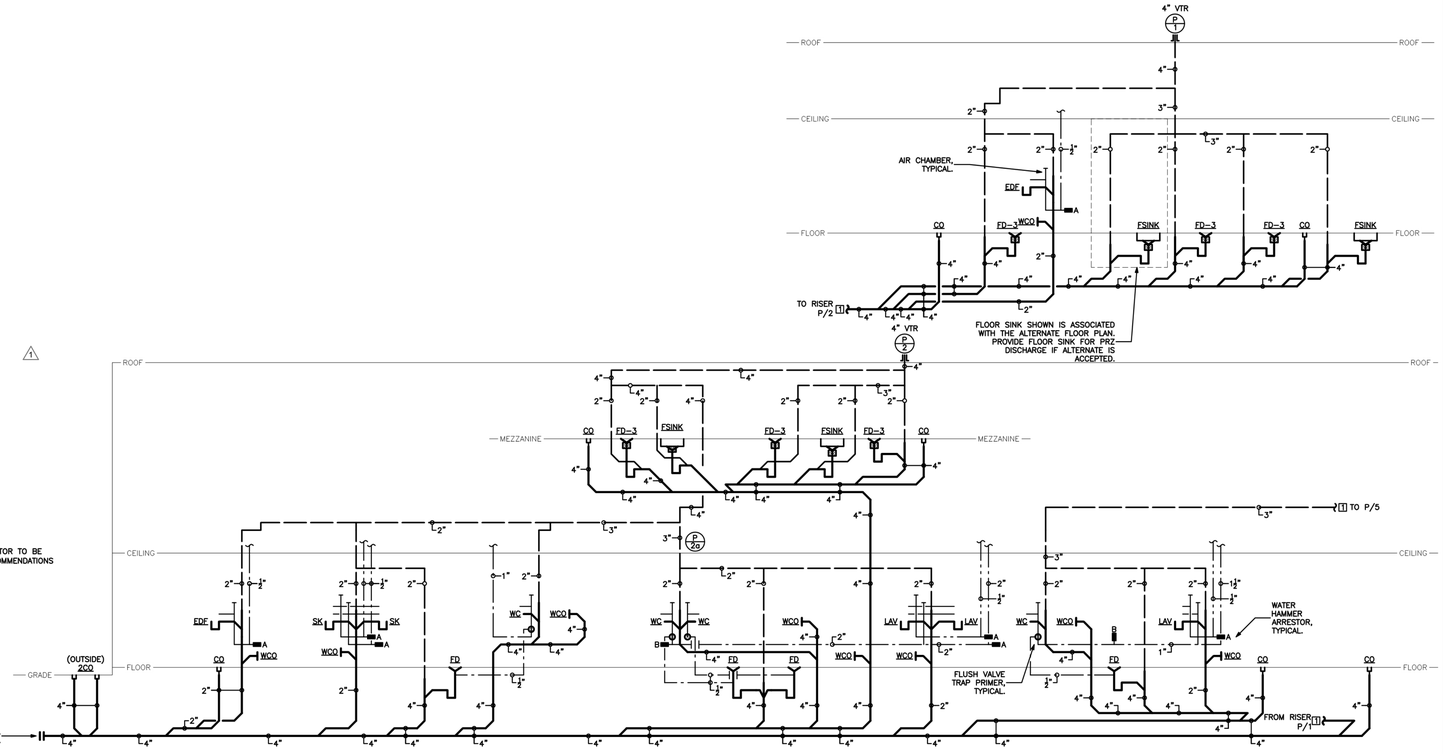
CONNECTED LOADS

GWH	199 CFH	
GENERATOR	1,915 CFH	
TOTAL GAS LOAD	2,114 CFH	Z1



1 TYPICAL NATURAL GAS RISER DIAGRAM

NO SCALE



2 PLUMBING RISER DIAGRAM

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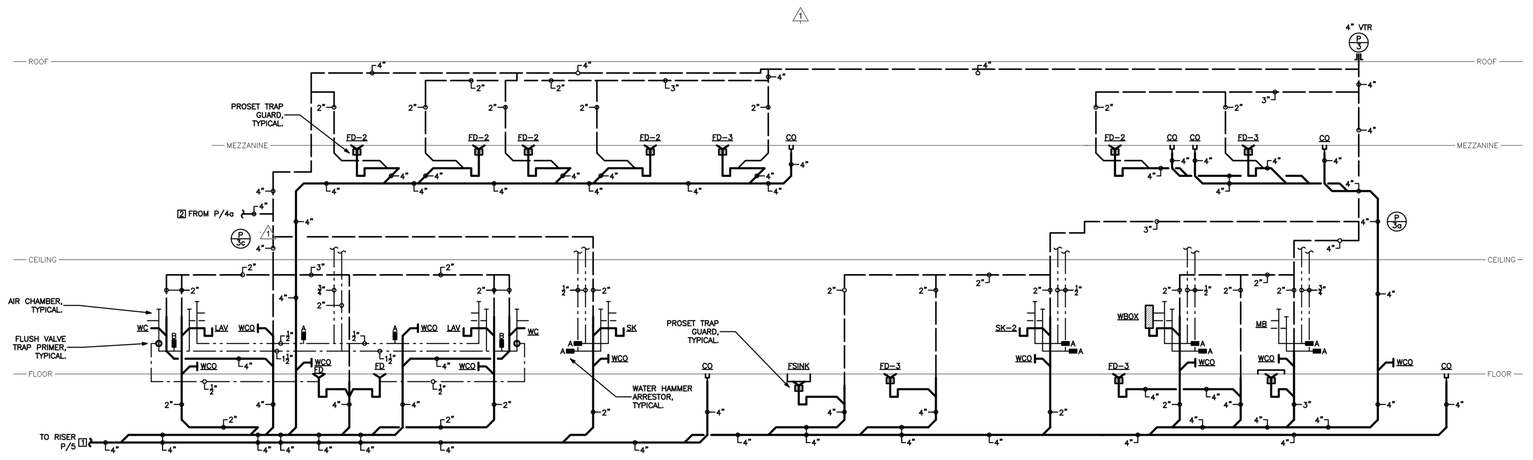

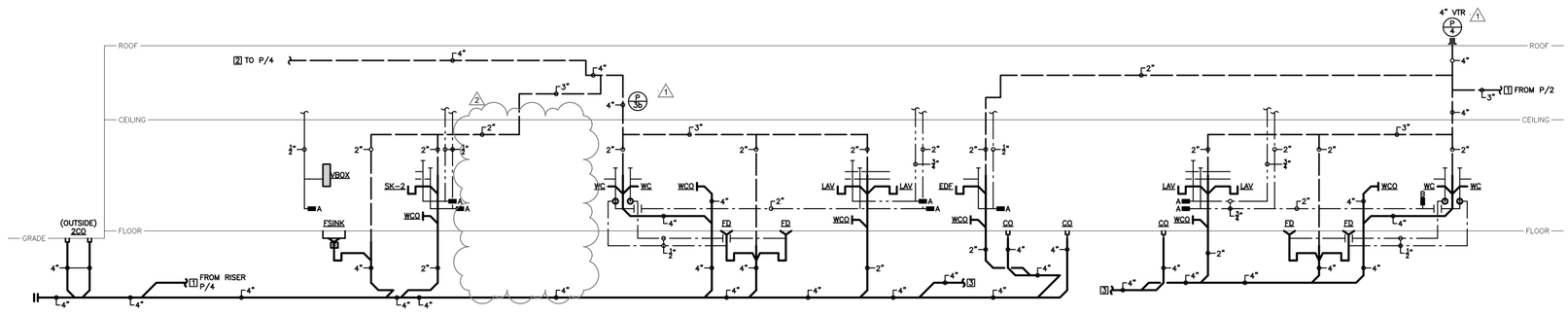

3 PLUMBING RISER DIAGRAM

NO SCALE

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ISSUED: May 26, 2026

REVISIONS

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1	Addendum No.3	06/11/2026
2	Addendum No.4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	AM
Drawn By	AM

PROJECT NO.

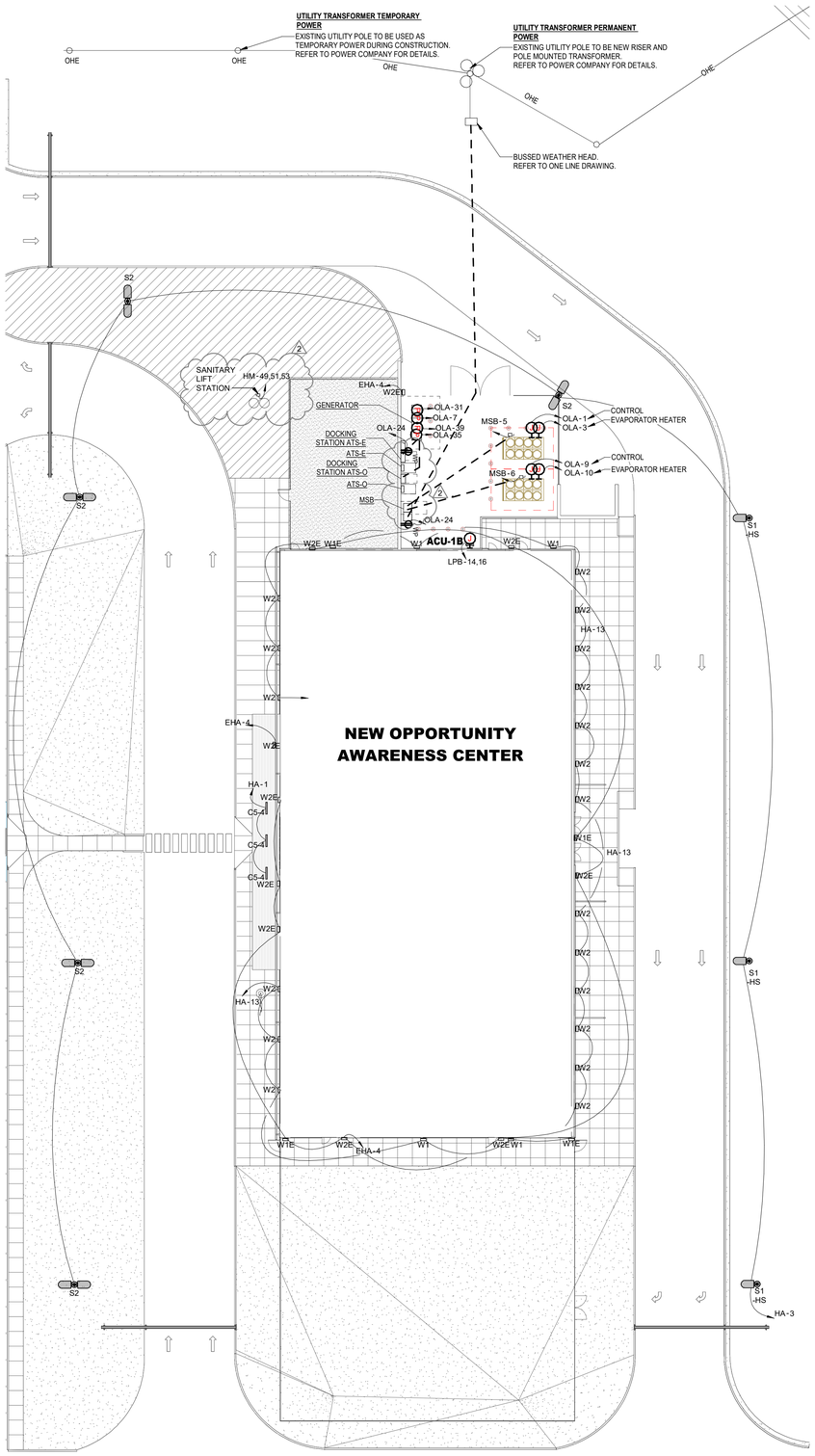
25-0067.00

SHEET TITLE

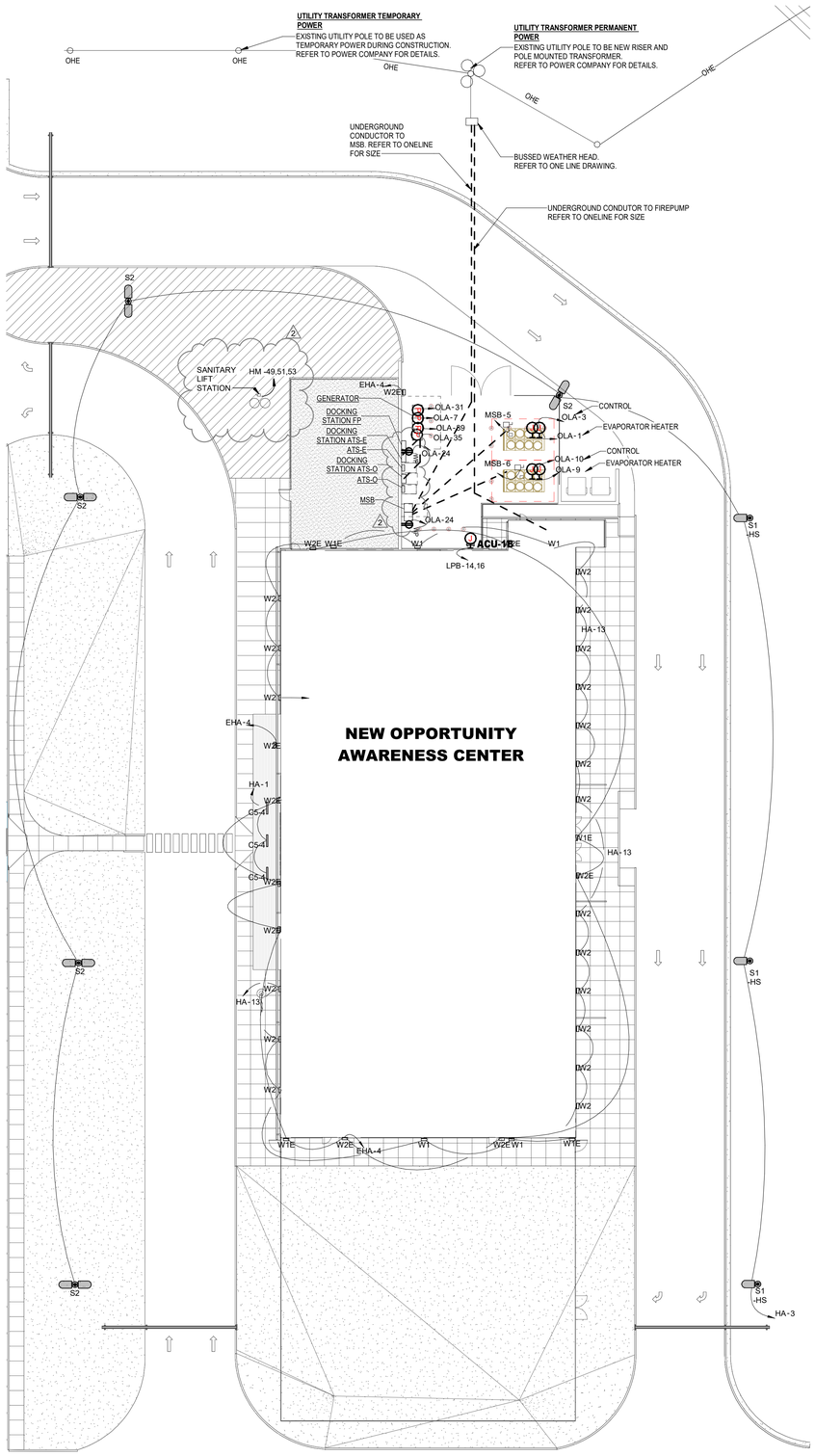
PLUMBING RISER DIAGRAM

SHEET NO.

P4.01



1 **ELECTRICAL SITE PLAN**
SCALE= 1" = 20'-0"



2 **ELECTRICAL SITE PLAN - ALTERNATE**
SCALE= 1" = 20'-0"

ELECTRICAL SITE NOTES

1. REFER TO ELECTRICAL ONE LINE DRAWING.
2. ALL EXTERIOR ELECTRICAL EQUIPMNET TO BE NEMA 4X.
3. CONDUIT ROUTING SHOWN FOR REFERENCE AND SHALL BE COORDINATED IN THE FIELD.
4. FINAL DESIGN OF THE UTILITY INCOMING POWER SUPPLY SHALL BE BY THE UTILITY COMPANY PROVIDER.
5. ALL WORK SHALL BE COORDINATED IN THE FIELD WITH ALL TRADES. DEVIATIONS FROM CONTRACT DOCUMENTS SHALL BE REPORTED TO THE DESIGN TEAM.
6. PROVIDE UNDERGROUND CONDUIT TO FEED THE NEW POLE MOUNTED LIGHTING FIXTURES. ALL UNDERGROUND CONDUIT SHALL BE COORDINATED WITH CIVIL, MECHANICAL AND PLUMBING PRIOR TO ROUGH-IN.
7. REFER TO LIGHTING FIXTURE SCHEDULE FOR LIGHT FIXTURE SPECIFICATIONS.
8. POLE MOUNTED LIGHT FIXUTURES ARE TO BE CONTROLLED VIA RELAY CONTACTOR LINKED TO A TIMECLOCK AND PHOTOCELL WITH AN OVERRIDE SWITCH TO THE BAS. FINAL LOCATION OF SWITCH TO BE COORDINATED WITH OWNER AND ARCHITECT.
9. SITE POLE LIGHTS SHOULD BE CONTROLLED SEPARATELY FROM ANY EXISTING LIGHTS.
10. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR EXACT WIRE SIZE.
11. PROVIDE RECEPTACLE FOR IRRIGATION CONTROL SYSTEM. FINAL LOCATION TO BE COORDINATED WITH ALL TRADES
12. REFER TO TECHNOLOGY DRAWINGS FOR EXACT CAMERA LOCATIONS.
13. CONTRACTOR TO VERIFY MINIMUM OF 10FEET FROM SERVICE ENTRANCE TO BUSSED WEATHER HEAD.
14. LOCATE LIGHT FIXTURES TO AVOID INTERFERENCE WITH ROLLING GATE OPERATION. COORDINATE LOCATIONS WITH ALL TRADES PRIOR TO INSTALLATION.
15. PROVIDE A TWO-CONTACTOR LIGHTING CONTROL RELAY TO SERVE WALL PACK AND SITE POLE LIGHTING. BUILDING FAÇADE LIGHTING SHALL BE CONTROLLED ON A SEPARATE CONTACTOR AND SHALL OPERATE INDEPENDENTLY OF SITE POLE LIGHTING.

CONDUIT PATH LEGEND

———	CONDUIT PATH IS OVERHEAD.
- - - - - - - -	CONDUIT PATH IS UNDERGROUND.

LEGEND APPLIES TO UTILITY AND SERVICE ENTRANCE.

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Proj. Arch.	Lynn Rabatsky
Designer	Designer
Drawn By	AR

PROJECT NO.
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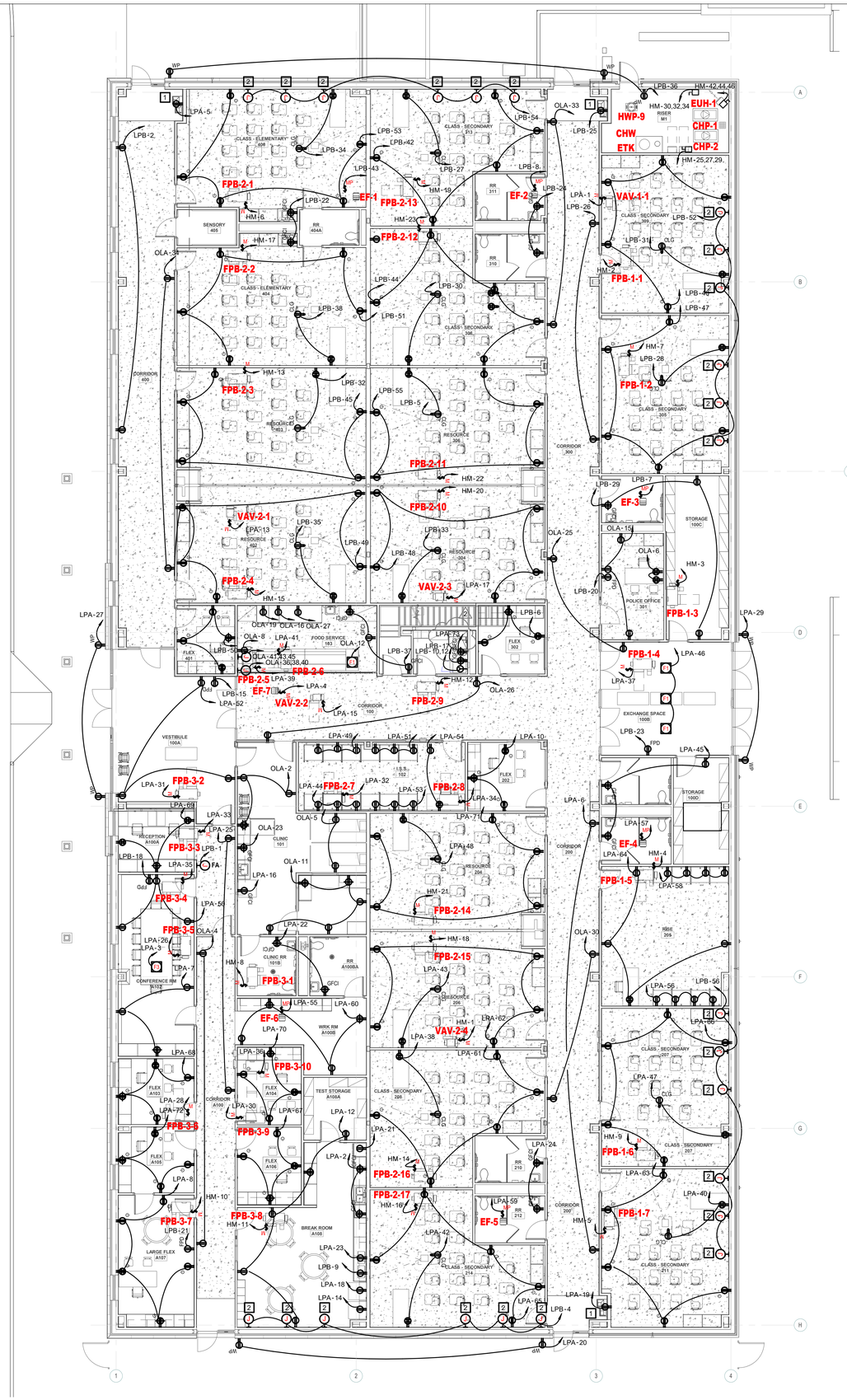
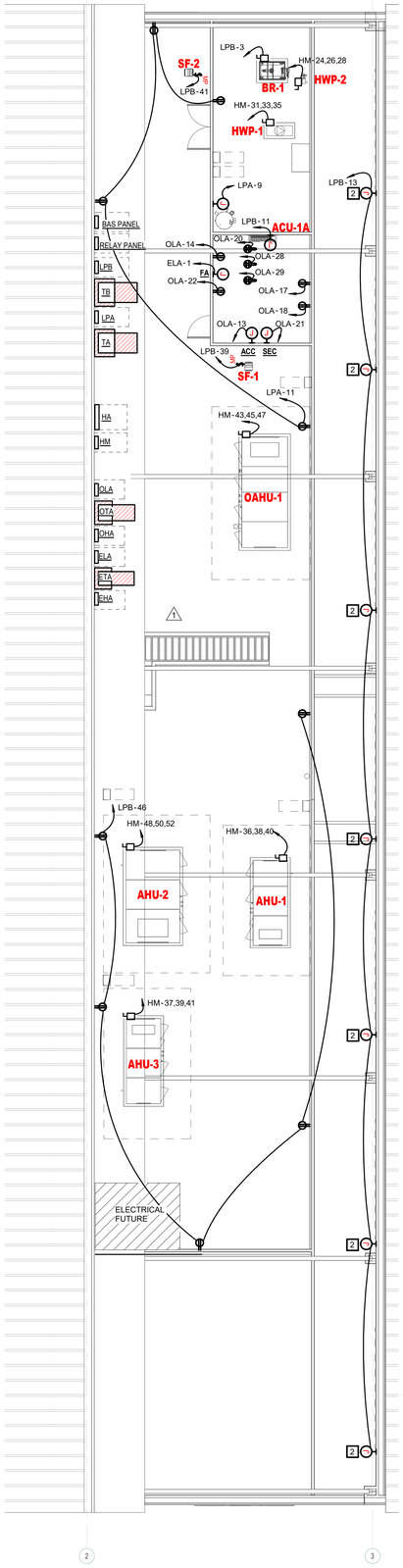
SHEET TITLE
ELECTRICAL SITE PLAN

SHEET NO.
E1.11



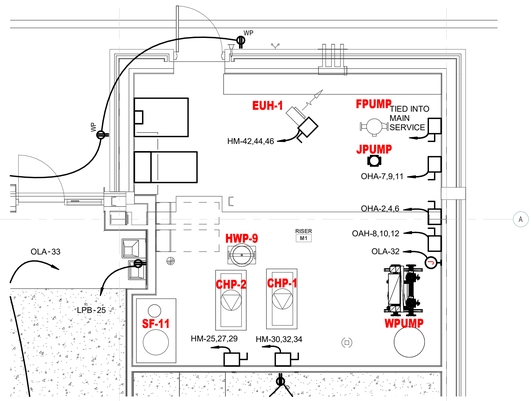
1 ELECTRICAL POWER LEVEL ONE FLOOR PLAN

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



2 POWER PLATFORM

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



3 ELECTRICAL POWER PLAN - ALTERNATE

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

GENERAL POWER NOTES

1. INSTALL SYSTEMS IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE.
2. RACEWAY SYSTEMS:
   A. CONCEAL ALL RACEWAY SYSTEMS IN CEILING, WALLS AND FLOORS. CONDUIT SHALL BE INSTALLED PARALLEL TO BUILDING COORDINATES. PROVIDE ADEQUATE AND STURDY SUPPORT FOR ALL PARTS OF RACEWAY SYSTEM. CONDUIT CONCEALED IN WALLS MAY BE SUPPORTED WITH HEAVY GAGE WIRE HANGERS. EXPOSED CONDUIT MUST BE SUPPORTED WITH MATERIAL SPECIFICALLY MADE FOR THIS PURPOSE. DO NOT USE WIRE HANGERS.
   B. CONTINUITY: MAKE ALL JOINTS AND CONNECTIONS IN A MANNER WHICH WILL INSURE MECHANICAL STRENGTH AND ELECTRICAL CONTINUITY. USE DOUBLE LOCKNUTS AND INSULATED BUSHINGS OR INSULATED COMPRESSION TYPE CONNECTORS FOR ALL CONDUIT CONNECTIONS TO BOXES. USE INSULATED GROUNDING BUSHINGS WHEREVER WHEN INTERNAL GROUND WIRE IS INSTALLED AND WHEN CONCENTRIC OR ECCENTRIC KNOCKOUTS ARE ENCOUNTERED.
   C. PULL BOX LOCATIONS: AS REQUIRED BY THE NATIONAL ELECTRICAL CODE.
   D. EXPANSION FITTINGS: INSTALL O.Z. OR EQUAL EXPANSION FITTING IN EACH RUN OF CONDUIT WHICH CROSSES BUILDING EXPANSION JOINT.
   E. OPENINGS: KEEP ALL RACEWAY OPENINGS CLOSED IN A MANNER TO PREVENT ENTRY OF MOISTURE AND FOREIGN MATERIALS UNTIL CONDUCTORS ARE INSTALLED.
   F. FIRE PROOFING: ALL RACEWAY COMPONENTS PASSING THROUGH OR INSTALLED WITHIN U.L. RATED WALLS, CEILING OR FLOOR STRUCTURES SHALL BE FIREPROOFED WITH 3M FIRE BARRIER CP25WB CAULK, MOLDABLE PUTTY OR FS-195 WRAP/STRIP INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
   G. ALL JUNCTION AND PULL BOXES SHALL BE MARKED NOTING CIRCUITS CONTAINED.
   H. SEALING: ALL CONDUIT, JUNCTION BOX, OUTLET BOX AND OTHER PENETRATIONS OF THE BUILDING ENVELOP SHALL BE SEALED WITH NON-HARDENING CAULKING OR OTHER NON-HARDENING MATERIAL AS REQUIRED BY THE INTERNATIONAL ENERGY CONSERVATION CODE.
3. TYPE OF CONDUIT FOR VARIOUS LOCATIONS:
   A. UNDERGROUND: RIGID GALVANIZED STEEL OR SCHEDULE 40 PVC.
   B. IN CONCRETE WALLS: RIGID GALVANIZED STEEL OR SCHEDULE 40 PVC.
   C. IN MASONRY WALLS: RIGID GALVANIZED STEEL.
   D. INSIDE OF BUILDING IN CEILING CAVITY OR IN DRY WALL: GALVANIZED STEEL EMT WITH STEEL, COMPRESSION FITTINGS.
   E. USE FLEXIBLE CONDUIT ONLY FOR CONNECTION TO MOTORS FROM RIGID CONDUIT SYSTEM. PROVIDE LIQUID TIGHT CONSTRUCTION AND FITTINGS. MAXIMUM LENGTH IS SIX FEET.
   F. FITTINGS: ALL RIGID GALVANIZED STEEL CONDUIT SHALL HAVE THREADED FITTINGS. PROVIDE INSULATED BUSHINGS FOR ALL CONNECTIONS TO BOXES WHERE THREADED CONDUIT IS USED. PROVIDE INSULATED BUSHINGS FOR ALL EMT CONDUIT 1" OR LARGER OR HOUSING #6 OR LARGER WIRES.
4. PROVIDE PULL BOXES, JUNCTION BOXES, WIRING TROUGHS AND CABINETS WHEREVER REQUIRED FOR PROPER INSTALLATION OF VARIOUS ELECTRICAL SYSTEMS. PULL BOXES SHALL BE MADE OF CODE GAGE STEEL WITH SIDES FORMED AND WELDED, SCREW COVERS UNLESS SHOWN TO HAVE HINGED DOORS. HINGED DOORS TO BE SAME AS FURNISHED ON PANEL BOARDS, WITH SAME LOCKING DEVICES. KNOCKOUTS SHALL BE FACTORY MADE OR FORMED IN FIELD WITH A CUTTING TOOL WHICH WILL PROVIDE A CLEAN, SYMMETRICALLY CUT HOLE. DO NOT GANG BOXES OR USE EXTENSION RINGS TO INCREASE CAPACITY.
5. PROVIDE OUTLET BOXES FOR ALL SWITCHES, RECEPTACLES AND THE VARIOUS OTHER OUTLETS AND EQUIPMENT SHOWN. OUTLET BOXES SHALL BE GALVANIZED STEEL, ONE PIECE CONSTRUCTION, IN ALL CASES SUITABLE FOR INTENDED USE. PROVIDE "GANG" BOXES WHERE DEVICES ARE SHOWN GROUPED. USE HOT DIPPED GALVANIZED CAST IRON FOR FLOORS OR EXTERIOR LOCATIONS.
6. ALL WIRING SHALL BE 600 VOLT, SOFT DRAWN ANNEALED COPPER, 98% CONDUCTIVITY, CONTINUOUS FROM OUTLET TO OUTLET. MINIMUM WIRE SIZE #12. ALL WIRE SHALL BE STRANDED TYPE THHN OR THWN-2 (WET RATED FOR 90° C). ALL WIRES SHALL BE COLOR CODED WITH SAME COLOR CONNECTED TO SAME UNGROUNDED PHASE THROUGHOUT THE INSTALLATION.
7. ALL CIRCUIT SHALL HAVE GREEN GROUND WIRE SIZED PER NATIONAL ELECTRIC CODE. PERMANENTLY AND SECURELY GROUND THE REFRIGERATION EQUIPMENT AND CONDUIT SYSTEM AND ALL OTHER COMPONENTS OF THE ELECTRICAL SYSTEM INSTALLED OR CONNECTED BY THE SUB-CONTRACTOR. FOLLOW NEC AND BUILDING CODE REQUIREMENTS.
8. WHERE PORTIONS OF INTERIOR RACEWAY SYSTEM ARE EXPOSED TO WIDELY DIFFERENT TEMPERATURES, PROVIDE AIR SEALING PER NEC TO PREVENT CIRCULATION OF AIR FROM WARMER TO A COOLER SECTION.
9. ALL MATERIAL MUST BE NEW AND OF GOOD QUALITY AND SHALL BEAR THE STAMP OF APPROVAL OF THE UNDERWRITERS' LABORATORIES, INC. (U.L.).

ELECTRICAL KEY NOTES

1 DRINKING FOUNTAINS ARE TO HAVE A BLANK FACE GFCI LOCATED AT 84" AFF.

2 LOCATION OF MOTORIZED SHADE CONNECTION TO BE FIELD VERIFIED.

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151421
LICENSED PROFESSIONAL ENGINEER
06/17/2026

ISSUED: May 26, 2026

REVISIONS

Revision No.		Revision Date
1	Addendum No.3	06/11/2026
2	Addendum No.4	06/17/2026

Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	Designer
Drawn By	AR&CR

PROJECT NO.

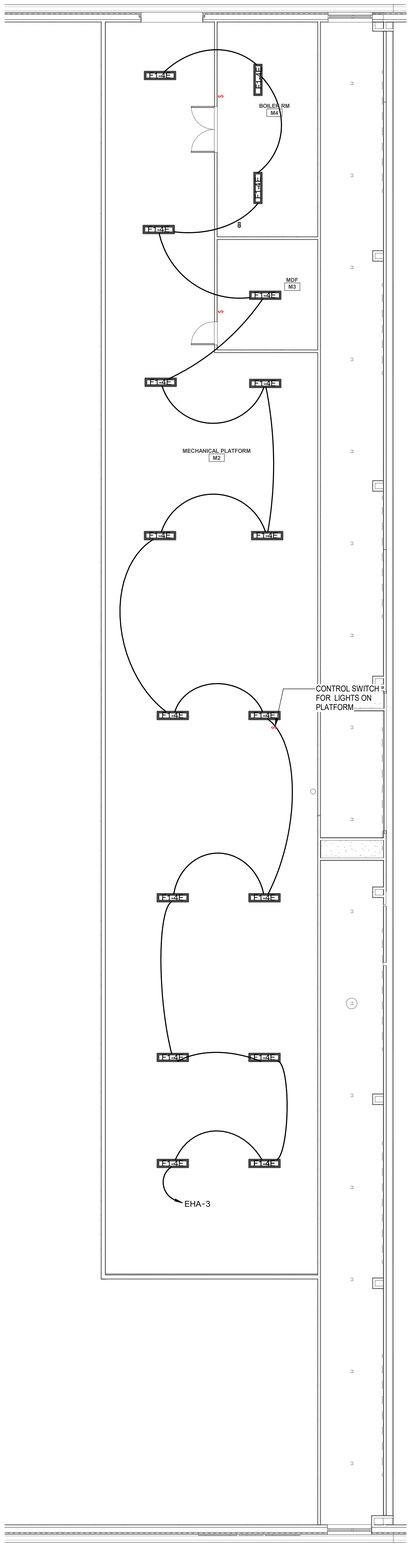
25-0067.00

SHEET TITLE

ELECTRICAL POWER LEVEL ONE FLOOR PLAN

SHEET NO.

E2.11



GENERAL LIGHTING NOTES

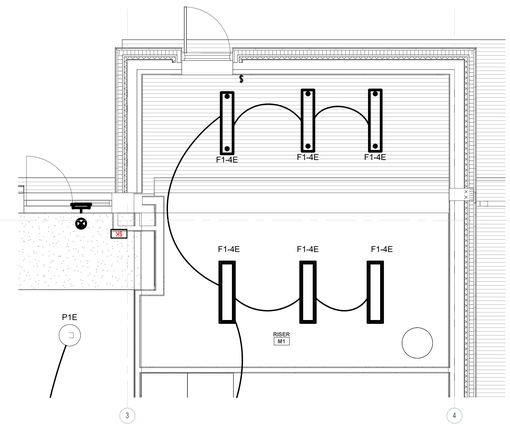
1. ALL EXIT SIGNS SHALL BE MOUNTED AT 6" ABOVE THE DOOR FRAME. ALL EXIT SIGNS TO BE CONNECTED WITH 2#12 + 1#12G IN 3/4" CONDUIT TO NEAREST UNSWITCHED EMERGENCY LIGHTING CIRCUIT.
2. ALL LIGHTING TO BE COORDINATED WITH ARCHITECTURAL RCP PLANS FOR EXACT LOCATIONS AND ELEVATIONS.
3. EXTERNAL LIGHTING SHALL BE CONTROLLED VIA CONTACTOR PANEL LINK TO THE BAS.
4. REFER TO LIGHTING SCHEDULE DRAWING FOR THE LUMINARIES SPECIFICATION.
5. MULTIPLE SWITCHES SHOWN TOGETHER SHALL BE GANGED TOGETHER UNDER A COMMON COVER PLATE.
6. FINAL FINISH OF ALL LIGHTING FIXTURES ARE TO BE AGREED WITH THE ARCHITECT.
7. ALL CLASSROOMS TO HAVE LIGHTING CONTROL WITH MANUAL DIMMING. CLASSROOMS TO BE PROVIDED WITH 6 BUTTON 1 GANG DIMMABLE SWITCH, PROVIDE 2 LIGHTING ZONE FOR PROJECTOR AND FULL CLASSROOM. COORDINATE FINAL LOCATION OF TEACHING WALL PER CLASSROOM PRIOR TO CIRCUITING LIGHTING ZONE.
8. ALL CEILING MOUNTED DEVICES LOCATED IN LAY-IN CEILINGS SHALL BE CENTERED IN THE CEILING TILE. DETECTION SHALL BE DUAL TECHNOLOGY TYPE WITH INFRARED AND ULTRASONIC OR PHONIC.
9. EMERGENCY LIGHTING SHALL BE FED FROM THE LIFE SAFETY PANEL FROM THE GENERATOR. CIRCUITS SHALL BE ROUTED IN SEPARATE CONDUIT FOR EMERGENCY LIGHTING.
10. FINAL LAYOUT OF EMERGENCY EXIT SIGN TO BE CONFIRMED WITH THE EGRESS PLAN. EXIT SIGNS TO BE FED FROM THE CLOSEST EMERGENCY LIGHTING CIRCUIT.
12. ALL LIGHTING SWITCHES PLATE SHALL BE WITH GRAY COLOR.
13. ALL LIGHTING FIXTURES INSTALLED WITHIN MDF/IDF ROOM SHALL BE COORDINATED WITH RACK FINAL LOCATION PRIOR ROUGH-IN.
14. NETWORKED LIGHTING CONTROL SHALL BE INTEGRATED WITH THE BUILDING MANAGEMENT CONTROL SYSTEM (BMCS/BAS) TO ALLOW THE BMCS TO MONITOR THE INDIVIDUAL ROOM/SPACE/AREA OCCUPIED/UNOCCUPIED STATE OF THE OCCUPANCY AND VACANCY SENSORS TO ENHANCE BMCS CONTROL OF HVAC EQUIPMENT. THE PHYSICAL INTEGRATION SHALL BE A SINGLE POINT OF COMMUNICATION BETWEEN THE LIGHTING CONTROL NETWORK HEAD END OR MASTER CONTROLLER AND THE BMCS.
15. NETWORKED LIGHTING CONTROL SHALL BE INTEGRATED WITH THE FIRE ALARM SYSTEM TO ALLOW THE FIRE ALARM SYSTEM TO FORCE TO FULL ON ALL NFPA 101 EGRESS PATH LIGHTING THAT IS CONTROLLED BY OCCUPANCY OR VACANCY SENSORS UPON ACTIVATION OF A FIRE ALARM OR FIRE DRILL.
16. LOW VOLTAGE LV CONTROL KEY SWITCHES AND LOW VOLTAGE LV OVERRIDE KEY SWITCHES SHALL USE A LEVITON #WS-35 TYPE KEY, THIS MAY INCLUDE THE USE OF LEVITON 120/277-VOLT KEY TOGGLE OR MOMENTARY SWITCHES TO BE USED ON LOW VOLTAGE CONTROL CIRCUITS TO ACHIEVE THE PROPER FUNCTION.
17. LV SPDT KEY SWITCH NEXT TO EACH SECURITY KEYPAD TO MANUALLY TURN CORRIDOR LIGHTS ON/OFF. LIGHTS WILL REMAIN ON AFTER MANUAL ON FOR TWO HOURS MINIMUM AND THEN UNTIL AN UNOCCUPIED STATE OR MANUALLY TURNING OFF AT THE KEY SWITCH IN WHICH THE LIGHTS SHALL TURN OFF. ANY OCCUPANCY SENSOR IN A RESPECTIVE CORRIDOR SHALL TURN ON ALL CORRIDOR LIGHTS LOCATED IN THAT CORRIDOR REGARDLESS OF CORRIDOR SIZE OR LENGTH.
19. EXIT SIGNS SHALL BE PROVIDED WITH 'RED' LETTERING.
20. FIXTURES ENDING WITH 'E' SHALL DENOTE FIXTURES POWERED TO EMERGENCY CIRCUITS. (EXAMPLE XX-XE)

LIGHT CONTROL SCHEDULE	CORRIDORS	CLASSROOMS	MEP ROOMS	OFFICE	STORAGE	RESTROOM	BREAKROOM	NURSE	EXTERIOR
TOGGLE SWITCH			X						
DIMMER SWITCH		X		X			X		
SCENE SWITCH									
KEY SWITCH	X								
TOUCH SCREEN CONTROL PANEL FOR MOTORIZED SHADES	X								
OCCUPANCY SWITCH (OCCUPANCY SENSOR MODE)						X		X	
OCCUPANCY SWITCH (VACANCY MODE)					X			X	
OCCUPANCY SENSOR (OCCUPANCY MODE)	X	X		X			X		X
DAYLIGHT SENSOR	X								X
TIMECLOCK CONTROL									X
OVERRIDE SWITCH									X

NOTES:

NURSE: LIGHTS OVER EXAM TABLE TO BE VACANY MODE, ALL OTHER LIGHTS TO BE OCCUPANY MODE.

PROVIDE ZONE CONTROL FOR SITE LIGHTING . ROOM TYPES FOR INTENT ONLY. REFER TO PLANS



1 **ELECTRICAL LIGHTING LEVEL ONE CEILING PLAN**
SCALE= 1/8" = 1'-0"

2 **ELECTRICAL LIGHTING PLATFORM CEILING PLAN**
SCALE= 1/8" = 1'-0"

3 **ELECTRICAL LIGHTING PLAN - ALTERNATE**
SCALE= 1/4" = 1'-0"

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Director	Charles Johnson
Proj. Arch.	Lynn Rabatsky
Designer	Designer
Drawn By	AR&CR

PROJECT NO.

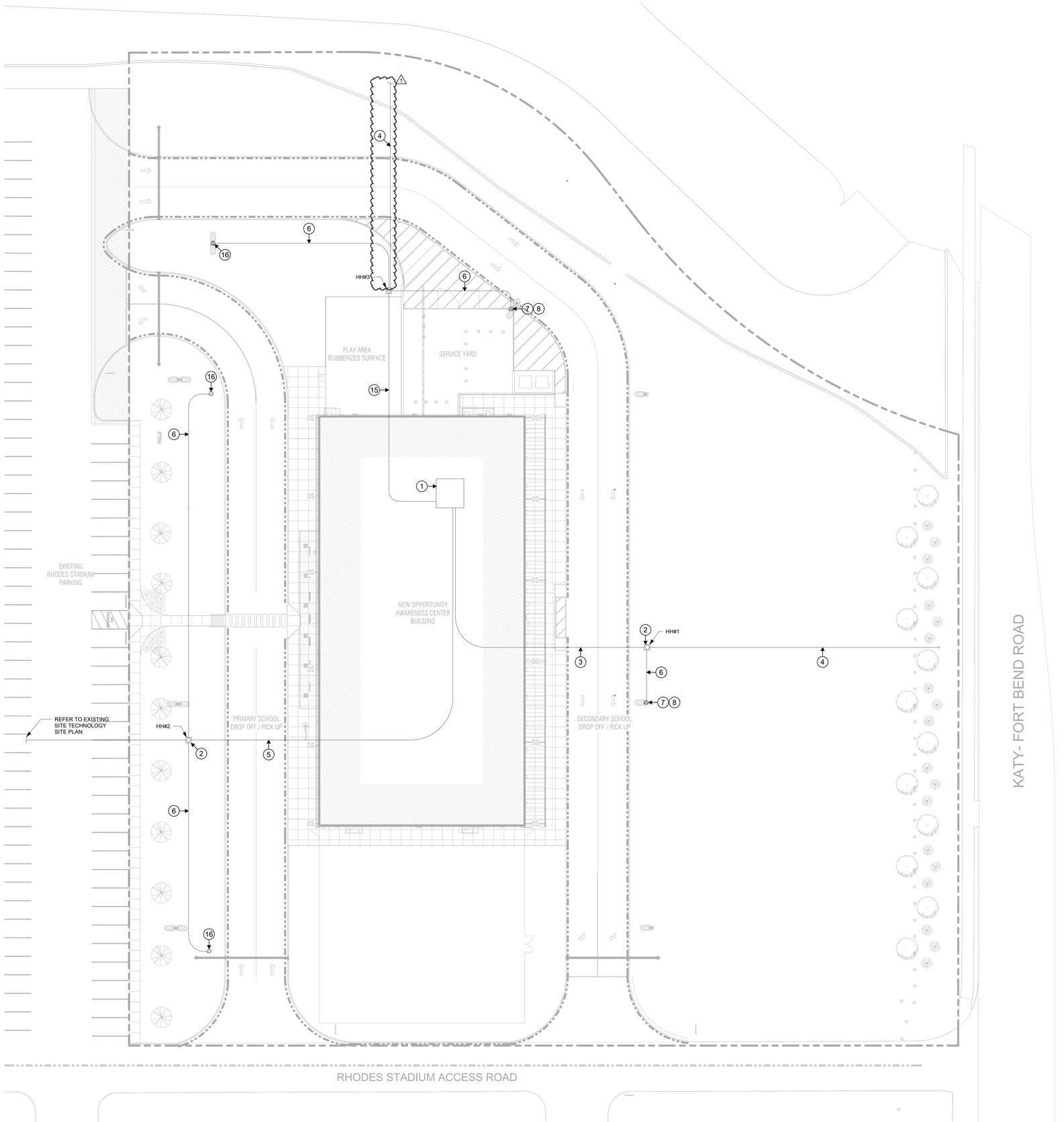
25-0067.00

SHEET TITLE

ELECTRICAL LIGHTING LEVEL ONE CEILING PLAN

SHEET NO.

E2.21



N

TRUE NORTH

1 / T1.11 TECHNOLOGY OVERALL SITE PLAN
1" = 20'-0"

TECHNOLOGY SITE PLAN GENERAL NOTES

1. ALL CONDUIT PATHWAYS, ROUGH-INS, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
2. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH WALLS/STRUCTURES FOR TECHNOLOGY CABLING TO PREVENT WATER INFILTRATION INTO THE SPACE.
6. CONDUITS SHALL MAINTAIN A MINIMUM OF 12-INCHES OF WELL TAMPED EARTH OR 3-INCHES OF CONCRETE SEPARATION BETWEEN ANY FOREIGN CONDUITS AND/OR PIPES THROUGHOUT THE ENTIRE CONDUIT PATHWAY.
7. CONDUIT SEGMENTS SHALL BE NO MORE THAN 600-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
8. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
9. CONTRACTOR SHALL PROVIDE DETECTABLE WARNING TAPE 12-INCHES BELOW GRADE ON TOP OF ALL CONDUITS THROUGHOUT THE ENTIRE CONDUIT TRENCH.
10. CONTRACTOR SHALL COORDINATE ALL CONDUIT PATHWAYS WITH THE ARCHITECT AND LANDSCAPE PLAN PRIOR TO BEGINNING ANY TRENCHING.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.

TECHNOLOGY SITE PLAN KEYED NOTES

1. APPROXIMATE LOCATION OF NEW MDF ROOM M3.
2. (36)-INCH X (36)-INCH X (36)-INCH HAND HOLE WITH LOCKABLE COVER RATED FOR ENVIRONMENT STAMPED WITH TELECOMMUNICATIONS. COVER OF HANDHOLE SHALL BE FLUSH WITH FINAL FINISHED GRADE. (BY DIV. 26)
3. (2) 4-INCH SCHEDULE 80 PVC CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM THE NEW HANDHOLE TO THE BUILDING POINT OF ENTRY SERVING THE NEW MDF LOCATION. CONDUITS SHALL TRANSITION TO VERTICAL RISER PATHWAYS AS REQUIRED TO SERVE THE MDF LOCATED ON THE PLATFORM LEVEL. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS AT EACH END OF THE CONDUIT. COORDINATE EXACT POINT OF ENTRY, SLEEVES, AND VERTICAL PATHWAY ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONDITIONS. (BY DIV. 26).
4. (2) 4-INCH SCHEDULE 80 PVC CONDUIT BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM NEW HANDHOLE TO SERVER PROVIDER POLE(S). THE CONDUIT RISERS SHALL BE TERMINATED 10 FEET ABOVE FINISHED GRADE AT THE POLE(S). CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. THESE CONDUITS SHALL BE RESERVED FOR SERVICE PROVIDER USE ONLY. (BY DIV. 26).
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6. (1) 1 1/4-INCH SCHEDULE 80 PVC CONDUIT BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM LOCKABLE COMMUNICATIONS HAND HOLE TO LIGHT POLE FOR POLE MOUNTED SECURITY CAMERA. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. (BY DIV. 26).
7. APPROXIMATE LOCATION OF POLE MOUNTED VIDEO SURVEILLANCE CAMERA.
8. PROVIDE POWERED FIBER OPTIC CABLE TO SUPPORT SECURITY POLE-MOUNTED CAMERA. TERMINATE AT MEDIA CONVERTER INSTALLED WITHIN NEMA-RATED WEATHERPROOF ENCLOSURE. REFER TO SECURITY DRAWINGS FOR EXACT LOCATION AND CONDUIT ROUGH-IN REQUIREMENTS (BY DIV. 27).
9. APPROXIMATE LOCATION WHERE EXISTING UNDERGROUND COMMUNICATIONS PATHWAYS TERMINATE ADJACENT TO NEW BUILDING; PROVIDE NEW INTERCEPT HANDHOLE/PULLBOX AT THIS LOCATION TO FACILITATE TRANSITION BETWEEN NEW PATHWAYS FROM NEW BUILDING AND EXISTING PATHWAYS ROUTING BACK TO EXISTING BUILDING IDF; ANY REQUIRED CONDUIT INTERCEPTION, MODIFICATION, OR ADJUSTMENT SHALL BE BY DIV. 26, WHILE DIV. 27 SHALL PROVIDE AND ROUTE TELECOMMUNICATIONS CABLING THROUGH NEW AND EXISTING PATHWAYS; CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND EXISTING CONDITIONS PRIOR TO INSTALLATION.
10. APPROXIMATE LOCATION OF EXISTING UNDERGROUND COMMUNICATIONS TRENCH ROUTING THROUGH PARKING LOT SERVING PATHWAYS BETWEEN NEW AND EXISTING BUILDINGS; CONTRACTOR SHALL UTILIZE THIS EXISTING TRENCH FOR TELECOMMUNICATIONS PATHWAY EXTENSION AND TIE-IN TO ROUTE BACK TO EXISTING BUILDING IDF; CONTRACTOR SHALL FIELD VERIFY EXACT ROUTING, DEPTH, AND CONDITION OF EXISTING CONDUITS WITHIN TRENCH PRIOR TO INSTALLATION AND COORDINATE ALL WORK TO MAINTAIN CONTINUITY OF EXISTING SYSTEMS. (BY DIV. 27)
11. APPROXIMATE LOCATION OF EXISTING WALL-MOUNTED COMMUNICATIONS PULLBOX FOR TELECOMMUNICATIONS TIE-IN SERVING PATHWAYS TO RHODES STADIUM FIELD HOUSE IDF AND ASSOCIATED SITE INFRASTRUCTURE, INCLUDING UNDERGROUND ROUTING TO PARKING LOT COMMUNICATIONS PULLBOXES SUPPORTING EXTERIOR DEVICES AND TRANSITION TO ABOVE-CEILING PATHWAYS; CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION AND EXISTING PATHWAY CONDITIONS PRIOR TO INSTALLATION AND COORDINATE ALL NEW WORK WITH EXISTING SYSTEMS. (BY DIV. 27)
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13. EXISTING IDF EQUIPMENT LOCATED WITHIN LAUNDRY ROOM F113A; CONTRACTOR SHALL EXTEND NEW FIBER OPTIC BACKBONE CABLING FROM NEW BUILDING TO THIS IDF AND TERMINATE WITHIN NEW OR EXISTING FIBER ENCLOSURE (LIU) FOR TELECOMMUNICATIONS TIE-IN; CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS, AVAILABLE RACK SPACE, AND PATHWAY ROUTING PRIOR TO INSTALLATION AND COORDINATE ALL WORK WITH EXISTING SYSTEMS. (BY DIV. 27)
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16. PROVIDE POWERED FIBER OPTIC CABLE TO POLE LOCATION FOR FUTURE USE. TERMINATE AT MEDIA CONVERTER INSTALLED WITHIN NEMA-RATED WEATHERPROOF ENCLOSURE. (BY DIV. 27)

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06/17/2026

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REVISIONS

Revision No.		Revision Date
1	Addendum No. 4	06/17/2026

Director
Proj. Arch.
Designer CCG
Drawn By CCG

PROJECT NO.
25-0067.00

SHEET TITLE
TECHNOLOGY OVERALL SITE PLAN

SHEET NO.
T1.11

TECHNOLOGY SITE PLAN KEYED NOTES

1. APPROXIMATE LOCATION OF NEW MDF ROOM M3.
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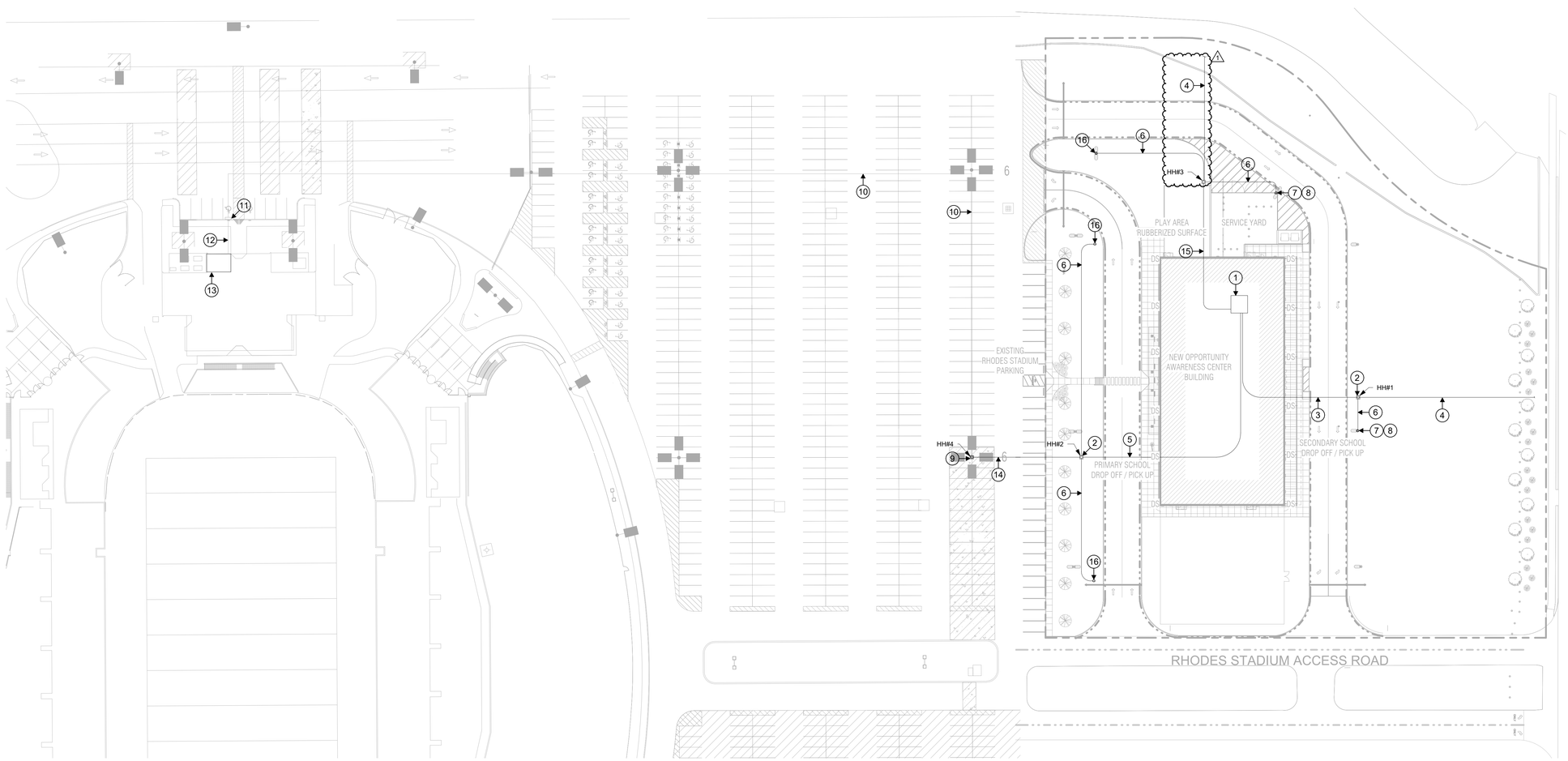
13. EXISTING IDF EQUIPMENT LOCATED WITHIN LAUNDRY ROOM F113A; CONTRACTOR SHALL EXTEND NEW FIBER OPTIC BACKBONE CABLING FROM NEW BUILDING TO THIS IDF AND TERMINATE WITHIN NEW OR EXISTING FIBER ENCLOSURE (LIU) FOR TELECOMMUNICATIONS TIE-IN; CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS, AVAILABLE RACK SPACE, AND PATHWAY ROUTING PRIOR TO INSTALLATION AND COORDINATE ALL WORK WITH EXISTING SYSTEMS. (BY DIV. 27)
14. (2) 4-INCH SCHEDULE 80 PVC CONDUIT BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM NEW HANDHOLE TO NEW HANDHOLE. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. CONTRACTOR SHALL PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS ON EACH END OF THE CONDUIT. THESE CONDUITS SHALL BE RESERVED FOR SERVICE PROVIDER USE ONLY. (BY DIV. 26).
15. (2) 4-INCH SCHEDULE 80 PVC CONDUITS BURIED 36-INCHES BELOW FINAL FINISHED GRADE FROM THE NEW HANDHOLE TO THE BUILDING POINT OF ENTRY SERVING THE NEW MDF LOCATION. CONDUITS SHALL TRANSITION TO VERTICAL RISER PATHWAYS AS REQUIRED TO SERVE THE MDF LOCATED ON THE MEZZANINE LEVEL. CONTRACTOR SHALL PROVIDE PULL STRING INSIDE EACH CONDUIT. PROVIDE NYLON BUSHINGS AND PROTECTIVE CAPS AT EACH END OF THE CONDUIT. COORDINATE EXACT POINT OF ENTRY, SLEEVES, AND VERTICAL PATHWAY ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONDITIONS. (BY DIV. 26). ⚠1
16. PROVIDE POWERED FIBER OPTIC CABLE TO POLE LOCATION FOR FUTURE USE. TERMINATE AT MEDIA CONVERTER INSTALLED WITHIN NEMA-RATED WEATHERPROOF ENCLOSURE. (BY DIV. 27)

TECHNOLOGY SITE PLAN GENERAL NOTES

1. ALL CONDUIT PATHWAYS, ROUGH-INS, CONDUIT SLEEVES, ETC. INDICATED ON THE TECHNOLOGY DRAWINGS ARE TO BE PROVIDED AND INSTALLED BY DIVISION 26.
2. ALL POWER INDICATED ON THE TECHNOLOGY DRAWINGS IS TO BE PROVIDED AND INSTALLED BY DIVISION 26.
3. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH FIRE RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING BACK TO THE ORIGINAL RATING.
4. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH NON-RATED WALLS/STRUCTURES FOR TECHNOLOGY CABLING FOR SOUND TO REDUCE NOISE TRAVELING THROUGH PENETRATIONS.
5. CONTRACTOR SHALL RESTORE ALL PENETRATIONS PROVIDED THROUGH WALLS/STRUCTURES FOR TECHNOLOGY CABLING TO PREVENT WATER INFILTRATION INTO THE SPACE.
6. CONDUITS SHALL MAINTAIN A MINIMUM OF 12-INCHES OF WELL TAMPED EARTH OR 3-INCHES OF CONCRETE SEPARATION BETWEEN ANY FOREIGN CONDUITS AND/OR PIPES THROUGHOUT THE ENTIRE CONDUIT PATHWAY.
7. CONDUIT SEGMENTS SHALL BE NO MORE THAN 600-FEET IN LENGTH WITH NO MORE THAN THE EQUIVALENT OF (2) 90 DEGREE BENDS BETWEEN PULLING POINTS.
8. CONDUITS SHALL MAINTAIN A BEND RADIUS OF 6 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS 2-INCHES OR SMALLER AND 10 TIMES THE DIAMETER OF THE CONDUIT FOR CONDUITS GREATER THAN 2-INCHES.
9. CONTRACTOR SHALL PROVIDE DETECTABLE WARNING TAPE 12-INCHES BELOW GRADE ON TOP OF ALL CONDUITS THROUGHOUT THE ENTIRE CONDUIT TRENCH.
10. CONTRACTOR SHALL COORDINATE ALL CONDUIT PATHWAYS WITH THE ARCHITECT AND LANDSCAPE PLAN PRIOR TO BEGINNING ANY TRENCHING.
11. ALL CONDUITS SHALL HAVE A PULL STRING INSTALLED FOR PULLING OF CABLE.
12. ALL SPARE CONDUITS OR CONDUITS FILLED WITH LESS THAN THE MAXIMUM ALLOWED FILL RATIO SHALL HAVE A PULL STRING INSTALLED AND LEFT FOR FUTURE PULLING OF CABLE. CLEARLY LABEL AS "PULL STRING" INDICATING OPPOSITE END LOCATION.



N
TRUE NORTH

1 / T1.12 TECHNOLOGY EXISTING OVERALL SITE PLAN
1" = 40'-0"

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NEW OPPORTUNITY AWARENESS CENTER

REGISTERED COMMUNICATIONS DISTRIBUTION DESIGNER
Bicsi
Anthony Vistein
BICSI ID # 203153
EXPIRES 12-31-26
Anthony Vistein
RCDD
06/17/2026

ISSUED: June 17, 2026

REVISIONS

Revision No.	Revision Date
1 Addendum No. 4	06/17/2026

Director
Proj. Arch.
Designer CCG
Drawn By CCG

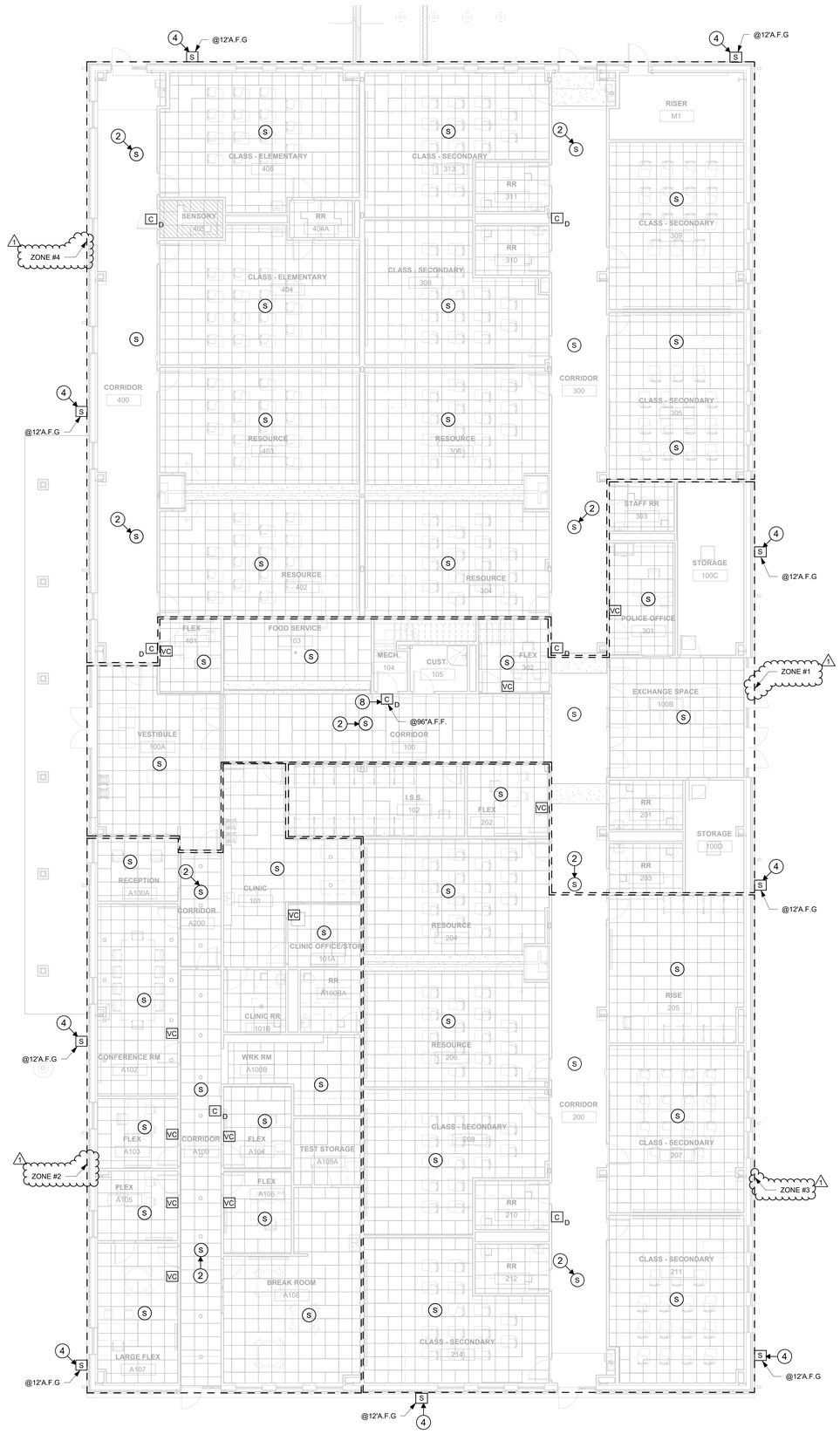
PROJECT NO.
25-0067.00

SHEET TITLE
TECHNOLOGY EXISTING OVERALL SITE PLAN

SHEET NO.
T1.12

PAGING ZONES:

1. ZONE 1-CONTRACTOR SHALL CONNECT ALL SPEAKERS ON THERE OWN ZONE (BY DIV. 27)
2. ZONE 2-CONTRACTOR SHALL CONNECT ALL SPEAKERS ON THERE OWN ZONE (BY DIV. 27)
3. ZONE 3-CONTRACTOR SHALL CONNECT ALL SPEAKERS ON THERE OWN ZONE (BY DIV. 27)
4. ZONE 4-CONTRACTOR SHALL CONNECT ALL SPEAKERS ON THERE OWN ZONE (BY DIV. 27)
5. ZONE 5 - CONTRACTOR SHALL PROVIDE ALL CALL PAGING FOR ZONES 1,2,3,4 AND 5.



1 PUBLIC ADDRESS ORIENTATION PLAN - LEVEL ONE
TPA2.11 1/8" = 1'-0"

TPA GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE ALL WALL-MOUNTED ROUGH-IN LOCATIONS AND DEVICE INSTALLATIONS IN CORRIDORS AND ROOMS WITH THE ARCHITECTURAL WALL PANELS AND ACOUSTICAL FEATURES. COORDINATION MUST BE COMPLETED WITH THE ARCHITECT PRIOR TO ANY ROUGH-IN OR INSTALLATION WORK.
2. CONTRACTOR SHALL CONDUCT A MANDATORY SITE TOUR TO REVIEW THE EXISTING CONDITIONS, PATHWAYS AND PAGING HEADEND PRIOR TO INSTALLATION.
3. CONTRACTOR SHALL PROVIDE THE PAGING OVERRIDE TO THE AUDIO-VISUAL CLASSROOM SPEAKER AS REQUIRED. (BY DIV 27)
4. ALL CONDUITS FOR PAGING DEVICES SHALL ROUTE FROM THE DEVICE LOCATION AND TERMINATE ABOVE A LAY- IN TYPE CEILING IN THE SAME ROOM WHERE THE DEVICE IS LOCATED. IF THE ROOM WHERE THE DEVICE IS LOCATED DOES NOT HAVE A LAY-IN TYPE CEILING TO PREVENT THE CABLES FROM BEING EXPOSED, THE CONDUIT SHALL ROUTE TO THE NEAREST LAY-IN TYPE CEILING OFF A MAIN CORRIDOR. THE CONDUIT PATHWAY SHALL TAKE THE SHORTEST ROUTE TO THE MAIN CORRIDOR TO MINIMIZE THE CABLE LENGTH ENSURING THE CABLE LENGTH DOES NOT EXCEED 275 FEET. CONDUIT, CONNECTIONS, J-BOXES, SUSPENSION, ANCHORAGES, AND OTHER CONDUIT COMPONENTS EXPOSED TO VIEW IN PUBLIC SPACES SHALL BE ROUTED AND INSTALLED CAREFULLY TO MINIMIZE VISUAL IMPACT AND SHALL BE FULLY PAINTED TO MATCH UNLESS NOTED OTHERWISE.

TPA OVERALL FLOOR PLAN KEYED NOTES

1. APPROXIMATE LOCATION OF MDF ROOM.
2. APPROXIMATE LOCATION OF TYPICAL NEW CEILING MOUNTED PA SPEAKER. (BY DIV 27)
3. APPROXIMATE LOCATION OF TYPICAL NEW INTERIOR WALL MOUNTED PA SPEAKER. (BY DIV 27)
4. APPROXIMATE LOCATION OF TYPICAL NEW EXTERIOR WALL MOUNTED SPEAKER. (BY DIV 27)
5. APPROXIMATE LOCATION OF TYPICAL NEW PA SYSTEM VOLUME CONTROL. (BY DIV 27)
6. APPROXIMATE LOCATION OF NEW PAGING HEADEND.
7. APPROXIMATE ROUTE CONDUIT SHALL TAKE TO AN ABOVE CEILING SPACE WITH DROP TILE CEILING. (BY DIV 26)
8. APPROXIMATE LOCATION OF TYPICAL NEW WALL MOUNTED CLOCK. (BY DIV 27)

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SHEET TITLE
PUBLIC ADDRESS ORIENTATION PLAN - LEVEL ONE

SHEET NO.
TPA2.11