

ADDENDUM NO. 4**DATE: July 20, 2026**

PROJECT: HARMONY SCIENCE ACADEMY BRIDGELAND PHASE II MIDDLE-HIGH SCHOOL

ARCHITECT: LDDBLUELINE, INC.
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**ARCHITECT'S PROJECT
NUMBER:** 06-22-014

OWNER: HARMONY PUBLIC SCHOOLS
1255 Enclave Parkway
Houston, TX 77077

THIS ADDENDUM IS ISSUED TO ALERT ALL PARTIES OF CHANGES AND/OR SUPPLEMENTARY CLARIFICATION INFORMATION TO THE CONTRACT DOCUMENTS AS OUTLINED BELOW. THE FOLLOWING ITEMS TAKE PRECEDENCE OVER REFERENCED PORTIONS OF THE CONTRACT DOCUMENTS AND IN EXECUTING A CONTRACT, SHALL BECOME A PART THEREOF. WHERE ANY ITEM CALLED FOR IN THE DOCUMENTS IS SUPPLEMENTED HEREBY, THE ORIGINAL REQUIREMENTS SHALL REMAIN IN EFFECT. ALL SUPPLEMENTED CONDITIONS SHALL BE CONSIDERED AS ADDED TO THERETO. WHERE ANY ORIGINAL ITEM IS AMENDED, VOIDED OR SUPERSEDED HEREBY, THE PROVISIONS OF SUCH ITEMS NOT SO SPECIFICALLY AMENDED, VOIDED OR SUPERSEDED SHALL REMAIN IN EFFECT.

Summary:

The following addendum includes drawing changes related to structural and architectural scope (see below), substitution request responses, and responses to bidders questions.

Drawing Revisions:

1. Please note that the Owner is including replacement of a water heater in the adjacent Elementary School building in the scope of work for this Phase II project. A sketch and a narrative will be provided in Addendum #5 to be issued 7/21/2026.
2. The door schedule had door hardware specification has been revised. Please see Sheet A-601 and Specification Section 08 7100 Door Hardware. Other drawing changes are in response to bidder questions.

Substitution Requests:

The following are responses to substitution requests received from potential bidders for the above referenced project.

1. Conwed is APPROVED as a manufacturer for Specification Section 09 8430 Fabric Wrapped Sounds Absorbing Panels
2. Sports Venue Padding is APPROVED as an manufacturer for Specification Section 11 6623 Gymnasium Equipment – Wall Padding
3. Sheridan Seating is APPROVED as a manufacturer for Specification Section 12 6613 Telescoping Bleachers
4. Tarkett Polyturf is APPROVED as a manufacturer for Specification Section 09 6566 Resilient Athletic Flooring
5. Aluminum Techniques Inc. is APPROVED as a manufacturer for Specification Section 10 7317.

Bidders' Questions & Responses:

The following are responses to questions received from potential bidders for the above-referenced project.

1. *2/S2.01A and 1/S2.20A does not show all roof screen framing that is shown on Sheet A1.30. Please confirm where roof screen framing is required on 2/S2.01A and 1/S2.20A.*

Response: Sheet S2.20A has been revised to show RTU screening locations.

2. *Please provide distinction of ACT-01, 02, and 03 on the RCP for which type tile is to be installed where.*

Response: ACT-01 intended in all corridors and the cafeteria, ACT-02 is the typical ceiling grid/tile to be used unless noted otherwise, ACT-03 is for Kitchen B108 and Dry Storage B108B

3. *Is there a specification for Division 28 Fire Alarm System? If so, will it be released in an upcoming addendum, or can you please provide the Fire Alarm specifications for Division 28?*

Response: There is no specification section for Fire Alarm system. This is a deferred submittal.

4. *Reference Sheet CS 1.01: Portable bleachers are indicated on both sides of the field and noted as "BY OTHERS." These bleachers do not appear to be referenced elsewhere in the contract documents. Please confirm that the portable bleachers are to be excluded from the scope of work and should not be included in the pricing for this project.*

Response: Please include the portable bleachers on CS 1.01 in the scope of work.

5. *Classrooms: - The projector specified has been discontinued for a while. What model number do they want to use? (Epson Powerlite 994F)? - The specs call for an HDMI wall plate with 3.5mm audio connection. But, the drawing (TA-300) only shows HDMI. Is audio needed? If so, can they create a new one line wiring diagram for class room signal flow diagram? - Does the HDMI wall plate with 3.5mm audio (C2G 39871) go by the teacher work station? And the HDMI onl wall plate (C2G 39710) go at the projector location? If so, can they update the drawing? - Can the consultant create a new class room signal flow diagram that shows the connectivity of the RDL audio items that are being requested in the specs? (They are not shown on the drawing). In section A.2 it mentions an 'in-ceiling storage box'. However, in section 2.2 (Equipment) - the projector mounting system does not include this box. Please confirm the intent, and the model number, if an in-ceiling storage box is needed.*

Response: These questions were addressed in Addendum #1

6. *Gym: - The gym is not listed in the spec at all, but is shown on the RCP and wiring diagram. Can you please confirm that the gym is part of the base bid package? - The signal flow diagram (TA-300) shows both a wireless mic antenna and an assisted listening mic antenna. But, there are not shown on the RCP TA-101B. If these are needed, can they send an updated TA-101B drawing showing the location? - The projector specified has been discontinued for a while. What model number do they want to use? (Epson Powerlite L530U)? - Can the consultant revise the signal flow drawing (TA-300) showing the connectivity of the RDL devices listed in the specs? - Can the consultant revise the signal flow drawing (TA-300) showing the connectivity of all of the Global Cache items listed in the specs?*

Response: These questions were addressed in Addendum #1

7. *Cafe: - The projector specified has been discontinued for a while. What model number do they want to use? (Epson Powerlite L530U)? - Can the consultant revise the signal flow drawing (TA-300) showing the connectivity of the RDL devices listed in the specs? - Can the consultant revise the signal flow drawing (TA-300) showing the connectivity of all of the Global Cache items listed in the specs?*

Response: These questions were addressed in Addendum #1

8. *A-810 indicates ACT-01, ACT-02, and ACT-03. There is no room finish schedule indicating where each type goes, nor is it on the reflected ceiling plans. Please clarify where each ceiling type occurs at.*

Response: Please see the response to Question #2 above.

9. *Does AT-01 and AT-02 Wall Panels only occur at the Gym and are they hi impact or co-polymer face?*

Response: Please follow the Specification Section 09 84 30 Fabric Wrapped Acoustical Panels.

10. *The wall Panels on A426 indicate 2x6 wall panels, but scale out to 1'-9" x5'-4" on the drawings. Please clarify.*

Response: Please follow the dimensions provided on the drawings

11. *A-006 indicates insulation on acoustical ceilings. Does this occur 24" or 48" over each side of the wall? Or does it occur above ALL acoustical ceilings?*

Response: Please see keynote 6A on A-006. This note applies to partition types 1 and 1B

12. *Division 95100 indicates Seismic at Paragraph 2.04. We are in 0 Seismic Zone. Will this be required?*

Response: No. Seismic Specialty Items should not be needed.

13. *Division 95100 indicates Axiom trim at Paragraph 2.05.L. None is indicated, where will this be required?*

Response: Please see the drawings for design intent.

14. Division 95100 indicates sealant at Paragraph 2.06.C/D/F. Will this be required?

Response: Yes. Walls between classrooms are intended to achieve an STC rating of 50.

15. Is any part of this site in flood zone A?

Response: According to map NO. 48201C0385N of the Federal Emergency Management Agency's Flood Insurance Rate Maps for Harris County and Incorporated Areas, dated 11/15/2019, the subject tract is situated within: ZONE "AE", SHADED ZONE "X", & UNSHADED ZONE "X". This information can be found on the Civil Cover Sheet C0.0.

16. Will the Pre-Bid Meeting sign in sheet be posted?

Response: The Pre-Bid Meeting Sign-In Sheet is included with Addendum #4.

17. Having trouble editing the forms. It's asking me for a password for the document.

Response: If you are having trouble with the form, please print out the form and complete it with a pen, then scan and upload it into the bidding system.

18. The document "Exhibit C - Prevailing Wage Rates" has been issued. Please clarify if this project will have Davis-Bacon wages AND reporting to the department of labor?

Response: HPS are required per Texas Government Code Chapter 2258 to request for the GCs to use prevailing wages. Please see attached Board Resolution.

19. Sheet G-002 lists an estimated cost of construction of \$34,380,000. The "Invitation To Bid" document lists the estimated budget as \$29 million. Can you please clarify which is the correct estimated construction budget?

Response: Please consider the amount listed in the Invitation To Bid amount as the estimated construction budget.

20. Are there any special requirements for ID checks/badging, given that this Phase 2 project will be built on an occupied campus with school in session?

Response: This question was addressed in Addendum 1.

21. Is there a designated construction material laydown area for this construction site?

Response: No, there is not a designated construction material laydown area. Contractor will be required to submit a site logistics plan for approval.

22. Must we submit our pricing on the "PROPOSAL FORM ATTACHMENT C" included in the Invitation to Bid document? We plan to submit our pricing electronically via the lonwave e-bid site. will that be sufficient?

Response: Both the Proposal Form Attachment C and submission via Ionwave site are required.

23. *The drawing index on sheet G-001 lists sheet "C0.2 - TOPOGRAPHIC SURVEY (2 OF 3)" and sheet " C.03 - TOPOGRAPHIC SURVEY (3 OF 3)" in the Civil section. Are we missing topographic survey page 1 of 3?*

Response: This is a typo in the drawing index. There is not a missing topographic survey page. Please see sheets C0.2 and C0.3. Sheet G-001 Cover has been revised.

24. *Is the Geotech Report by Raba Kistner referenced in spec section 00 3132-1 available in the Ionwave plan room? Will this be issued with Addendum 01?*

Response: The Geotech Report was issued with Addendum #2

25. *On the chain link fencing, the drawings call out 1-3/4" black vinyl mesh but the specs call for 2" black vinyl mesh, please advise*

Response: Please follow the Specification Section 32 3113.30 for chain link fence.

26. *Civil sheet C1.3 notes a "20 MPH SOLAR POWER FLASHER ASSEMBLY..." and says to see detail sheet C7.6. That sheet appears to be missing from the set. Will the school zone flashers work be included in the GC's scope of work?*

Response: Yes the school zone flashers are included in the GC's scope of work. Harris County Engineering have been included with this addendum.

27. *Addendum #1 Q&A stated the Geotech report would be included, however it was not. Please provide a copy of the report for bidders to reference.*

Response: The Geotech Report was issued with Addendum #2

28. *Several civil drawings note that "SPORTS FIELD GRADING AND DRAINAGE BY OTHERS (REF PLANS BY TEXAS SPORTS & CIVIL ENGINEERING). Is the sports field work in the general contractor's scope? Do we have access to the Texas Sports Plans?*

Response: Correct. "BY OTHERS (REF PLANS PREPARED BY TEXAS SPORTS & CIVIL ENGINEERING)" on the C series sheets is referencing the plans by Texas Sports & Civil Engineering and their design responsibility. The scope of work shown on the C series sheets and the CS series sheets (by Texas Sports & Civil Engineering) are included in the drawings and in Contractor's scope of work.

29. *What email for the Architect are substitution requests supposed to be sent to?*

Response: Please email substitution requests to Welby Lehman; welby.lehman@lddblue.com

30. *Reference 4/A-501. Please advise what base is needed to support lockers.*

Response: Provide the manufacturer's locker base as appropriate for the location and type. Finish with scheduled wall base.

31. *Reference A-811B. The flooring tag at the ramp for the flooring is VCT-02, but the shading appears to match RF-03. Please advise what flooring and base goes at the ramp.*

Response: For Ramp A-811B, the flooring is to be RF-03 and the wall base is R-02

32. *Reference 3/A-403 This ramp calls out "Sched. Wood Flooring" but the finish plan A-811B calls out VCT. Please confirm what flooring is needed at the ramp.*

Response: The flooring for the ramp is to be RF-03

33. *Reference note 5 on A-002, please provide a specification and a detail for aluminum railings located plan north.*

Response: Please see the detail added to sheet A-005.

34. *Reference Sheet MEP-001: The drawings include a pole base detail for the standard light fixtures; however, no foundation detail is provided for the "OS" fixture, which is indicated as being mounted on a 60'-0" tall pole. Due to the increased height and loading requirements, the standard pole base detail may not be applicable. Please provide the required foundation/pole base detail and design criteria for the 60'-0" tall "OS" fixture, including any required anchor bolt pattern, reinforcing, and foundation dimensions.*

Response: Sheet S3.11 has been revised to show the foundation condition for both types of light poles on the project.

35. *In reference to Addendum #1 Q&A #24, please advise approved suppliers/manufacture for fire alarm system and associated devices.*

Response: Approved manufacturers for the fire alarm include Honeywell (notifier), Edwards, Fire-Lite, and Siemens.

36. *Can the question deadline be moved back to the 17th? This will give us one more week to find and address any issues before the bid. Please consider. Thank you.*

Response: No, the architects need enough time to answer and issue the addendum to avoid any delays in the procurement/project timeline.

37. *Is a bid bond required to be submitted with letter of statement on bid day?*

Response: HPS does not require a bid bond. The project requires a Payment & Performance Bond to be priced in the schedule of values. And a letter from the bonding company stating that the bidder is eligible to obtain both bonds.

38. *Is fireproofing required on this project? The building type is II-B but there is a spec. Please advise.*

Response: Please see G-101 for locations of fireproofing.

39. *Can you provide a pavement marking spec?*

Response: Please see the response to question #4 in Addendum #3.

40. *Are any site furnishings such as trash receptacles, benches, tables, etc. required for this project? They have in the past but I don't see any on the plans.*

Response: Please see revised sheet A-002. There are 7 benches added and 3 trash cans.

41. *Can you provide a fire alarm spec?*

Response: This question was addressed in Addendum #1

42. *Is the wood lab/science room casework OFOI? Or by the GC? Sheet X-101 states both.*

Response: Items shown as dashed on the interior elevations of Sheets X-101 through X-109 are OFOI.

43. *1. Intrusion Detection System Devices We observed that the provided drawings include markups for the Intrusion Detection System. However, the provided specification primarily includes details for the following devices: • Video Intercom • Intrusion Detection Keypad • Duress Button We could not locate specification details for the following devices shown on the drawings. Could you please review and provide the applicable specifications? i. Wall-Mounted Motion Detector ii. Wall-Mounted Motion Detector, Long Range iii. Bell/Buzzer Audible Alarm*

Response: i. Verkada BR-11-HW (281600 2.2.D.1.a.1)
ii. For bidding purposes use the same detector as the regular motion detectors.
iii. For bidding purposes use the Verkada BZ11 Horn Speaker (281600 2.2.G.1).

44. *2. Card Readers at Gates As stated in Section 28 13 00 – Installation (Page 12), the contractor is required to provide card readers at the gates. However, we could not identify any corresponding markups or device locations for these card readers on the provided drawings. Could you please confirm the required gate locations where the card readers are to be installed and provide any associated drawings or markups, if available?*

Response: Please plan for a card reader at the new site entrance gate. There are no other gates that require a card reader.

45. *Reference A-810, we cannot locate a plastic laminate or veneer type for the wood doors, please advise.*

Response: The laminate is to be WilsonArt 7909 Fusion Maple

46. *Reference A-601, there are openings that reference wood door type "HL2". We cannot locate this elevation, please advise.*

Response: The intent for doors of Type 'HL2' is a half-lite similar to Type 'FL' but with the bottom of the lite at 3'-4" above the floor.

47. *Reference L1.1. Please confirm that the maintenance bands are to be Black Star Crushed Granite as indicated on Sheet L1.1, and not decomposed granite.*

Response: Please use Black Star Crushed Granite.

48. *Reference L2.1 and L2.2. The plans indicate that new irrigation is to be installed within the Phase 1 limits of work, including areas containing existing landscape plantings. Installation of new irrigation within these existing planting beds may result in disturbance to the landscape and potential damage or loss of existing plant material. Please clarify the following: Will the contractor be responsible for replacing any existing plant material that is damaged or lost as a result of the irrigation installation? Is there a planting replacement allowance associated with the Phase 1 irrigation work that will be identified as part of this bid, or should any required plant replacement be included in the contractor's base bid?*

Response: The Contractor is responsible for repair or replacement of damaged plantings

49. *The project documents do not include a signage floor plan identifying sign types by room location. To accurately quantify and price the required signage, please provide a signage floor plan indicating each sign type and its corresponding room/location throughout the project.*

Response: The signs shown on sheet A-821 have been labeled Type A, Type B, and Type C. Type A is typical of all restroom locations. Type B is typical of all offices. Type C is typical of all Classrooms, Teachers Lounges, and all other rooms.

50. *Reference Detail 12/A-421. The stage curtains are identified as "By Others." Please confirm whether the stage curtains are to be furnished and installed by the Contractor and included in this bid, or if they are to be provided and installed by others and excluded from this scope of work.*

Response: The stage curtain is to be furnished and installed by the Contractor.

51. *As a follow up to RFI #8 in addendum #1, for bid leveling purposes, when can we anticipate permanent power by the utility company?*

Response: This is difficult to determine. The Contractor will be responsible for electrical power for construction activities.

52. *For large canopy north of the cafeteria and gymnasium, please advise if this canopy will be required to be included in the fire suppression system.*

Response: The fire suppression system is a delegated design and deferred submittal.

53. *Please confirm if the available water flow is sufficient for the proposed building design. If additional pressure maintenance is required, please confirm whether a*

jockey pump and all associated components are to be included in the Contractor's scope and bid pricing.

Response: Available water flow rate is not available at this time.

54. *RFI #1, Item #1 – Electronic Drawing Files Specification Section 274001 does not mention the provision of electronic drawing files to the successful AV Contractor for use in submittals. Please clarify if electronic CAD files will be provided to the successful AV Contractor for use in submittals.*

Response: Yes, electronic CAD files will be available.

55. *RFI #1, Item #2 – Classroom Wall-Mounted Loudspeakers Specification Section 274001, Part 2.2.1.a.2.b. describes Amplified Wall Mount Speaker Set Type 'S3.' There are no wall-mounted speaker locations indicated in the drawings, for any classroom. Please confirm this speaker type will not be used.*

Response: Confirmed that this speaker type will not be used.

56. *RFI #1, Item #3 – Maker's Lab C113 Ceiling/Speaker Type Drawing TA-101C, detail 1 indicates that Maker's Lab C110 will have ceiling speakers but may be an open ceiling. Specification Section 274001, Part 2.2.1.a.2. does not specify a ceiling speaker type for installation in an open ceiling. Please confirm the ceiling and speaker types for Maker's Lab C110.*

Response: Maker's Lab C110 has an open ceiling. For classroom pendant speakers use OWI Model# M6750W.

57. *RFI #1, Item #4 – Cafeteria and Gymnasium 2nd HDMI Input Locations Specification Section 274001, Part 1.5.B.1.a. indicates the projectors for the Cafeteria and Gymnasium spaces will each "be provided video signals from two independent HDMI input locations." Drawing TA-101B shows a single "HD" wall plate location for each space. The Cafeteria and Gym Signal Flow Diagram from Drawing TA-300 describes a single HDMI Input Wall Plate. Please confirm whether Two HDMI Input Locations are required. If so, please indicate the location and signal flow for this HDMI Input Location.*

Response: Plan on one HDMI input per location as shown on floor plans and signal flows.

58. *RFI #1, Item #5 – Gymnasium Wired Microphone Input Location Specification Section 274001, Part 1.5.B.2.b. prescribes that there "be one microphone stage wired input available" for each of these systems. Drawing TA-101B does not show any locations marked for a Wired Microphone Input. Please confirm if these microphone inputs are required; if they are, please integrate these Wired Microphone Input locations into the AV Plans, Signal Flow Diagram, and provide Plate Details.*

Response: For bidding purposes please disregard the wired microphone location.

59. *RFI #1, Item #6 – HDBaseT Cabling – Cat7 Specification Section 274001, Part 2.3.E.1.a indicates that CAT7 will be the only cable allowed for use in HDBaseT applications. The same section also specifies the connectors to be used with this*

cable as Cat6a. Please confirm whether Shielded Cat6a may be used in HDBaseT cabling applications.

Response: Cat 6A Liberty 24-4P-P-L6ASH-BLU cabling may be used to match the connectors.

- 60.** *RFI #1, Item #7 – Plywood in Equipment Rooms / Telecommunications Rooms Specification Section 274001, Part 3.3.A.11.b. describes Plywood as to be Installed and Painted by the AV contractor. The same is described in Section 271000, Part 3.3.G.1.c., as by the Structured Cabling Contractor. Please confirm whose responsibility this will be.*

Response: Plywood for Server A112, IDF B131, and IDF A223 should be provided/installed by the Structured Cabling Contractor for the telecom racks. Plywood for Stage B112 should be provided/installed by the AV contractor for the AV rack.

- 61.** *There's EIFS is called out on the exterior elevations (A-201 & A-202) to have a stucco finish, however there is no EIFS specification provided. Please confirm the extent of the EIFS and or stucco stucco scope of work and provide the necessary specifications.*

Response: The EIFS designation has been changed on the building elevations to STUC. These drawings show the extent of the STUC scope. Also see Wall Section 08 on sheet A-313. See Specification Section 09 2400 Cement Plastering related the STUC scope.

Specifications:

1. Revision to 08 7100 Door Hardware
2. Revision to 10 5113 Metal Lockers

Drawings:

1. Drawing G-001 Cover
 - a. **REVISE** Drawing Index
2. Drawing S2-20A Framing Plan – High Roof Level – Area A
 - a. **REVISE** RTU Screening
3. Drawing S3.11 Foundation Sections
 - a. **REVISE** Light Pole Foundation for two pole height conditions
4. Drawing A-002 Enlarged Site Plan
 - a. **ADD** Outdoor Benches and Trash Cans
5. Drawing A-005 Site Details
 - a. **ADD** Guardrail Detail
6. Drawing A-201 Building Elevations
 - a. **REVISE** EIFS designation to STUC
7. Drawing A-202 Building Elevations
 - a. **REVISE** EIFS designation to STUC

8. Drawing A-601 Door Schedule & Details
 - a. **REVISE** Door Schedule, Remarks
9. Drawing A-821 Signage Details
 - a. **ADD** Sign Types

Documents:

1. Sign Mounting Details (for School Flasher)
2. Harris County Engineering Dept. Solar Power Flasher Assembly Details
3. Pre-Bid Meeting Sign-In Sheet
4. Signed Board Resolution adopting the Texas Gulf Coast Prevailing Wages

END OF ADDENDUM NO. 4

SECTION 08 7100

DOOR HARDWARE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for wood, aluminum, and hollow metal doors.
- B. Electrically operated and controlled hardware.
- C. Lock cylinders for doors with balance of hardware specified in other sections.
- D. Thresholds.
- E. Weatherstripping and gasketing.

1.02 RELATED REQUIREMENTS

- A. Section 081113 - Hollow Metal Doors and Frames.
- B. Section 081416 - Flush Wood Doors.
- C. Section 084313 - Aluminum-Framed Storefronts: Door hardware, except as noted in section.
- D. Section 281000 - Access Control: Electronic access control devices.

1.03 REFERENCE STANDARDS

- A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design 2010.
- B. BHMA A156.1 - Standard for Butts and Hinges 2021.
- C. BHMA A156.2 - Bored and Preassembled Locks and Latches 2017.
- D. BHMA A156.3 - Exit Devices 2020.
- E. BHMA A156.4 - Door Controls - Closers 2019.
- F. BHMA A156.5 - Cylinders and Input Devices for Locks 2020.
- G. BHMA A156.6 - Standard for Architectural Door Trim 2021.
- H. BHMA A156.7 - Template Hinge Dimensions 2016.
- I. BHMA A156.16 - Auxiliary Hardware 2018.
- J. BHMA A156.21 - Thresholds 2019.
- K. BHMA A156.22 - Standard for Gasketing 2021.
- L. BHMA A156.26 - Standard for Continuous Hinges 2021.
- M. BHMA A156.28 - Recommended Practices For Mechanical Keying Systems 2018.
- N. BHMA A156.36 - Auxiliary Locks 2020.
- O. BHMA A156.115 - Hardware Preparation In Steel Doors And Steel Frames 2016.
- P. BHMA A156.115W - Hardware Preparation in Wood Doors with Wood or Steel Frames 2006.
- Q. DHI (H&S) - Sequence and Format for the Hardware Schedule 2019.
- R. DHI (KSN) - Keying Systems and Nomenclature 2019.

- S. DHI (LOCS) - Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames 2004.
- T. DHI WDHS.3 - Recommended Locations for Architectural Hardware for Flush Wood Doors 1993; also in WDHS-1/WDHS-5 Series, 1996.
- U. ICC (IBC) - International Building Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- V. ICC A117.1 - Accessible and Usable Buildings and Facilities 2017.
- W. ITS (DIR) - Directory of Listed Products Current Edition.
- X. NFPA 70 - National Electrical Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- Y. NFPA 80 - Standard for Fire Doors and Other Opening Protectives 2022.
- Z. NFPA 101 - Life Safety Code Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- AA. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives 2022.
- BB. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies 2022.
- CC. Storm Codes:
 - 1. Texas Department of Insurance (TDI).
- DD. UL (DIR) - Online Certifications Directory Current Edition.
- EE. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products that door hardware is installed on.
- B. Sequence installation to ensure facility services connections are achieved in an orderly and expeditious manner.
- C. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; require attendance by affected installers and the following:
 - 1. Installer's Architectural Hardware Consultant (AHC).
 - 2. Hardware Installer.
 - 3. Owner's Security Consultant.
- D. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware.
- E. Keying Requirements Meeting:
 - 1. Schedule meeting at project site prior to Contractor occupancy.
 - 2. Attendance Required:
 - a. Contractor.
 - b. Installer's Architectural Hardware Consultant (AHC).
 - c. Door Hardware Installer.
 - d. Owner's Security Consultant.
 - 3. Agenda:
 - a. Establish keying requirements.

- b. Verify locksets and locking hardware are functionally correct for project requirements.
 - c. Verify that keying and programming complies with project requirements.
 - d. Establish keying submittal schedule and update requirements.
4. Incorporate "Keying Requirements Meeting" decisions into keying submittal upon review of door hardware keying system including, but not limited to, the following:
 - a. Access control requirements.
 - b. Key control system requirements.
 - c. Schematic diagram of preliminary key system.
5. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.
6. Deliver established keying requirements to manufacturers.

1.05 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's catalog literature for each type of hardware, marked to clearly show products to be furnished for this project, and includes construction details, material descriptions, finishes, and dimensions and profiles of individual components.
- C. Shop Drawings - Door Hardware Schedule: A detailed listing that includes each item of hardware to be installed on each door.
 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC).
 2. Comply with DHI (H&S) using door numbering scheme and hardware set numbers as indicated in Contract Documents.
 - a. Submit in vertical format.
 3. List groups and suffixes in proper sequence.
 4. Include complete description for each door listed.
 5. Include manufacturers and product names, and catalog numbers; include functions, types, styles, sizes and finishes of each item.
 6. Include account of abbreviations and symbols used in schedule.
- D. Samples for Verification:
 1. Submit minimum size of 2 by 4 inch (51 by 102 mm) for sheet samples, and minimum length of 4 inch (102 mm) for other products.
 2. Include product description with samples.
- E. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- F. Manufacturer's qualification statement.
- G. Installer's qualification statement.
- H. Supplier's qualification statement.
- I. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- J. Keying Schedule:
 1. Submit three (3) copies of Keying Schedule in compliance with requirements established during Keying Requirements Meeting unless otherwise indicated.

- K. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.
- L. Project Record Documents: Record actual locations of concealed equipment, services, and conduit.
- M. Maintenance Materials and Tools: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.

1.06 QUALITY ASSURANCE

- A. Standards for Fire-Rated Doors: Maintain one copy of each referenced standard on site, for use by Architect and Contractor.
- B. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified for commercial door hardware with at least three years of documented experience.
- D. Supplier Qualifications: Company with certified Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC) to assist in work of this section.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Package hardware items individually; label and identify each package with door opening code to match door hardware schedule.

1.08 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Manufacturer Warranty: Provide manufacturer warranty against defects in material and workmanship for period indicated, from Date of Substantial Completion. Complete forms in Owner's name and register with manufacturer.
 - 1. Closers: Thirty years, minimum.
 - 2. Mechanical Exit Devices: Three years, minimum.
 - 3. Electrical Exit Devices: One year, minimum
 - 4. Locksets: Ten years, minimum.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Provide specified door hardware as required to make doors fully functional, compliant with applicable codes, and secure to extent indicated.
- B. Provide individual items of single type, of same model, and by same manufacturer.
- C. Closers:
 - 1. Provide door closer on each exterior door, unless otherwise indicated.
 - 2. Provide door closer on each fire-rated and smoke-rated door.
 - 3. Spring hinges are not an acceptable self-closing device, unless otherwise indicated.
- D. Weatherstripping and Gasketing:
 - 1. Provide weatherstripping on each exterior door at head, jambs, and meeting stiles of door pairs, unless otherwise indicated.
 - 2. Provide door bottom sweep on each exterior door, unless otherwise indicated.
 - 3. Fabricate as continuous gasketing, do not cut or notch gasketing material.

- E. Electrically Operated and/or Controlled Hardware: Provide necessary power supplies, power transfer hinges, relays, and interfaces as required for proper operation; provide wiring between hardware and control components and to building power connection in compliance with NFPA 70.
- F. See Section 281000 for additional access control system requirements.
- G. Fasteners:
 - 1. Provide fasteners of proper type, size, quantity, and finish that comply with commercially recognized standards for proposed applications.
 - a. Aluminum fasteners are not permitted.
 - b. Provide phillips flat-head screws with heads finished to match door surface hardware unless otherwise indicated.
 - 2. Provide machine screws for attachment to reinforced hollow metal and aluminum frames.
 - a. Self-drilling (Tek) type screws are not permitted.
 - 3. Provide stainless steel machine screws and lead expansion shields for concrete and masonry substrates.
 - 4. Provide wall grip inserts for hollow wall construction.
 - 5. Fire-Resistance-Rated Applications: Comply with NFPA 80.
 - a. Provide wood or machine screws for hinges mortised to doors or frames, strike plates to frames, and closers to doors and frames.
 - b. Provide steel through bolts for attachment of surface mounted closers, hinges, or exit devices to door panels unless proper door blocking is provided.

2.02 PERFORMANCE REQUIREMENTS

- A. Provide door hardware products that comply with the following requirements:
 - 1. Applicable provisions of federal, state, and local codes.
 - a. ICC (IBC).
 - b. NFPA 101.
 - 2. Accessibility: ADA Standards and ICC A117.1.
 - 3. Fire-Resistance-Rated Doors: NFPA 80, listed and labeled by qualified testing agency for fire protection ratings indicated, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.
 - 4. Hardware on Fire-Resistance-Rated Doors: Listed and classified by UL (DIR), ITS (DIR), or testing firm acceptable to authorities having jurisdiction as suitable for application indicated.
 - 5. Hardware Preparation for Steel Doors and Steel Frames: BHMA A156.115.
 - 6. Hardware Preparation for Wood Doors with Wood or Steel Frames: BHMA A156.115W.
 - 7. Products Requiring Electrical Connection: Listed and classified by UL (DIR) as suitable for the purpose specified.
 - 8. Exterior doors to meet Texas Department of Insurance (TDI) windstorm requirements.

2.03 HINGES

- A. Basis-of-Design Product: Subject to compliance with requirements, provide BEST; dormakaba Group or comparable product by one of the following:
 - 1. .Hager
 - 2. .Ives
 - 3. Approved Equal

B. Properties:

1. Butt Hinges: As applicable to each item specified.
 - a. Standard Weight Hinges: Minimum of two (2) permanently lubricated non-detachable bearings.
 - b. Heavy Weight Hinges: Minimum of four (4) permanently lubricated bearings on heavy weight hinges.
 - c. Template screw hole locations.
 - d. Bearing assembly installed after plating.
 - e. Bearings: Concealed fully hardened bearings.
 - f. Bearing Shells: Shapes consistent with barrels.
 - g. Pins: Easily seated, non-rising pins.
 - 1) Fully plate hinge pins.
 - 2) Non-Removable Pins: Slotted stainless steel screws.
 - h. UL 10C listed for fire-resistance-rated doors.
2. Continuous Hinges: As applicable to each item specified.
 - a. Geared Continuous Hinges: As applicable to each item specified.
 - 1) Non-handed.
 - 2) Anti-spinning through-fastener.
 - 3) UL 10C listed for fire-resistance-rated doors.
 - (a) Metal Door Installation: Rated up to 90 minutes.
 - (b) Wood Door Installation: Rated up to 60 minutes.
 - 4) Sufficient size to permit door to swing 180 degrees.

C. Sizes: See Door Hardware Schedule.

1. Hinge Widths: As required to clear surrounding trim.
2. Sufficient size to allow 180 degree swing of door.

D. Finishes: See Door Hardware Schedule.

1. Fully polish hinges, front, back, and barrel.

E. Grades:

1. Butt Hinges: Comply with BHMA A156.1 and BHMA A156.7 for templated hinges.
2. Continuous Hinges: Comply with BHMA A156.26, Grade 1.

F. Material: Base metal as indicated for each item by BHMA material and finish designation.

G. Types:

1. Butt Hinges: Include full mortise hinges.
2. Continuous Hinges: Include geared hinges.

H. Options: As applicable to each item specified.

1. Provide electric power transfer (EPT) as listed in hardware sets.
2. Provide concealed electric (CE) as listed in the hardware sets.

I. Quantities:

1. Butt Hinges: Three (3) hinges per leaves up to 90 inches (2286 mm) in height. Add one (1) for each additional 30 inches (762 mm) in height or fraction thereof.
 - a. Hinge weight and size unless otherwise indicated in hardware sets:
 - 1) For doors up to 36 inches (914 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.134 inch (3.4 mm) and a minimum of 4-1/2 inches (114 mm) in height.

- 2) For doors from 36 inches (914 mm) wide up to 42 inches (1067 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.145 inch (3.7 mm) and a minimum of 4-1/2 inches (114 mm) in height.
 - 3) For doors from 42 inches (1067 mm) wide up to 48 inches (1219 mm) wide and up to 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm) in height.
 - 4) For doors greater than 1-3/4 inches (44.5 mm) thick provide hinges with a minimum thickness of 0.180 inch (4.6 mm) and a minimum of 5 inches (127 mm) in height.
2. Continuous Hinges: One per door leaf.
- J. Applications: At swinging doors.
1. Provide non-removable pins at out-swinging doors with locking hardware and all exterior doors.
- K. Products:
1. Butt Hinges:
 - a. Concealed bearing, five (5) knuckle.
 2. Continuous Hinges:
 - a. Aluminum geared hinges.

2.04 BOLTS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Trimco or comparable product by one of the following:
1. Trimco
 2. Ives
 3. Hager
 4. Approved Equal
- B. Properties:
1. Flush Bolts:
 - a. Automatic Flush Bolts: Automatically latching upon closing of door leaf.
 - 1) Bolt Throw: 3/4 inch (19 mm), minimum.
 2. Dustproof Strikes: For bolting into floor, provide except at metal thresholds.
- C. Options:
1. Lever extensions: Provide for top bolt at oversized doors.
- D. Products:
1. Automatic flush bolts.

2.05 EXIT DEVICES

- A. Basis-of-Design Product: Subject to compliance with requirements, provide dormakaba; dormakaba Group or comparable product by one of the following:
1. Precision.
 2. Von Duprin.
- B. Properties:
1. Actuation: Full-length touchpad.

2. Touchpads: 'T" style metal touchpads and rail assemblies with matching chassis covers end caps.
 3. Latch Bolts: Stainless steel deadlocking with 3/4 inch (19 mm) projection using latch bolt.
 4. Lever Design: Match project standard lockset trims.
 5. Cylinder: Include where cylinder dogging or locking trim is indicated.
 6. Strike as recommended by manufacturer for application indicated.
 7. Sound dampening on touch bar.
 8. Dogging:
 - a. Non-Fire-Resistance-Rated Devices: Cylinder 1/4 inch (6 mm) dogging.
 - b. Fire-Resistance-Rated Devices: Manual dogging not permitted.
 9. Touch bar assembly on wide style exit devices to have a 1/4 inch (6.3 mm) clearance to allow for vision frames.
 10. All exposed exit device components to be of architectural metals and "true" architectural finishes.
 11. Handing: Field-reversible.
 12. Fasteners on Back Side of Device Channel: Concealed - exposed fasteners not allowed.
 13. Vertical Latch Assemblies' Operation: Gravity, without use of springs.
- C. Grades: Complying with BHMA A156.3, Grade 1.
1. Provide exit devices tested and certified by UL or by a recognized independent laboratory for mechanical operational testing to 10 million cycles minimum with inspection confirming Grade 1 Loaded Forces have been maintained.
- D. Options:
1. Electrified Devices:
 - a. Latchbolt Retraction: motorized latch bolt retraction.
- E. Products:
1. Best Precision
 2. Von Duprin.
 3. Approved Equal

2.06 REMOVABLE MULLIONS

- A. Manufacturers:
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 2. Von Duprin
 3. Approved Equal
- B. Properties:
1. Rectangular shape 3 inches (76 mm) by 2 inches (51 mm) tubes with minimum 1/8 inch (3.2 mm) wall thickness.
 2. Furnished by the same manufacturer as exit devices.
 3. Spacers: Provide as required for proper installation, based on frame profile and dimensions.
- C. Grades: Complying with BHMA A156.3.
- D. Materials: Manufacturer's standard for items specified.
1. Top and Bottom Brackets: Investment-cast steel.

- E. Options:
 - 1. Furnish Keyed Removable "KR" feature and corresponding cylinders as specified.
 - a. Mullions capable of being installed without physical key present.
 - b. Physical key required to operate.
- F. Applications: As indicated on drawings and in Door Hardware Schedule.
- G. Products:
 - 1. 822 Series.

2.07 LOCK CYLINDERS

- A. Manufacturers:
 - 1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 - 2. Schlage
 - 3. Approved Equal
- B. Properties:
 - 1. Lock Cylinders: Provide key access on outside of each lock, unless otherwise indicated.
 - a. Provide cylinders from same manufacturer as locking device.
 - b. Provide cams and/or tailpieces as required for locking devices.
 - c. Provide cylinders with appropriate format interchangeable cores where indicated.
- C. Grades:
 - 1. Standard Security Cylinders: Comply with BHMA A156.5.
- D. Material:
 - 1. Manufacturer's standard corrosion-resistant brass alloy.
- E. Types: As applicable to each item specified.
 - 1. Standard security small format interchangeable core (SFIC) type cylinders, with seven-pin, 1C - 7-pin cores.
- F. Applications: At locations indicated in hardware sets.
- G. Products:
 - 1. Rim/mortise.

2.08 MORTISE LOCKS

- A. Manufacturers:
 - 1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 - 2. Schlage
 - 3. Approved Equal
- B. Properties:
 - 1. Mechanical Locks: Manufacturer's standard.
 - a. Fitting modified ANSI A115.1 door preparation.
 - b. Door Thickness Coordination Fitting 1-3/4 inch (44 mm) to 2-1/4 inch (57 mm) thick doors.
 - c. Latch: Solid, one-piece, anti-friction, self-lubricating stainless steel.
 - 1) Latchbolt Throw: 3/4 inch (19 mm), minimum.
 - d. Auxiliary Deadlatch: One piece stainless steel, permanently lubricated.
 - e. Backset: 2-3/4 inch (70 mm).

- f. Cylinders:
 - 1) Cylinder Core Types: Locks capable of supporting manufacturers' cores, as applicable.
 - (a) Small format interchangeable.
- g. Lever Trim:
 - 1) Functionality: Allow the lever handle to move up to 45 degrees from horizontal position prior to engaging the latchbolt assembly.
 - 2) Strength: Locksets outside locked lever designed to withstand minimum 1,400 inch-lbs (158.2 Nm) of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still operate lockset.
 - 3) Spindle: Designed to prevent forced entry from attacking of lever.
 - 4) Independent spring mechanism for each lever.
 - (a) Trim to be self-aligning and thru bolted.
 - 5) Handles: Made of forged or cast brass, bronze, or stainless steel construction. Levers that contain a hollow cavity are not acceptable.
 - 6) Levers to operate a roller bearing spindle hub mechanism.
- C. Finishes: See Door Hardware Schedule.
 - 1. Core Faces: Match finish of lockset.
- D. Grades:
- E. Products: Mortise locks, including standard and electrified types.
 - 1. 40H.

2.09 CYLINDRICAL LOCKS

- A. Manufacturers:
 - 1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 - 2. dormakaba; dormakaba Group: www.dormakaba.com/us-en/#sle.
 - 3. Schlage
 - 4. Approved Equal
- B. Properties:
 - 1. Mechanical Locks:
 - a. Fitting modified ANSI A115.2 door preparation.
 - b. Door Thickness Fit: 1-3/8 inches (35 mm) to 2-1/4 inches (57 mm) thick doors.
 - c. Construction: Hub, side plate, shrouded rose, locking pin to be a one-piece casting with a shrouded locking lug.
 - 1) Through-bolted anti-rotational studs.
 - d. Cast stainless steel latch retractor with roller bearings for exceptionally smooth operation and superior strength and durability.
 - e. Bored Hole: 2-1/8 inch (54 mm) diameter.
 - f. Backset: 2-3/4 inches (70 mm) unless otherwise indicated.
 - g. Latch: Single piece tail-piece construction.
 - 1) Latchbolt Throw: 1/2 inch (12.7 mm), minimum.
 - h. Cylinders:
 - 1) Cylinder Core Types: Locks capable of supporting manufacturers' cores, as applicable.
 - (a) Small format interchangeable.
 - i. Lever Trim:

- 1) Style: See Door Hardware Schedule.
 - 2) Functionality: Allow the lever handle to move up to 45 degrees from horizontal position prior to engaging the latchbolt assembly.
 - 3) Strength: Locksets outside locked lever designed to withstand minimum 1,400 inch-lbs (158.2 Nm) of torque. In excess of that, a replaceable part will shear. Key from outside and/or inside lever will still operate lockset.
 - 4) Independent spring mechanism for each lever.
 - (a) Contain lever springs in the main lock hub.
 - 5) Outside Lever Sleeve: Seamless one-piece construction.
 - 6) Keyed Levers: Removable only after core is removed by authorized control key.
2. Electrified Locks: Same properties as standard locks, and as follows:
- a. Voltage: 24 VDC.
 - b. Function: Electrically locked (Fail Safe) or unlocked (Fail Secure), as indicated for each lock in Door Hardware Schedule.
 - c. Temperature Control Module (TCM).
- C. Finishes: See Door Hardware Schedule.
1. Core Faces: Match finish of lockset.
- D. Grades: Comply with BHMA A156.2, Grade 1, Series 4000, Operational Grade 1, Extra Heavy Duty.
1. Durability: Passing 50 Million cycle tests verified by third party testing agency.
- E. Material: Manufacturer's standard for specified lock.
1. Critical Latch and Chassis Components: Brass or corrosion-resistance treated steel.
 2. Outside Lever Sleeve: Hardened steel alloy.
- F. Options:
1. Regulatory Compliance: As required by authorities having jurisdiction the State in which the Project is located.
 - a. California State Fire Marshal listing, Admin Code Title 19 and 24.
- G. Products: Cylindrical locks, including mechanical and electrified types.
1. Best 9K
 2. Schlage ND
 3. Approved Equal

2.10 AUXILIARY LOCKS (DEADLOCKS)

- A. Manufacturers:
1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 2. Schlage
 3. Approved Equal
- B. Properties:
1. Backset: 2-3/4 inch (70 mm), unless otherwise indicated.
 2. Strike: Appropriate for door frame.
 3. Cylindrical Deadbolt: Manufacturer's standard, adjustable to accommodate range of door thicknesses indicated.
 - a. Door Thickness Fit: 1-3/8 inches (35 mm) to 3 inches (76 mm) thick doors.
 - b. Bolt Throw: 1 inch (25.4 mm) hardened steel.

c. UL listed for up to 3 hours.

C. Grades:

1. Cylindrical Deadbolts: Tested and approved by BHMA A156.36, Operational Grade 1.

D. Products:

1. 82/83T (Cylindrical, Grade 1).

2.11 COORDINATORS

A. Manufacturers:

1. Trimco: www.trimcohardware.com/#sle.
2. Hager
3. Ives
4. Approved Equal

B. Properties:

1. General: Non-handed devices, with field-selectable active door leaf.
2. Coordinators: Devices on pairs of doors with closers and self-latching or automatic flush bolts installed.
 - a. Coordinator Operation: Only when inactive door is opened.

C. Grades:

D. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.

1. Meet UL 10C for Positive Pressure.

E. Types:

1. Coordinators: Bar.

F. Installation:

1. Mounting: Provide necessary mounting brackets and filler bars to ensure proper installation of coordinator and related hardware.
2. Coordination: Properly sequence installation of other door hardware affected by placement of coordinators and carry bars.

G. Products:

1. 3090 Series.

2.12 CLOSERS

A. Manufacturers:

1. BEST, dormakaba Group www.bestaccess.com/#sle.
2. dormakaba; dormakaba Group: www.dormakaba.com/us-en/#sle.
3. LCN
4. Approved Equal

B. Properties:

1. Surface Mounted Closers: Manufacturer's standard.
 - a. Construction: R14 high silicon aluminum alloy.
 - b. Maximum Projection from Face of Door: 2-7/16 inches (62 mm).
 - c. Mechanism: Separate tamper-resistant adjusting valves for closing and latching speeds.
 - 1) Include advanced backcheck feature.
 - 2) Include delayed action feature.

- d. Hydraulic Fluid: All-weather type.
- e. Arm Assembly: Standard for product specified.
 - 1) Include hold-open, integral stop, or spring-loaded stop feature, as specified in Door Hardware Schedule.
 - 2) Parallel arm to be a heavy-duty rigid arm.
 - 3) Where "IS" or "S-IS" arms are specified in hardware sets, if manufacturer does not offer this arm provide a regular arm mount closer in conjunction with a heavy-duty overhead stop equal to a dormakaba 900 Series.
- f. Covers:
 - 1) Type: Standard for product selected.
 - (a) Full.
 - 2) Material: Plastic.
 - 3) Finish: Painted.
- C. Grades:
 - 1. Closers: Comply with BHMA A156.4, Grade 1.
 - a. Underwriters Laboratories Compliance:
 - 1) Product Listing: UL (DIR) and ULC for use on fire-resistance-rated doors.
 - (a) UL 228 - Door Closers-Holders, With or Without Integral Smoke Detectors.
- D. Code Compliance: As required by authorities having jurisdiction in the State in which the Project is located.
 - 1. Devices listed with California Department of Forestry and Fire Protection, Office of the State Fire Marshal.
- E. Types:
 - 1. Rack-and-pinion, surface-mounted. 1-1/2 inches (38 mm) minimum bore.
- F. Installation:
 - 1. Mounting: Includes surface mounted installations.
 - 2. Mount closers on non-public side of door and stair side of stair doors unless otherwise noted in hardware sets.
 - 3. At outswinging exterior doors, mount closer on interior side of door.
 - 4. Provide adapter plates, shim spacers, and blade stop spacers as required by frame and door conditions.
 - 5. Where an overlapping astragal is included on pairs of swinging doors, provide coordinator to ensure door leaves close in proper order.
 - 6. All closers to be mounted on the non-public or interior side of the door.
- G. Products:
 - 1. Surface Mounted:
 - a. Best HD9000.
 - b. Dormakaba 8900.
 - c. LCN 4040
 - d. Approved Equal

2.13 PROTECTION PLATES

- A. Manufacturers:
- B.

C. Properties:

1. Plates:

- a. Kick Plates: Provide along bottom edge of push side of every wood door with closer, except aluminum storefront and glass entry doors, unless otherwise indicated.
 - 1) Size: 10 inches (254 mm) high by 2 inch (51 mm) less door width (LDW) on push side of door.
- b. Mop Plates: Provide along bottom edge of push side of doors to provide protection from cleaning liquids and equipment damage to door surface.
 - 1) Size: 6 inch (152 mm) high by 1 inch (38 mm) less door width (LDW) on pull side and 2 inch (51 mm) LDW on push side of door.
- c. Edges: Beveled, on four (4) unless otherwise indicated.

D. Grades: Comply with BHMA A156.6.

E. Material: As indicated for each item by BHMA material and finish designation.

- 1. Metal Properties: Stainless steel.
 - a. Metal, Standard Duty: Thickness 0.050 inch (1.27 mm), minimum.

F. Installation:

- 1. Fasteners: Countersunk screw fasteners

2.14 STOPS AND HOLDERS

A. Manufacturers:

- 1. Trimco: www.trimcohardware.com/#sle.
- 2. Ives
- 3. Hager
- 4. Approved Equal

B. General: Provide overhead stop/holder when wall or floor stop is not feasible.

C. Grades:

- 1. Wall Bumpers and Floor Stops: Comply with BHMA A156.16 and Resilient Material Retention Test as described in this standard.

D. Material: Base metal as indicated for each item by BHMA material and finish designation.

E. Types:

- 1. Wall Bumpers: Bumper, concave, wall stop.
- 2. Floor Stops: Provide with bumper floor stop.

F. Installation:

- 1. Non-Masonry Walls: Confirm adequate wall reinforcement has been installed to allow lasting installation of wall bumpers.

G. Products:

- 1. Wall Bumpers.
- 2. Floor Stops.

2.15 THRESHOLDS

A. Manufacturers:

- 1. National Guard Products, Inc: www.ngpinc.com/#sle.

B. Properties:

- 1. Threshold Surface: Fluted horizontal grooves across full width.

- C. Grades: Thresholds: Comply with BHMA A156.21.
- D. Material: Base metal as indicated for each item by BHMA material and finish designation.
 - 1. Threshold Assemblies: Aluminum.
- E. Types: As applicable to project conditions. Provide barrier-free type at every location where specified.
 - 1. Saddle Thresholds: Without thermal break.

2.16 WEATHERSTRIPPING AND GASKETING

- A. Manufacturers:
 - 1. National Guard Products, Inc: www.ngpinc.com/#sle.
 - 2. Zero
 - 3. Hager
 - 4. Approved Equal
- B. Properties:
 - 1. Adhesive-Backed Perimeter Gasketing: Silicone gasket material applied to frame with self- adhesive.
 - 2. Rigid, Housed, Perimeter Gasketing: Neoprene bulb gasket material held in place by aluminum housing; fastened to frame stop with screws.
 - 3. Door Sweeps: Neoprene gasket material held in place by flat aluminum housing or flange; surface mounted to face of door with screws.
- C. Grades: Comply with BHMA A156.22.
- D. Products:
 - 1. Weatherstripping: See Door Hardware Schedule.
 - 2. Smoke Seals: See Door Hardware Schedule.
 - 3. Sound Seals: See Door Hardware Schedule.
 - 4. Door Bottom Seals:
 - a. Door Sweeps: See Door Hardware Schedule.

2.17 MISCELLANEOUS ITEMS

- A. Manufacturers:
 - 1. Trimco: www.trimcohardware.com/#sle.
 - 2. Hager
 - 3. Ives
 - 4. Approved Equal
- B. Properties:
 - 1. Silencers: Provide at equal locations on door frame to mute sound of door's impact upon closing.
 - a. Single Door: Provide three on strike jamb of frame.
 - b. Pair of Doors: Provide two on head of frame, one for each door at latch side.
 - c. Material: Rubber, gray color.
- C. Products:
 - 1. Silencers.

2.18 ELECTRIFIED HARDWARE

- A. Manufacturers:
 - 1. BEST, dormakaba Group: www.bestaccess.com/#sle.

2. Schlage
3. Approved Equal
- B. Properties:
 1. Power Supply Units: Manufacturer's standard.
 - a. Enclosures: Lockable NEMA Type 1, with hinged cover and knockouts.
 - b. Power: 24 VDC; 2 AMP.
 - 1) Incoming Power Voltage: 120 VAC.
 - 2) Input circuit protection fuse.
 - c. Emergency Release Terminals: Designed to release devices upon activation of fire alarm system.
 - d. Auxiliary contacts for remote signaling.
 - e. User-selectable time delay from 0 to 4 minutes.
 - f. Fire Alarm System Interface: Standard.
 - 1) Fire alarm terminal with green LED indicating power is available.
 - g. Output Distribution Board with indicator LEDs.
 - h. Battery backup.
 - i. On/Off LED power indicator.
 2. Power Transfers: Manufacturer's standard.
 - a. Mortised Type with Wires & Connectors:
 - 1) Listed by UL and ULC.
 - 2) Stainless steel housing and spring conduit.
 - 3) Wire Harness: Pre-installed, twelve wire, equipped with ten (10) 24 gauge wires and two 18 gauge wires.
 - 4) Accommodate 180 degree door swing.
 - 5) Quick-Connect Plugs: Pre-installed.
 3. Wire Harnesses: Of sufficient length, with quick connectors.
 - a. Wire Harness End Connection to Power Supply or Junction Box: One end with bare leads.
- C. Products:
 1. Power Supplies:
 - a. Refer to Division 281300.
 2. Power Transfers:
 - a. EPT-12C.
 3. Wire Harnesses:
 - a. BEST wire harnesses.

2.19 KEYS AND CORES

- A. Manufacturers:
 1. BEST, dormakaba Group: www.bestaccess.com/#sle.
 2. Schlage
 3. Approved Equal.
- B. Properties: Complying with guidelines of BHMA A156.28.
 1. Provide small format interchangeable core.
 2. Provide Patented CORMAX keys and cores.
 3. Provide keying information in compliance with DHI (KSN) standards.

4. Keying Schedule: Arrange for a keying meeting, with Architect, Owner and hardware supplier, and other involved parties to ensure locksets and locking hardware, are functionally correct and keying complies with project requirements.
 5. Keying: Master keyed.
 6. Include construction keying and control keying with removable core cylinders.
 7. Supply keys in following quantities:
 - a. Master Keys: 4 each.
 - b. Construction Master Keys: 6 each.
 - c. Construction Keys: 15 each.
 - d. Construction Control Keys: 2 each.
 - e. Control Keys if New System: 2 each.
 - f. Change Keys: 2 each for each keyed core.
 8. Provide key collection envelopes, receipt cards, and index cards in quantity suitable to manage number of keys.
 9. Deliver keys with identifying tags to Owner by security shipment direct from manufacturer.
 10. Permanent Keys and Cores: Stamped with applicable key marking for identification. Do not include actual key cuts within visual key control marks or codes. Stamp permanent keys "Do Not Duplicate."
 11. Include installation of permanent cores and return construction cores to hardware supplier. Construction cores and keys to remain property of hardware supplier.
- C. Products:
1. Patented:
 - a. Best
 - b. Schlage
 - c. Approved Equal

2.20 FINISHES

- A. Finishes: Identified in Hardware Sets.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that doors and frames are ready to receive this work; labeled, fire-rated doors and frames are properly installed, and dimensions are as indicated on shop drawings.
- B. Correct all defects prior to proceeding with installation.
- C. Verify that electric power is available to power operated devices and of correct characteristics.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Install hardware using the manufacturer's fasteners provided. Drill and tap all screw holes located in metallic materials. Do not use "Riv-Nuts" or similar products.
- C. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80.
- D. Install hardware for smoke and draft control doors in accordance with NFPA 105.
- E. Use templates provided by hardware item manufacturer.

- F. Do not install surface mounted items until application of finishes to substrate are fully completed.
- G. Wash down masonry walls and complete painting or staining of doors and frames.
- H. Complete finish flooring prior to installation of thresholds.
- I. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As indicated in following list, unless noted otherwise in Door Hardware Schedule or on drawings.
 - 1. For Steel Doors and Frames: Install in compliance with DHI (LOCS) recommendations.
 - 2. For Steel Doors and Frames: See Section 081113.
 - 3. For Aluminum-Framed Storefront Doors and Frames: See Section 084313.
 - 4. For Wood Doors: Install in compliance with DHI WDHS.3 recommendations.
 - 5. Flush Wood Doors: See Section 081416.
 - 6. Mounting heights in compliance with ADA Standards:
 - a. Locksets: 40-5/16 inch (1024 mm).
 - b. Push Plates/Pull Bars: 42 inch (1067 mm).
 - c. Deadlocks (Deadbolts): 48 inch (1219 mm).
 - d. Exit Devices: 40-5/16 inch (1024 mm).
 - e. Door Viewer: 43 inch (1092 mm); standard height 60 inch (1524 mm).
- J. Set exterior door thresholds with full-width bead of elastomeric sealant at each point of contact with floor providing a continuous weather seal, anchor thresholds with stainless steel countersunk screws.
- K. Include in installation for existing doors and frames any necessary field modification and field preparation of doors and frames for new hardware. Provide necessary fillers, reinforcements, and fasteners for mounting new hardware and to cover existing door and frame preparations.

3.03 FIELD QUALITY CONTROL

- A. Perform field inspection and testing under provisions of Section 014000 - Quality Requirements.

3.04 ADJUSTING

- A. Adjust work under provisions of Section 017000 - Execution and Closeout Requirements.
- B. Adjust hardware for smooth operation.
- C. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.

3.05 CLEANING

- A. Clean finished hardware in accordance with manufacturer's written instructions after final adjustments have been made.
- B. Clean adjacent surfaces soiled by hardware installation activities.
- C. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.

3.06 PROTECTION

- A. Protect finished Work under provisions of Section 017000 - Execution and Closeout Requirements.

- B. Do not permit adjacent work to damage hardware or finish.

HARDWARE SETS

Manufacturer list

BES Best
PRE BEST (Precision)
DKM dormakaba Multi Family
NGP National Guard Products
RCI Rutherford Controls Inc
TRI Trimco

Option list

Code:	Name:
PC90	Full Size Plastic Cover
EHD90	EHD9000 Series Closer
S300	Standard strike
3	2-3/4" Backset
BSHD90	Heavy-Duty Blade Stop Spacer
SIS90	HD Regular or Top Jamb Spring Stop Arm
TS	Touchbar Monitoring Switch
4S	"Adjustre" Wall Stop & Holder
SDST90	HD Spring Stop & Hold Open Parallel Arm
V4908	Key Controls Lever- Anti Vandal Lever
S2	Standard Spindle
DS90	HD Door saver (Stop) PA
1702	Exit Only, Dummy Pull Trim
7	7 Pin
LBR	Less Bottom Rod
EPT12C	Mortised Power Transfer
CV	Cast Wall Bumper Concave Combo Pack
S3	ANSI 4 7/8" Strike
(1/4-20 MS/EA)	1/4-20 Mach. Screw/Exp Anchor
Head	Provide at the head
6S	"Adjustre" Wall Stop & Holder and Pivoting
UL	UL Rating
HD	Heavy Duty
SPA90	Heavy Duty Parallel Arm
Adhesive Tape	Adhesive Tape
CB278	HWT. 5 Knuckle Swing Clear Concealed Bearing Hinge
RQE	Request to Exit
D	Storeroom
AVB	AVB Advanced Variable Backcheck
S3 7/8"	7/8" lip to Center Strike
B4E	Bevel 4 edges
RP3	Rings for 7 pin cylinder
CORMAX	CORMAX

FL	Fire Rated Hardware
VIB	Double Visual Indicator
S3	ANSI 4 7/8" Strike
S300	Top Strike
R	Classroom
AF90P	Standard - flat arm tri-pack
CA-03	Cylinder Attachment Kit
LDW	Less Door Width
1703	Pull - Key retracts latchbolt
MLR	Motorized Latch Retraction
ODW	Over Door Width
4	Standard Mortise
L	Privacy Function
CD	Cylinder Dogging: 1-1/4" Mortise Cylinder not included
Head & Jambs (2)	Provide at the head and both jambs
Jamb	Provide at the jamb
LAR	Length As Required
RP	Rim Cylinder Ring
2S	"Adjustre" Floor Stop & Holder
HOHA	Extra Heavy-Duty Floor Stop Hold Open
DP90	HD Parallel Arm Drop Plate
NRP	NRP>NON-REMOVABLE PINS
CSK	Counter Sunk Holes
DEU	Electrically Unlocked

Finish list

Code:	Name:
710CU	Steralloy (Silver Color)
689	689 Aluminum
630	Satin stainless steel
CL	Clear
B	Black Silicone
W	White
626 / 26D	Satin Chrome plated
A / AL	Anodized Aluminum
Gray	Gray Rubber
622	Matte Black

Specification Report

Set #2 - Push / Pull Bars, DB

Doors: A121

3.0	Hinge	CB179 NRP 45X45	26D	BES
1.0	Deadbolt	8T 3 K S5 CORMAX 7	626	BES
1.0	Push / Pull Bar	1738 CTC dimension as directed by Architect	630	TRI
1.0	Door Closer	EHD 9016 SPA90	689	BES
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #3 - Push Pull, DB-Double Cyl

Doors: B113B

3.0	Hinge	CB179 45X45	26D	BES
1.0	Deadbolt	8T 3 M STKCORMAX 7	626	BES
1.0	Push Plate	1001 11	630	TRI
1.0	Pull Plate	1035 3	630	TRI
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #4 - Push Pull, DB-Classroom

Doors: B117, B119

3.0	Hinge	CB179 45X45	26D	BES
1.0	Deadbolt	8T 3 S STKCORMAX 7	626	BES
1.0	Push Plate	1001 11	630	TRI
1.0	Pull Plate	1035 3	630	TRI
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #5 - Push Pull, DB-Double Cyl
Doors: B108B

3.0	Hinge	CB179 NRP 45X45	26D	BES
1.0	Deadbolt	8T 3 K STK CORMAX 7	626	BES
1.0	Push Plate	1001 11	630	TRI
1.0	Pull Plate	1035 3	630	TRI
1.0	Door Closer HO	EHD 9016 DST90	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
3.0	Silencer	1229A	Gray	TRI

Set #6 - Passage Set
Doors: A123

3.0	Hinge	CB179 45X45	26D	BES
1.0	Cylindrical Lock	9K 3 0 N 15 D S3	626	BES
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #7 - Inswing Privacy - Indicator
Doors: A107

3.0	Hinge	CB179 45X45	26D	BES
1.0	Mortise Lock	45H 0 L 15 H VIBE	626	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #7.1 - Inswing Hotel Function - Indicator
Doors: A103, A131, A132, B102, B121, B122, B129, A217, A218

3.0	Hinge	CB179 45X45	26D	BES
1.0	Mortise Lock	45H H L 15 H VIBE	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #8 – Not Used

Set #10 - Inswing Storeroom LK

Doors: A104, A105, A106, A108, A111, A119, A127, A128, A130, A133, A134, A136, A139, A140, A141, A142, A143, A144, A145, B103, B104, B105, B106, B120, B123, B126, B127, B130, , B133, B134, C107, C114A, C115, C116, C117, C118, A122, A202, A203, A204, A205, A206, A207, A208, A209, A210, A212, A211, A214, A215, A219, A221, A224, A225, A226, A229, A230, A231, A232, A233, A234, A235

3.0	Hinge	CB179 45X45	26D	BES
1.0	Cylindrical Lock	9K 3 7 D 15 D S3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #10.1 - Inswing Office

Doors: B108A

3.0	Hinge	CB179 45X45	26D	BES
1.0	Cylindrical Lock	9K 3 7 AB 15 D S3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #10.2 - Storeroom LK

Doors: B108E, C106, C103, C109, C113

3.0	Hinge	CB179 45X45	26D	BES
1.0	Cylindrical Lock	9K 3 7 D 15 D S3 CORMAX	626	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #10.3 - Inswing Office

Doors: A116, A117, A118, A120, A121A, A121B, A121C, A121D, A121E, A121F, B118

3.0	Hinge	CB179 45X45	26D	BES
1.0	Cylindrical Lock	9K 3 7 AB 15 D S3 CORMAX	626	BES
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI

1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #10.4 - Storeroom Rated / Gasketing
Doors: A109A, A129

3.0	Hinge	CB179 45X45	630	BES
1.0	Cylindrical Lock	9K 3 7 D 15 D S3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
1.0	Gasketing	5050 Head & Jambs (2)	A	NGP

Set #11 - Outswing Storeroom Lk,
Doors: A115A

3.0	Hinge	CB179 45X45	26D	BES
1.0	Cylindrical Lock	9K 3 7 D 15 D S3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #11.1 - Inswing Storeroom w/Gasketing
Doors: A213A

3.0	Hinge	CB179 NRP 45X45	26D	BES
1.0	Cylindrical Lock	9K 3 7 D 15 D S3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Wall Stop	1270 CX	626	TRI
1.0	Gasketing	5050 Head & Jambs (2)	CL	NGP

Set #12 - Exterior Outswing Storeroom Lk
Doors: A124

3.0	Hinge	CB179 NRP 45X45	630	BES
1.0	Cylindrical Lock	9K 3 7 D 15 D S3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 SDS90	689	BES
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	110S Head & Jambs (2)	A	NGP
1.0	Sweep	C699 LAR	A	NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP

Set #13 - Pr. Outswing FB, Storeroom Lk
Doors: B109, B111

6.0	Hinge	CB179 45X45	26D	BES
1.0	Flush Bolt Set	1857P	626	ABH
1.0	Strike	1870	626	ABH
1.0	Cylindrical Lock	9K 3 7 D 15 D STK 7/8" CORMAX	626	BES
2.0	Door Closer H/O	EHD 9016 SDST90	689	BES
1.0	Coordinator	3090 SERIES	626	TRI
2.0	Kick Plate	K0050 10" X 1" LDW CSK B4E	630	TRI
2.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Astragal	1390SP-83		NGP
2.0	Silencer	1229A	Gray	TRI

Set #14 - Pr. Storeroom Lk,
Doors: C110A, C111A, C111B

6.0	Hinge	CB179 45X45	26D	BES
2.0	Surface Mount Slide Bolt	3923	630	TRI
1.0	Cylindrical Lock	9K 3 7 D 15 D STK 7/8" CORMAX	626	BES
1.0	Door Closer	EHD90 16 SDST90 (ACTIVE LEAF)	689	BES
2.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
2.0	Kick Plate	K0050 10" X 1" LDW CSK B4E	630	TRI
1.0	Astragal	139 LAR	A	NGP
2.0	Silencer	1229A	Gray	TRI

Set #15 - Inswing Electrified
Doors: A112, B131, A110, A115, A223

3.0	Hinge	CB179 45X45	26D	BES
1.0	Power Transfer	EPT-12C		PRE
1.0	Electromechanical Cylindrical Lock	9KW 3 7 DEU 15 D C RQE CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP
1.0	Card Reader	By Div 28		
1.0	Power Supply	COMM-DKPS-2A		DKM
1.0	Wiring Harness	WH-6E		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-38P		BES
1.0	Door Position Switch	9540	W	RCI

NOTE: Door normally closed and secure. Door contact signals door status. RQE signals authorized egress. Entry by key, remote release or approved credential. Free egress at all times.

Set #16 - Exterior Outswing
Doors: A213B

3.0	Hinge	CB168 NRP 45X45	630	BES
1.0	Cylindrical Lock	9K 3 7 D 15 D S3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	110S Head & Jambs (2)	A	NGP
1.0	Sweep	C699 LAR	A	NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP

Set #17 - Outswing Rim Exit CD-08

Doors: B110, C102A, C102B, C104, C105A, C105B, C108A, C108B, C112

3.0	Hinge	CB179 45X45	26D	BES
1.0	Exit Device	2108 CD A V4908A	630	PRE
1.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
1.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
3.0	Silencer	1229A	Gray	TRI

Set #18 - Outswing Fire Rated Rim Exit-08

Doors: S2A, S2C, S3C,

3.0	Hinge	CB168 NRP 45X45	630	BES
1.0	Exit Device	2108 FL A V4908A	630	PRE
1.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
1.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
1.0	Wall Stop	1270 CX	626	TRI
1.0	Gasketing	5050 Head & Jambs (2)	B	NGP

Set #19 – Not Used

Set #20 - Pr. Outswing - HO

Doors: B107A, B107B,

6.0	Hinge	CB168 45X45	26D	BES
1.0	Keyed Removeable Mullion	KR822	689	PRE
2.0	Exit Device	2108 CD V 4908A	630	PRE
3.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
2.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
2.0	Door Closer H/O	EHD 9016 SDST90	689	BES
2.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
1.0	Gasketing	BY ALUMINUM FRAME/DOOR MANUFACTURER		
1.0	Gasketing	5100N Mullion		NGP

Set #20.1 - Pr. Outswing - HO

Doors: B116A, B116B

6.0	Hinge	CB168 45X45	26D	BES
1.0	Keyed Removeable Mullion	KR822	689	PRE
2.0	Exit Device	2108 CD V 4908A	630	PRE
3.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
2.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
2.0	Door Closer H/O	EHD 9016 SDST90	689	BES
2.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
1.0	Gasketing	5100N Mullion		NGP
2.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
2.0	Kick Plate	K0050 10" X 1" LDW CSK B4E	630	TRI
2.0	Silencer	1229A	Gray	TRI

Set #21 - Outswing Exterior Rim Exit MLR, TS

Doors:, A121G, A135, C114B

1.0	Hinge	CE 662HDUL 12R 83IN	AL	BES
1.0	Exit Device	2103 C MLR TS	630	PRE
1.0	Pull	1096 PHI	630	TRI
1.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
1.0	Door Closer w/ Stop	EHD 9016 SDS90	689	BES

1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	BY ALUMINUM FRAME/DOOR MANUFACTURER		
1.0	Sweep	C699 LAR	A	NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP
1.0	Card Reader	By Div 28		
1.0	Power Supply	COMM-DKPS-2A		DKM
1.0	Wiring Harness	WH-6E		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-38P		BES
1.0	Door Position Switch	9540	W	RCI

NOTE: Door normally closed and secure. Door contact signals door status. TS signals authorized egress. Entry by key, remote release or approved credential. Free egress at all times.

Set #21.1 - Outswing Exterior Rim Exit MLR, TS
Doors: B108F

3.0	Hinge	CB168 NRP 45X45	630	BES
1.0	Exit Device	2103 C MLR TS 1700A	630	PRE
1.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
1.0	Door Closer	EHD 9016 AF90P	689	BES
1.0	Armor Plate	KA050	630	TRI
1.0	Floor Stop	1209 HOHA	630	TRI
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	700S Head & Jambs (2)	A	NGP
1.0	Sweep	C699 LAR	A	NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP
1.0	Card Reader	By Div 28		
1.0	Power Supply	COMM-DKPS-2A		DKM
1.0	Wiring Harness	WH-6E		BES
1.0	Wiring Harness	WH-192P		BES
1.0	Wiring Harness	WH-38P		BES
1.0	Door Position Switch	9540	W	RCI

NOTE: Door contact signals door status. TS signals authorized egress. Entry by key, remote release or approved credential. Free egress at all times.

Set #21.2 - Exterior Outswing, Rim Exit
Doors: A109B, B132

3.0	Hinge	CB168 NRP 45X45	630	BES
1.0	Exit Device	2103 1700A	630	PRE
1.0	Rim Cylinder	12E 7 2 CORMAX	626	BES
1.0	Door Closer w/ Stop	EHD 9016 SDS90	689	BES

1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	700S Head & Jamb (2	A	NGP
1.0	Sweep	C699 LAR	A	NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP

Set #22 - Pr. Outswing Exterior Rim Exit-02/03 MLR, TS

Doors: A101A, B101, B107C, B107D, B128, S2B, S3B, C101, C110B

2.0	Hinge	CE 661HDUL 12R 83IN	AL	BES
1.0	Keyed Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2102 C TSCD	630	PRE
1.0	Exit Device	2103 C MLR TS	630	PRE
2.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
1.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
2.0	Pull	1097 PHI	630	TRI
2.0	Door Closer w/ Stop	EHD 9016 SDS90	689	BES
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	BY ALUMINUM FRAME/DOOR MANUFACTURER		
1.0	Gasketing	5100N Mullion		NGP
2.0	Sweep	C699 LAR	A	NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP
1.0	Card Reader	By Div 28		
1.0	Power Supply	COMM-DKPS-2A		DKM
2.0	Wiring Harness	WH-6E		BES
2.0	Wiring Harness	WH-192P		BES
2.0	Wiring Harness	WH-6		BES
2.0	Door Position Switch	9540	W	RCI

NOTE: Door normally closed and secure. Door contact signals door status. TS signals authorized egress. Entry by key, remote release or approved credential. Free egress at all times.

Set #22.1 - Pr. Outswing Interior Rim Exit-02/03 MLR, TS

Doors: A101B

2.0	Hinge	CE 661HDUL 12R 83IN	AL	BES
1.0	Keyed Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2102 C TSCD	630	PRE
1.0	Exit Device	2103 C MLR TS	630	PRE
2.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
1.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
2.0	Pull	1097 PHI	630	TRI
2.0	Door Closer w/ Stop	EHD 9016 SDS90	689	BES

1.0	Gasketing	BY ALUMINUM FRAME/DOOR MANUFACTURER		
1.0	Gasketing	5100N Mullion		NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP
1.0	Card Reader	By Div 28		
1.0	Power Supply	COMM-DKPS-2A		DKM
2.0	Wiring Harness	WH-6E		BES
2.0	Wiring Harness	WH-192P		BES
2.0	Wiring Harness	WH-6		BES
2.0	Door Position Switch	9540	W	RCI

NOTE: Door normally closed and secure. Door contact signals door status. TS signals authorized egress. Entry by key, remote release or approved credential. Free egress at all times.

Set #22.2 - Pr. Outswing Exterior Rim Exit-MLR, TS
Doors: B116C, B116D

6.0	Hinge	CB168 NRP 45X45	630	BES
2.0	Power Transfer	EPT-12C		PRE
1.0	Keyed Removeable Mullion	KR822	689	PRE
1.0	Exit Device	2102 C TS CD	630	PRE
1.0	Exit Device	2103 C MLR TS	630	PRE
2.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
1.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
2.0	Pull	1097 PHI	630	TRI
2.0	Door Closer w/ Stop	EHD 9016 SDS90	689	BES
1.0	Drip Cap	16 4" ODW	A	NGP
1.0	Gasketing	110S Head & Jambs (2)	A	NGP
2.0	Sweep	200S	A	NGP
1.0	Gasketing	5100N Mullion		NGP
1.0	Threshold	425 LAR (1/4-20-2" Combo) HD	A	NGP
1.0	Card Reader	By Div 28		
1.0	Power Supply	COMM-DKPS-2A		DKM
2.0	Wiring Harness	WH-6E		BES
2.0	Wiring Harness	WH-192P		BES
2.0	Wiring Harness	WH-6		BES
2.0	Door Position Switch	9540	W	RCI

NOTE: Door normally closed and secure. Door contact signals door status. TS signals authorized egress. Entry by key, remote release or approved credential. Free egress at all times.

Set #22.3 - Outswing Fire Rated Pair Rim Exit-08
Doors: S3A

6.0	Hinge	CB168 NRP 45X45	630	BES
1.0	Keyed Removeable Mullion	FLKR822	689	PRE
2.0	Exit Device	2108 FL A V4908A	630	PRE
3.0	Rim Cylinder	12E 7 2 CORMAX S2 RP	626	BES
2.0	Door Closer	EHD 9016 SPA90	689	BES
2.0	Mop Plate	KM050 6" X 1" LDW CSK B4E	630	TRI
2.0	Kick Plate	K0050 10" X 2" LDW CSK B4E	630	TRI
2.0	Floor Stop	1209 HOHA	630	TRI
1.0	Gasketing	5050 Head & Jambs (2)	CL	NGP
1.0	Gasketing	5100N Mullion		NGP

Set #23 - Coiling Door - Cylinder Only Balance of hardware by door manufacturer.
Doors: B108C, B108D

1.0	Mortise Cylinder	1E E 7 4 C4 RP3 CORMAX	626	BES
-----	------------------	------------------------	-----	-----

Set #24 - Cased Opening - Ho Hardware Required
Doors: A137, A138, A227, A228, B113A, B114, B115, B124, B125

END SECTION

SECTION 10 5113
METAL LOCKERS

PART 1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SECTION INCLUDES

- A. Metal lockers.
- B. Locker room benches.

1.03 REFERENCES

- A. ADAAG - Americans with Disabilities Act, Accessibility Guidelines.

1.04 PREINSTALLATION CONFERENCES

- A. Preinstallation Conference: Conduct conference at Project site minimum fourteen days prior to installation to discuss conformance with project requirements, manufacturer installation requirements, affected adjacent materials and system, and site conditions.
- B. Attendees shall include contractor, locker installer, manufacturer technical representative, and installers of adjacent materials and systems.
- C. Conduct meeting in accordance with Section 01 3100 - Project Management and Coordination.

1.05 SUBMITTALS

- A. Refer to Section 01 3300 - Submittal Procedures, for submittal procedure requirements.
- B. Product Data: For each type of product. Provide manufacturer product data sheets including, but not limited to the following:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: For metal lockers.
 - 1. Include plans, elevations, sections, and attachment details as dimensioned drawings to show locker locations and interfaces with adjacent substrates.
 - 2. Details of assembly, erection, anchorage and clearance requirements.
 - 3. Include locker identification system and numbering sequence.
- D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and finishes.
- E. Sample warranty.

1.06 CLOSEOUT SUBMITTALS

- A. Special Installer Warranty: Executed warranty meeting specified requirements.
- B. Special Manufacturer Warranty: Executed warranty meeting specified requirements.
- C. Special Manufacturer Finish Warranty: Executed warranty meeting specified requirements.
- D. Maintenance Data: Provide manufacturer parts lists, operation, and maintenance instructions for the materials of this Section.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Furnish assemblies from one manufacturer with a minimum of fifteen years experience in the design, fabrication, and domestic manufacturing of the products of this Section.
- B. Installer Qualifications: Firm with a minimum of five years experience in installation of systems similar to those required by this project and acceptable to manufacturer.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Protect locker finish and adjacent surfaces from damage.

1.09 WARRANTY

- A. Special Manufacturer Warranty: Provide manufacturer's warranty covering manufacturing and material defects, where items fail to perform as designed and manufactured.
 - 1. Warranty Period: Two years from date of Substantial Completion.
- B. Special Warranty on Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace materials that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Warranty Period: Ten years from date of Substantial Completion.
- C. Special Installer Warranty: Furnish a written warranty signed by the installer guaranteeing materials and workmanship for the Work of this section.
 - 1. Warranty Period: One year from date of Substantial Completion.

PART 2 PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Accessibility Standard: For lockers indicated to be accessible, comply with applicable provisions in ICC A117.1.

2.02 MANUFACTURERS

- A. Basis of Design: Lockers by Republic Storage Products, LLC. www.republicstorage.com
- B. Acceptable Manufacturers: Subject to compliance with requirements.
 - 1. Debourgh. www.debourgh.com
 - 2. Lyon Metal Products, Inc. www.lyonworkspace.com
 - 3. Penco Products, Inc. www.pencoproducts.com
 - 4. Republic Storage Products, LLC. www.republicstorage.com

2.03 MATERIAL

- A. Steel: Prime grade mild cold-rolled sheet steel free from surface imperfection, capable of taking a high-grade enamel finish and in compliance with ASTM A1008.
- B. Steel: Sheet steel components shall be fabricated using zinc-coated steel free from surface imperfection, capable of taking a high-grade enamel finish and in compliance with ASTM A879.
- C. Bolts and Nuts: Zinc plated truss fin head bolts and hex nuts.
- D. Provide metal lockers manufactured and fabricated domestically by a single manufacturer.

2.04 HEAVY DUTY VENTILATED LOCKERS - WELDED

- A. Fabrication:
 - 1. Material: All major steel parts shall be made of mild cold rolled steel, free from imperfections and capable of taking a high grade enamel or powder coat finish.
 - 2. Finish: Surfaces of the steel shall be thoroughly cleaned, phosphatized and prepared for baked enamel or powder coat finish in accordance with paint manufacturer's instructions.
 - 3. Welded Construction: Lockers shall be pre-assembled of welded construction in multiple groups, conforming to job requirements.
 - a. All welds shall be smooth and without burrs. No nuts, bolts or rivets shall be allowed in assembly of main locker groups.
- B. Ventilation:
 - 1. Non-Corridor Locations: Locker doors shall be ventilated by diamond shape perforations on the face of each door at top and bottom.
 - 2. Corridors: Locker doors shall be ventilated by louvers on the face of each door at top and bottom.
 - 3. Lockers shall be ventilated at sides with manufacturer standard perforations.

- C. Door Frames: Door frames shall be 16 gauge formed into 1" wide face channel shapes with a continuous vertical door strike, integral with the frame on both sides of the door opening.
 - 1. Cross frame members of 16 gauge channel shapes, including intermediate cross frame on double, triple or four tier lockers shall be securely welded to vertical framing members to ensure a square and rigid assembly. Intermediate cross frame members are not required on box lockers.
- D. Doors: Single, double and triple tier doors shall be formed from one piece 14 gauge cold rolled sheet steel.
 - 1. Formations shall consist of a full channel shape on the lock side of adequate depth to fully conceal the lock bar, channel formation on the hinge side and right angle formations across the top and bottom.
- E. Doors for box lockers 4, 5 and 6 openings high to be 14 gauge formed steel with right angle flanges on all four sides.
 - 1. Box locker doors are perforated for free airflow using small diamond perforations 7/16" wide by 15/16" high.
 - 2. Reinforced Door: On doors 15" and wider, and tiered doors, shall be reinforced with a 16 gauge channel welded to the inside side of the door.
 - a. Channel shall be 7/8" wide and shall be placed vertically in the center of the door to provide maximum stiffness.
 - b. On doors with louvers, the channel shall be located near the hinge side of the door, so that the louvers are unobstructed.
- F. Pre-Locking Device: All "tiered" lockers, except lockers with a turn handle, shall be equipped with a positive automatic pre-locking device whereby the locker may be locked while door is open and then closed without unlocking and without damaging locking mechanism.
- G. Latching: Latching shall be a one-piece, pre-lubricated spring steel latch, completely contained within the lock bar under tension to provide rattle-free operation.
 - 1. The lock bar shall be of pre-coated, double-channel steel construction.
 - 2. The lock bar shall be securely contained in the door channel by self-lubricating polyethylene guides that isolate the lock bar from metal-to-metal contact with the door.
 - 3. There shall be three latching points for lockers over 42" in height and two latching points for all tiered lockers 42" and under in height.
 - 4. The lock bar travel is limited by contacting resilient high-quality elastomeric cushioning devices concealed inside the lock bar.
 - 5. Frame hooks to accept latching shall be of heavy gauge steel, set close in and welded to the door frame.
 - 6. Continuous vertical door strike shall protect frame hooks from door slam damage.

7. A soft rubber silencer shall be securely installed on each frame hook to absorb the impact caused by closing of the door.
8. A latch guard steel plate shall be welded on each frame hook on tiered lockers.
- H. Handles - Tiered Lockers: A non-protruding 14 gauge lifting trigger and slide plate shall transfer the lifting force for actuating the lock bar when opening the door.
 1. The exposed portion of the lifting trigger shall be encased in a molded ABS thermoplastic cover that provides isolation from metal-to-metal contact and be contained in a formed 20 gauge stainless steel pocket.
 2. This stainless steel pocket shall contain a recessed area for the various lock types available and a mounting area for the number plate.
- I. Hinges: Hinges to be 2" high, 5-knuckle, full loop, tight pin style, securely welded to frame and double riveted to the inside of the door flange.
 1. Hinges are attached with two rivets.
 2. Locker doors 42" high and less shall have two hinges.
 3. Doors over 42" high shall have three hinges.
 4. An extra hinge shall be provided on 24" wide Heavy-Duty Ventilated single and double tier doors.
- J. Body: Locker body components shall be made of cold rolled steel specially formed for added strength and rigidity and to ensure tight joints at fastening points.
 1. 16 gauge side uprights are perforated with diamond-shaped openings 3/4" wide by 1-1/2" high for maximum ventilation.
 2. Tops, bottoms, shelves and compartment dividers shall be 16 gauge steel, fully flanged on all sides for added stiffness.
 3. Shelves shall have an additional return flange on the front edge creating a channel shape to rigidize the impact surface.
 4. All body parts are finished in the same color selected for doors and frames.
 5. Locker back shall be fabricated from 16 gauge cold rolled sheet steel and formed in combination with the 16 gauge upright to provide a one piece uniform structure.
- K. Locker Interior Equipment:
 1. Provide shelf at 44 inches above locker bottom. Provide one coat rod and two double prong wall hooks at shelf. Coordinate with ADA requirements for accessible locker locations.
 - a. Rod shall be 1 inch diameter stainless steel.
 2. All hooks shall be made of steel, formed with ball points, zinc-plated and attached with two bolts or rivets.
 3. Locker openings under 20" high shall not be not equipped with hooks.

4. Provide universal handicapped accessibility decal at each ADA accessible locker location.
5. Interior locker lock box not required.
- L. Color: Lockers shall be finished in colors selected from manufacturer standard nine powder coat colors.

2.05 ACCESSIBLE LOCKERS

- A. For use at locations designated as accessible lockers.
- B. ADA-Compliant Lockers (Recessed Handles with Multi-Point Latch):
 1. Single Tier Lockers: Hat shelf 48 inches maximum above finish floor.
 2. Locker Compartment Bottom: Minimum of 15 inches above finish floor, or an additional shelf placed 15 inches off the floor for unobstructed forward and side reach.
 3. Provide accessibility symbol attached to door.
 4. Provide hooks and rods as specified for other lockers.

2.06 ACCESSORIES

- A. All fasteners shall be tamper-proof stainless steel. Finish as selected by Architect.
- B. Number Plates: Provide each locker with a polished aluminum number plate, 2-1/4 inches (57 mm) wide by 1 inch (25 mm) high, with black numerals not less than 3/8 inch (9.5 mm) high; attach to face of door with two aluminum rivets.
 1. Numbering shall be as selected by Architect.
- C. Closed Bases: 18 gauge closed metal front and end bases, finished to match lockers.
- D. Locks: Built-in three-number dialing combination locks capable of at least five different combinations changes; provide master key, combination change key, and combination control charts. Mechanism must be resistant to "shimming". Assembly shall be serviceable/replaceable.
- E. Continuous Sloped Hoods: 16 gauge steel, slope rise equal to 1/3 of the locker depth (18.5 degrees), plus a 1 inch (25 mm) vertical rise at front.
 1. Slip joints without visible fasteners at splice locations.
 2. Provide necessary end closures.
 3. Finish to match lockers.
- F. Front Fillers: 20 gauge steel formed in an angle shape, with 20 gauge slip joint angles formed in an angle shape with double bend on one leg forming a pocket to provide adjustable mating with angle filler.
 1. Finish to match lockers.

2.07 BENCH SEATING

- A. Wood Benches: Select hardwood, 1-1/4 inch full finished thickness, corners rounded and sanded, surfaces finished with two coats of clear heavy duty polyurethane.
 - 1. Bench Wood Species: Maple.
 - 2. Bench Size: Typical 42 by 20 inches. Refer to Drawings for additional requirements. Coordinate with ADA requirements for accessible locations.
 - 3. Bench Height: Typical 17-1/2 inches above finish floor. Refer to Drawings for additional requirements. Coordinate with ADA requirements for accessible locations.
- B. Heavy-Duty Bench Pedestals: 1-1/2 inch diameter welded steel tubing with 11 gauge steel flanges welded to each end, typically 16-1/4 inches (412 mm) high as required to provide overall bench finished height.
 - 1. Quantity per bench: As recommended by bench manufacturer. Typical four per bench.
 - 2. Satin finish type 304 or 316 stainless steel.

2.08 FINISHES

- A. Finish: Enamel powder coat paint finish electrostatically applied and properly cured to manufacturer's specifications for optimum performance. Finishes containing volatile organic compounds and subject to out-gassing are not acceptable.
 - 1. Powder Coat - Dry Thickness: 2 to 2.2 mils (0.05 to 0.055 mm).
- B. Color: As selected by Architect from manufacturer's full range.

2.09 FABRICATION

- A. Welded Construction: Factory preassemble metal lockers by welding all joints, seams, and connections; with no bolts, nuts, screws, or rivets used in assembly of main locker groups. Factory weld main locker groups into one-piece structures. Grind exposed welds smooth and flush.
- B. Fabricate metal lockers square, rigid, without warp, and with metal faces flat and free of dents or distortion. Make exposed metal edges safe to touch and free of sharp edges and burrs.
- C. Fabricate each metal locker with an individual door and frame; individual top, bottom, and back; and common intermediate uprights separating compartments.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates and bases have been properly prepared.
- B. If substrate and bases are the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Proceed with installation only after unsatisfactory conditions have been corrected. Installation of materials of this Section indicates acceptance of substrates and conditions.

3.02 INSTALLATION

- A. Install metal lockers and accessories at locations shown in accordance with manufacturer's instructions.
- B. Install lockers plumb, level, and square.
- C. Anchor lockers to floor and wall at 36 inches or less, as recommended by the manufacturer.
- D. Bolt adjoining locker units together to provide rigid installation.
- E. Install sloping tops and metal fillers using concealed fasteners. Provide flush hairline joints against adjacent surfaces.
- F. Install front bases between legs without overlap or exposed fasteners. Provide end bases on exposed ends.

3.03 ADJUSTING AND CLEANING

- A. Adjust doors and latches to operate without binding. Verify that latches are operating satisfactorily.
- B. Touch-up with factory-supplied paint and repair or replace damaged products before Substantial Completion.

3.04 PROTECTION

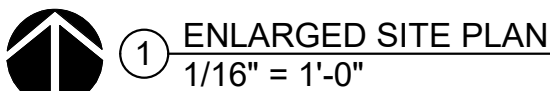
- A. Protect installed products until completion of project.

END OF SECTION



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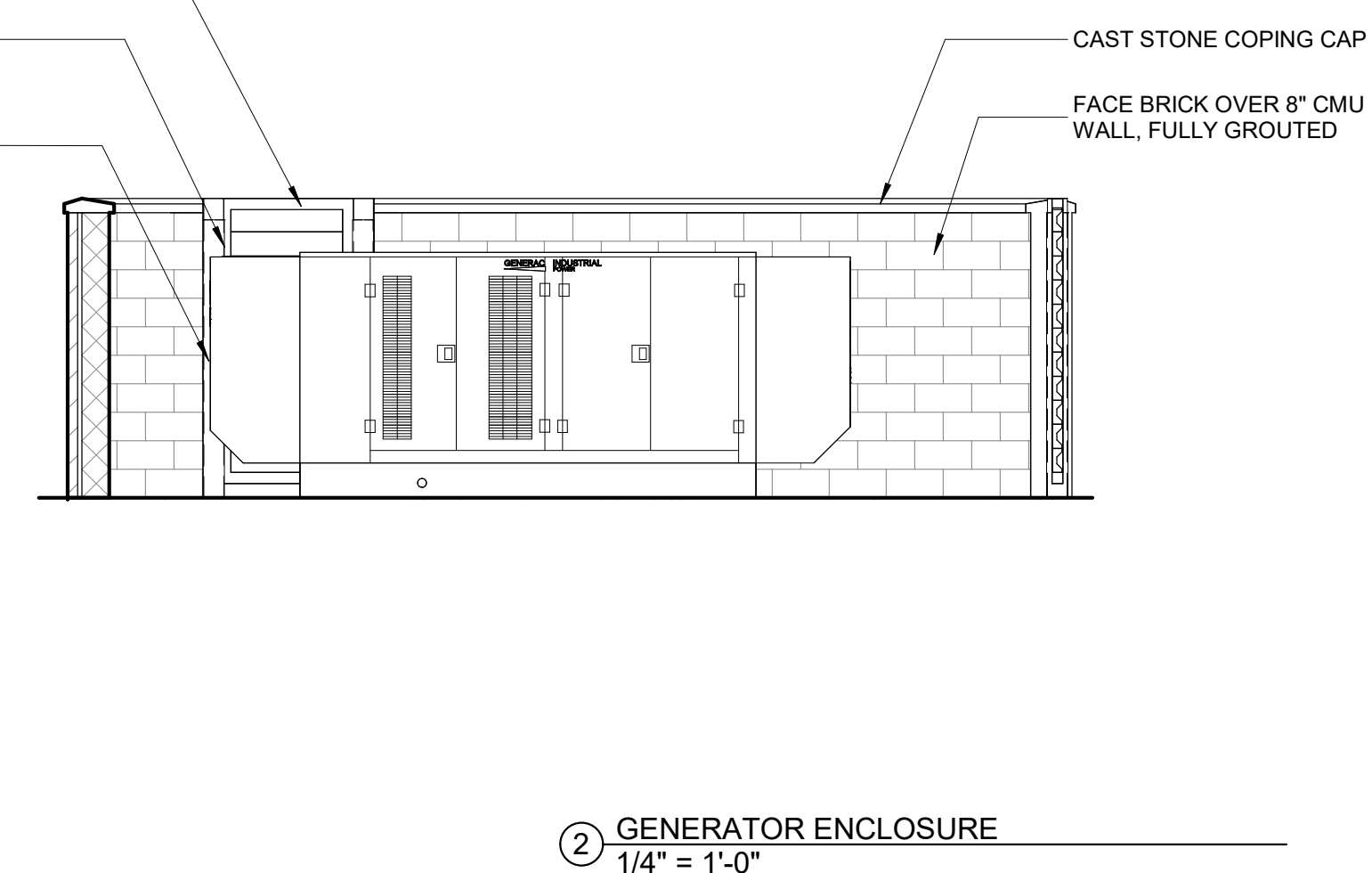
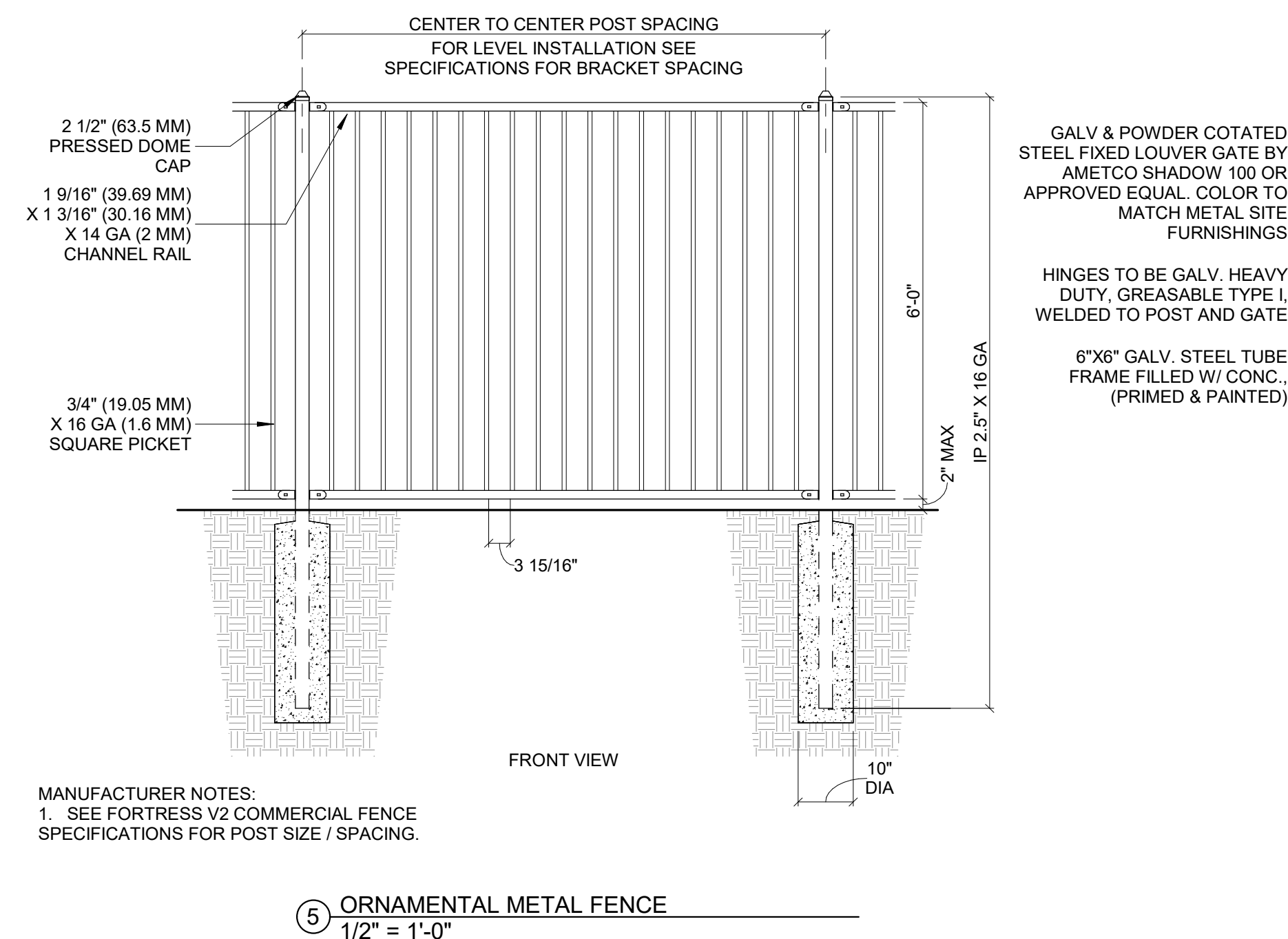
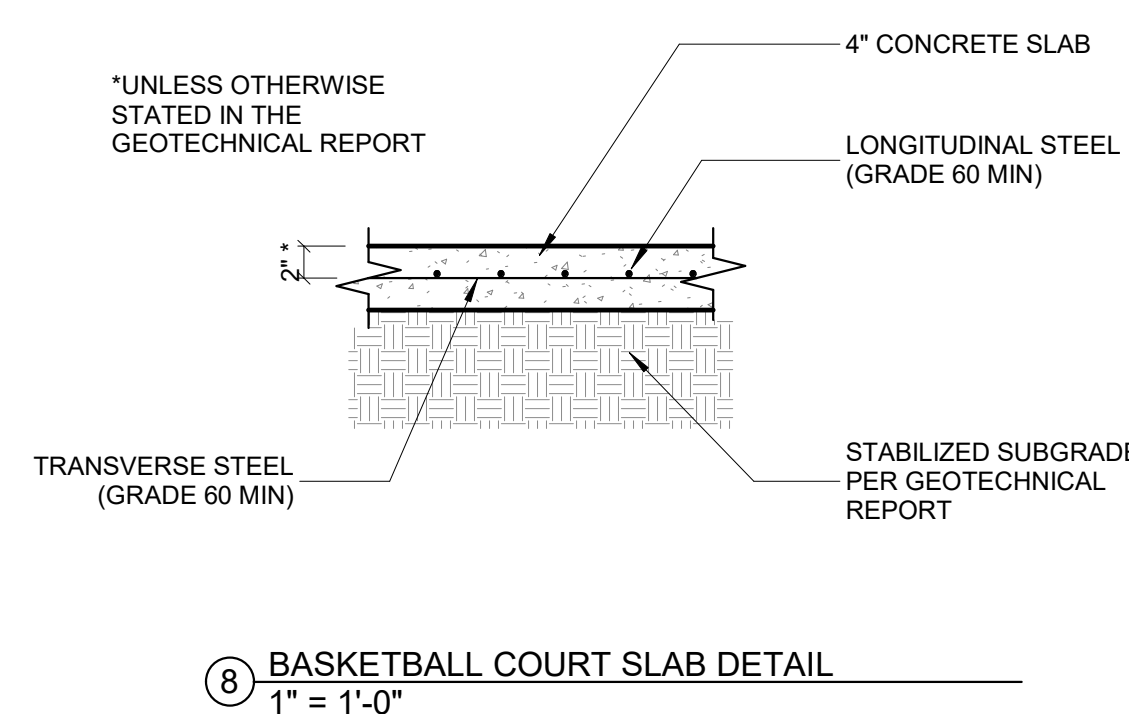
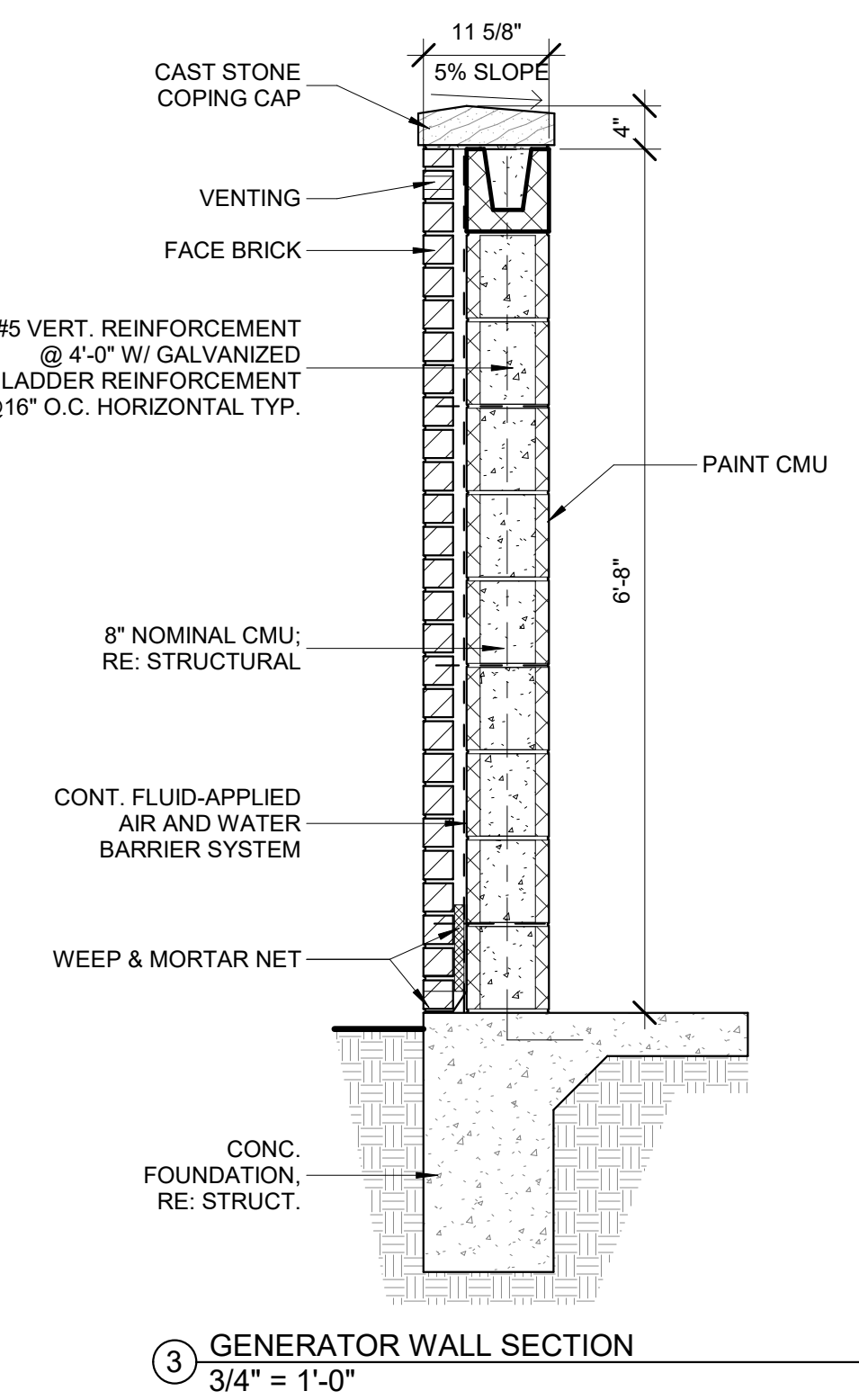
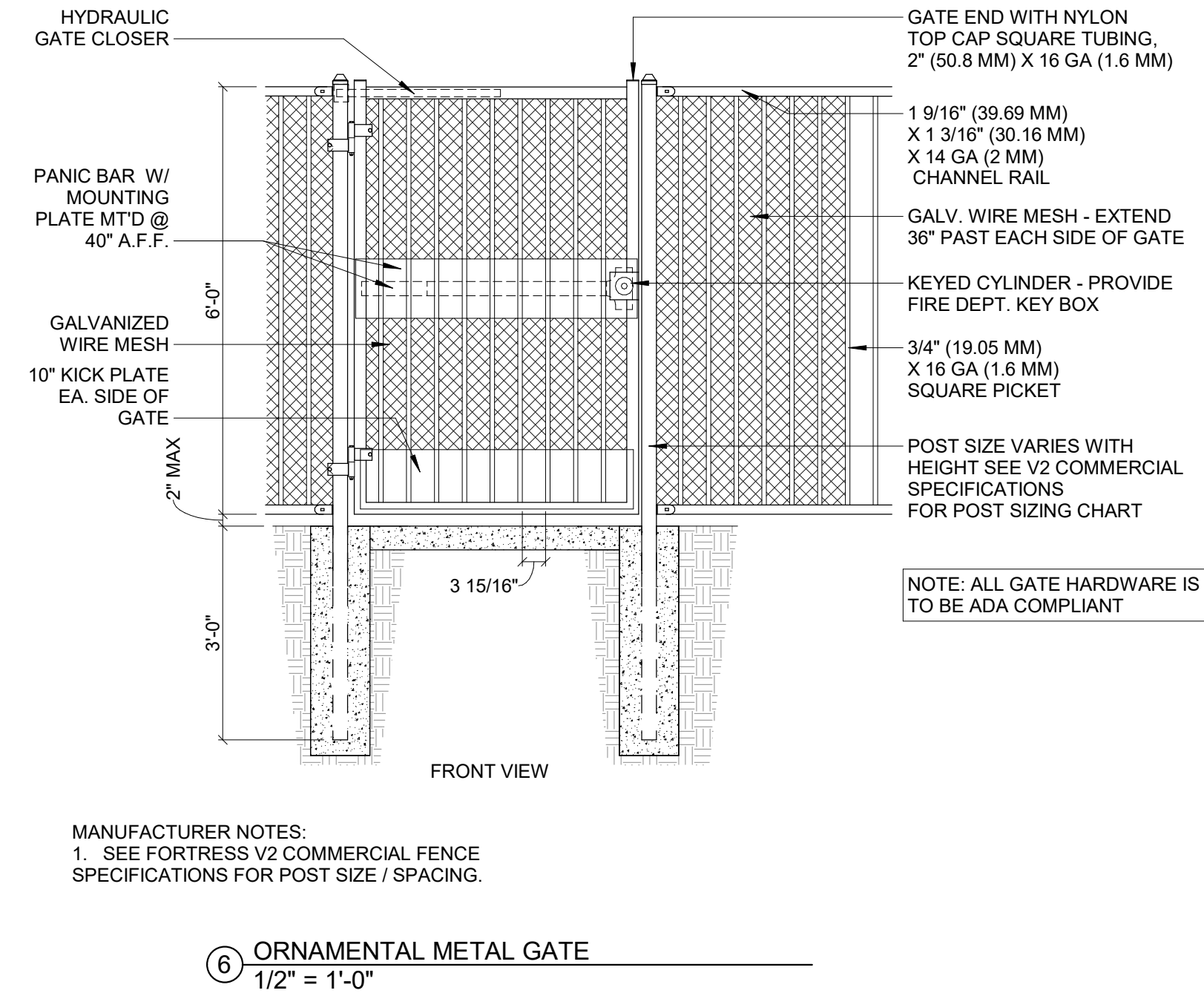
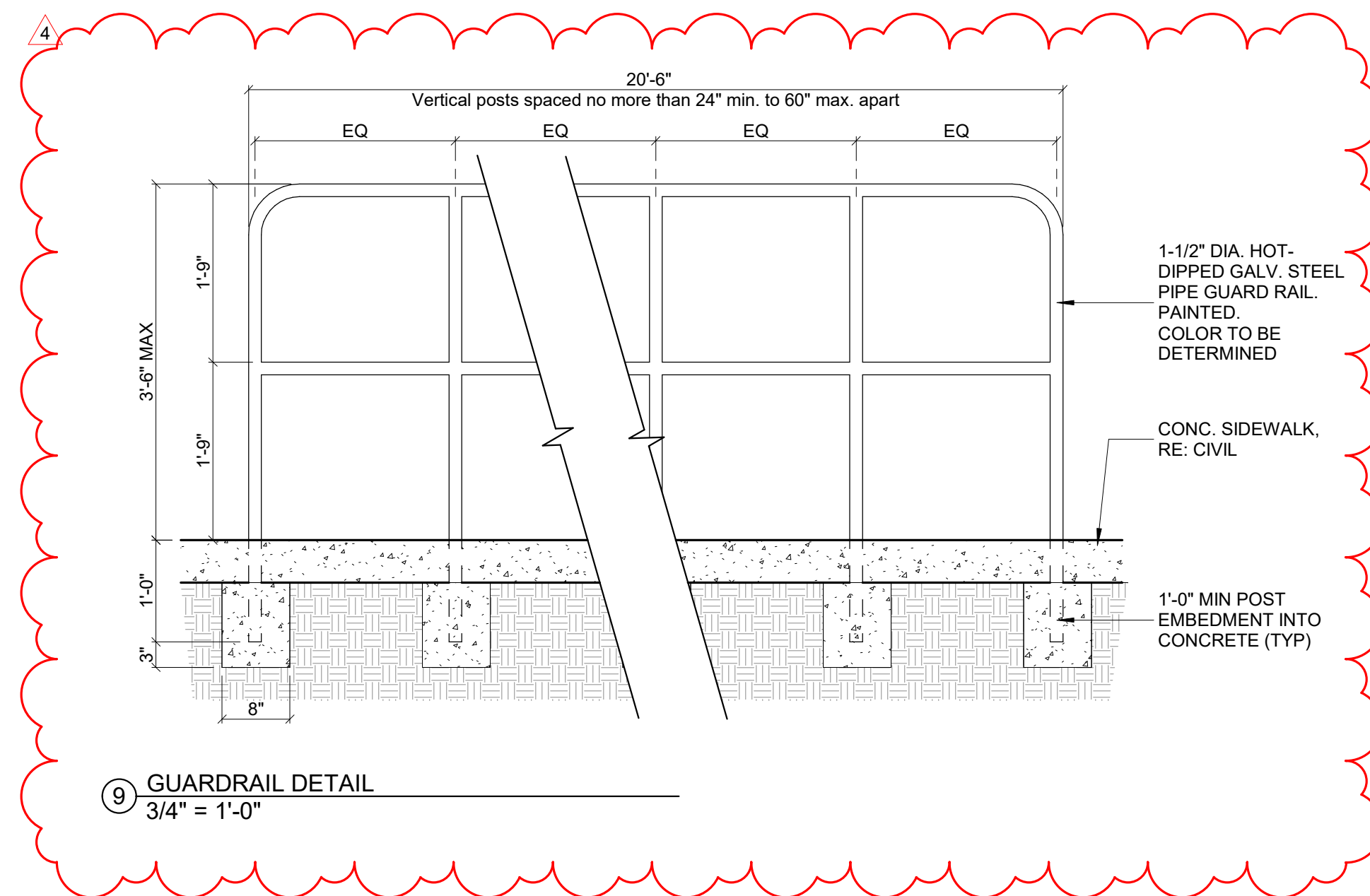
- 10 ANOVA BEACON HILL 6' CONTOUR BENCH RBH1RBRK COLOR: TED
- 11 INSTALL ADDRESS NUMBERS - 12" HIGH WITH MINIMUM STROKE OF 1/2" IN CONTRASTING COLOR.
- 12 PAINTED ACCESSIBLE SYMBOL, BLUE FIELD VERIFY TO MATCH EXISTING
- 13 PRECAST CONCRETE TIRE STOPS W/ METAL DOWELS
- 14 LATITUDE SIDE OPENING TRASH RECEPTACLE WITH BONNET TOP BY ANOVA - #H2055, PYP
- 15 HANDICAP PARKING SIGN RE: CIVIL

 EXISTING PHASE 1
(SHOWN FOR REFERENCE ONLY)
 EXISTING CONCRETE PAVING
 NEW CONCRETE PAVING
 NEW CONCRETE SIDEWALK
 GRASS AND PLANTING AREAS,
RE: LANDSCAPE PLANS
 6" H METAL FENCE - SEE NOTE #1

1. INFORMATION CONTAINED ON THE ARCHITECTURAL SITE DRAWING(S) HAS BEEN TAKEN FROM THE ARCHITECT'S PLANS. DRAWINGS, THE INTENT OF THE ARCHITECTURAL SITE DRAWING(S) IS TO INDICATE THE OVERALL RELATIONSHIP OF THE BUILDINGS, PAVING & OTHER SITE FEATURES. NO GUARANTEE IS MADE TO THE ACCURACY OF THE ARCHITECTURAL SITE DRAWING(S)
2. DO NOT EXCEED 1:20 (5%) SLOPE ON PAVING & SIDEWALKS. DO NOT EXCEED 1:50 (2%) SLOPE ON LANDINGS AT DOORS & CROSS WALKS. UNDESIRABLE SLOPES OF DIFFERENT ELEVATIONS & DIMENSIONS INDICATED ON DRAWING(S) EXCEED THESE SLOPES. CONSULT ARCHITECT AND CIVIL ENGINEER
3. VERIFY ALL INFORMATION SHOWN WITH CIVIL ENGINEER'S OTHER DRAWINGS. IF DISCREPANCIES EXIST, CONSULT WITH ARCHITECT AND ENGINEER(S) PRIOR TO CONSTRUCTION
4. ALL APPROVALS SHALL BE OBTAINED FROM AUTHORITIES HAVING JURISDICTION ON THIS PROJECT PRIOR TO CONSTRUCTION
5. THE ARCHITECTURAL SITE DRAWING(S) SHOWS LOCATION OF SIDEWALKS. SEE CIVIL FOR CONSTRUCTION & PAVING DETAILS, JOINTS, ETC.
6. SEE CIVIL DRAWINGS FOR PARKING REQUIREMENTS, & OTHER ITEMS NOT SHOWN ON ARCHITECTURAL DRAWING(S). MAY BE REQUIRED FOR PERMITTING AND/OR CONSTRUCTION
7. REFER TO CIVIL DRAWINGS AND GEOTECHNICAL REPORT FOR THICKNESS OF CONCRETE PAVING
8. REFER TO LANDSCAPE DRAWINGS FOR LOCATION OF SLOPE SLEEVES UNDER SIDEWALKS FOR IRRIGATION PIPING

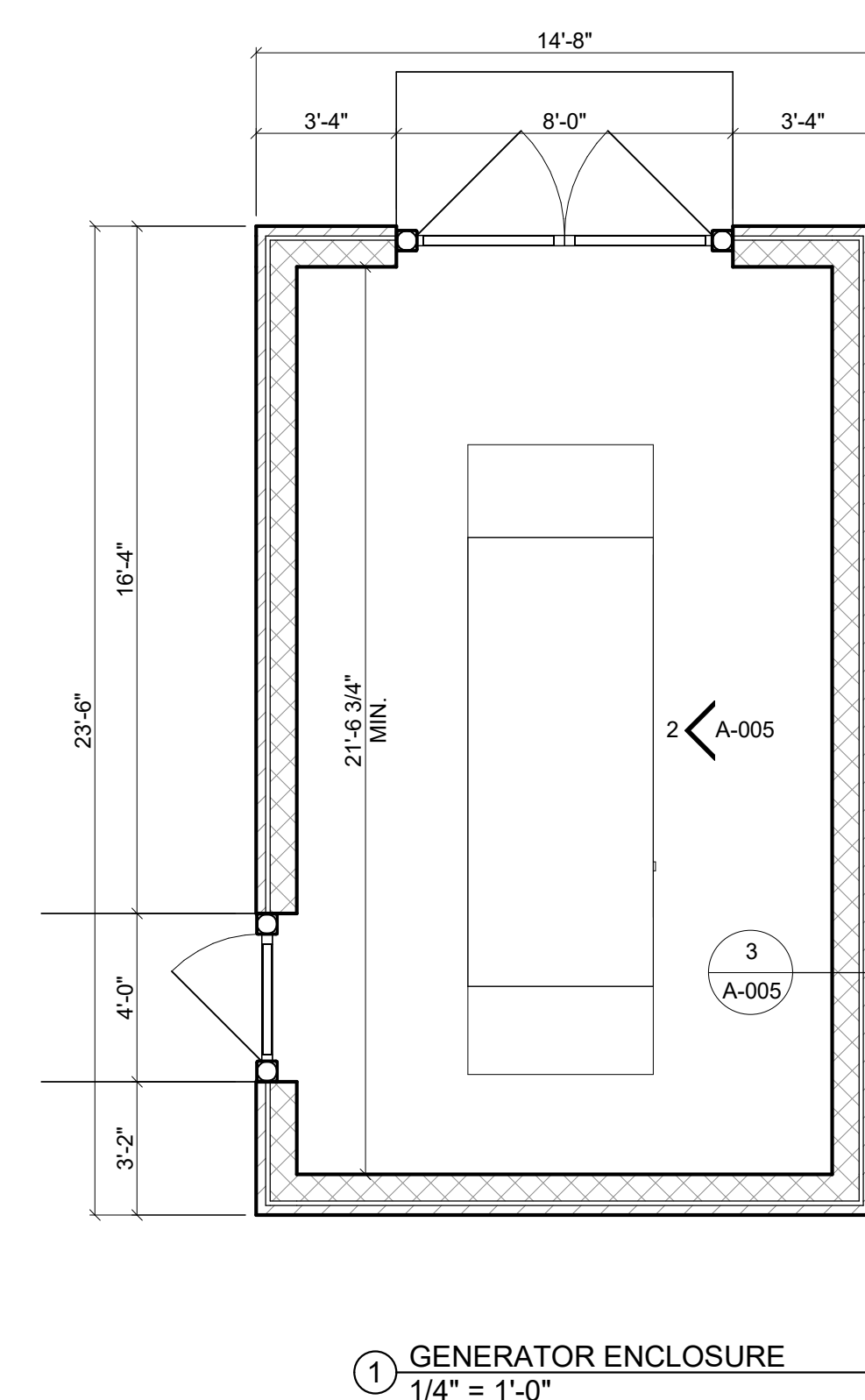
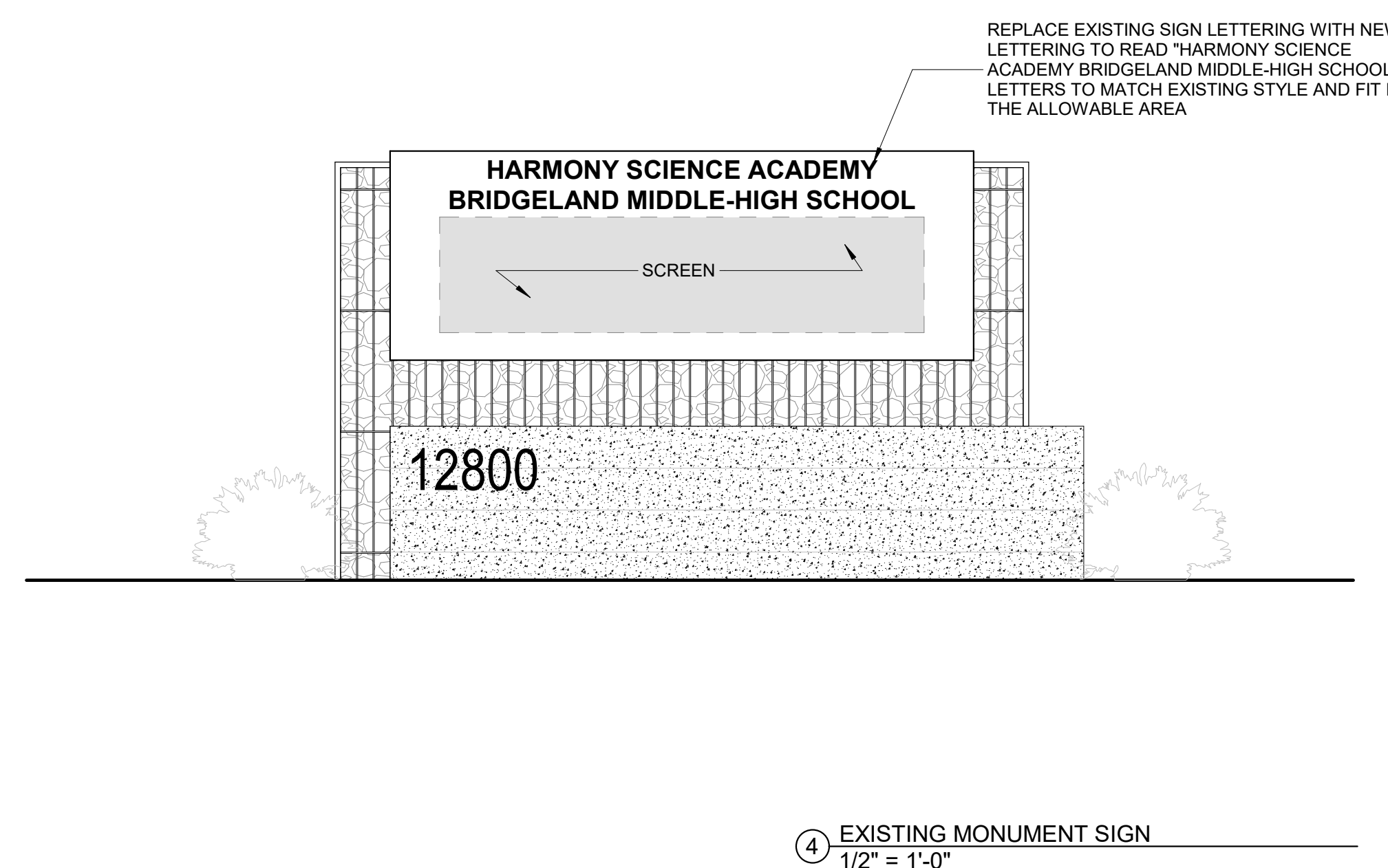
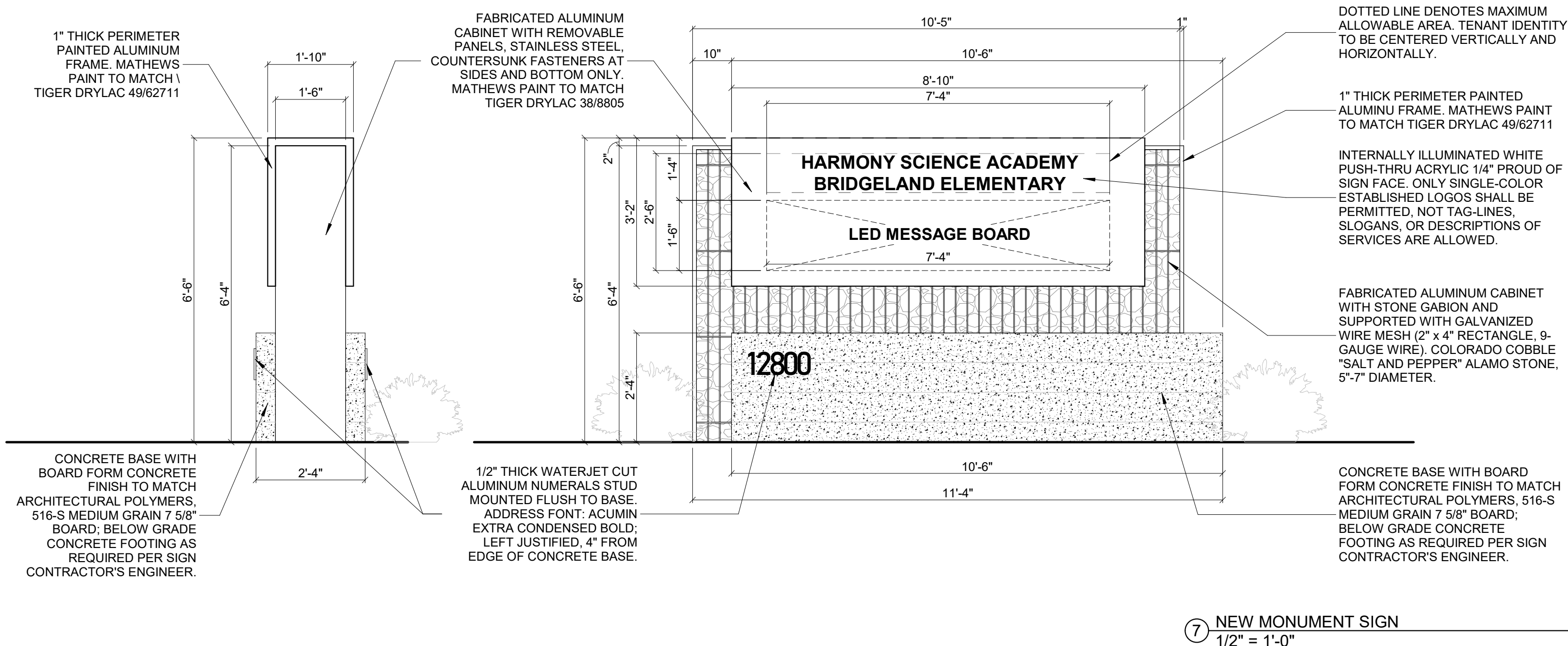
HARMONY SCIENCE ACADEMY - PHASE II
BRIDGELAND NEW MIDDLE/HIGH SCHOOL
12800 CREEKLAND VILLAGE DRIVE
CYPRESS, TX 77435

A-002

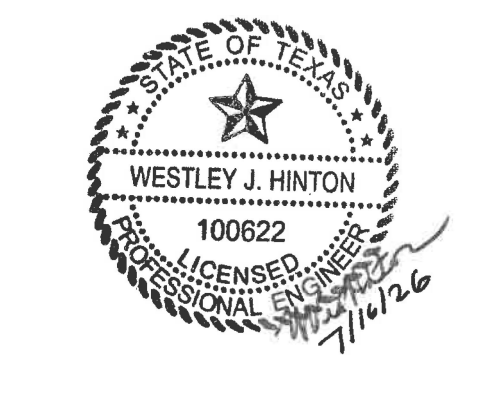


NOTES:

1. ALUMINUM PANELS WITH COPY TO BE WATERJET CUT, ACRYLIC COPY TO BE LASER CUT TO MATCH AND MAINTAIN FONT INTEGRITY.
2. SIGN FACILITATOR TO CONFIRM ALL FINAL MESSAGING AND LOCATIONS WITH CLIENT OR GENERAL CONTRACTOR PRIOR TO FABRICATION.
3. SURFACES TO BE FREE FROM OIL CANNING, WARPING, DISTORTION OR ANY IRREGULARITIES OR INCONSISTENCIES.
4. ALL SEAMS ON FACES TO BE WELDED, GROUND SMOOTH, SANDED, FILLED AND PAINTED.
5. LED TEMPERATURE TO BE REVIEWED AND APPROVED BY CLIENT TEAM PRIOR TO FABRICATION.
6. DESIGN TO MATCH UPDATED EXISTING MONUMENT SIGN



HARMONY PUBLIC SCHOOLS
HARMONY SCIENCE ACADEMY - PHASE II
BRIDGELAND NEW MIDDLE/HIGH SCHOOL
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CYPRESS, TEXAS 77433

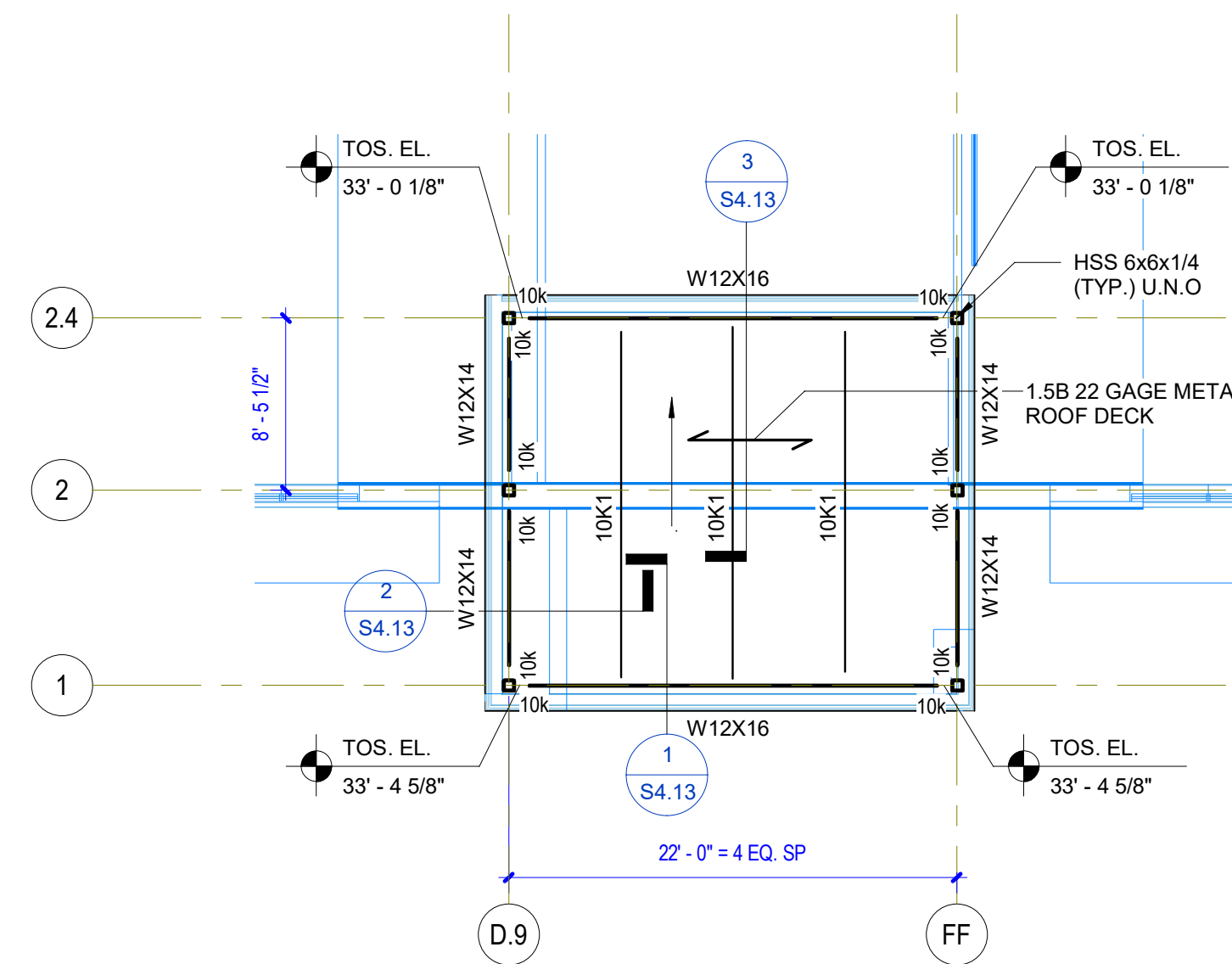


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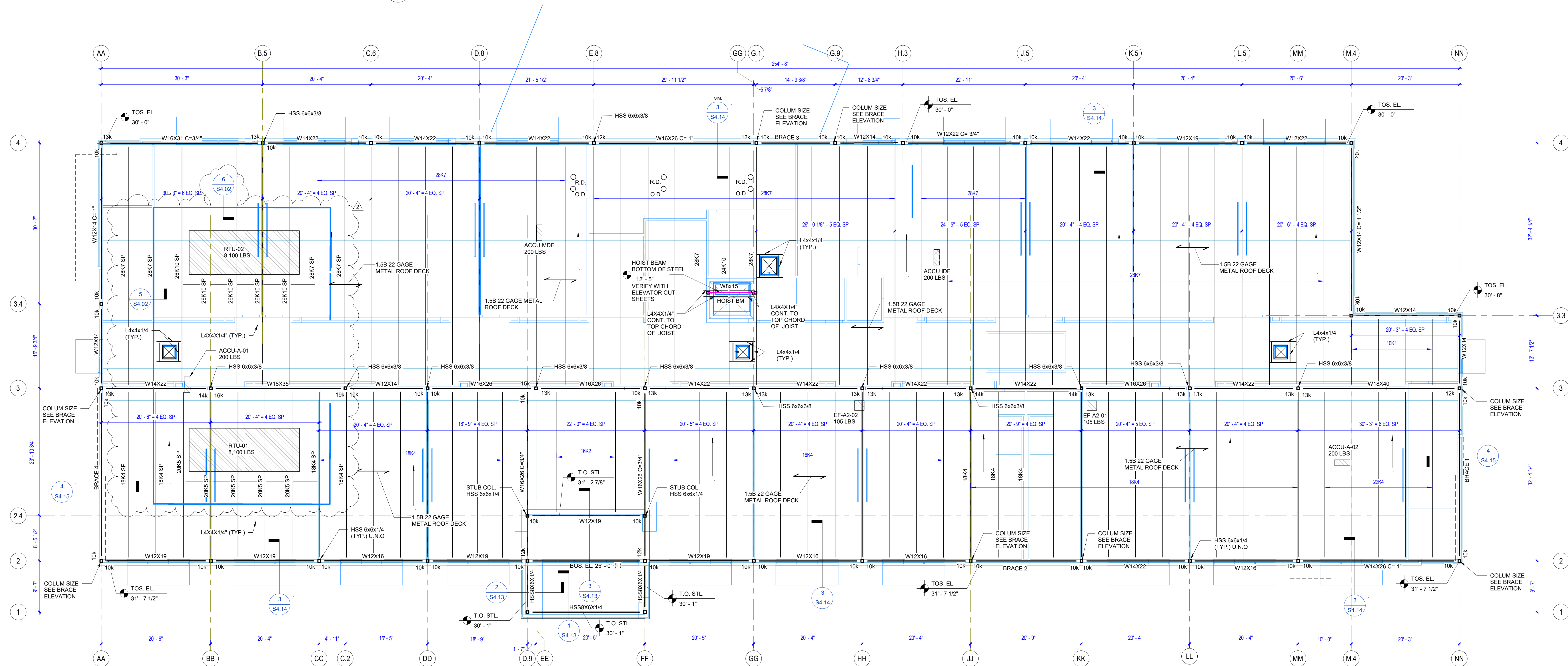
REV	DATE	ISSUED FOR:
1	11-25-2025	PERMIT ISSUE SET
2	07-20-2026	ADDENDUM #4

PROJECT NO.: 24148S
DRAWN BY: QN, MH QC: WH

Framing Plan -
High Roof Level -
Area A
S2.20A



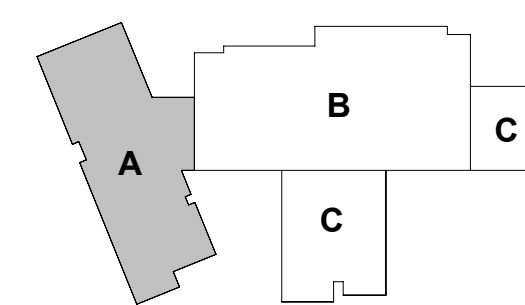
2 Framing Plan - Top Hi Roof Level
1/8" = 1'-0"

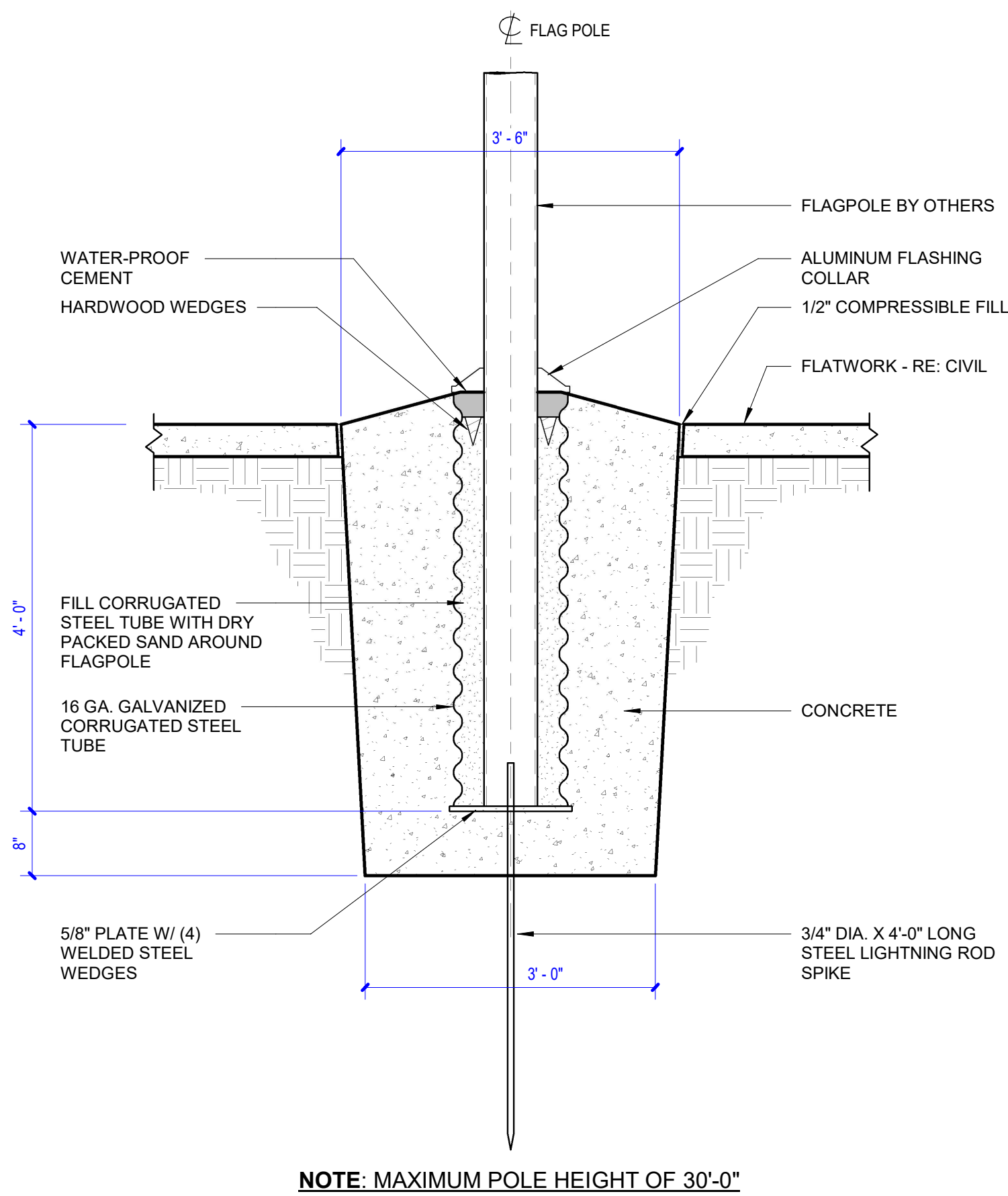


1 Framing Plan - Hi Roof Level - Area A
1/8" = 1'-0"

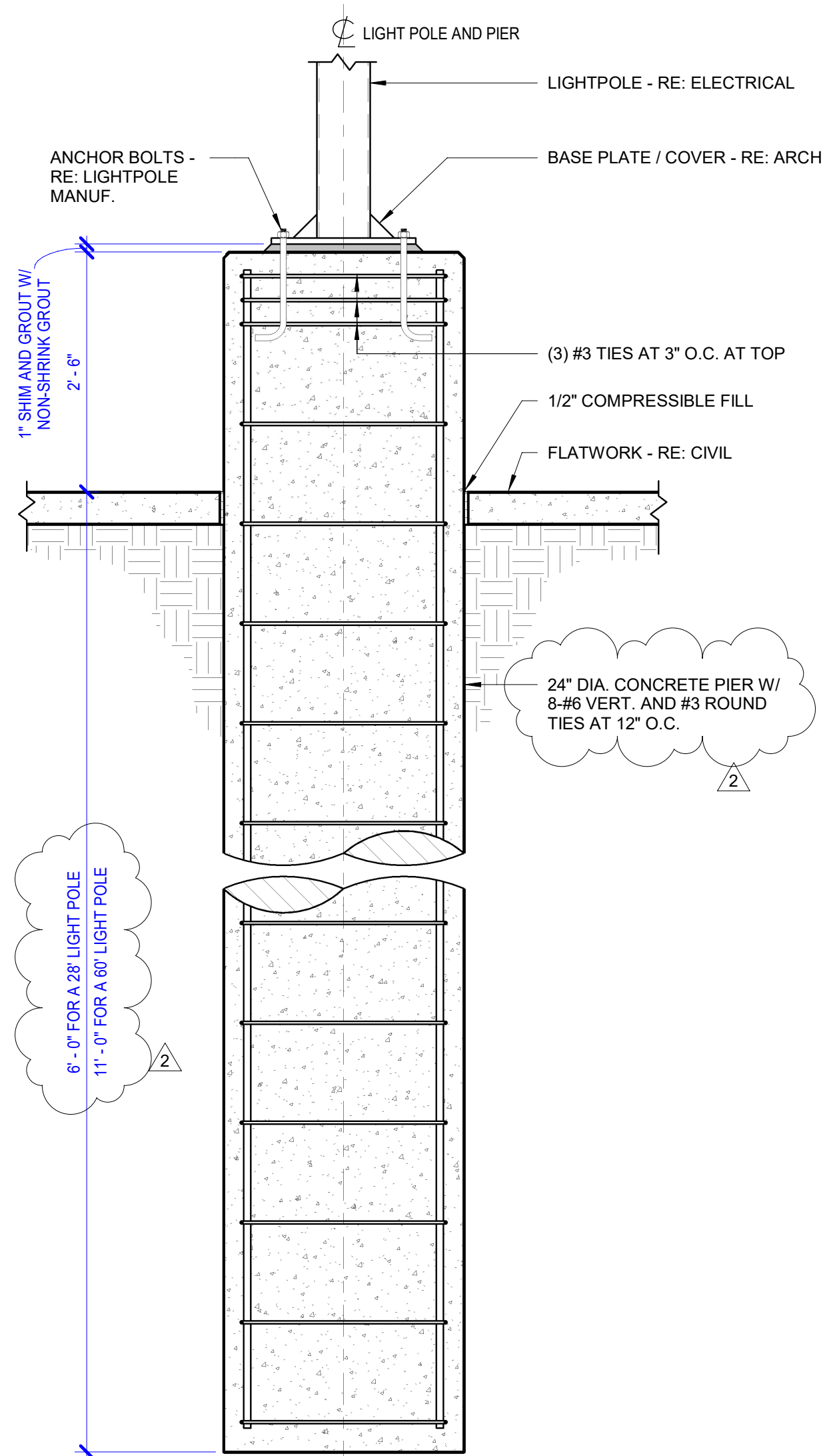
ROOF FRAMING NOTES:

- SEE SPEC. SHEET FOR ADDITIONAL STEEL JOIST AND FRAMING NOTES.
- JOIST MANUFACTURER TO DESIGN FOR WEIGHT OF RTU, RE. MECH.
- X-X' = INDICATES ELEVATION RELATIVE TO FINISH FLOOR ELEVATION.
- SEE SHEET S5.01, S5.10 AND S5.11 FOR BRACE ELEVATIONS AND DETAILS.
- SEE SHEET S4.01 AND S4.02 FOR TYPICAL FRAMING DETAILS.
- (Y) OFFSET W18 AND W21 BEAMS WITH FLANGES WIDER THAN 6 INCHES, FLUSH WITH EXTERIOR FACE OF METAL STUDS. MAXIMUM OFFSET OF 1/2" FROM CENTERLINE OF COLUMN.
- * SP = INDICATES SPECIAL JOIST TO BE DESIGNED FOR MECHANICAL UNIT LOADS, RE. MECH.
- JOIST MANUFACTURER TO DESIGN THE JOISTS FOR SCREEN LOAD PROVIDED PER THE COMPONENT AND CLADDING WIND LOADS ON SHEET S0.12. STEEL BEAM REACTIONS ARE UNFACTORED.
- RTU UNITS CONNECTIONS TO ROOF BY UNIT MANUFACTURER.

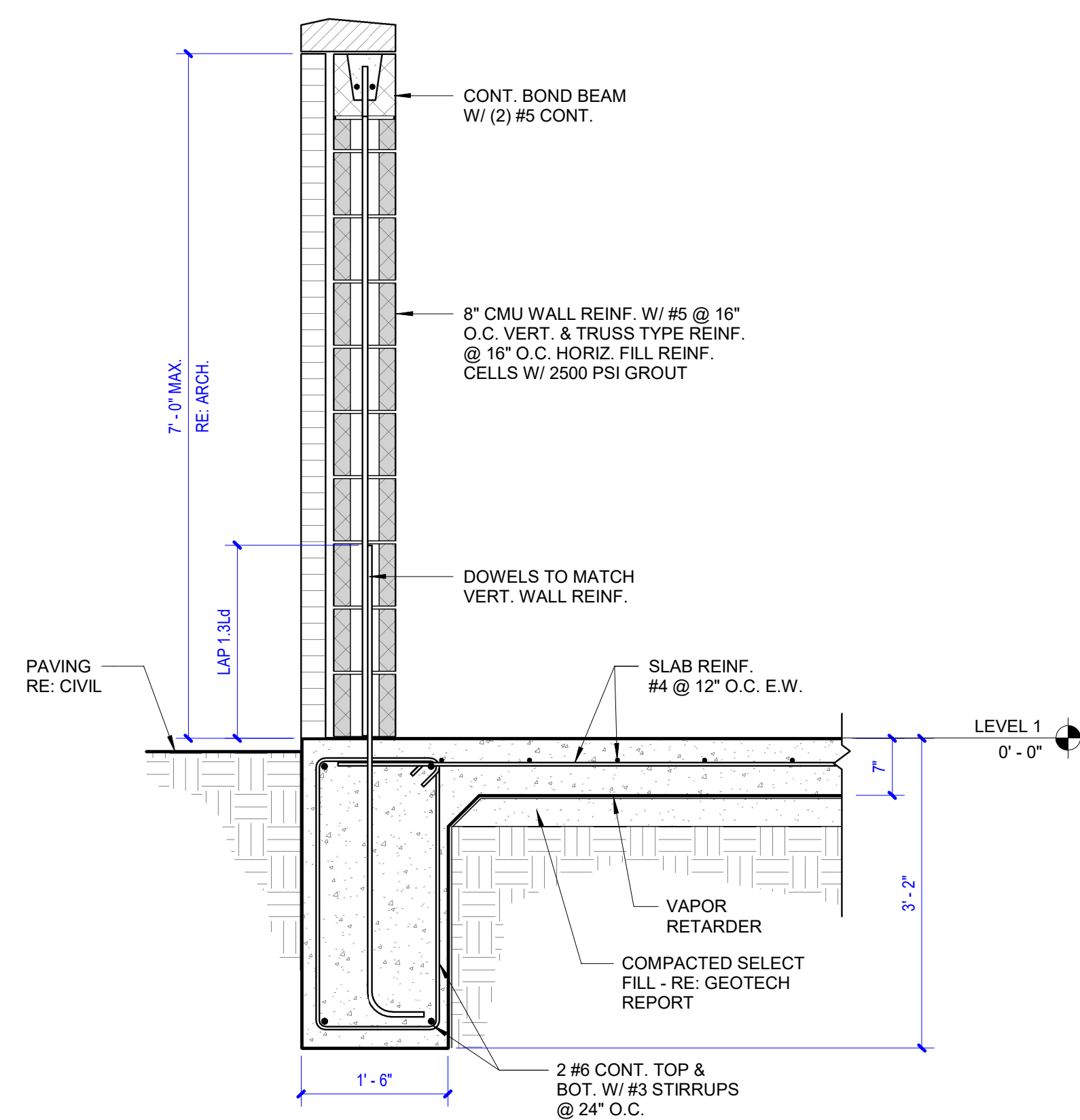




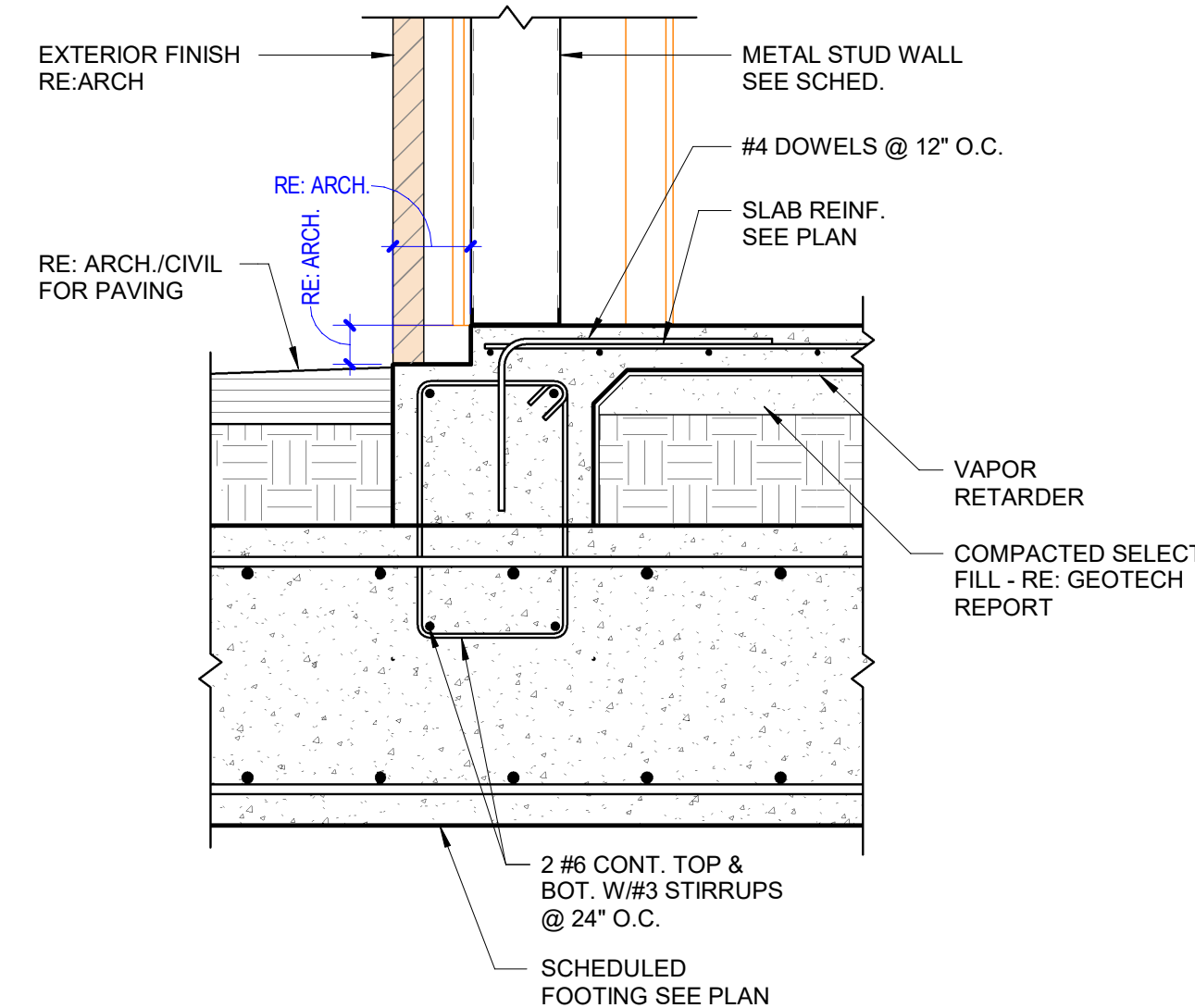
9 Flag Pole Foundation - 30'-0" Max
3/4" = 1'-0"



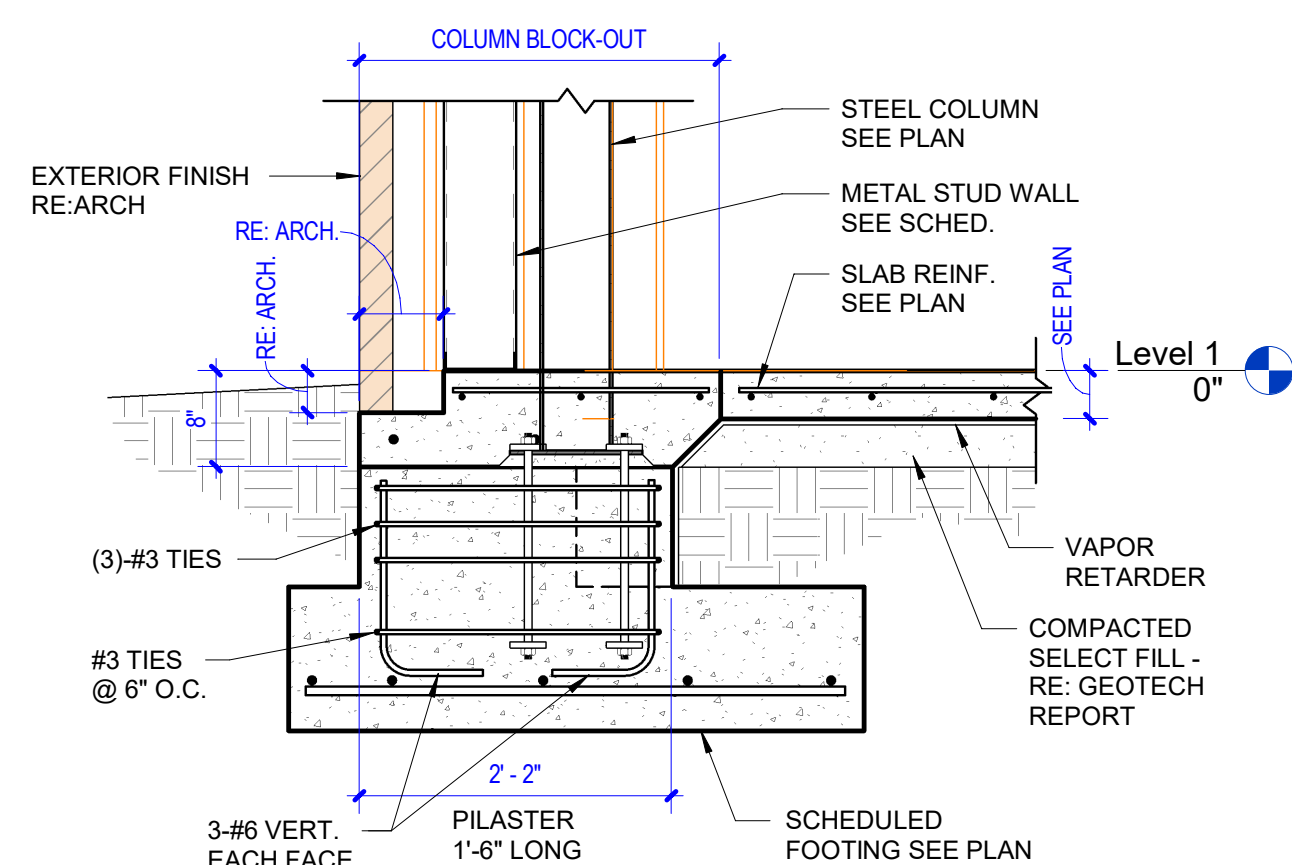
8 Lightpole Foundation
3/4" = 1'-0"



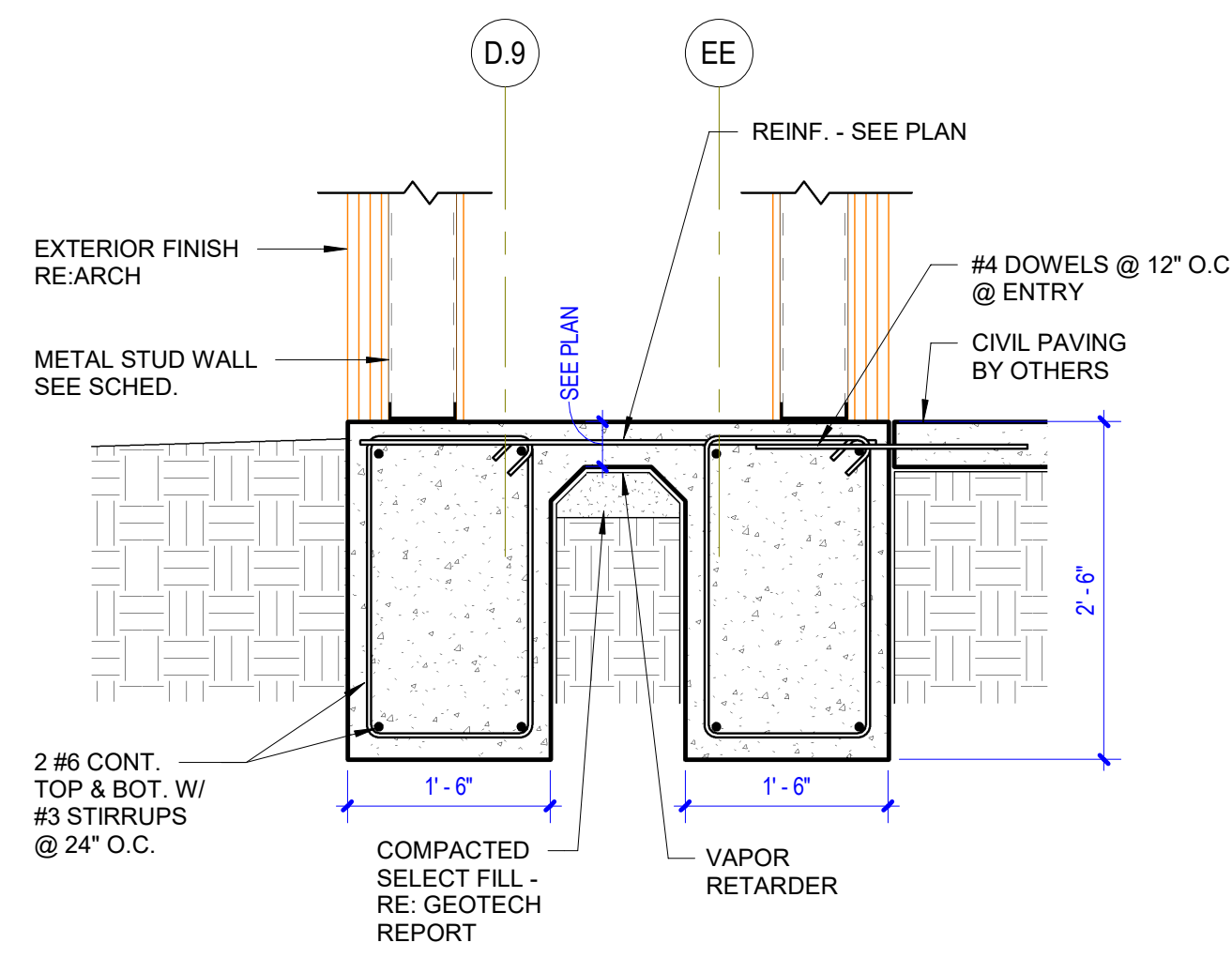
7 Dumpster and Generator FDN Detail
3/4" = 1'-0"



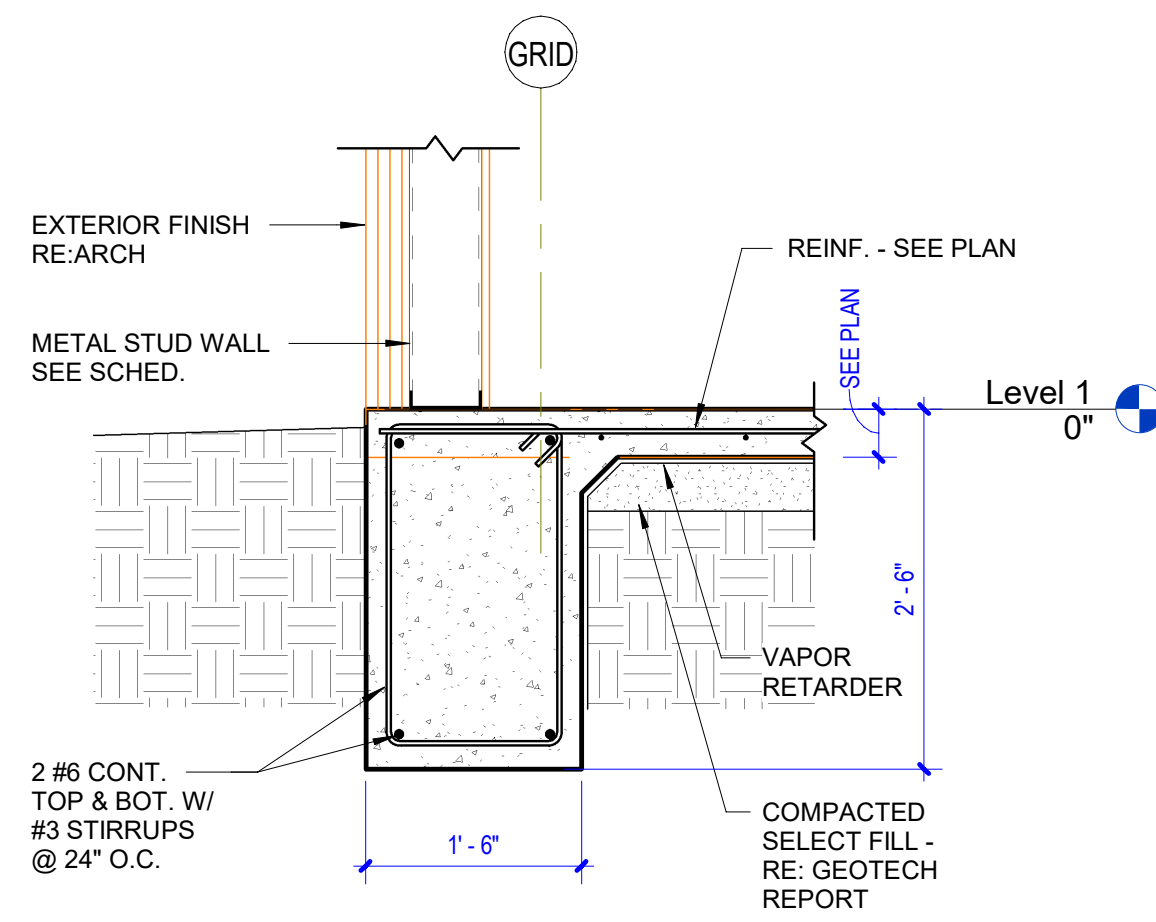
6 Foundation Section @ Exterior
3/4" = 1'-0"



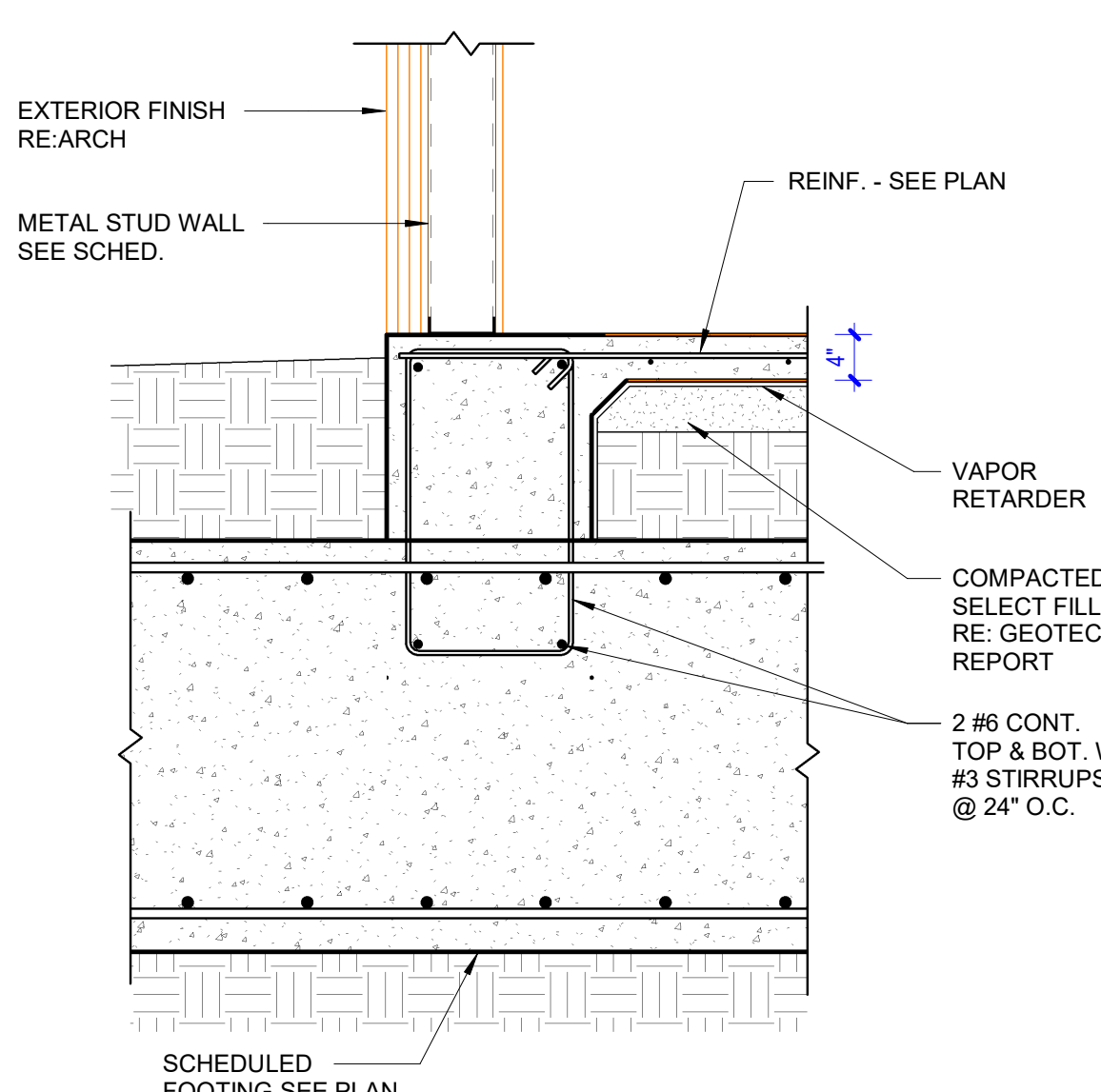
5 Section @ Exterior Foundation
3/4" = 1'-0"



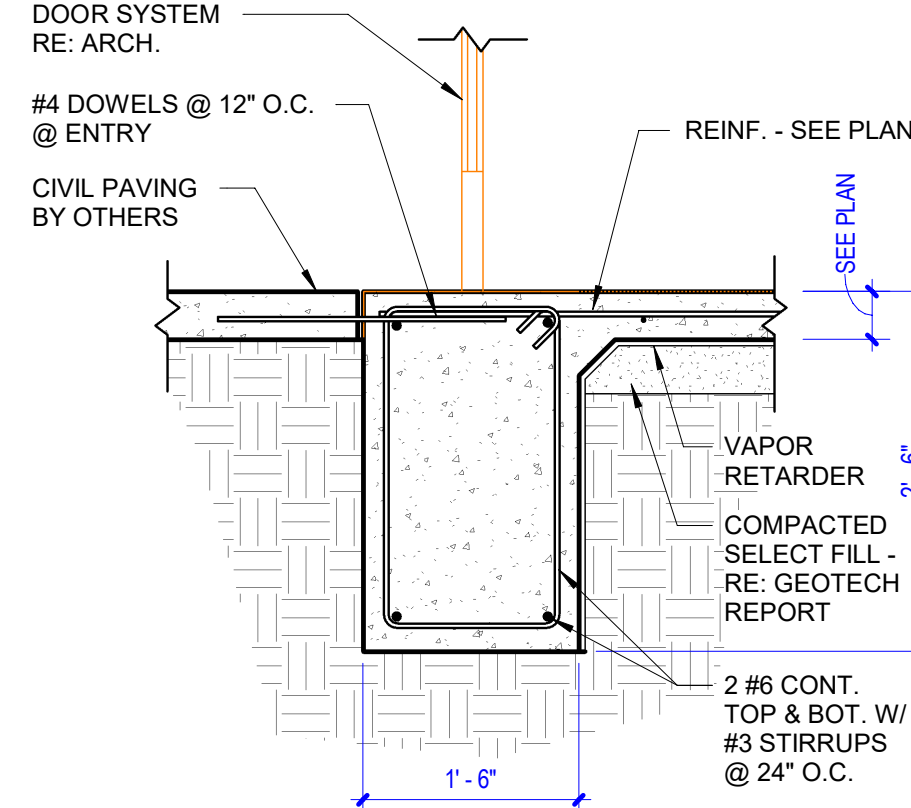
4 Foundation Section
3/4" = 1'-0"



3 Foundation Section
3/4" = 1'-0"



2 Foundation Section @ Exterior
3/4" = 1'-0"



1 Foundation Section @ Entry
3/4" = 1'-0"

Architectural elevation drawing of a building facade. The drawing shows a brick structure with horizontal bands of ACM-1 and blue panels. The drawing includes vertical and horizontal dimensions, level markers for Level 1 and Level 2, and labels for 'ACM REVEAL (TYP.)' and 'B'.

Horizontal Dimensions (Top):

- 3'-11"
- 3'-10"
- 3'-11"

Vertical Dimensions (Left):

- 3'-0"
- 7'-0 3/4" R.O.
- 3'-6"
- 8'-0"
- 3'-10"
- 8"
- 7'-0 3/4" R.O.
- 3'-0"

Labels and Markers:

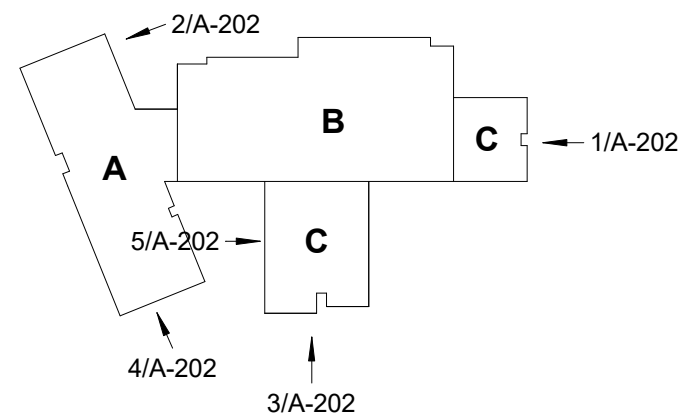
- ACM-1
- B
- LEVEL 2
15'-0"
- ACM REVEAL (TYP.)
- LEVEL 1
0'-0"

③ WEST ELEVATION - AREA 'A'
1/16" = 1'-0"

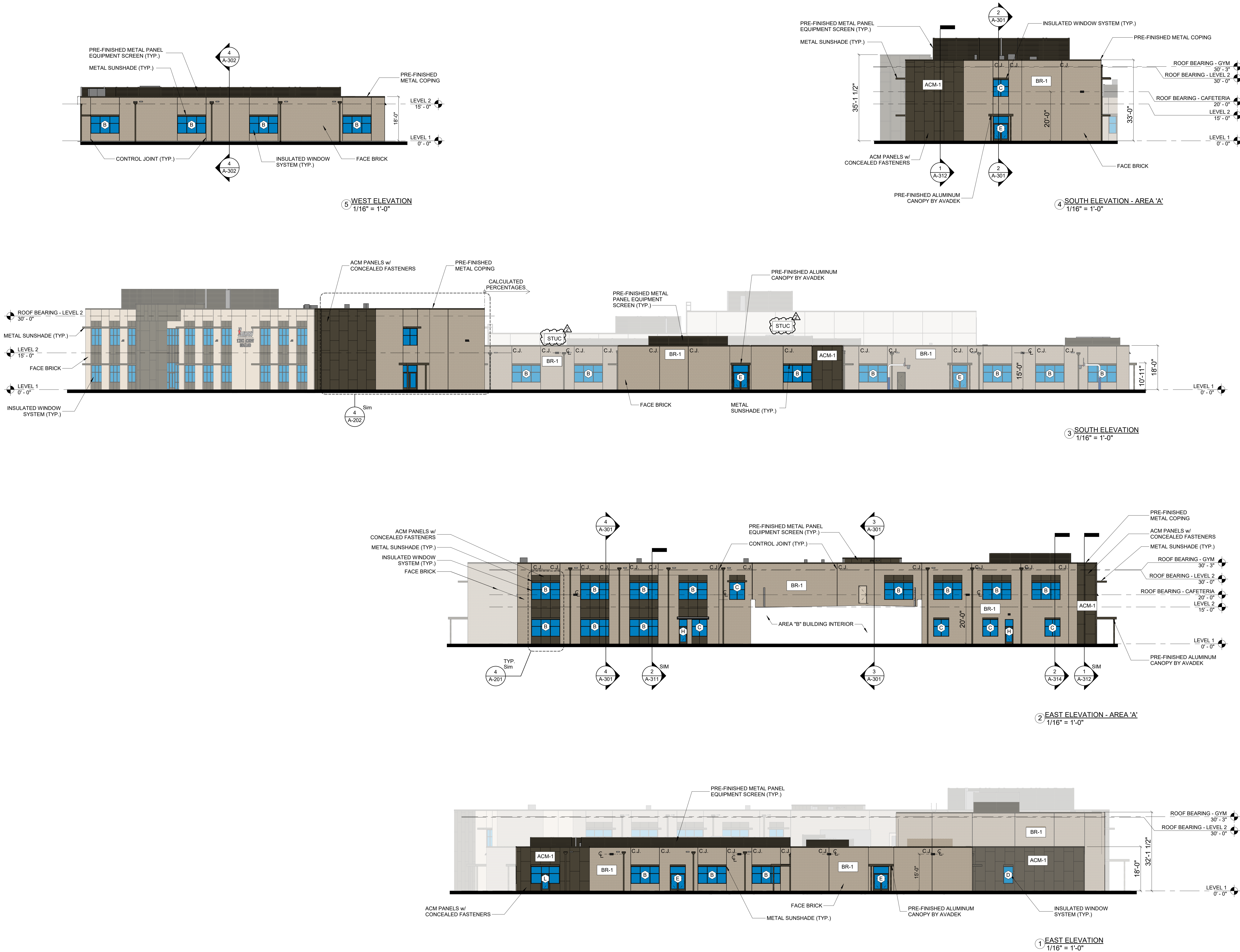
① NORTH ELEVATION
1/16" = 1'-0"

[illegible]

1/16" = 1'-0"



EXTERIOR FINISH SCHEDULE		
MARK	MANUFACTURER	DESCRIPTION
ACM-1	ALPOLIC	PRE-FINISHED ALUM COMPOSITE PANELS, TO MATCH ELEMENTARY SCHOOL, JBR BRONZE
BR-1	CLOUD CERAMICS	FACE BRICK, TO MATCH ELEMENTARY SCHOOL, LIGHT IVORY, KING SIZE, VELOUR
PT-1	GYPSUM	GYPSUM WALLBOARD
STUC	DRYVIT	STUCCO FINISH, COLOR TO MATCH ELEMENTARY SCHOOL, SW 7572 LOTUS POND



DOOR SCHEDULE

NO.	ROOM	SIZE		DOOR		FRAME		FIRE RATING	DETAIL		HARDWARE				REMARKS	NO.
		WIDTH	HEIGHT	TYPE	MAT.	FIN.	FIN.		JAMB	SILL	TYPE	ACCESS CTRL	PANIC	CLOSER		
A101A	SECURE LOBBY	6'-0"	7'-0"	SF2	AL	AN	AL	AN			22	X	X	X	1, 2, 8	A101A
A101B	FOYER	6'-0"	7'-0"	SF2	AL	AN	AL	AN			22	X	X	X	1, 2, 8	A101B
A103	TLT	3'-0"	7'-0"	F	WD	PL	HM	PT			7					A103
A104	SPECIAL ED	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A104
A105	ESL	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A105
A106	LIFE SKILLS	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A106
A107	LIFE SKILLS	3'-0"	7'-0"	F	WD	PL	HM	PT			7					A107
A108	LIFE SKILLS	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A108
A109A	ELEC.	3'-0"	7'-0"	F	WD	PF	HM	PT	45							A109A
A109B	ELEC.	3'-0"	7'-0"	F	HM	PT	HM	PT			21			X		A109B
A110	NURSE	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A110
A111	DETENTION	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A111
A112	SERVER	3'-0"	7'-0"	F	WD	PL	HM	PT			10	X			1	A112
A115	FRONT OFFICES	3'-0"	7'-0"	SD	WD	PL	HM	PT			10	X			1	A115
A115A	FRONT OFFICES	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A115A
A116	AP OFFICE	3'-0"	7'-0"	SD	WD	PL	HM	PT			10					A116
A117	DEAN	3'-0"	7'-0"	SD	WD	PL	HM	PT			10					A117
A118	PRINCIPAL	3'-0"	7'-0"	SD	WD	PL	HM	PT			10					A118
A119	MEETINGS	3'-0"	7'-0"	SD	WD	PL	HM	PT			8					A119
A120	AP OFFICE	3'-0"	7'-0"	SD	WD	PL	HM	PT			10					A120
A121	COUNSELOR SUITE	3'-0"	7'-0"	SF	AL	AN	AL	AN			2			X		A121
A121A	OFFICE	3'-0"	7'-0"	SF	AL	AN	AL	AN			10					A121A
A121B	OFFICE	3'-0"	7'-0"	SF	AL	AN	AL	AN			10					A121B
A121C	OFFICE	3'-0"	7'-0"	SF	AL	AN	AL	AN			10					A121C
A121D	OFFICE	3'-0"	7'-0"	SF	AL	AN	AL	AN			10					A121D
A121E	OFFICE	3'-0"	7'-0"	SF	AL	AN	AL	AN			10					A121E
A121F	OFFICE	3'-0"	7'-0"	SF	AL	AN	AL	AN			10					A121F
A121G	COUNSELOR SUITE	3'-0"	7'-0"	SF	AL	AN	AL	AN			12	X	X	X	1, 8	A121G
A122	COORDINATOR	3'-0"	7'-0"	SD	WD	PL	HM	PT			10					A122
A123	TEST	3'-0"	7'-0"	FL	WD	PL	HM	PT			6					A123
A124	RISE	3'-0"	7'-0"	F	HM	PT	HM	PT			12					A124
A127	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A127
A128	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A128
A129	MECH.	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A129
A130	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A130
A131	TLT	3'-0"	7'-0"	F	WD	PL	HM	PT			7					A131
A132	TLT	3'-0"	7'-0"	F	WD	PL	HM	PT			7					A132
A133	JANITOR	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A133
A134	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A134
A135	CORRIDOR	3'-0"	7'-0"	SF	AL	AN	AL	AN			10	X	X	X	1, 8	A135
A136	SMALL CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A136
A137	GIRLS	3'-0"	7'-0"	CO	-		HM	PT			24					A137
A138	BOYS	3'-0"	7'-0"	CO	-		HM	PT			24					A138
A139	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A139
A140	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A140
A141	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A141
A142	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A142
A143	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A143
A144	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A144
A145	STORAGE	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A145
A202	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A202
A203	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A203
A204	STORAGE	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A204
A205	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A205
A206	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A206
A207	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A207
A208	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A208
A209	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A209
A210	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A210
A211	TEACHERS LOUNGE	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A211
A212	OFFICE	3'-0"	7'-0"	NL	WD	PL	HM	PT			15					A212
A213A	STORAGE / ROOF ACCESS	3'-0"	7'-0"	F	HM	PT	HM	PT			16			X		A213A
A213B	STORAGE / ROOF ACCESS	3'-0"	7'-0"	F	HM	PT	HM	PT			16					A213B
A214	STORAGE / ROOF ACCESS	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A214
A215	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A215
A217	TLT	3'-0"	7'-0"	NL	WD	PL	HM	PT			7					A217
A218	TLT	3'-0"	7'-0"	NL	WD	PL	HM	PT			7					A218
A219	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A219
A221	JANITOR	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A221
A223	IDF	3'-0"	7'-0"	F	WD	PL	HM	PT			10	X			1	A223
A224	SMALL CLASSROOM	3'-0"	7'-0"	F	WD	PL	HM	PT			10					A224
A225	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A225
A226	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A226
A227	GIRLS	3'-0"	7'-0"	CO	-		HM	PT			10					A227
A228	BOYS	3'-0"	7'-0"	CO	-		HM	PT			10					A228
A229	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A229
A230	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A230
A231	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A231
A232	CLASSROOM	3'-0"	7'-0"	NL	WD	PL	HM	PT			10					A232

DOOR SCHEDULE

NO.	CLASSROOM	ROOM	SIZE		DOOR		FRAME		FIRE RATING	HEAD	DETAIL		HARDWARE				REMARKS	NO.
			WIDTH	HEIGHT	TYPE	MAT.	FIN.	FIN.			JAMB	SILL	TYPE	ACCESS CTRL.	PANIC	CLOSER		
A233	CLASSROOM		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					A233
A234	CLASSROOM		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					A234
A235	STORAGE		3'-0"	7'-0"	F	WD	PL	HM	PT				10					A235
B101	CORRIDOR		6'-0"	7'-0"	SF2	AL	AN	AL	AN				19	X		X	1, 2, 8	B101
B102	TLT		3'-0"	7'-0"	F	WD	PL	HM	PT				7					B102
B103	MS SCIENCE 1		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B103
B104	MS SCIENCE 2		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B104
B105	MS SCIENCE 3		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B105
B106	ENGINEERING LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B106
B107A	CAFETERIA		6'-0"	7'-0"	SF2	AL	AN	AL	AN						X	X		B107A
B107B	CAFETERIA		6'-0"	7'-0"	SF2	AL	AN	AL	AN					X	X	X		B107B
B107C	CAFETERIA		6'-0"	7'-0"	SF2	AL	AN	AL	AN				19	X	X	X	1, 2, 8	B107C
B107D	CAFETERIA		6'-0"	7'-0"	SF2	AL	AN	AL	AN				19	X	X	X	1, 2, 8	B107D
B108A	OFFICE		3'-0"	7'-0"	F	WD	PL	HM	PT				5					B108A
B108B	KITCHEN/ SERVING		3'-0"	7'-0"	NL	WD	PL	HM	PT				20					B108B
B108C	KITCHEN/ SERVING		10'-4"	3'-6"														B108C
B108D	KITCHEN/ SERVING		10'-4"	3'-6"									20					B108D
B108E	KITCHEN/ SERVING		3'-0"	6'-8"	F	WD	PL	HM	PT				23					B108E
B108F	KITCHEN/ SERVING		3'-0"	7'-0"	NL	HM	PT	HM	PT				23	X		X	1	B108F
B109	CAFETERIA		6'-0"	7'-0"	F2	WD	PL	HM	PT				13					B109
B110	RAMP		3'-0"	7'-0"	F	WD	PL	HM	PT				17			X		B110
B111	STAGE STORAGE		6'-0"	7'-0"	F2	WD	PL	HM	PT				13					B111
B113A	CAFETERIA		5'-0"	7'-0"	CO	-		HM	PT									B113A
B113B	GYMNASIUM		3'-0"	7'-0"	F	WD	PL	HM	PT									B113B
B114	BOYS		3'-0"	7'-0"	CO	-		HM	PT				24					B114
B115	GIRLS		3'-0"	7'-0"	CO	-		HM	PT				24					B115
B116A	GYMNASIUM		6'-0"	7'-0"	NL2	WD	PL	HM	PT				20			X	X	B116A
B116B	GYMNASIUM		6'-0"	7'-0"	NL2	WD	PL	HM	PT				20			X	X	B116B
B116C	GYMNASIUM		6'-0"	7'-0"	NL2	HM	PT	HM	PT				19	X	X	X	1, 2, 8	B116C
B116D	GYMNASIUM		6'-0"	7'-0"	NL2	HM	PT	HM	PT				19	X	X	X	1, 2, 8	B116D
B117	BOYS DRESSING		3'-0"	7'-0"	F	WD	PL	HM	PT				4					B117
B118	COACH		3'-0"	7'-0"	F	WD	PL	HM	PT				4					B118
B119	GIRLS DRESSING		3'-0"	7'-0"	F	WD	PL	HM	PT				4					B119
B120	STORAGE		3'-0"	7'-0"	F	WD	PL	HM	PT				7					B120
B121	TLT		3'-0"	7'-0"	F	WD	PL	HM	PT				7					B121
B122	TLT		3'-0"	7'-0"	F	WD	PL	HM	PT				7					B122
B123	JANITOR		3'-0"	7'-0"	F	WD	PL	HM	PT				7					B123
B124	GIRLS		3'-0"	7'-0"	CO	-		HM	PT				24					B124
B125	BOYS		3'-0"	7'-0"	CO	-		HM	PT				24					B125
B126	TECHNOLOGY		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B126
B127	ADMIN		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B127
B128	CORRIDOR		6'-0"	7'-0"	SF2	AL	AN	AL	AN					X		X	1, 2, 8	B128
B129	TLT		3'-0"	7'-0"	F	WD	PL	HM	PT				7					B129
B130	STORAGE		3'-0"	7'-0"	F	WD	PL	HM	PT									B130
B131	IDF		3'-0"	7'-0"	F	WD	PL	HM	PT									B131
B132	ELEC.		3'-0"	7'-0"	F	HM	PT	HM	PT									B132
B133	TEACHERS LOUNGE		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B133
B134	CLASSROOM		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					B134
C101	CORRIDOR		6'-0"	7'-0"	SF2	AL	AN	AL	AN				19	X		X	1, 2, 8	C101
C102A	PHYSICS LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT									C102A
C102B	PHYSICS LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT									C102B
C103	PHYSICS LAB		3'-0"	7'-0"	F	WD	PL	HM	PT				10					C103
C104	MS SCIENCE LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT				17					C104
C105A	CHEMISTRY LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT									C105A
C105B	CHEMISTRY LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT									C105B
C106	LAB PREP		3'-0"	7'-0"	NL	WD	PL	HM	PT				17					C106
C107	TECHNOLOGY		3'-0"	7'-0"	NL	WD	PL	HM	PT				17					C107
C108A	BIOLOGY LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT									C108A
C108B	BIOLOGY LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT									C108B
C109	LAB PREP		3'-0"	7'-0"	F	WD	PL	HM	PT				19					C109
C110A	MAKERS LAB		6'-0"	7'-0"	NL2	WD	PL	HM	PT									C110A
C110B	MAKERS LAB		6'-0"	7'-0"	SF2	AL	AN	AL	AN				9	X		X	1, 2, 8	C110B
C111A	MAKERS LAB SHOP		6'-0"	7'-0"	HL2	WD	PL	HM	PT									C111A
C111B	MAKERS LAB SHOP		6'-0"	7'-0"	HL2	WD	PL	HM	PT									C111B
C112	BIOMEDICAL LAB		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					C112
C113	LAB PREP		3'-0"	7'-0"	F	WD	PL	HM	PT				10					C113
C114A	ART		3'-0"	7'-0"	NL	WD	PL	HM	PT									C114A
C114B	ART		3'-0"	7'-0"	SF	AL	AN	AL	AN					X		X	1, 8	C114B
C115	CLASSROOM		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					C115
C116	CLASSROOM		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					C116
C117	CLASSROOM		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					C117
C118	CLASSROOM		3'-0"	7'-0"	NL	WD	PL	HM	PT				10					C118
S2A	STAIR 2		3'-0"	7'-0"	F	WD	PF	HM	PT	45			18			X	X	S2A
S2B	STAIR 2		6'-0"	7'-0"	SF2	AL	AN	AL	AN				22	X	X	X	1, 2, 8	S2B
S2C	STAIR 2		3'-0"	7'-0"	F	WD	PF	HM	PT	45						X	X	S2C
S3A	STAIR 3		6'-0"	7'-0"	SF2	AL	AN	AL	AN	45			22			X	X	S3A
S3B	STAIR 3		6'-0"	7'-0"	SF2	AL	AN	AL	AN				22	X	X	X	1, 2, 8	S3B
S3C	STAIR 3		3'-0"	7'-0"	F	WD	PF	HM	PT	45						X	X	S3C

V:sTouch® DuraDot®ADA Sign Systems

AlumiSet® Carrier System
Item 3 - Type C - Restroom Identification
AL-RR-GP2-LAM-09-06-TS
2010 ADA-SAD

Color Selections: As selected by Architect from manufacturer's full range.

Color Scheme is conceptual

- Notes:
1. AlumiSet 1 piece extrusion frame
 2. .030 Laminate on 3/16" clear acrylic insert
 3. 1/32" raised ADA text/symbol chemically welded to core
 4. 1/32" raised Grade 2 Braille



Elevation
Scale: 1/8" = 1"



AlumiSet Extrusion - #7524
Finish - Clear Satin Anodized
Laminate Background Color - Wilsonart D307-60 Hollyberry
Text Color - VisiTouch ADA 151
Coronation White
Braille - Clear Acrylic
Font - Helvetica Reg (Swiss721)
Mounting - 3M VHB foam tape and silicone

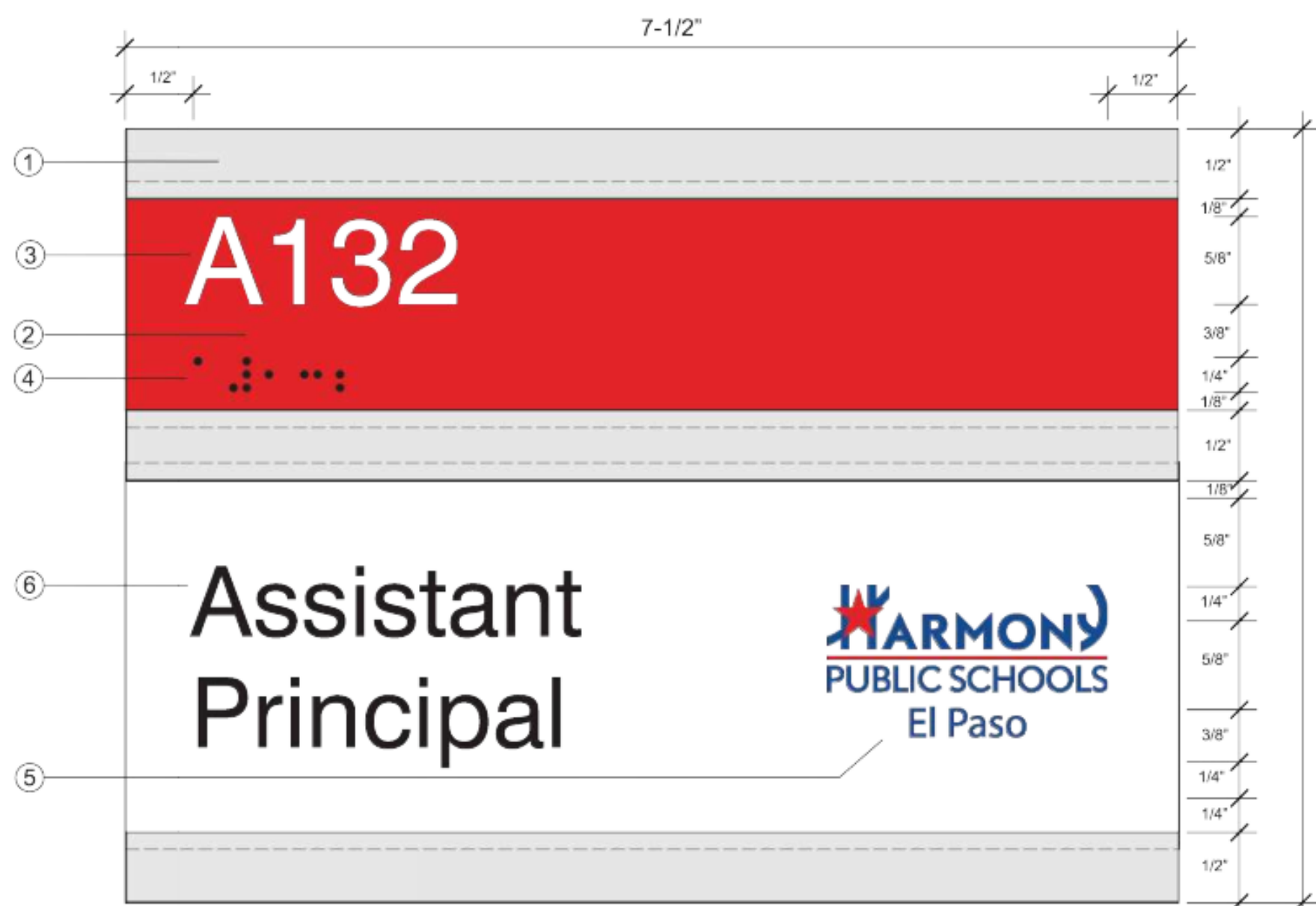
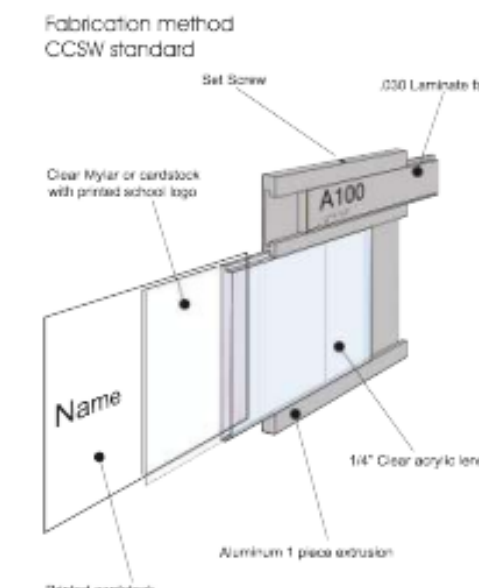
V:sTouch® DuraDot®ADA Sign Systems

AlumiSet® Carrier System
Item 2 - Type B - Office/Classroom Identification
AL-CM-GP2-GP6-LAM-5-5-7-5-TS
2010 ADA-SAD

Color Selections: As selected by Architect from manufacturer's full range.

Color Scheme is conceptual

- Notes:
1. AlumiSet 1 piece extrusion frame
 2. .030 Laminate on 3/16" clear acrylic insert
 3. 1/32" raised ADA text welded to core
 4. 1/32" raised Grade 2 Braille
 5. Digital printed cardstock insert
 6. Digital printed Mylar with 1/2" high text left aligned and centered



AlumiSet Extrusion - #7524
Finish - Clear Satin Anodized
Laminate Background Color - Wilsonart D307-60 Hollyberry
Text Color - VisiTouch ADA 151
Coronation White
Braille - Clear Acrylic
Font - Helvetica Reg (Swiss721)
Inserts - White Cardstock with digital printed logo and clear Mylar film with printed text black ink
Mounting - 3M VHB foam tape and silicone

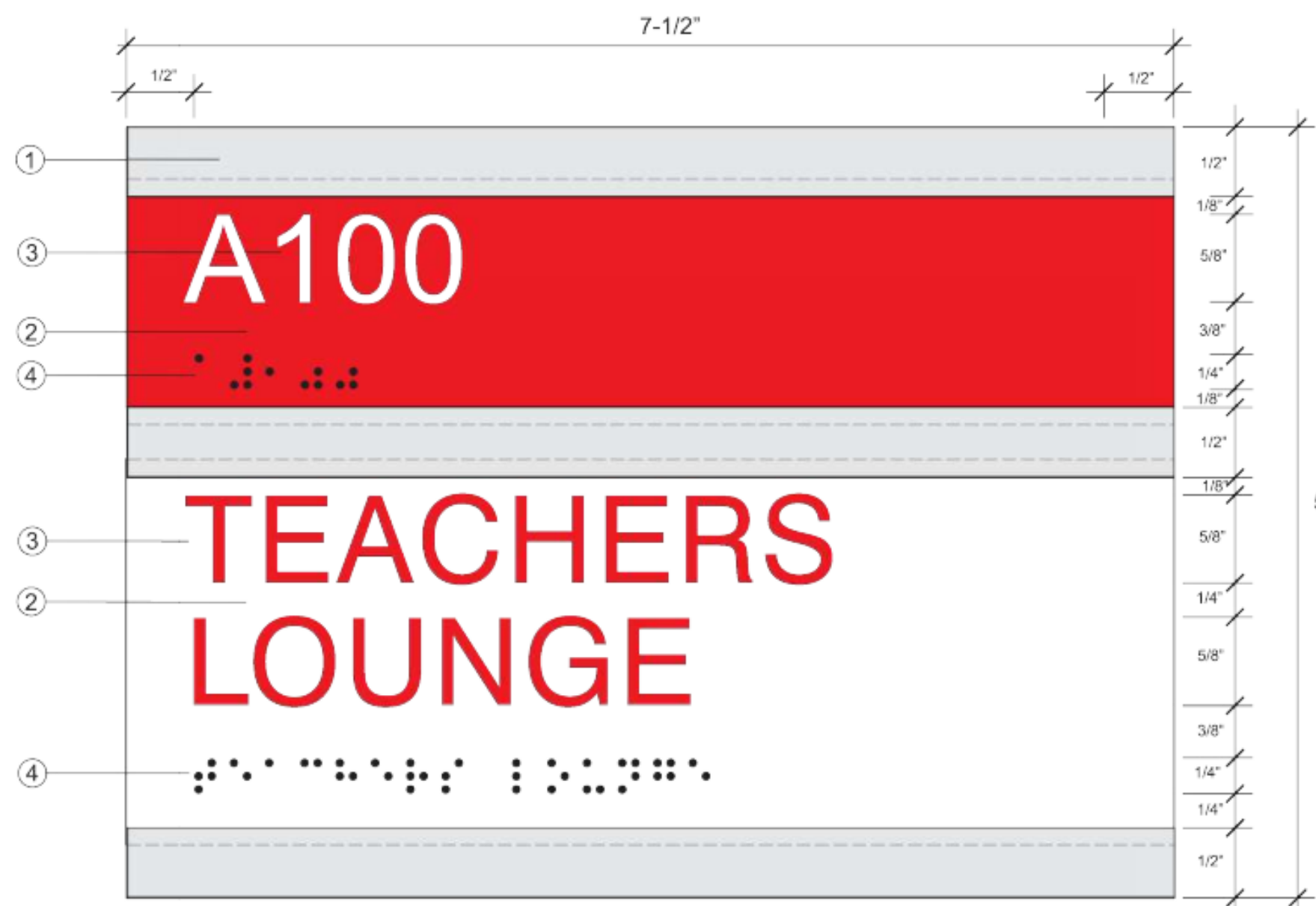
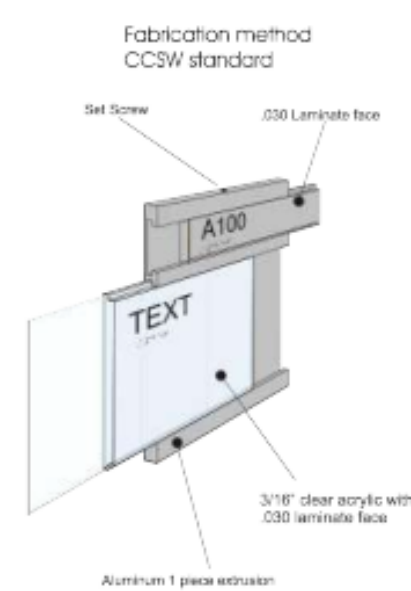
V:sTouch® DuraDot®ADA Sign Systems

AlumiSet® Carrier System
Item 1 - Type A - Permanent Interior Room Identification
AL-CA-GP2-LAM-5-5-7-5-TS
2010 ADA-SAD

Color Selections: As selected by Architect from manufacturer's full range.

Color Scheme is conceptual

- Notes:
1. AlumiSet 1 piece extrusion frame
 2. .030 Laminate on 3/16" clear acrylic insert
 3. 1/32" raised ADA text welded to core
 4. 1/32" raised Grade 2 Braille



AlumiSet Extrusion - #7524
Finish - Clear Satin Anodized
Top Laminate Color - Wilsonart D307-60 Hollyberry
Top Text Color - VisiTouch ADA 151
Coronation White
Bottom Laminate Color - Wilsonart 1376-60 White
Bottom Text Color - VisiTouch ADA 111 Valentine Red
Braille - Clear Acrylic
Font - Helvetica Reg (Swiss721)
Mounting - 3M VHB foam tape and silicone

HARMONY PUBLIC SCHOOLS HARMONY SCIENCE ACADEMY - PHASE II BRIDGELAND NEW MIDDLE/HIGH SCHOOL

12800 CREEKLAND VILLAGE DRIVE
CYPRESS, TX 77433

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REV	DATE	ISSUED FOR:
1	12/19/2025	PERMIT
2	06/11/2026	ISSUE FOR BID
4	07/20/2026	ADDENDUM #04

PROJECT NO.: 06.22.013
DRAWN BY: KL QC: TWL

SIGNAGE
DETAILS

A-821

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SIGN SUPPORT DESCRIPTIVE CODES

(Descriptive Codes correspond to project estimate and quantities sheets)

SM RD SGN ASSM TY XXXXX(X)XX(X-XXXX)

Post Type

FRP = Fiberglass Reinforced Plastic Pipe (see SMD(FRP))
TWT = Thin-Walled Tubing (see SMD(TWT))
10BWG = 10 BWG Tubing (see SMD(SLIP-1) to (SLIP-3))
S80 = Schedule 80 Pipe (see SMD(SLIP-1) to (SLIP-3))

Number of Posts (1 or 2)

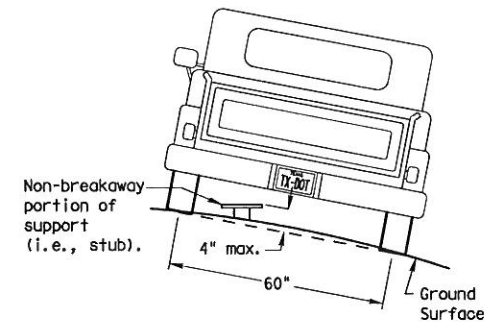
Anchor Type

UA = Universal Anchor - Concreted (see SMD(FRP) and (TWT))
UB = Universal Anchor - Bolted down (see SMD(FRP) and (TWT))
WS = Wedge Anchor Steel - (see SMD(TWT))
WP = Wedge Anchor Plastic (see SMD(TWT))
SA = Slipbase - Concreted (see SMD(SLIP-1) to (SLIP-3))
SB = Slipbase - Bolted Down (see SMD(SLIP-1) to (SLIP-3))

Sign Mounting Designation

P = Prefab. "Plain" (see SMD(SLIP-1) to (SLIP-3), (TWT), (FRP))
T = Prefab. "T" (see SMD(SLIP-1) to (SLIP-3), (TWT))
U = Prefab. "U" (see SMD(SLIP-1) to (SLIP-3))
IF REQUIRED
1EXT or 2EXT = Number of Extensions (see SMD(SLIP-1) to (SLIP-3), (TWT))
BM = Extruded Wind Beam (see SMD(SLIP-1) to (SLIP-3))
WC = 1.12 #/ft Wing Channel (see SMD(SLIP-1) to (SLIP-3))
EXAL = Extruded Aluminum Sign Panels (see SMD(SLIP-3))

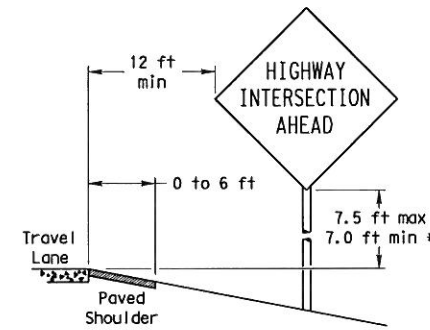
REQUIRED CLEARANCE FOR BREAKAWAY SUPPORT



To avoid vehicle undercarriage snagging, any substantial remains of a breakaway support, when it is broken away, should not project more than 4 inches above a 60-inch chord (i.e., typical space between wheel paths).

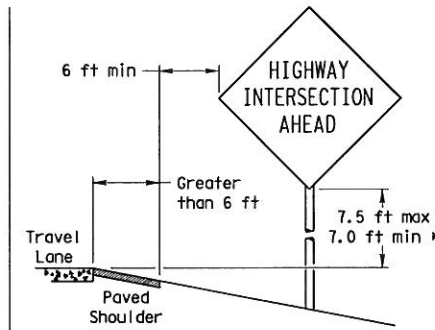
SIGN LOCATION

PAVED SHOULDERS



LESS THAN 6 FT. WIDE

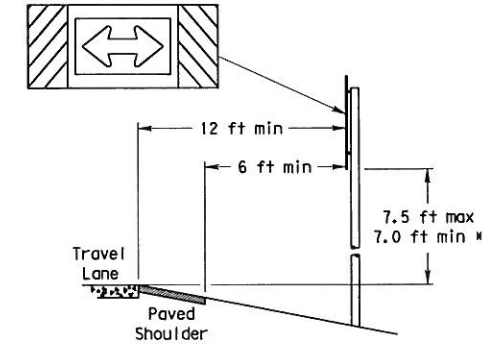
When the shoulder is 6 ft. or less in width, the sign must be placed at least 12 ft. from the edge of the travel lane.



GREATER THAN 6 FT. WIDE

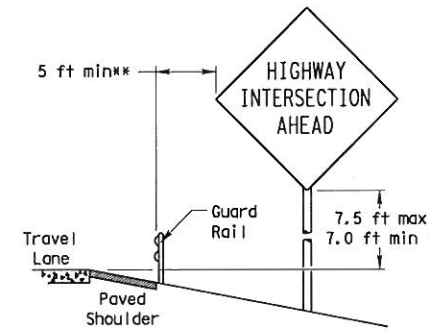
When the shoulder is greater than 6 ft in width, the sign must be placed at least 6 ft. from the edge of the shoulder.

T-INTERSECTION



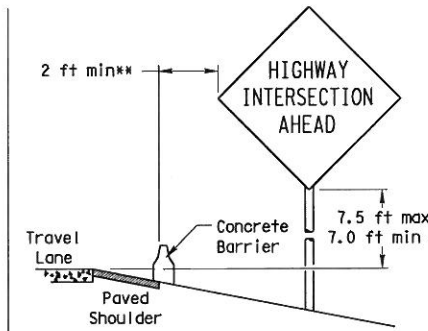
When this sign is needed at the end of a two-lane, two way roadway, the right edge of the sign should be in line with the centerline of the roadway. Place as close to ROW as practical.

BEHIND BARRIER

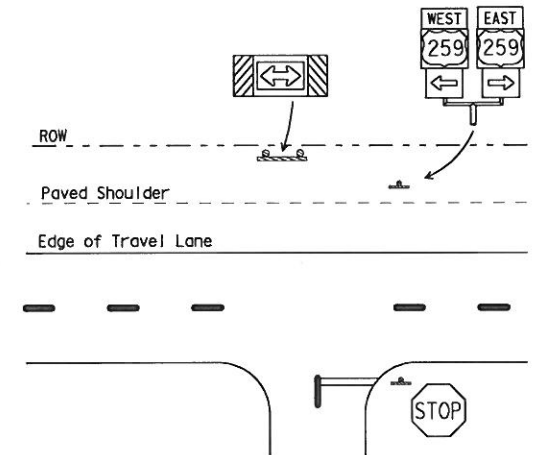


BEHIND GUARDRAIL

**Sign clearance based on distance required for proper guard rail or concrete barrier performance.



BEHIND CONCRETE BARRIER



* Signs shall be mounted using the following condition that results in the greatest sign elevation:

- (1) a minimum of 7 to a maximum of 7.5 feet above the edge of the travel lane or
- (2) a minimum of 7 to a maximum of 7.5 feet above the grade at the base of the support when sign is installed on the backslope.

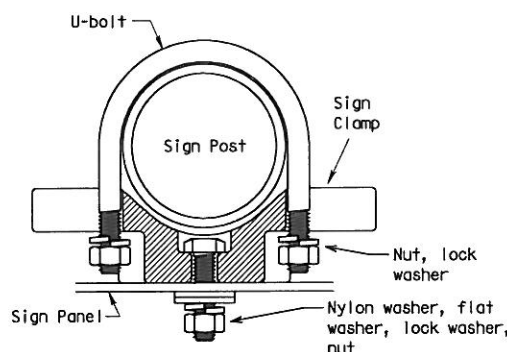
The maximum values may be increased when directed by the Engineer.

See the Traffic Operations Division website for detailed drawings of sign clamps, Triangular Slipbase System components and Wedge Anchor System components.

The website address is:
<http://www.txdot.gov/publications/traffic.htm>

TYPICAL SIGN ATTACHMENT DETAIL

Single Signs

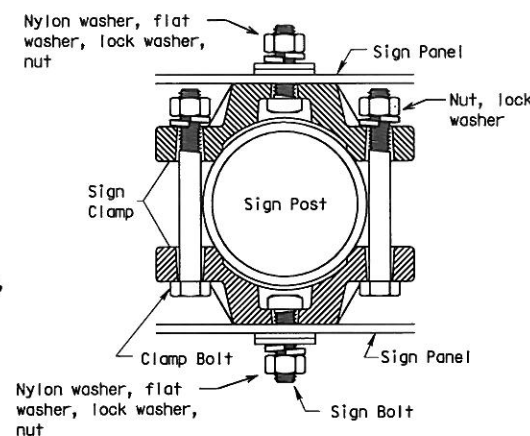


Bolts used to mount sign panels to the clamp are 5/16-18 UNC galvanized square head with nut, nylon washer, flat washer and lock washer. The bolt length is 1 inch for aluminum.

When two sign clamps are used to mount signs back-to-back, use a 5/16-18 UNC galvanized hex head per ASTM A307 with nut and helical-spring lock washer. The approximate bolt lengths for various post sizes and sign clamp types are given in the table at right. The bolt length may need to be adjusted depending upon field conditions.

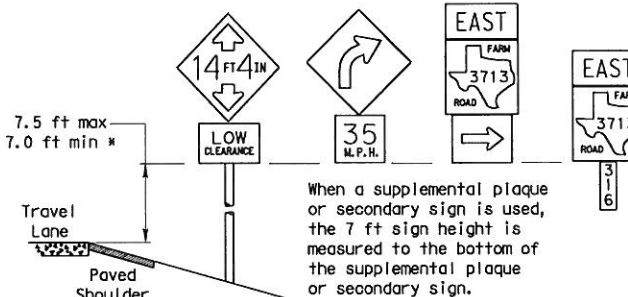
Sign clamps may be either the specific size clamp or the universal clamp.

Back-to-Back Signs



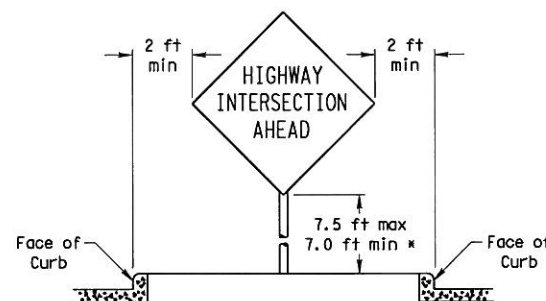
Pipe Diameter	Approximate Bolt Length	
	Specific Clamp	Universal Clamp
2" nominal	3"	3 or 3 1/2"
2 1/2" nominal	3 or 3 1/2"	3 1/2 or 4"
3" nominal	3 1/2 or 4"	4 1/2"

SIGNS WITH PLAQUES

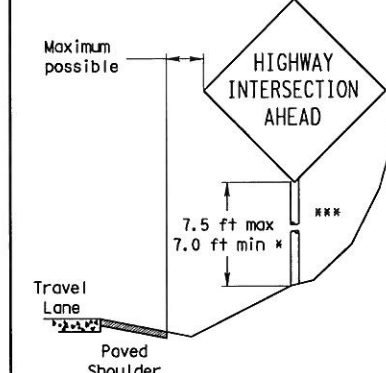


When a supplemental plaque or secondary sign is used, the 7 ft sign height is measured to the bottom of the supplemental plaque or secondary sign.

CURB & GUTTER OR RAISED ISLAND



RESTRICTED RIGHT-OF-WAY (When 6 ft min. is not possible.)



Right-of-way restrictions may be created by rocks, water, vegetation, forest, buildings, a narrow island, or other factors.

In situations where a lateral restriction prevents the minimum horizontal clearance from the edge of the travel lane, signs should be placed as far from the travel lane as practical.

*** Post may be shorter if protected by guardrail or if Engineer determines the post could not be hit due to extreme slope.



SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS GENERAL NOTES & DETAILS

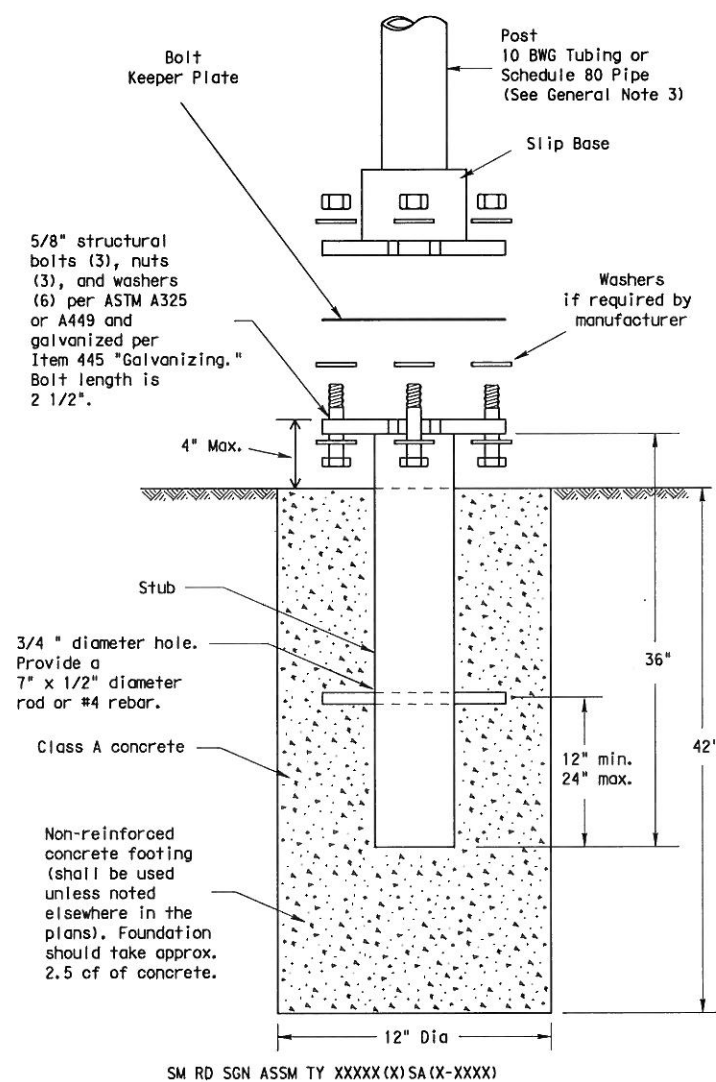
SMD (GEN) -08

© TxDOT July 2002	REVISED	DATE	BY	CHKD	DATE
9-08	REVISIONS	DATE	BY	CHKD	DATE
		DATE	BY	CHKD	DATE
		DATE	BY	CHKD	DATE

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DATE:
FILE:

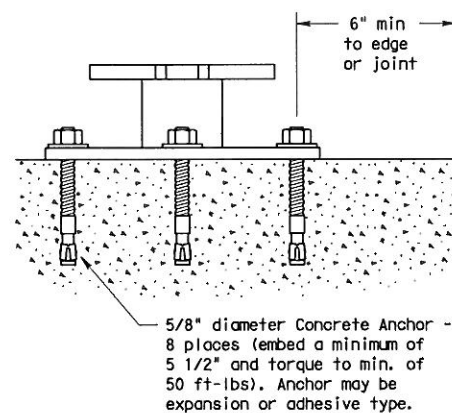
TRIANGULAR SLIPBASE INSTALLATION GENERAL REQUIREMENTS



NOTE

There are various devices approved for the Triangular Slipbase System. Please reference the Material Producer List for approved slip base systems. http://www.txdot.gov/business/producer_list.htm The devices shall be installed per manufacturers' recommendations. Installation procedures shall be provided to the Engineer by Contractor.

CONCRETE ANCHOR



Concrete anchor consists of 5/8" diameter stud bolt with UNC series bolt threads on the upper end. Heavy hex nut per ASTM A563, and hardened washer per ASTM F436. The stud bolt shall have a minimum yield and ultimate tensile strength of 50 and 75 KSI, respectively. Nuts, bolts and washers shall be galvanized per Item 445, "Galvanizing." Adhesive type anchors shall have stud bolts installed with Type III epoxy per DMS-6100, "Epoxies and Adhesives." Adhesive anchors may be loaded after adequate epoxy cure time per the manufacturer's recommendations. Top of bolt shall extend at least flush with top of the nut when installed. The anchor, when installed in 4000 psi normal-weight concrete with a 5 1/2" minimum embedment, shall have a minimum allowable tension and shear of 3900 and 3100 psi, respectively.

GENERAL NOTES:

- Slip base shall be permanently marked to indicate manufacturer. Method, design, and location of marking are subject to approval of the TxDOT Traffic Standards Engineer.
- Material used as post with this system shall conform to the following specifications:
 - 10 BWG Tubing (2.875" outside diameter)
 - 0.134" nominal wall thickness
 - Seamless or electric-resistance welded steel tubing or pipe
 - Steel shall be HSLAS Gr 55 per ASTM A1011 or ASTM A1008
 - Other steels may be used if they meet the following:
 - 55,000 PSI minimum yield strength
 - 70,000 PSI minimum tensile strength
 - 20% minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of 0.122" to 0.138"
 - Outside diameter (uncoated) shall be within the range of 2.867" to 2.883"
 - Galvanization per ASTM A123 or ASTM A653 G210. For precoated steel tubing (ASTM A653), recoat tube outside diameter weld seam by metallizing with zinc wire per ASTM B833.
 - Schedule 80 Pipe (2.875" outside diameter)
 - 0.276" nominal wall thickness
 - Steel tubing per ASTM A500 Gr C
 - Other seamless or electric-resistance welded steel tubing or pipe with equivalent outside diameter and wall thickness may be used if they meet the following:
 - 46,000 PSI minimum yield strength
 - 62,000 PSI minimum tensile strength
 - 21% minimum elongation in 2"
 - Wall thickness (uncoated) shall be within the range of 0.248" to 0.304"
 - Outside diameter (uncoated) shall be within the range of 2.855" to 2.895"
 - Galvanization per ASTM A123
- See the Traffic Operations Division website for detailed drawings of sign clamps and Texas Universal Triangular Slipbase System components. The website address is: <http://www.txdot.gov/publications/traffic.htm>
- Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.

ASSEMBLY PROCEDURE

Foundation

- Prepare 12-inch diameter by 42-inch deep hole. If solid rock is encountered, the depth of the foundation may be reduced such that it is embedded a minimum of 18 inches into the solid rock.
- The Engineer may permit batches of concrete less than 2 cubic yards to be mixed with a portable, motor-driven concrete mixer. For small placements less than 0.5 cubic yards, hand mixing in a suitable container may be allowed by Engineer. Concrete shall be Class A.
- Push the pipe end of the slip base stub into the center of the concrete. Rotate the stub back and forth while pushing it down into the concrete to assure good contact between the concrete and stub. Continue to work the stub into the concrete until it is between 2 to 4 inches above the ground.
- Plumb the stub. Allow a minimum of 4 days to set, unless otherwise directed by the Engineer.
- The triangular slipbase system is multidirectional and is designed to release when struck from any direction.

Support

- Cut support so that the bottom of the sign will be 7 to 7.5 feet above the edge of the travelway (i.e., edge of the closest lane) when slip plate is below the edge of pavement or 7 to 7.5 feet above slip plate when the slip plate is above the edge of the travelway. The cut shall be plumb and straight.
- Attach sign to support using connections shown. When multiple signs are installed on the same support, ensure the minimum clearance between each sign is maintained. See SMD(SLIP-2) for clearances based on sign types.



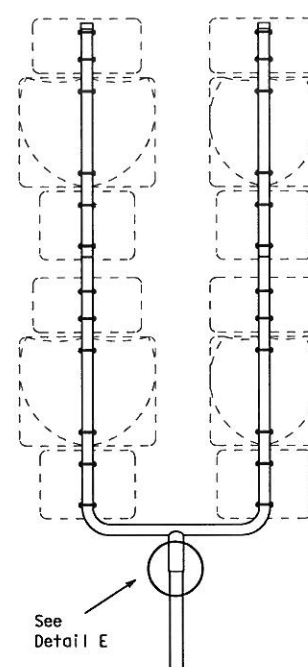
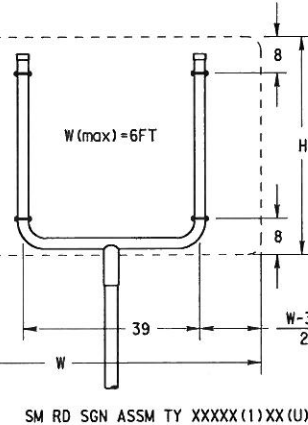
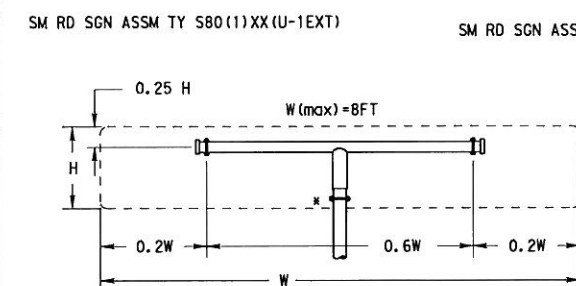
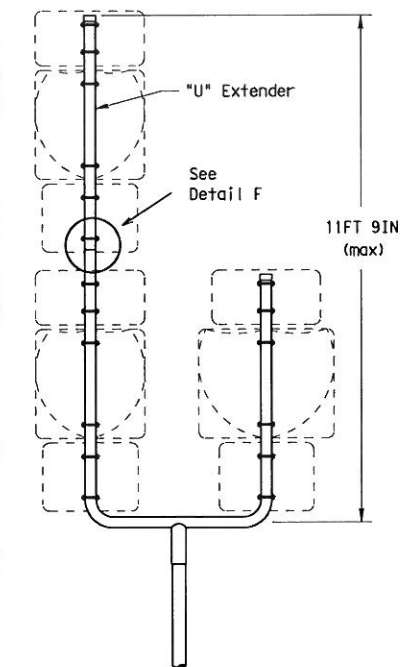
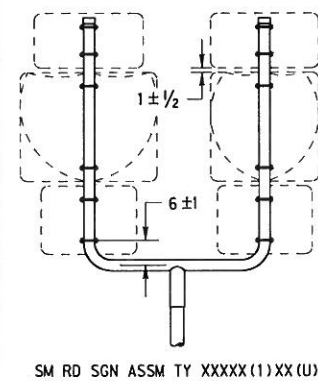
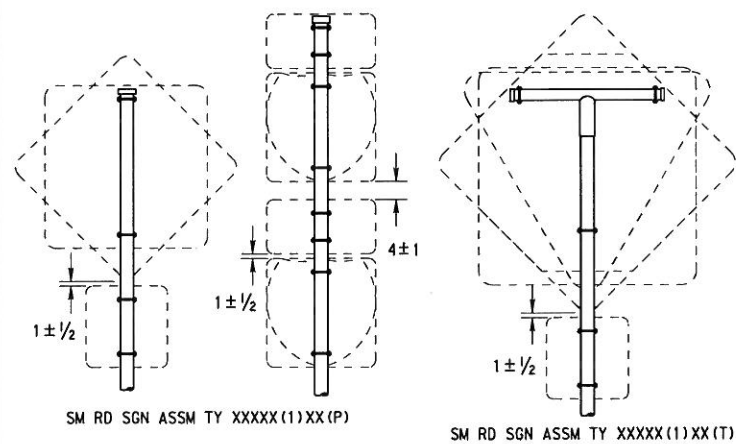
SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

SMD(SLIP-1)-08

© TxDOT July 2002	REV	TXDOT	CKT	TXDOT	DATE	TXDOT	CKT	TXDOT
9-08	REV	TXDOT	CKT	TXDOT	DATE	TXDOT	CKT	TXDOT
9-08	REV	TXDOT	CKT	TXDOT	DATE	TXDOT	CKT	TXDOT
9-08	REV	TXDOT	CKT	TXDOT	DATE	TXDOT	CKT	TXDOT

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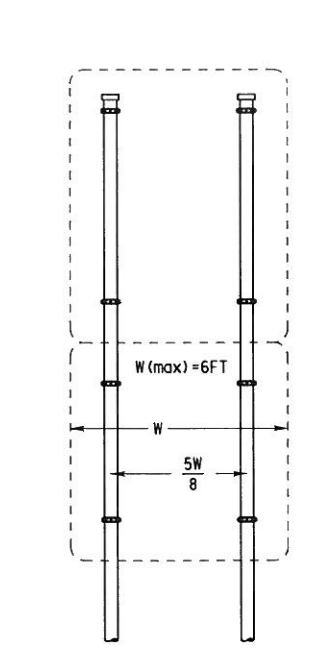
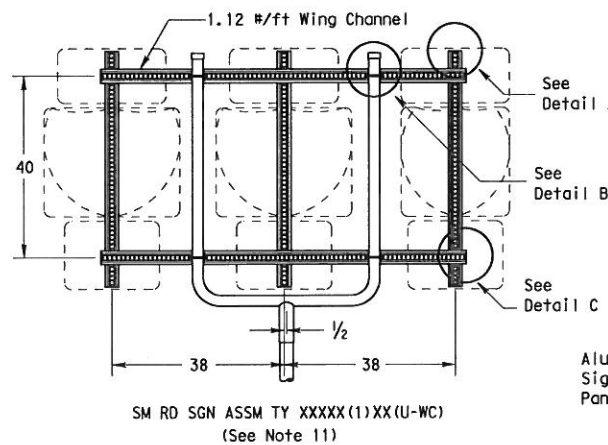
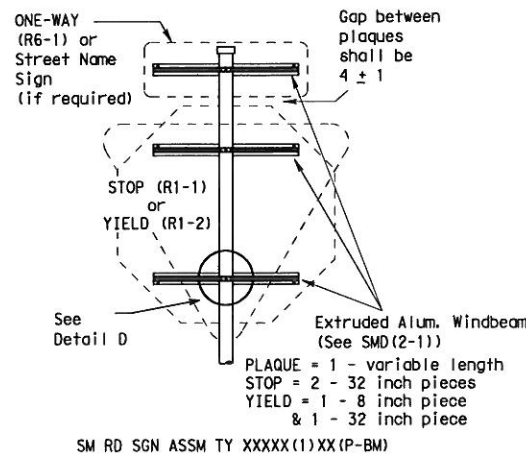
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SM RD SGN ASSM TY S80(1)XX(U-2EXT)

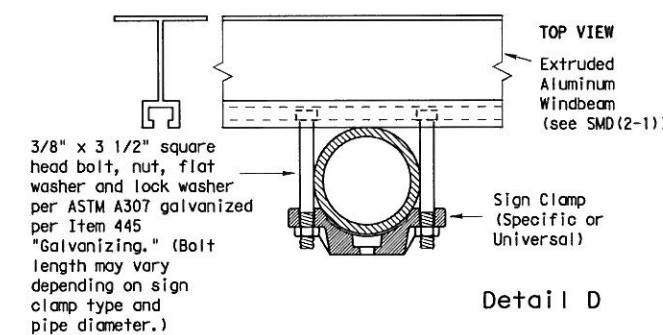
SM RD SGN ASSM TY XXXXX(1)XX(T)
(* - See Note 12)

All dimensions are in english
unless detailed otherwise.

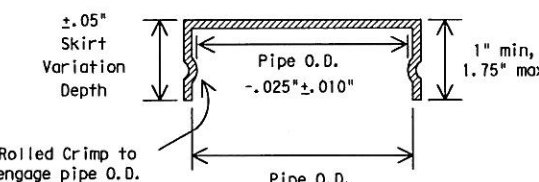


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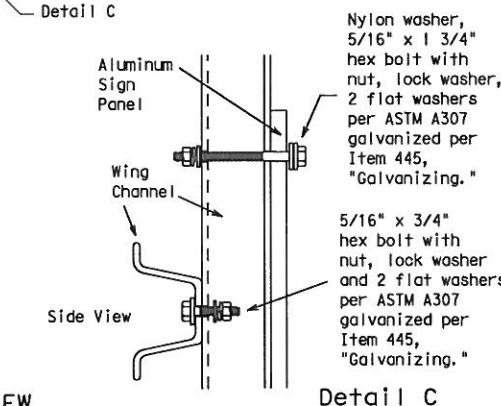
SIDE VIEW



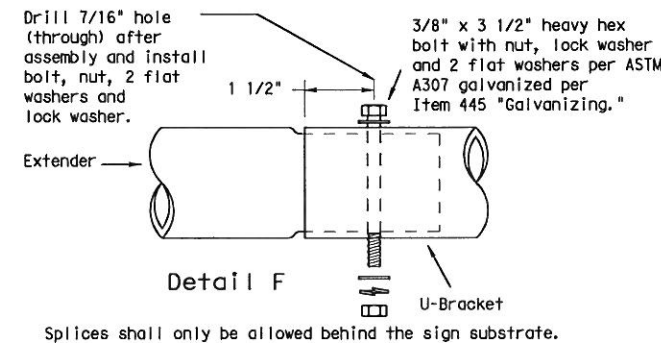
FRICION CAP DETAIL



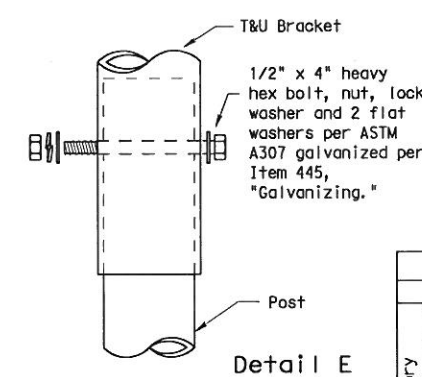
Rolled Crimp to engage pipe O.D.



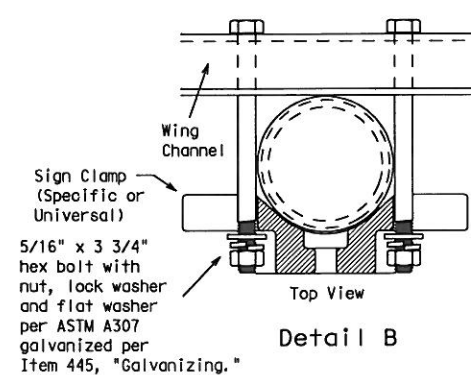
Detail C



Detail F



Detail E



Detail B

GENERAL NOTES:

1. SIGN SUPPORT # OF POSTS MAX. SIGN AREA
10 BWG 1 16 SF
10 BWG 2 32 SF
Sch 80 1 32 SF
Sch 80 2 64 SF
2. The Engineer may require that a Schedule 80 post be used in place of a 10 BWG where a sign height is abnormally high due to a fill slope.
3. Sign supports shall not be spliced except where shown. Sign support posts shall not be spliced.
4. Aluminum sign blanks shall conform to Departmental Material Specifications DMS-7110 and shall have the following minimum thicknesses: 0.080 for signs less than 7.5 sq. ft., 0.100 for signs 7.5 to 15 sq. ft., and 0.125 for signs greater than 15 sq. ft.
5. Signs that require specific supports due to reasons in addition to windloading are indicated on the "REQUIRED SUPPORT" table on this sheet.
6. For horizontal rectangular signs fabricated from flat aluminum, T-brackets are used for signs 24 inches or less in height. U-brackets are used for signs of greater height.
7. When two triangular slipbase supports are used to support a single sign, they shall not be "rigidly" connected to each other except through the sign panel. This will allow each support to act independently when impacted by an errant vehicle.
8. Wing channel shall meet ASTM A 1011 SS Gr 50 and be galvanized per ASTM A 123.
9. Excess pipe, wing channel, or windbeam shall be cut off so that it does not extend beyond the sign panel (i.e., excess support shall not be visible when the sign is viewed from the front.) Repair galvanized coating at cut support ends per Item 445, "Galvanizing."
10. Additional route markers may be added vertically, provided the total sign area does not exceed the maximum allowable amount per Note 1.
11. Additional sign clamp required on the "T-bracket" post for 24 inch height signs. Place the clamp 3 inches above bottom of sign when possible.
12. Post open ends shall be fitted with Friction Caps.
13. Sign blanks shall be the sizes and shapes shown on the plans.

REQUIRED SUPPORT		
SIGN DESCRIPTION		SUPPORT
Regulatory	48-inch STOP sign (R1-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	60-inch YIELD sign (R1-2)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	48x16-inch ONE-WAY sign (R6-1)	TY 10BWG(1)XX(T) TY 10BWG(1)XX(P-BM)
	36x48, 48x36, and 48x48-inch signs	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
Warning	48x48-inch signs (diamond or square)	TY 10BWG(1)XX(T)
	48x60-inch signs	TY S80(1)XX(T)
	48-inch Advance School X-ing sign (S1-1)	TY 10BWG(1)XX(T)
	48-inch School X-ing sign (S2-1)	TY 10BWG(1)XX(T)
	Large Arrow sign (W1-6 & W1-7)	TY 10BWG(1)XX(T)

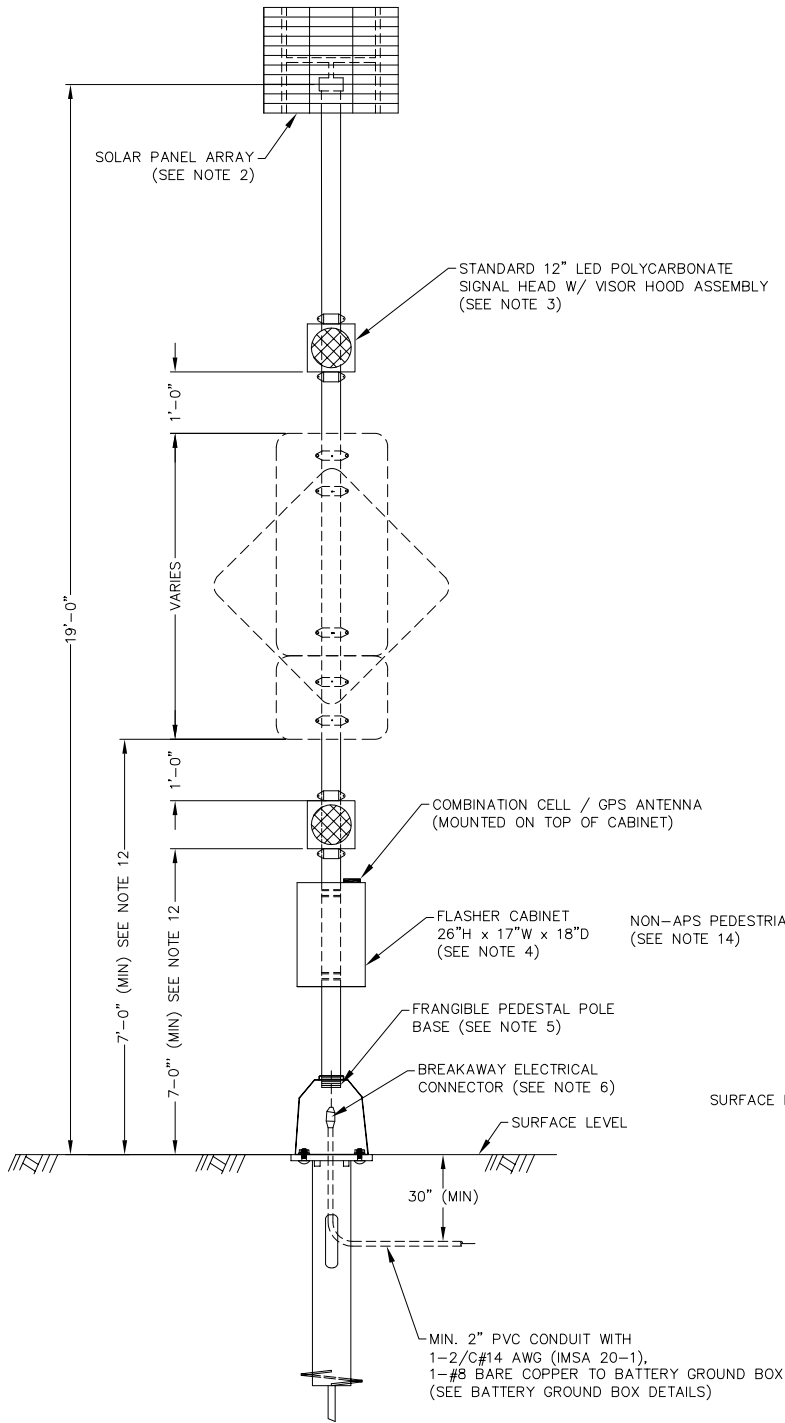
Texas Department of Transportation
Traffic Operations Division

SIGN MOUNTING DETAILS SMALL ROADSIDE SIGNS TRIANGULAR SLIPBASE SYSTEM

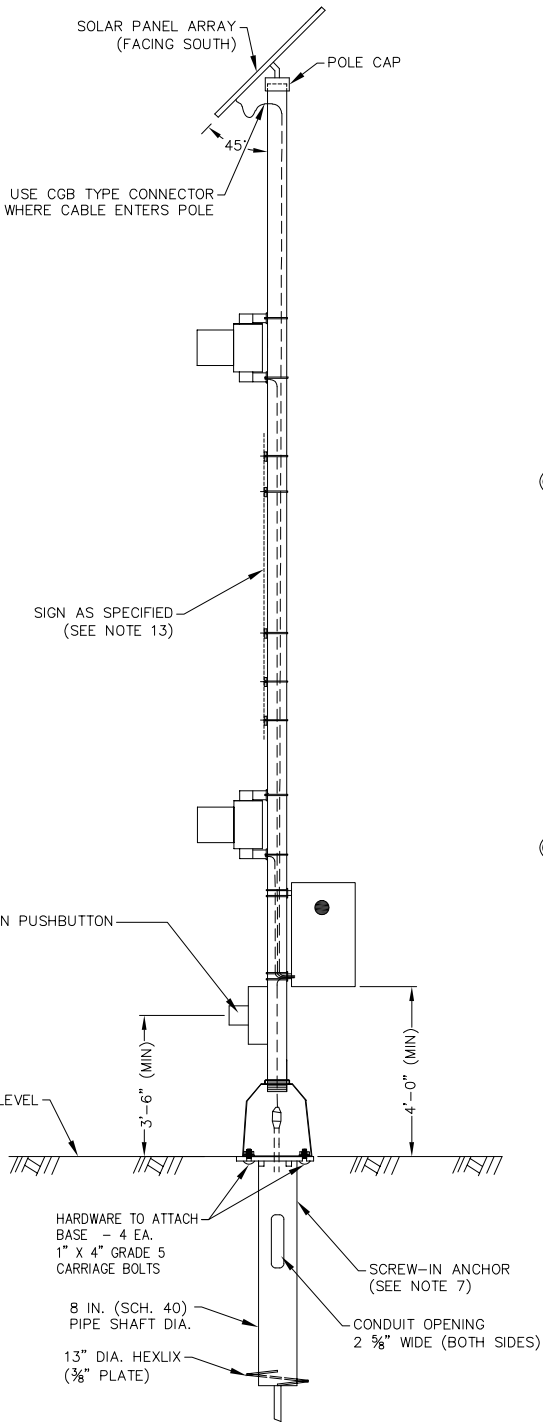
SMD (SLIP-2) -08

© TxDOT July 2002	Revisions	Rev. TxDOT	Rev. TxDOT	Rev. TxDOT	Rev. TxDOT
9-08	Revisions	Rev. TxDOT	Rev. TxDOT	Rev. TxDOT	Rev. TxDOT
		Rev. TxDOT	Rev. TxDOT	Rev. TxDOT	Rev. TxDOT
		Rev. TxDOT	Rev. TxDOT	Rev. TxDOT	Rev. TxDOT

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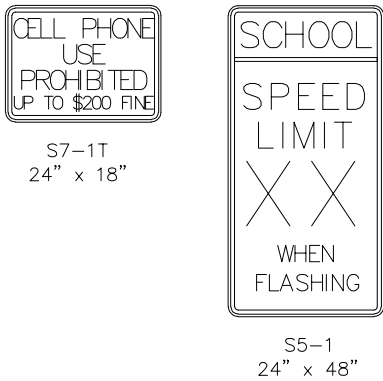


FRONT VIEW OF SOLAR ASSEMBLY FLASHER

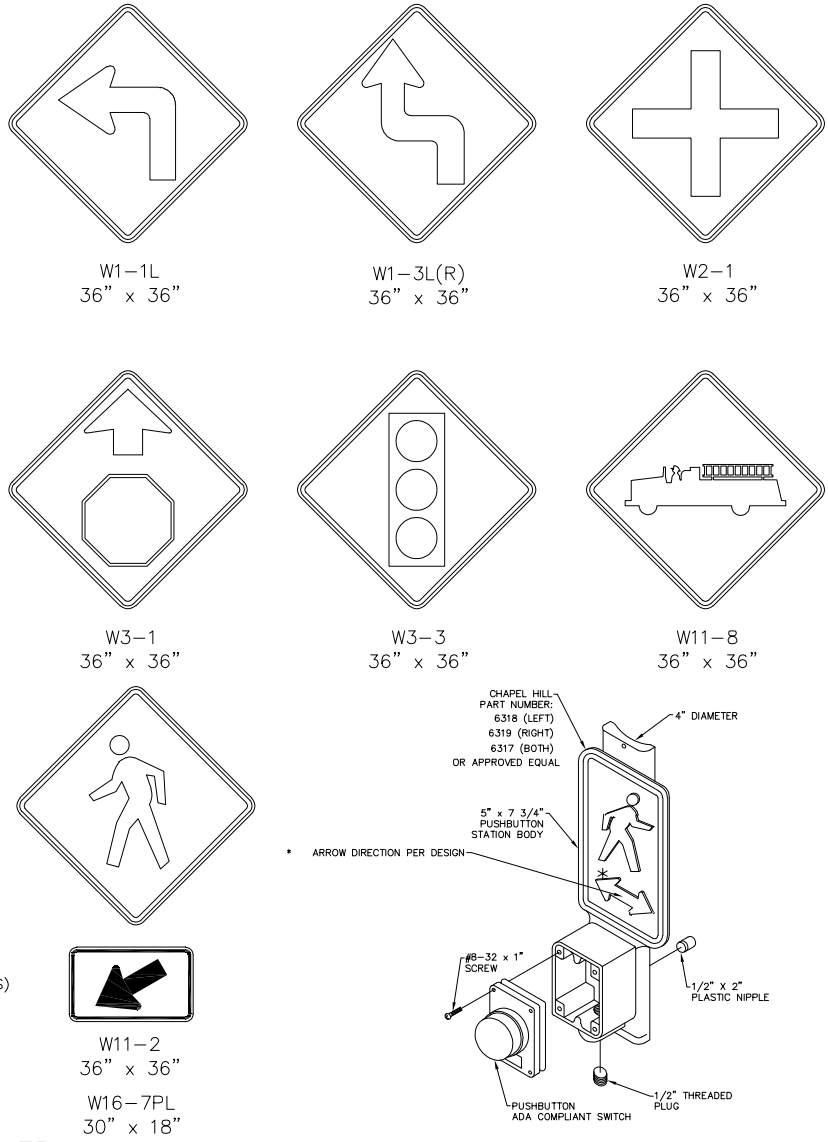


SIDE VIEW OF SOLAR ASSEMBLY FLASHER

TYPICAL SCHOOL ZONE SIGNS



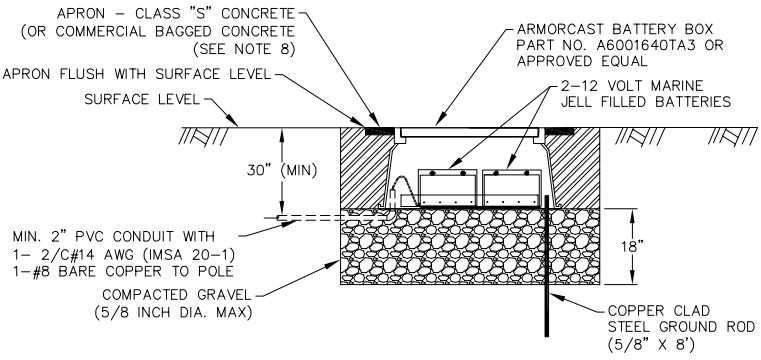
TYPICAL WARNING SIGNS



NON-APS PEDESTRIAN PUSHBUTTON (SEE NOTE 14)

GENERAL NOTES:

1. DETAILS SHOW A TYPICAL SOLAR FLASHER ASSEMBLY WITH REQUISITE SIGN, TWO FLASHING BEACON HEADS, OTHER ARRANGEMENTS ARE POSSIBLE. WHEN ONLY ONE FLASHING BEACON IS REQUIRED, INSTALL THE UPPER FLASHING BEACON.
2. SOLAR PANEL ARRAY SHALL HAVE A MINIMUM POWER OUTPUT OF 53 WATTS
3. SINGULAR MANUFACTURER SHALL SUPPLY THE 12" LED POLYCARBONATE, EQUIPPED WITH TUNNEL VISOR, IN ACCORDANCE WITH SPECIFICATION ITEM 689. SIGNALS SHALL BE AFFIXED TO POLE WITH STAINLESS STEEL SIGN CLAMP MATERIAL OR APPROVED EQUAL.
4. CABINET SHALL BE MANUFACTURED FROM .125" ALUMINUM, WELDED CONSTRUCTION, RAIN DRIP LIP, SCREEN AIR INTAKE, 1-2 FIXED SHELF, GASKET RETAINER, 1/2" x 2" CLOSED CELL NEOPRENE GASKET, 3 POINT LATCH ASSEMBLY FOR PADLOCK, STAINLESS STEEL DOOR HINGE, SEALED JOINTS, DOOR POSITION ROD, #2 CABINET LOCK, INSULATED (BATTERY COMPARTMENT CABINET SHALL BE EQUIPPED WITH A NEMA FLASHER, SURGE AND LIGHTING PROTECTION, THE LIGHTING PROTECTION SHALL BE A STRIKE ZORB OR APPROVE EQUAL. TERMINAL CONNECTION FACILITY. ALL COMPONENTS SHALL BE AFFIXED TO A SINGLE BACK PANEL ASSEMBLY. CABINET SHALL USE (2) PELCO BRACKETS.
5. PER MANUFACTURER'S RECOMMENDATION, ENGAGE ALL TREADS ON THE THE PEDESTAL BASE AND PIPE UNLESS THE PIPE IS FULLY SEATED INTO THE BASE. USE A POLE AND BASE COLLAR ASSEMBLY TO ADD STRENGTH AND PREVENT LOOSING.
6. NON-FUSED WATERTIGHT BREAKAWAY ELECTRICAL CONNECTORS FOR BREAKAWAY POLES. (BUSSMANN HET, LITTELFUSE LET, FERRAZ-SHAWMUT FEBN OR APPROVED EQUAL)
7. INSTALL ONE OF THE FOLLOWING SCREW-IN ANCHOR AS SHOWN IN DRAWINGS: A.B. CHANCE COMPANY, MODEL C1124NG4VP; COMPONENT PRODUCTS, INC., MODEL CPI-SLSF-5TX; PELCO PRODUCTS, INC., PB-5359; OR APPROVED EQUAL.
8. CONCRETE APRON SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE ITEM "BATTERY GROUND BOX".
9. ALL BANDING MATERIAL (STRAPPING AND BUCKLES) SHALL BE STAINLESS STEEL.
10. ALL SIGNAL INDICATIONS SHALL BE WIRED WITH COPPER INSULATED, JACKETED CABLE IN ACCORDANCE WITH SPECIFICATION ITEM 679. THE NUMBER AND SIZE OF CONDUCTORS SHALL BE A MINIMUM 14 AWG.
11. BOX COVERS SHALL BE LEGIBLY IMPRINTED WITH THE WORDS "TRAFFIC SIGNAL - HCED" IN MINIMUM 1 INCH LETTERS.
12. PROVIDE CLEARANCES AS SHOWN ABOVE THE SIDEWALK OR PAVEMENT GRADE AT THE EDGE OF THE ROAD. WHEN A BOTTOM BEACON IS NOT USED, MOUNT THE SIGN AT LEAST 7 FT. ABOVE THE SIDEWALK OF PAVEMENT GRADE AT THE EDGE OF THE ROAD.
13. ALL SIGNS SHALL CONFORM WITH THE LATEST VERSION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) AND STANDARD HIGHWAY SIGN DESIGN FOR TEXAS (SHSD). ALL SIGNS DEPICTED ON STANDARD DETAIL ARE CONSIDERED TYPICAL. ALL OTHER SIGNS AND SIZES MAY BE UTILIZED IF RECOMMENDED BY ENGINEER.
14. IF NON-APS PEDESTRIAN PUSHBUTTON ARE TO BE INSTALLED, IT SHALL BE USER-ACTUATED.



BATTERY GROUND BOX DETAILS
OPTIONAL

NO.	REVISIONS	DATE	NAME
△			
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HARRIS COUNTY
ENGINEERING DEPARTMENT



PROJECT TITLE:		TRAFFIC STANDARD
SHEET DESCRIPTION: SOLAR POWER FLASHER ASSEMBLY DETAILS		SPFA
DRAWN BY: BSH		DATE: 0/10/2023
CK'D BY: BSH	SCALE: NONE	SHEET NO: /



Pre Bid Meeting Sign-In Sheet

Project Name: **#HPS2026 HSA Bridgeland Phase II – Ground Up Project**

Date: **7/1/2026** Time: **2:00 PM**

	Name	Organization	Type (GC, Architect,Sub)	Email
1.	Mehmed Milanovic	HPS	Owner	mmilanovic@harmonytx.org
2.	Jack Ellisor	Ellisor Constructors	GC	jack@ellisorinc.com
3.	Korbin Mullinax	Stewart Builders LLC	GC	Bids@stewartbuilders.com
4.	Jorge Mendez	Transnet Communications	Sub	jmendez@transnet-co.com
5.	Marshall McMurrey	CMOST	GC	mmcmurrey@cmosetx.com
6.	Dave Ritz	SEDALCO	GC	bids@sedalco.com
7.	Joshua Haworth	ICI Construction Inc	GC	bids@iciconstructioninc.com
8.	Laura Reddehase	SEDALCO	GC	bids@sedalco.com
9.	Devon Fuqua	SEDALCO	GC	bids@sedalco.com
10.	Welby Lehman	LDDBlueline	Architect	welby.lehman@lddbline.com
11.	Lindsay Lara	SEDALCO	GC	bids@sedalco.com
12.	Marcos Mendoza	C.A. Walker Construction	GC	bids@cawalker.net
13.	Miguel Flores	Transnet Communications	Sub	mflores@transnet-co.com
14.	Jonathan Lundell	Landry's Landscape	Sub	jlundell@landrylandscape.com
15.	Nestor Gonzalez	C.A. Walker Consturction	GC	bids@cawalker.net



16.	Robert Snoddy	mission restaurant supply	sub 114000	roberts@missionrs.com
17.	Alexis Delgado	DivisionOne Construction	GC	bid@d1construction.com
18.	Lee Sumlin	LDDDB	Arch. PM	leesumlin@lddbline.com
19.	Jay Caldwell	HPS construction field manager	owner	pcaldwell@harmonytx.org
20.	Brandon Watson	DivisionOne Construction	GC	bid@d1construction.com
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**RESOLUTION OF THE BOARD OF DIRECTORS OF
HARMONY PUBLIC SCHOOLS**

The Board of Directors of Harmony Public Schools ("HPS") hereby makes the following findings in connection with HPS facilities projects:

1. Texas Government Code Chapter 2258 requires school districts, including charter schools such as HPS, to adopt Prevailing Wage Rates setting the minimum hourly wages paid to be paid to construction workers engaged in public works projects in HPS; and
2. PBK Architects, Inc., on behalf of public school districts in the Texas Gulf Coast area, has conducted a survey of Prevailing Wage Rates for construction trades in accordance with the requirements of Texas Government Code Chapter 2258. The results of such survey are attached as Exhibit "A."

BE IT, THEREFORE, RESOLVED that Harmony Public Schools hereby adopts the Prevailing Wages reflected in Exhibit A for use on all HPS facilities projects located in the Gulf Coast Area.

BE IT, THEREFORE, FURTHER RESOLVED that Harmony Public Schools hereby adopts the U.S. Department of Labor building construction wage determinations applicable in the county in which the work is performed for use on all HPS facilities projects not located in the Gulf Coast Area.

Passed the 22nd day of February, 2016.



President, Board of Directors
Harmony Public Schools

Attest:



Secretary, Board of Directors
Harmony Public Schools

Prevailing Wage Rate Determination Information

The following information is from Chapter 2258 Texas Government Code:

2258.021. Right to be Paid Prevailing Wage Rates.

- (a) A worker employed on a public work by or on behalf of the state or a political subdivision of the state shall be paid:
 - (1) not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the work is performed; and
 - (2) not less than the general prevailing rate of per diem wages for legal holiday and overtime work.
- (b) Subsection (a) does not apply to maintenance work.
- (c) A worker is employed on a public work for the purposes of this section if the worker is employed by a contractor or subcontractor in the execution of a contract for the public work with the state, a political subdivision of the state, or any officer or public body of the state or a political subdivision of the state.

2258.023. Prevailing Wage Rates to be Paid by Contractor and Subcontractor; Penalty.

- (a) The contractor who is awarded a contract by a public body or a subcontractor of the contractor shall pay not less than the rates determined under Section 2258.022 to a worker employed by it in the execution of the contract.
- (b) A contractor or subcontractor who violates this section shall pay to the state or a political subdivision of the state on whose behalf the contract is made, \$60 for each worker employed for each calendar day or part of the day that the worker is paid less than the wage rates stipulated in the contract. A public body awarding a contract shall specify this penalty in the contract.
- (c) A contractor or subcontractor does not violate this section if a public body awarding a contract does not determine the prevailing wage rates and specify the rates in the contract as provided by Section 2258.022.
- (d) The public body shall use any money collected under this section to offset the costs incurred in the administration of this chapter.
- (e) A municipality is entitled to collect a penalty under this section only if the municipality has a population of more than 10,000.

2258.051. Duty of Public Body to Hear Complaints and Withhold Payment.

A public body awarding a contract, and an agent or officer of the public body, shall:

- (1) take cognizance of complaints of all violations of this chapter committed in the execution of the contract; and
- (2) withhold money forfeited or required to be withheld under this chapter from the payments to the contractor under the contract, except that the public body may not withhold money from other than the final payment without a determination by the public body that there is good cause to believe that the contractor has violated this chapter.

Prevailing Wage Rates - School Construction Trades
Effective – March 2, 2013 through March 1, 2016
Texas Gulf Coast Area

CLASSIFICATION	HOURLY RATE
Asbestos Worker	\$13.00
Bricklayers; Masons	\$17.10
Carpenters/Caseworker	\$15.00
Carpet Layers/Floor Installers	\$13.68
Concrete Finishers	\$14.58
Data Comm / Telecom Installer	\$18.13
Drywall Installers; Ceiling Installers	\$16.73
Electricians	\$17.93
Elevator Mechanics	\$29.89
Fire Proofing Installer	\$14.85
Glaziers	\$16.43
Heavy Equipment Operators	\$15.10
Insulators	\$12.00
Ironworkers	\$19.13
Laborers	\$12.67
Lather / Plasterer	\$17.10
Light Equipment Operators	\$14.50
Metal Building Assemblers	\$14.13
Millwrights	\$21.25
Painters/Wall Covering Installers	\$13.60
Pipefitters	\$22.53
Plumbers	\$21.88
Roofers	\$14.79
Sheet Metal Workers	\$16.47
Sprinkler Fitters	\$20.13
Steel Erector	\$17.38
Terrazzo Workers	\$18.67
Tile Setters	\$18.54
Waterproofers/Caulkers	\$15.10

This document was developed by PBK Architects, Inc. in strict
accordance with the Texas Government Code Chapter 2258.

Prevailing Wage Rates Worker Classification Definition Sheet

Asbestos Worker	Worker who removes & disposes of asbestos materials.
Bricklayers/Masons	Craftsman who works with masonry products, stone, brick, block or any material substituting for those materials & accessories.
Carpenter / Caseworker	Worker who builds wood structures or structures of any material which has replaced wood. Includes rough & finish carpentry, hardware and trim.
Carpet Layer / Floor Installer	Worker who installs carpets and/or floor coverings-vinyl tile.
Concrete Finisher	Worker who floats, trowels and finishes concrete.
Data Comm / Telecom Installer	Worker who installs data/telephone & television cable and associated equipment and accessories.
Drywall / Ceiling Installer	Worker who installs metal framed walls & ceilings, drywall coverings, ceiling grids & ceilings.
Electrician	Skilled craftsman who installs or repairs electrical wiring & devices. Includes fire alarm systems & HVAC electrical controls.
Elevator Mechanic	Craftsman skilled in the installation & maintenance of elevators.
Fire Proofing Installer	Worker who sprays or applies fire proofing materials.
Glazier	Worker who installs glass, glazing and glass framing.
Heavy Equipment Operator	Includes, but not limited to, all Cat tractors, all derrick-powered, all power operated cranes, back-hoe, back-filler, power operated shovel, winch truck, all trenching machines.
Insulator	Worker who applies, sprays or installs insulation.
Iron Worker	Skilled craftsman who erects structural steel framing & installs structural concrete Rebar.
Laborer / Helper	Worker qualified for only unskilled or semi-skilled work. Lifting, carrying materials & tools, hauling, digging, clean-up.
Lather / Plasterer	Worker who installs metal framing & lath. Worker who applies plaster to lathing and installs associated accessories.
Light Equipment Operator	Includes, but not limited to, air compressors, truck crane driver, flex plane, building elevator, form grader, concrete mixer (less than 14cf), conveyer.
Metal Building Assembler	Worker who assembles pre-made metal buildings.
Millwright	Mechanic specializing in the installation of heavy machinery, conveyance, wrenches, dock levelers, hydraulic lifts & align pumps.
Painter / Wall Covering Installer	Worker who prepares wall surfaces & applies paint and/or wall coverings, tape and bedding.
Pipefitter	Trained worker who installs piping systems, chilled water piping & hot water (boiler) piping, pneumatic tubing controls, chillers, boilers & associated mechanical equipment.
Plumber	Skilled craftsman who installs domestic hot & cold water piping, waste piping, storm system piping, water closets, sinks, urinals, and related work.
Roofer	Worker who installs roofing materials, Bitumen (asphalt & coal tar) felts, flashings, all types roofing membranes & associated products.
Sheet Metal Worker	Worker who installs sheet metal products. Roof metal, flashings & curbs, ductwork, mechanical equipment and associated metals.
Sprinkler Fitter	Worker who installs fire sprinkler systems & fire protection equipment.
Steel Erector	Worker who erects and dismantles structural steel frames of buildings and other structures
Terrazzo Worker	Craftsman who places & finishes Terrazzo.
Tile Setter	Worker who prepares wall and/or floor surfaces & applies ceramic tiles to these surfaces.
Waterproofor / Caulker	Worker who applies water proofing material to buildings. Products include sealant, caulk, sheet membrane, liquid membranes, sprayed, rolled or brushed.

END OF DOCUMENT

PREVAILING WAGE RATES
CC - 3 of 3

PBK Architects