



Project: **OAHS Multi-Use Room Building**
Project No. 2-2022-02-22-01
 Orcutt Academy High School
 610 Pinal Ave, Orcutt, CA 93455

Owner: Orcutt Union School District
 500 Dyer Street
 Orcutt, CA 93455

Architect: 19six Architects
 560 Higuera Street, Suite C
 San Luis Obispo, CA 93401

Construction Manager: TELACU Construction Management
 604 N. Eckhoff Street
 Orange, CA 92868

BID ADDENDUM 05

Revision: **May 9, 2022**

Note: The following revisions and clarifications to the Bid Documents (plans and specifications) shall become a part of the Contract Documents upon award of Bid. All Bidders are required to incorporate all necessary changes, additions, or deductions into their proposals.

In case of conflict between Bid Documents and this Addendum, this Addendum shall govern. Bidder shall acknowledge receipt of this Addendum on the Bid Form as noted in the Instruction to Bidders, failure to do so may subject Bidder to disqualification.

Volume I – Project Manual, Bid Procedures and Contract

1. **Invitation to Bid – Revised Bid Date & Time:**

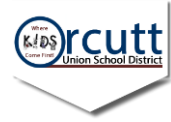
Sealed Bids are now to be received on or before **2:00 p.m., May 26th, 2022**, at the front desk counter at the District Office, located at 500 Dyer Street, Orcutt, CA 93455, in the basket labeled “Bids” at or after which time the bids will be opened and publicly read aloud. Any claim of error by a bidder in its bid must be made in compliance with section 5100 et seq. of the Public Contract Code. Any bid that is submitted after this time shall be non-responsive and returned to the bidder.

Volume II – Technical Specifications and Reports

1. Refer to **Addendum 03 by 19-6 Architects** which is attached hereto

Volume III –Bid Set Drawings

1. Refer to **Addendum 03 by 19-6 Architects** which is attached hereto



Pre-Bid RFIs:

1. See attached responses to Pre-Bid RFIs #6-12.
2. Additional Pre-Bid RFI responses will be provided on a forthcoming addendum.

Prepared by,

TELACU Construction Management

Attachments:

1. Addendum 03 by 19-6 Architects - Orcutt Academy MUR dated May 6, 2022
2. Pre-Bid RFI Responses #6-#12 dated May 6, 2022

ADDENDUM NO. 03

Project: Orcutt Union School District
 Orcutt Academy High School
Multi-Use Room Building

19six No. 20179.01
 DSA App. No.: 03-121912 File No.: N/A
 Bid No.: ###

Date: May 6, 2022

To all bidders submitting proposals for the above captioned project. This Addendum is hereby included in the Contract Documents to the same extent as though it were originally included therein. The following items modify, add to, delete from, or explain the drawings and/or specifications. The contents of this Addendum shall take precedence over the original specifications and plans.

SPECIFICATIONS

- Item #1:** **Masonry.** Revise page 6 of 04 20 00 Unit Masonry Assemblies to show specified color. See revised page 6 of specification section 04 20 00.
- Item #2:** **Composite Metal Wall Panel System** Revise list of manufacturers and fabricators for composite metal wall panel system. See revised page 6 of specification section 07 42 43.
- Item #3:** **Gymnasium Flooring** Revise list of manufacturers for gymnasium flooring. See revised page 3 of specification section 09 64 20.
- Item #4:** **Stage Curtains.** Revise page 4 of specification section 11 06 30 to identify curtain operation. See revised page 4 of specification section 11 06 30.
- Item #5:** **Gymnasium Equipment.** Revise specified model of basketball backboard. See revised specification section 11 49 10.

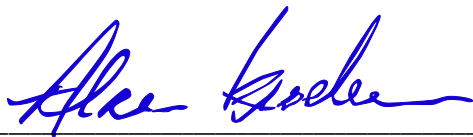
DRAWINGS

- Item #6:** **Painting.** Revise note for acoustical steel deck in Ceiling Legend on sheet A-211 and Remarks on sheet A-251 regarding finish. See revised sheet A-211 and A-251.
- Item #7:** **Board Insulation.** Revise details 8/A-701, 10/A-701, 15/A-701 and details on sheet A-702 to specify board insulation. See revised sheets A-701 and A-702.
- Item #8:** **Depressed Slab.** Revise detail 8/A-921 for dimensions regarding depressed slab. See revised sheet A-921.

- Item #9:** **Fiber Optic Cabling.** Install fiber optic cabling from District's IT Building. Install conduits between Admin Building and MUR. See revised sheets E-101, E-501 and added (new) sheet E-103.
- Item #10:** **Fire Sprinkler Check Valve.** Install monitoring station at double detector check valve. See revised sheets E-102, E-231, E-401, E-402 and E-403.
- Item #11:** **Electrical Power.** Revise electrical power single line diagram and feeder schedule to provide additional conduits. Revise typical ground/bond detail. See revised sheet E-002.
- Item #12:** **Fire Rated Plywood Backboard.** Install 1-hour fire-rated plywood backboard in the Electrical Room (Rm 108). See revised sheet E-221.
- Item #13:** **Existing Fire Alarm Control Panel and Pull Station.** Add location of existing fire alarm control panel and fire alarm manual pull station in Admin Bldg (Bldg 10). See revised sheet E-102.

ATTACHMENTS:

04 20 00 UNIT MASONRY ASSEMBLIES
 07 42 43 COMPOSITE WALL PANELS
 09 64 20 GYMANSIUM FLOORING
 11 06 30 STAGE CURTAINS
 11 49 10 GYMNASIUM EQUIPMENT
 A-211 REFLECTED CEILING PLAN AT GYM
 A-251 FINISH PLAN
 A-701 EXTERIOR DETAILS
 A-702 EXTERIOR DETAILS
 A-921 INTERIOR DETAILS
 E-002 SINGLE LINE DIAGRAM
 E-101 SITE ELECTRICAL PLAN
 E-102 SITE FIRE ALARM PLAN
 E-103 SITE ELECTRICAL PLAN
 E-221 COMMUNICATIONS FLOOR PLAN
 E-231 FIRE ALARM FLOOR PLAN
 E-401 FIRE ALARM RISER DIAGRAM
 E-402 FIRE ALARM CALCULATIONS
 E-403 FIRE ALARM DETAILS
 E-501 COMMUNICATIONS RISER DIAGRAM



Alan Kroeker

C-22474

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SECTION 04 20 00 - UNIT MASONRY ASSEMBLIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes unit masonry assemblies consisting of the following:
 - 1. Concrete masonry units (CMUs).
 - 2. Decorative concrete masonry units.
 - 3. Mortar and grout.
 - 4. Reinforcing steel.
 - 5. Ties and anchors.
 - 6. Miscellaneous masonry accessories.
- B. Related Sections include the following:
 - 1. Division 4 Section "Unit Masonry Finishes" for protection and finishing of Unit Masonry Assemblies.
 - 2. Division 7 Section "Sheet Metal Flashing and Trim" for exposed sheet metal flashing.
 - 3. Division 7 Section "Joint Sealants" for sealing control and expansion joints in unit masonry.
- C. Products installed, but not furnished, under this Section include the following:
 - 1. Manufactured reglets in masonry joints for metal flashing, furnished under Division 7 Section "Sheet Metal Flashing and Trim."

1.3 DEFINITIONS

- A. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

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1.4 PERFORMANCE REQUIREMENTS

- A. Provide structural unit masonry that develops indicated net-area compressive strengths (f'_m) at 28 days.
- B. Determine net-area compressive strength (f'_m) of masonry by testing masonry prisms according to ASTM C 1314, before delivering masonry to the jobsite.

1.5 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For the following:
 - 1. Reinforcing Steel: Detail bending and placement of unit masonry reinforcing bars. Comply with ACI 315, "Details and Detailing of Concrete Reinforcement." Show elevations of reinforced walls. Provide drawings on 24" x 36" sheets.
 - 2. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection: For the following:
 - 1. Decorative concrete masonry units, in the form of small-scale units.
 - 2. Colored mortar.
- D. Samples for Verification: For each type and color of the following:
 - 1. Exposed Decorative concrete masonry units.
 - 2. Pigmented mortar. Make Samples using same sand and mortar ingredients to be used on Project. Label Samples to indicate types and amounts of pigments used.
- E. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers, batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.
 - 1. Submittal is for information only. Neither receipt of list nor approval of mockup constitutes approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.

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- F. Material Certificates: Include statements of material properties indicating compliance with requirements including compliance with standards and type designations within standards. Provide for each type and size of the following:
 - 1. Masonry units.
 - a. Include material test reports substantiating compliance with requirements.
 - b. For masonry units used in structural masonry, include data and calculations establishing average net-area compressive strength of units.
 - 2. Cementitious materials. Include brand, type, and name of manufacturer.
 - 3. Pre-blended, dry mortar mixes. Include description of type and proportions of ingredients.
 - 4. Grout mixes. Include description of type and proportions of ingredients.
 - 5. Reinforcing bars.
 - 6. Anchors, ties, and metal accessories.
- G. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
 - 1. Include test reports, per 2019 CBC Chapter 17A and DSA IR 17-4, 17-5 and 17-6, for mortar mixes required to comply with property specification.
 - 2. Include test reports, per 2019 CBC Chapter 17A and DSA IR 17-4, 17-5 and 17-6, for grout mixes required to comply with compressive strength requirement.

1.6 QUALITY ASSURANCE

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, through one source from a single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from a single manufacturer for each cementitious component and from one source or producer for each aggregate.
- C. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements in Division 1 Section "Quality Requirements" for mockups.
 - 1. Build sample panels for each type of exposed unit masonry construction in sizes approximately 48 inches long by 48 inches high.
 - 2. Where masonry is to match existing, erect panels adjacent and parallel to existing surface.

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3. Clean exposed faces of panels with masonry cleaner indicated.
 4. Protect approved sample panels from the elements with weather-resistant membrane.
 5. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
 - a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless such deviations are specifically approved by Architect in writing.
- D. Comply with applicable provisions of the following codes, specifications, and documents:
1. California Building Code (2019 CBC) as adopted by the Division of the State Architect, Structural Safety Section. Specifically, Chapter 17A as it relates to this project.
 2. DSA Interpretation of Regulations (IR) 17-1 through 17-7.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for lifting and emptying into dispensing silo. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in a metal dispensing silo with weatherproof cover.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.8 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.

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1. Extend cover a minimum of 24 inches down both sides and hold cover securely in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least 3 days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 2. Protect sills, ledges, and projections from mortar droppings.
 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1

PART 2 - PRODUCTS

2.1 MASONRY UNITS, GENERAL

- A. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to exceed tolerances and to contain chips, cracks, or other defects exceeding limits stated in the standard. Do not use units where such defects, including dimensions that vary from specified dimensions by more than stated tolerances, will be exposed in the completed Work or will impair the quality of completed masonry.

2.2 CONCRETE MASONRY UNITS (CMUs)

- A. Shapes: Provide shapes indicated and as follows:
 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
 2. Provide square-edged units for outside corners, unless otherwise indicated.
 3. Provide single open-end units.
- B. Concrete Masonry Units: ASTM C 90

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1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 13 f'm =2000 psi.
2. Weight Classification: Medium weight
3. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
4. Exposed Faces: Match Architect's samples and per Finish Plan (Air Vol Block Inc. Color #MW04B407A, split-faced to exterior, and precision faced at all interior walls).

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2.3 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type II. Provide natural color or white cement as required to produce mortar color indicated.
- B. Hydrated Lime: ASTM C 207 Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement complying with ASTM C 150, Type I or Type III, and hydrated lime complying with ASTM C 207, Type S.
- D. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with a record of satisfactory performance in masonry mortar.
 1. Products:
 - a. Bayer Corporation, Industrial Chemicals Div.; Bayferrox Iron Oxide Pigments.
 - b. Davis Colors; True Tone Mortar Colors.
 - c. Solomon Grind-Chem Services, Inc.; SGS Mortar Colors.
- E. Aggregate for Mortar: ASTM C 144.
 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
 2. For joints less than 1/4 inch thick, use aggregate graded with 100 percent passing the No. 16 sieve.
 3. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.
- F. Aggregate for Grout: ASTM C 404.
- G. Water: Potable.

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2.4 REINFORCEMENT

- A. Uncoated Steel Reinforcing Bars: ASTM A 615, Grade 60.

2.5 MISCELLANEOUS ANCHORS

- A. Anchor Bolts: Headed steel bolts complying with ASTM A 307, Grade A with ASTM A 563 hex nuts and, where indicated, flat washers; hot-dip galvanized to comply with ASTM A 153, Class C; of dimensions indicated.

2.6 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene or PVC.
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D 2000, Designation M2AA-805 or PVC, complying with ASTM D 2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells with loops for holding reinforcing bars in center of cells. Units are formed from 0.142-inch steel wire, hot-dip galvanized after fabrication. Provide units with either two loops or four loops as needed for number of bars indicated.

2.7 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.8 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures, unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.

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2. Limit cementitious materials in mortar to Portland cement, mortar cement, and lime.
- B. Mortar for Unit Masonry: Comply with ASTM C 270 Property Specification. Provide type S mortar for applications stated unless another type is indicated
 1. Measure materials in calibrated devices, shovels are not acceptable.
 2. Comply with ASTM C 144 for aggregates.
 3. Lime shall be the last material added to the mixer.
- C. Pigmented Mortar: Use colored cement product or select and proportion pigments with other ingredients to produce color required. Do not add pigments to colored cement products.
- D. Grout for Unit Masonry: Comply with ASTM C 476, specify by proportion requirements or property requirements.
 1. Use grout of type indicated.
 2. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143.
 3. Comply with ASTM C 404 for aggregates.

2.9 SOURCE QUALITY CONTROL

- A. Owner will engage a qualified independent testing agency to perform source quality-control testing indicated below:
 1. Payment for these services will be made by Owner.
 2. Retesting of materials failing to comply with specified requirements shall be done at Contractor's expense.
- B. Concrete Masonry Unit Test: For each type of unit furnished, per ASTM C 140.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
 1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of work.
 2. Verify that foundations are within tolerances specified.

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3. Verify that reinforcing dowels are properly placed.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
- B. Build chases and recesses to accommodate items specified in this and other Sections.
- C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match the construction immediately adjacent to opening.
- D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- F. Comply with construction tolerances in ACI 530.1 602 and with the following:
 1. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 feet, 1/4 inch in 20 feet or 1/2 inch maximum.
 2. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 feet or 1/2 inch maximum.
 3. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 feet 1/4 inch in 20 feet or 1/2 inch maximum.
 4. For exposed bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
 5. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch . Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch .

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6. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.
7. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

3.3 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Thoroughly clean surfaces to be in contact with mortar or grout. Lay units with open end against closed end or open end against open end. Do not lay units with closed end against closed end. Units may be sawcut open to comply with the above requirement.
- C. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- D. Lay concealed masonry with all units in a wythe in running bond Bond and interlock each course of each wythe at corners. Do not use units with less than nominal 4-inch horizontal face dimensions at corners or jambs.
- E. Stopping and Resuming Work: Stop work by racking back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- F. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- G. Fill space between steel frames and masonry solidly with mortar, unless otherwise indicated.
- H. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below and rod mortar or grout into core.
- I. Fill cores in hollow concrete masonry units with grout 24 inches under bearing plates, beams, lintels, posts, and similar items, unless otherwise indicated.

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3.4 MORTAR BEDDING AND JOINTING

- A. Lay hollow concrete masonry units as follows:
 - 1. With face shells fully bedded in mortar and with head joints of depth equal to bed joints.
 - 2. With webs fully bedded in mortar in all courses of piers, columns, and pilasters.
 - 3. With webs fully bedded in mortar in grouted masonry, including starting course on footings.
- B. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint), unless otherwise indicated.

3.5 CONTROL AND EXPANSION JOINTS

- A. General: Install control and expansion joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
 - 1. Form control joints in concrete masonry

3.6 REINFORCED UNIT MASONRY INSTALLATION

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
 - 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
 - 2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and other temporary loads that may be placed on them during construction.
- B. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
 - 1. Prior to grouting, clean the grout space to remove mortar projections greater than 1/2-inch, mortar droppings, or other foreign material. Align vertical cells in masonry units to provide a minimum of 3 inches by 3 inches clear grout space.
 - 2. Control grout materials and water content to provide adequate fluidity for placement without segregation of the constituents and mix thoroughly. When

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grout pour heights exceed 2 feet, include a high-lift grouting admixture in the grout mix.

3. Grout all cells solid. Maximum grout pour height is 4 feet (Low Lift Grouting in accordance with CBC 2104A.6.1.1.2) unless the grouting procedures comply with CBC 2104A.6.1.1.3 and the Division of the State Architect's Interpretation of Regulations Document IR 21-2 "High Lift Grouting Method".
4. Consolidate grout by mechanical vibration during placement before loss of plasticity in a manner to fill the grout space.
5. Between grout pours, provide a horizontal construction joint formed by stopping all wythes at the same elevation and with the grout stopping a minimum of 1½ inches below the mortar joint except at the top of the wall. Where bond beams occur, stop the grout pour a minimum of ½-inch below the top of the masonry.
6. Complete the grouting of any section with no interruptions greater than one hour.

3.7 FIELD QUALITY CONTROL

- A. Inspectors: Owner will engage qualified independent inspectors to perform inspections and prepare reports. Allow inspectors access to scaffolding and work areas, as needed to perform inspections.
 1. Place grout only after inspectors have verified compliance of grout spaces and grades, sizes, and locations of reinforcement.
 2. Comply, and facilitate the compliance of the special inspector, with DSA IR 17-4 and IR 17-6.
- B. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform field tests and inspections indicated below and prepare test reports:
 1. Retesting of materials failing to comply with specified requirements shall be done at Contractor's expense.
 2. Comply, and facilitate the compliance of the testing laboratory, with DSA IR 17-4 and IR 17-5.
- C. Testing Frequency: One set of tests for each 5000 sq. ft. of wall area or portion thereof.
- D. Concrete Masonry Unit Test: For each type of unit provided, per ASTM C 140.
- E. Mortar Test (Property Specification): For each mix provided, per UBC Standard 21-16. Test mortar for compressive strength.
- F. Grout Test (Compressive Strength): For each mix provided, per UBC Standard 21-18.

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3.8 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and non-masonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.
 - 5. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
 - 6. Clean concrete masonry by cleaning method indicated in NCMA TEK 8-2A applicable to type of stain on exposed surfaces.

3.9 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
 - 1. Crush masonry waste to less than 4 inches in each dimension.

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2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Division 2 Section "Earthwork."
 3. Do not dispose of masonry waste as fill within 18 inches of finished grade.
- C. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 04 20 00

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SECTION 07 42 43 – COMPOSITE WALL PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes

1. The extent of panel system work is indicated on the drawings and in these specifications.
2. Panel system requirements include the following components:
 - a. Aluminum-faced composite panels with mounting system. Panel mounting system including anchorages, furring, fasteners, gaskets and sealants, related flashing adapters and masking for a complete installation.
 - b. Panel manufacturer recommends that system should include shop-installed aluminum stiffeners on all panels of 20 square feet or larger. Minimum stiffener recommendation is one per 20 square feet of panel area.
 - c. Parapet coping, column covers, soffits, sills, border and filler items may be indicated as integral components of the panels system or as designed.
 - d. All flashing metal required shall be provided by the panel manufacturer.
 - e. System to be fabricated and installed per local code requirements.

B. Related Documents

1. Drawings and general provisions of the contract, including general and supplementary conditions, division 1 specification sections and technical specification divisions 2 through 16, apply to this section.

C. Related Work Specifies Elsewhere

1. Section 05100: Structural steel
2. Section 06100: Backup walls
3. Section 07200: Insulation
4. Section 07600: Metal flashing, counter flashing and parapet coping
5. Section 07920: Caulking and sealants
6. Section 09200: Interior wall finishes

1.2 PERFORMANCE REQUIREMENTS

- A. Structural performance: provide exterior/interior wall cladding assemblies capable of withstanding the effects of load and stresses from dead loads, wind loads, snow loads and normal thermal movement without evidence of permanent defects of assemblies or components.

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1. Dead load: As required by applicable building code.
 2. Live Load: As required by applicable building code.
 3. Wind Load: Uniform pressure [velocity pressure] of 35 lb/sq ft., acting inward or outward.
 4. Thermal Movements: Provide assemblies that allow for thermal movements resulting from the following maximum changes (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components and other detrimental effects:
 - a. Temperature Change (range): 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- B. Sealed joints shall allow free and silent movement of panels during expansion and contraction while preventing uncontrolled penetration of moisture.
- C. Manufacturing, installation, and sealing shall prevent deformation of exposed surfaces.
- D. Design panel system to accommodate substructure tolerance of +0 to -1/8 inch.
- E. Design the system to affect a positive mechanically fastened assembly to substructure, not dependent on adhesives.
- F. Not Permitted: Vibration harmonics; wind whistles; noises caused by thermal movement; thermal movement transmitted to other building elements; loosening, weakening or fracturing of attachments or components of system.
- G. Structural Performance / Uniform Load Deflection Test: Provide panel system that has been tested in accordance with ASTM E330 at a design pressure of 60 psf without deformation or failures of structural members. Maximum allowable deflection of span: L/60.
- H. Air Infiltration: Panel system shall not have air infiltration rate more than 0.06 cfm per sq. ft. of fixed wall area when tested in accordance with ASTM E283 at static air pressure differential of 1.57 psf.
- I. Static Water Penetration: Panel system shall have no water penetration as defined by in test method when tested in accordance with ASTM E331 at inward static pressure differential of not less than 6.24 psf and not more than 12.0 psf.
- J. Dynamic Water Penetration: Panel system shall have been tested in accordance with AAMA 501 and shall have passed with no uncontrolled water leakage at 10.00 psf dynamic pressure differential, with water application rate of 5 gallons/hr/sqft.

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1.3 QUALITY ASSURANCE

- A. Composite panel manufacturer shall have a minimum of 5 years' architectural experience in the manufacture of this product and be located within the continental USA.
- B. It is recommended that fabrication and installation of composite panels shall be from a single source. If not single source, both panel fabricator and the installer must show proof of past successful collaboration.
- C. Installer shall be acceptable to composite panel manufacturer.
- D. Installer shall have a minimum 5 years' experience in architectural metal panel work similar in scope and size to this project.
- E. Coordinate fabrication schedule with construction progress as directed by the contractor to avoid delay of work.
- F. Shop drawings shall show the preferred joint details providing a watertight and structurally sound wall panel system that allows no uncontrolled water penetration, on the inside face of the panel system as determined by ASTM E331.
- G. Maximum deviation from vertical and horizontal alignment of erected panels: 6 mm (1/4") in 6 m (20') non-accumulative.
- H. Panel fabricator and installer shall assume undivided responsibility for all components of the exterior panel system, including but not limited to, attachment to sub-construction, panel-to-panel joinery, panel-to-dissimilar-material joinery and joint seal associated with the panel system.

1.4 REFERENCES

- A. American Society for Testing and Materials
 - 1. E330: Structural Performance of Exterior Windows, Curtain Walls and Doors under the Influence of Wind Loads.
 - 2. E283: Rate of Leakage Through Exterior Windows, Curtain Walls and Doors.
 - 3. D1781: Climbing Drum Peel Test for Adhesive Materials.
 - 4. E84: Surface-Burning Characteristics of Building Materials.
 - 5. E283: Air Performance of Exterior Windows, Curtain Walls and Doors.
 - 6. D3363: Method for Film Hardness by Pencil Test.
 - 7. D2794: Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
 - 8. D3359: Methods for Measuring Adhesion by Tape Test.

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9. D2247: Practice for Testing Water Resistance of Coatings in 100% Relative Humidity.
10. B117: Method of Salt Spray (Fog) Testing.
11. D822: Practice for Operating Light and Water Exposure Apparatus (Carbon-Arc Type) for Testing Paint, Varnish, Lacquer and Related Products.
12. D1308: Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
13. D1735: Method for Water Fog Testing of Organic Coatings.
14. D1929: Standard Test Method for Determining Ignition Temperature of Plastics.
15. D635: Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in Horizontal Position.

- B. American Architectural Manufacturers Association
1. AAMA-620

1.5 SUBMITTALS

- A. Submittals shall be in conformance with section 01 33 00.
- B. Samples
1. Panel assembly: Two samples of each type of assembly, 304 mm (12") x 304 mm (12") minimum.
 2. Two samples of each color or finish selected, 76 mm (3") x 102 mm (4") minimum.
 3. Custom-color samples will contain drawdown lines. Sizes for custom-color samples are limited.
- C. Shop Drawings: Submit shop drawings showing project layout and elevations; fastening and anchoring methods; detail and location of joints, sealants and gaskets, including joints necessary to accommodate thermal movement; trim; flashing; and accessories.
- D. Manufacturer's literature shall certify that material meets specifications.
- E. Submit fabrication drawings showing location and type of aluminum-extruded stiffeners at typical panels and at corner panels, if required.
- F. Documents showing product compliance with the local building code shall be submitted prior to the bid. These documents may include evaluation reports, test reports, supporting document and drawings, and manufacturer's data. The architect must approve alternate material prior to bid date.

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1.6 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements Sections.
- B. Ordering: Comply with manufacturer's ordering instructions, and lead-time requirements to avoid construction delays.
- C. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
 - 1. Store materials in accordance with manufacturer's recommendations.
 - 2. Handle materials carefully to avoid damage to materials and finishes.

1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual supporting and adjoining construction by field measurements before fabrication, and indicate recorded measurements on final shop drawings. Coordinate construction to ensure that wall panel assemblies fit properly to supporting and adjoining construction and coordinate schedule with construction progress to avoid delaying the work.
 - 1. Established dimensions: where field measurements cannot be made without delaying the work, guarantee dimensions and proceed with fabrication of wall panel assemblies corresponding to the established dimensions.

1.8 WARRANTY

- A. The installer will warrant the wall system for a period of 1 year that the fabrication and installation workmanship will be free from defects.
- B. The aluminum composite material manufacturer shall warrant for a period of 20 years against Max 5 fade based on ASTM D2244 and Max 8 chalk based on ASTM D4212 and delamination of the paint finish.

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PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Manufacturers: Subject to compliance requirements, provide products manufactured by:
1. Petersen Aluminum Corporation, 1005 Tonne Road, Elk Grove Village, IL 60007. Phone – 800-722-7440, Fax: 800-722-7150, www.pac-clad.com
 - a. PAC 3000 RS Rain Screen (Dry System) Composite Wall Panel System
 2. Alfrex, LLC, 943 Gainesville HWY, Building 100, Suite 400, Buford, GA 30518; Phone – (470) 589-7449; Website: <http://alfrexusa.com>
 3. Alternate systems by other manufacturers/fabricators are to be submitted to the architect not less than 7 working days prior to bid

2.2 FABRICATORS

- A. Elward Systems Corporation, 680 Harlan St., Lakewood CO; Phone: (800) 933-5339; Request information: sales@elward.com; Web: www.elward.com

2.3 MATERIALS

- A. Composite Panels
1. Panels shall be Reynobond® Aluminum Composite Material (ACM) as manufactured by Alcoa Architectural Products, Other manufacturers are acceptable as long as they meet the same criteria as Reynobond in thickness, panel weight, bond integrity, fire rating, paint color and finish. ACM must be manufactured in the USA.
 2. Standard Fire rated Core (FR)
 3. Panel Thickness: RB160FR (4 mm) = 0.157"
 4. Panel Weight: RB160FR (4 mm) = 1.53 lbs/sft
- B. Product Performance
1. Bond integrity: When tested for bond integrity, in accordance with ASTM D1781 (simulating resistance to panel delamination), there shall not be an adhesive failure of the bond a) between the core and the skin or b) cohesive failure of the core itself below the following values.
 2. Peel Strength: 178 N mm/mm (40 in lb./in.) as manufactured; 178 N mm/mm (40 in lb./in.) After 21 days soaking in water at 70°F
 3. Fire Performance: ASTM E84 – Passed Class A; NFPA 285 - Passed
- C. Panel Finishes

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1. Coil-coated Kynar 500® or Hylar 5000® based polyvinylidene fluoride (PVDF). Alcoa Architectural Products shall be Colorweld® 300 a fluoropolymer coating utilizing 70% Kynar 500® resins.
 - a. Color: To be chosen from Alcoa Architectural Products, Reynobond® standard series one, two or three colors.
 - b. Coating: Shall be factory applied on a continuous-process paint line. Coating shall consist of a 0.2 mil (approx.) prime coat and a 0.8 mil (approx.) finish coat containing 70% Kynar 500® resins. (If Colorweld® 300XL, coating shall consist of a 0.2 mil (approx.) barrier prime coat, a 0.80 mil (approx.) color coat, containing 70% Kynar 500® resins and a 0.5 mil (approx.) clear coat containing 70% Kynar 500® resins.) Nominal dry film thickness is 1.50 mils.
 - c. Specular Gloss: ASTM D523 standard at 60° shall be 15-35, Mica; 25-35 Metallic.
 - d. Pencil hardness: ASTM D3363 shall be F-2H minimum.
 - e. Flexibility T-Bend: ASTM D4145 shall be 1T to 2T-Bend; no pick-off.
 - f. Adhesion: ASTM D3359 reverse impact 1/16" crosshatch shall show no cracking or adhesion loss.
 - g. Reverse Impact: ASTM D2794 - Passes.
 - h. Salt Spray Resistance: ASTM B117, 5% salt fog at 95°F. Pass 4,000 hrs. less than 1/16" average creep from scribe; up to a few #8 blisters.
 - i. Humidity Resistance: ASTM D2247 100% relative humidity at 95°F, shall pass 4,000 hrs., # 8 blisters.
 - j. Exterior Exposure: 10 years at 45°, South Florida. ASTM D2244 shall be 10 years, Max. 5 fade; and ASTM D4214 shall be Max. 8 chalk.
 - k. Paint system shall meet the requirements of AAMA 620 specifications. Megaflon®, Corafon® or any Lumiflon®-based paint systems are not acceptable.
 - l. Paint system shall have more than 20 years of architectural field use.

2.4 PANEL FABRICATION

- A. ACM is comprised of two sheets of aluminum sandwiching a solid core of extruded thermoplastic material formed in a continuous process using no glues or adhesives between dissimilar materials. The core shall be free of voids and/or air spaces and not contain foamed insulation materials. The bond between the core and the skins shall be a chemical bond. Products laminated sheet by sheet in a batch process using glues or adhesives between materials shall not be acceptable.
- B. Aluminum Face Sheets
 1. Thickness: 0.020"
 2. Aluminum alloy shall be 3000 series or equivalent.

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C. Tolerances

1. Panel Bow: Shall not exceed 0.8% of panel overall dimension in width or length.
2. Panel Dimensions: Field fabrication shall be allowed where necessary, but shall be kept to an absolute minimum. All fabrication shall be done under controlled shop conditions when possible. Panel dimensions shall be such that there will be an allowance for field adjustment and thermal movement.
3. Panel Lines: Breaks and curves shall be sharp and true, and surfaces free of warps or buckles.
4. Flatness: Panels shall be visually flat.
5. Panel Surfaces: Shall be free of scratches or marks caused during fabrication.

D. Systems Characteristics

1. Plans, elevations, details, characteristics and other requirements indicated are based upon standards by one manufacturer. It is intended that other manufacturers, receiving prior approval, may be acceptable, provided their details and characteristics comply with size and profile requirements, and material/performance standards.
2. System must not generally have any visible fasteners, telegraphing or fastening on the panel faces or any other compromise of a neat and flat appearance.
3. Fabricate panel system to dimension, size and profile indicated on the drawings based on a design temperature of 68°F (20°C).
4. Fabricate panel system to avoid compressive skin stresses. The installation detailing shall be such that the panels remain flat regardless of temperature changes and at all times remain air- and watertight.
5. The finish side of the panel shall have a removable protective film applied prior to fabrication, which shall remain on the panel during fabrication, shipping and erection to protect the surface from damage.

E. System Type (*select from the following*)

1. PAC 3000RS - Rout-and-Return Dry System, engineered system including extruded perimeter frame, all extrusions, clips, trim and flashings.

F. System Performance

1. Composite panels shall be capable of withstanding building movements and weather exposures based on the following test standards required by the architect and/or local building codes:
 - a. Wind Load – If system tests are not available, under the direction of an independent third-party laboratory, mockups shall be constructed and tests performed to show compliance to the following minimum standards:
 - 1) Panels shall be designed to withstand the design wind load based upon the local building code, but in no case less than 20 pounds per square foot (psf) and 30 psf on parapet and corner panels. Wind-load

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- testing shall be conducted in accordance with ASTM E330 to obtain the following results.
- 2) Normal to the plane of the wall between supports, deflection of the secured perimeter-framing members shall not exceed $L/175$ or $3/4"$, whichever is less.
 - 3) Normal to the plane of the wall, the maximum panel deflection shall not exceed $L/60$ of the full span.
 - 4) Maximum anchor deflection shall not exceed $1/16"$. At $1\ 1/2$ times design pressure, permanent deflections of framing members shall not exceed $1/100$ of span length and components shall not experience failure or gross permanent distortion. At connection points of framing members to anchors, permanent set shall not exceed $1/16"$.
- b. Air/Water System Test – Without backup waterproof membrane. If system tests are not available, under the direction of an independent third-party laboratory, mockups shall be constructed and tests performed to show compliance to the following minimum standards:
- 1) Air Infiltration – When tested in accordance with ASTM E283, air infiltration at 1.57 psf must not exceed 0.06 cubic feet per minute per square foot of wall area.
 - 2) Water Infiltration – Water infiltration is defined as uncontrolled water leakage through the exterior face of the assembly. Systems not using a construction sealant at the panel joints (i.e., Dry Systems) shall be designed to drain any water leakage occurring at the joints. No water infiltration shall occur in any system under a differential static pressure of 6.24 psf after 15 minutes of exposure in accordance with ASTM E331.

2.5 ACCESSORIES

- A. Extrusions, formed members, sheet and plate shall conform with ASTM B209 and the recommendations of the manufacturer.
- B. Panel stiffeners, if required, shall be structurally fastened or restrained at the ends and shall be secured to the rear face of the composite panel with silicone of sufficient size and strength to maintain panel flatness. Stiffener material and/or finish shall be compatible with the silicone.
- C. Sealants and gaskets within the panel system shall be as per manufacturer's standards to meet performance requirements.
- D. Fabricate flashing materials from 0.040" minimum thickness aluminum sheet or as recommended by panel manufacturer to match the adjacent curtain wall/panel system where exposed. Post-painted spray-applied flashings are not acceptable. Provide a lap

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strap under the flashing at abutted conditions and seal lapped surfaces with a full bead of non-hardening sealant.

- E. Fasteners (concealed/non-corrosive): Fasteners as recommended by system manufacturer.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Surfaces to receive panels shall be even, smooth, sound, clean, dry and free from defects detrimental to work. Notify contractor in writing of conditions detrimental to proper and timely completion of the work. Do not proceed with erection until unsatisfactory conditions have been corrected.
- B. Surfaces to receive panels shall be structurally sound as determined by a registered engineer. In no case shall metal structural supports be less than 18 gauge.

3.2 INSTALLATION

- A. Erect panels plumb and level.
- B. Attachment system shall allow for the free vertical and horizontal thermal movement due to expansion and contraction for a material temperature range of -20°F (-29°C) to +180°F (+82°C). Buckling of panels, opening of joints, undue stress on fasteners, failure of sealants or any other detrimental effects due to thermal movement are not permitted. Fabrication, assembly and erection procedure shall account for the ambient temperature at the time of the respective operation.
- C. Panels shall be erected in accordance with an approved set of shop drawings.
- D. Anchor panels securely per engineering recommendations and in accordance with approved shop drawings to allow for necessary thermal movement and structural support.
- E. Conform to panel fabricator's instructions for installation of concealed fasteners.
- F. Do not install component parts that are observed to be defective, including warped, bowed, dented, scraped and broken members.
- G. Do not cut, trim, weld or scrape component parts during erection in a manner that would damage the finish, decrease strength or result in a visual imperfection or a failure in

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performance. Return component parts that require alteration to shop for re-fabrication, or for replacement with new parts.

- H. Separate dissimilar metals; use appropriate gaskets and fasteners to minimize corrosive or electrolytic action between metals.

3.3 ADJUSTION AND CLEANING

- A. Remove and replace panels damaged beyond repair as a direct result of panel installation. After installation, panel repair and replacement shall become the responsibility of the general contractor.
- B. Repair panels with minor damage.
- C. Remove masking film (if used) as soon as possible after installation. Masking intentionally left in place after panel installation on an elevation shall become the responsibility of the general contractor.
- D. Any additional protection, after installation, shall be the responsibility of the general contractor to remove.
- E. Make sure weep holes and drainage channels are unobstructed and free of dirt and sealants.
- F. Final cleaning shall not be part of the work of this section.

SECTION 09 64 20 – WOOD GYMNASIUM FLOORING

PART 1 - GENERAL

1.1 DESCRIPTION

A. Related work specified under other sections.

1. CONCRETE SUBFLOORS - SECTION 03__ __

- a. Slab depression is:
2-1/4" (57mm) for 25/32" (20mm) flooring
- b. The general contractor shall furnish and install the concrete subfloor depressing the slab sufficiently to accommodate the floor system. The slab shall be steel troweled and finished smooth to a tolerance of 1/8" in any 10' (3mm in any 3 meter) radius by the general contractor. High spots shall be ground level, and low spots filled in with approved leveling compound by the general contractor to the full approval of the Flooring Installer.
- c. Concrete slab aggregate shall be 3/4" (19mm) screen crushed limestone or similar type material (no river gravel or pea gravel), free of curing agents. Concrete shall develop an average of 3,500-PSI (246 Kg/cm) compression after 28 days.

2. MEMBRANE WATERPROOFING - SECTION 07__ __

- a. Concrete subfloors on or below grade shall be adequately waterproofed beneath the slab and at the perimeter walls and on earth side of below grade walls by general contractor using suitable type membrane.

3. THRESHOLDS - SECTION 08__ __

4. GAME STANDARD INSERTS - SECTION 11__ __

1.2 REFERENCES

A. MFMA - Maple Flooring Manufacturers Association

1.3 QUALITY ASSURANCE

A. Manufacturer

1. Manufacturer of resilient flooring shall be a firm specializing in manufacturing products specified in this section.
2. Manufacturer of flooring and subfloor components must be ISO 14001:2015 Certified.
3. Basis of design shall be "Alliance" sports floor system as provided by Connor Sports, www.connorfloor.com, (800-833-7144).
4. Materials other than those listed must be approved 10 days prior by written addendum. Materials from non-approved manufacturers will not be accepted.

B. Installer (Flooring Contractor)

1. The complete installation of the flooring system, as described in the scope of these specifications, shall be carried out by an experienced installer (Flooring Contractor), and the work shall be performed in accordance with most recent installation instructions of the manufacturer.
2. Installer (Flooring Contractor) shall be liable for all matters related to installation for a period of one year after the floor has been substantially installed and completed.

C. Performance Testing

1. Floor system shall have been independently evaluated according to established performance standards for the athletic flooring industry.
2. Compliance of athletic floor standard(s) for specified system as provided by Connor Sports at www.connorsports.com.

1.4 SUBMITTALS

A. Specification - Submit Connor Alliance specification sheets.

B. Sample - Submit one sample of specified system, if requested by architect.

C. Maintenance Literature - Upon completion of floor installation, send to owner, attendants or individuals in charge and responsible for the upkeep of the building a CARE CARD. This card spells out care and maintenance instructions including temperature and humidity ranges for areas where flooring is installed.

1.5 WORKING CONDITIONS

- A.** The wood flooring specified herein shall not be installed until all masonry, painting, plaster, tile, marble and terrazzo work is completed, and overhead mechanical trades and painters have finished in the wood floor areas. The building shall be enclosed and weathertite.
- B.** The concrete subfloor shall be determined dry by industry standard testing procedures, free of foreign materials and turned over to the installer (Flooring Contractor) broom clean. Moderate room temperature of 65 degrees (18 degrees Celsius) or more shall be maintained a week preceding and throughout the duration of the work. Humidity conditions within the building shall approximate the humidity conditions that will prevail when the building is occupied.
- C.** Permanent heat, light and ventilation shall be installed and operating during and after installation, maintaining a range of temperature and humidity compatible with the expected low and high moisture content of the flooring. The wood moisture content range is determined by the Flooring Installer based on the facility's mechanical controls and/or geographical location.
- D.** Flooring must be stored in a dry, well-ventilated area, not in contact with masonry, to acclimate to building conditions and shall be installed at moisture content compatible with the normally expected environmental range of temperature and relative humidity achieved while the facility is occupied.
- E.** General Contractor shall lock floor area after floor is finished to allow proper curing time. If general contractor or owner requires use of gym after proper curing time, he shall protect the floor by covering with non-marring Kraft paper or red rosin paper with taped joints until acceptance by owner of complete gymnasium floor.
- F.** Working conditions as described above shall be followed. Variations and substitutions shall be submitted for approval to the architect who shall advise Connor of the same.

1.6 HUMIDITY CONTROL

- A.** Since all wood flooring will expand and contract as relative humidity varies, it is important to minimize extremes between low and high. Hardwood flooring is manufactured at moisture content most compatible with a 35%-50% relative humidity range. Geographical regions and available mechanicals determine the typical range of temperature and humidity for each facility. Maintaining a 15% fluctuation between highest and lowest average indoor relative humidity provides limited shrinkage and growth. Facility managers should make use of available HVAC systems to prevent excessive tightening and shrinkage of flooring.

1.7 WARRANTY

- A.** Connor warrants that the materials it has supplied will be free from manufacturing defects for a period of one year. The foregoing warranty is in lieu of and excludes all other warranties not expressly set forth herein, whether express or implied in operation of law or otherwise, including, but not limited to, and implied warranties of merchantability or fitness. This warranty is expressly limited to the flooring materials (goods) supplied by Connor. This warranty does not cover floor damage caused (wholly or in part) by fire, winds, floods, moisture, other unfavorable atmospheric conditions or chemical action, nor does it apply to damage caused by ordinary wear, misuse, abuse, negligent or intentional misconduct, aging, faulty building construction, concrete slab separation, faulty or unsuitable subsurface or site preparation, settlement of the building walls or faulty or unprofessional installation of Connor flooring systems.
- B.** Connor shall not be liable for incidental or consequential losses, damages or expenses directly or indirectly arising from the sale, handling or use of the materials (goods) or from any other cause relating thereto, and their liability hereunder in any case is expressly limited to the replacement of materials (goods) not complying with this agreement, or at their elections, to the repayment of, or crediting buyer with, an amount equal to the purchase price of such materials (goods), whether such claims are for breach of warranty or negligence. Any claim shall be deemed waived by buyer unless submitted to Connor in writing within 30 days from the date buyer discovered, or should have discovered, any claimed breach.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Wood Gymnasium Flooring: Subject to compliance requirements, provide products by one of the following:
1. Connor Sports (Basis of Design)
 2. Action Floor Systems
 3. Aacer Base
 4. Or Equal



2.2 MATERIAL

- A. **Vapor Barrier** - 6-mil (0.2mm) polyethylene.
- B. **Subfloor**
1. Alliance I - Factory assembled subfloor panels shall provide nominal 3/4" (19mm) X 4" (102mm) X 8' (2438mm) UL plywood nailers set at Alliance I spacing with 3/4" Rezill pads attached. Sleeper anchorage struts shall be nominal 1/2" (12mm) X 4" (102mm) UL grade plywood with pre-drilled anchor pockets.
 2. Alliance II - (specify above or delete) - Factory assembled subfloor panels shall provide nominal 3/4" (19mm) X 4" (102mm) X 8' (2438mm) UL plywood nailers set at Alliance II spacing with 3/4" (19mm) Rezill pads attached. Sleeper anchorage struts shall be nominal 1/2" (12mm) X 4" (102mm) UL grade plywood with pre-drilled anchor pockets.
 3. Optional - (specify above or delete) - Third Grade flooring on Alliance I system shall provide factory assembled subfloor panels having nominal 3/4" (19mm) X 5" (127mm) X 8' (2438mm) UL plywood nailers set at Alliance I spacing with 3/4" (19mm) Rezill pads attached. Sleeper anchorage struts shall be nominal 1/2" (12mm) X 4" (102mm) UL grade plywood with pre-drilled anchor pockets.
- C. **Flooring** (Connor Laytite Maple)
1. 25/32" (20mm) X 2-1/4" (57mm), Second & Better Grade, Northern Hard Maple Flooring, TGEM, MFMA Grade marked and stamped as manufactured by Connor Sports, Amasa, MI.
 2. Optional grades (specify above or delete) - First Grade, Third Grade
- D. **Fasteners**
1. Flooring - 2" (51mm) barbed cleats or coated staples.
 2. Subfloor - 1" (25mm) coated staples or nails and PL400 adhesive or equal.
 3. Concrete - 2-1/2" (64mm), collared, steel drive pins.
- E. **Finish Materials** - Connor oil modified polyurethane seal and finish or equal.
- F. **Game Lines** - Game line paint shall be compatible with finish.
- G. **Wall Base** - 3" (76mm) X 4" (102mm), heavy duty, molded, vented cove base with pre-molded outside corners.
- H. **Protective Floor Cover** - (specify or delete) Provide court tiles selected from manufacturer's standard dimensions and colors.

PART 3-EXECUTION

3.1 EXECUTION

- A. Inspect concrete slab for proper tolerance and dryness. Report any discrepancies to general contractor and architect in writing.
- B. Concrete slab shall be broom cleaned by general contractor.
- C. Installer (Flooring Contractor) shall document all working conditions provided in General Specifications prior to commencement of installation.

3.2 INSTALLATION

A. Subfloor

1. Cover concrete with poly, sealing and lapping joints a minimum of 6" (152mm).
2. Layout subfloor assembly with sleepers at right angle to finish flooring. Place subfloor panels to maintain spacing between panel edges as provided between pre-assembled sleepers. Lap panel nailer ends onto designated cross struts, providing 1/4" (6mm) end joint spacing, and secure with nails or staples and construction adhesive. Align subfloor panels to provide correct stagger of concrete anchors in adjacent rows. Provide 1-1/2" (38mm) expansion voids at perimeter and at vertical obstructions. Install solid blocking at doorways, under bleachers in the stacked position, and below portable goals.
3. Secure sleeper struts to concrete with steel anchors inserted into anchor pockets provided. Maintain proper anchor

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penetration with Connor installation tools and procedures.

B. Maple Flooring

1. Install maple flooring parallel to main playing court by power nailing or stapling at all sleeper locations. End joints shall be properly driven up.
2. If required, size joints between flooring strips to allow for intermediate expansion in accordance with local humidity conditions.
3. Provided 1-1/2" (38mm) expansion voids at perimeter and at all vertical obstructions.

3.3 FINISHING

A. Maple Flooring

1. Machine sand with coarse, medium, and fine paper to a smooth, even and uniform surface.
2. Remove sanding dust from entire surface by tack or vacuum.
3. Inspect entire area of floor to insure surface is acceptable for finishing, clean and completely free from sanding dust.
4. Apply two (2) coats of approved seal and two (2) coats of approved finish per manufacture's instructions.
5. Buff and clean floor between coats.
6. Games Lines: Apply game lines as indicated on drawings, between seal and first coat of finish.

3.4 BASE INSTALLATION

- A. Install vent cove base to walls with base cement or screws. Use pre-molded outside corners and mitered inside corners.

3.5 CLEANING

- A. Remove excess and waste materials from the area of work.

END OF SECTION 09642

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SECTION 11 06 30 - STAGE CURTAINS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes stage curtains, draw-curtain tracks, and rigging accessories.

1.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design rigging, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance: Rigging shall withstand the effects of gravity loads and stresses within limits and under conditions indicated.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated. For draw-curtain machines, include rated capacities, operating characteristics, and electrical characteristics.
- B. Shop Drawings: Show fabrication and installation details for stage curtains. Include plans, elevations, sections, details, attachments to other work, and the following:
 - 1. Operating clearances.
 - 2. Requirements for supporting curtains, track, and equipment. Verify capacity of each track and rigging component to support loads.
 - 3. Locations of equipment components, switches, and controls. Differentiate between manufacturer-installed and field-installed wiring.
 - 4. Wiring Diagrams: For power, signal, and control wiring.
- C. Samples for Initial Selection: For each type of stage curtain indicated. Include color charts showing the full range of colors, textures, and patterns available, together with a 12-inch-square Sample (any color) of each type of fabric.
- D. Curtain Fabric Samples for Verification: Full width by 36-inch- long section of fabric from dye lot to be used for the Work, with specified treatments applied. Show complete pattern repeat. Mark top and face of fabric.

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1.5 QUALITY ASSURANCE

A. Reference Standards:

1. 2019 Building Standards Administrative Code, Part 1, CBSC.
2. 2019 California Building Code (CBC), Part 2, CBSC (2018 IBC & California Amendments).
3. 2019 California Energy Code, Part 6, CBSC.
4. 2019 California Fire Code, Part 9, CBSC (2018 International Fire Code & California Amendments).
5. 2019 California referenced Standards, Part 12 CBSC.
6. Title 19 C.C.R., Public Safety, SFM Regulations.
7. Americans with Disabilities Act (ADA), Title II or Title III.

B. Decorative Materials and Trim:

1. 806.1 General requirements: In occupancies in Group A, E, I and R-1 and dormitories in Group R-2, curtains, draperies, hangings and other decorative materials suspended from walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 806.2 or be noncombustible.
2. 806.2 Acceptance criteria and reports: Where required by Section 806.1 decorative materials shall be tested by an agency and meet the flame propagation performance criteria of NFPA 701 or such materials shall be noncombustible. Reports of test results shall be prepared in accordance with NFPA 701 and furnished to the building official upon request.

C. Installer Qualifications: Fabricator of stage curtains.

D. Fire-Test-Response Characteristics: Provide stage curtains with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or a testing and inspecting agency acceptable to authorities having jurisdiction.

1. Flame-Resistance Ratings: Passes NFPA 701.
 - a. Permanently attach label to each fabric of curtain assembly indicating whether fabric is inherently and permanently flame resistant or treated with flame-retardant chemicals, and whether it requires retreatment after designated time period or cleaning.

E. Preinstallation Conference: Conduct conference at Project site.

1.6 PROJECT CONDITIONS

- ### A. Field Measurements: Verify actual dimensions of openings and construction contiguous with stage curtains and rigging by field measurements before fabrication and indicate measurements on Shop Drawings.

1.7 WARRANTY

- ### A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of rigging equipment that fail in materials or workmanship within specified warranty period.

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1. Failures include, but are not limited to, faulty operation of rigging equipment.
2. Warranty Period: Two years.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Stage Curtains:
1. Stagecraft Industries (Basis of Design)
 2. Or equal.

2.2 CURTAIN FABRICS

- A. General: Provide fabrics inherently and permanently flame resistant or chemically flame resistant by immersion treatment to comply with requirements indicated. Provide fabrics of each type and color from same dye lot.
- B. Heavyweight Woven Cotton Velour: Napped fabric of 100 percent cotton weighing not less than 25 oz./linear yd. before flame-retardant treatment, with pile height not less than 79 mils; 54-inch minimum width.
1. Color, Texture, and Pattern: As selected by Architect from manufacturer's full range.

2.3 CURTAIN FABRICATION

- A. General: Affix permanent label, stating compliance with requirements of authorities having jurisdiction, in accessible location on curtain not visible to audience. Provide vertical seams unless otherwise indicated. Arrange vertical seams so they do not fall on faces of pleats. Do not use fabric cuts less than one-half width.
- B. Scrim: Fabricate from scrim curtain fabric, sewn flat. Provide a continuous 6-inch pipe pocket at bottom with a 6-inch flap of same fabric in front of pocket. Provide double-stitched, 3-1/2-inch jute webbing at top with not less than No. 2 brass grommets spaced at 12 inches o.c. and 1 inch from corner of curtain. Provide not less than a 2-inch double-folded side hem and a 4-inch bottom hem.
- C. Drop: Fabricate from muslin fabric, sewn flat, with either horizontal or vertical seams to suit Project and selvage to the rear. Provide 6-inch pipe pocket at bottom with a 6-inch flap of same fabric in front of pocket. Provide double-stitched, 3-1/2-inch jute webbing at top with not less than No. 2 brass grommets spaced at 12 inches o.c. and 1 inch from corner of curtain. Provide not less than a 2-inch double-folded side hem and a 4-inch bottom hem.

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2.4 STEEL-CURTAIN TRACK

- A. Steel Track: Fabricate of roll-formed, galvanized, commercial-quality, zinc-coated steel sheet; complying with ASTM A 653/A 653M; G60 coating designation with continuous bottom slot and with each half of track in one continuous piece; black paint finish.

2.5 CURTAIN RIGGING

- A. Curtain Battens: Fabricate battens from steel pipe with a minimum number of joints. As necessary for required lengths, connect pipe with a drive-fit pipe sleeve not less than 18 inches long, and secure with four flush rivets, plug welds, threaded couplings, or another equally secure method. Shop-paint completed pipe battens with black paint and with a 1-inch- wide yellow stripe at the center of each.
 - 1. Steel Pipe: ASTM A 53/A 53M, Grade A, standard weight (Schedule 40), black, NPS 1-1/2 nominal diameter unless otherwise indicated.
- B. Supports, Clamps, and Anchors: Sheet steel in manufacturer's standard thicknesses, galvanized after fabrication according to ASTM A 153/A 153M, Class B.
- C. Trim and Support Cable: 1/4-inch- diameter, 7x19 galvanized-steel cable with a breaking strength of 7000 lb. Provide fittings complying with cable manufacturer's written recommendations for size, number, and method of installation, including a drop-forged galvanized turnbuckle to allow for leveling.
- D. Trim and Support Chain: Grade 80 hardened alloy steel chain rated for overhead lifting, ASTM A 391/A 391M.
- E. Inserts, Bolts, Rivets, and Fasteners: Manufacturer's standard corrosion-resistant units.

2.6 CURTAIN OPERATION

- A. Front Stage Curtains: Floor-mounted tension block
- B. Side Stage Curtains: Walk-along
- C. Rear Stage Curtains: Walk-along



PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for supporting members, blocking, installation tolerances, clearances, and other conditions affecting performance of stage-curtain work. Examine inserts, clips, blocking, or other supports required to be installed by others to support tracks and battens.

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- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Install stage-curtain system according to track manufacturer's and curtain fabricator's written instructions.

3.3 TRACK INSTALLATION

- A. Ceiling-Mounted Tracks: Drill track at intervals not greater than manufacturer's written instructions for spacing, and fasten directly to structure.
- B. Spacing: Do not exceed the following dimensions between supports:
 - 1. Heavy-Duty Track: 72 inches.
- C. Install track for center-parting curtains with not less than 24-inch overlap of track sections at center, supported by special lap clamps.

3.4 CURTAIN INSTALLATION

- A. Track Hung: Secure curtains to track carriers as recommended by curtain manufacturerer.

END OF SECTION 11063

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SECTION 11491 - GYMNASIUM EQUIPMENT

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following gymnasium equipment:

1. Basketball equipment.
2. Volleyball equipment.
3. Scoreboard and shot clock.
4. ~~Outdoor playground equipment.~~

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- B. Related Sections include the following:

1. Division 16 Sections for electrical service for motor operators, controls, and other powered devices for motorized gymnasium equipment.

1.3 PERFORMANCE REQUIREMENTS

- A. Seismic Performance: Provide basketball backboards capable of withstanding the effects of earthquake motions determined according to ASCE 7, "Minimum Design Loads for Buildings and Other Structures": Section 9, "Earthquake Loads."
1. Free-standing gym equipment shall be secured to the floor (and/or wall) to prevent sliding and/or overturning.
 2. Weights and heavy equipment shall be properly stored (secured) when not in use.
 3. Secure equipment to concrete floor with concrete drill-in anchor bolt at each leg.
 4. Secure equipment to wood floor with lag bolt at each leg. Lag bolt must be installed into floor joists or blocking.
 5. Screw clip angle to equipment and fasten to floor with either concrete drill-in anchor or lag bolts.
 6. Comply with seismic requirements indicated on Structural drawings.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
1. If applicable, include assembly, disassembly, and storage instructions for removable equipment.
 2. Motors: Show nameplate data, ratings, characteristics, and mounting arrangements.

- B. Shop Drawings: For gymnasium equipment. Include plans, elevations, sections, details, attachments to other work, and the following:
 - 1. Method of field assembly for removable equipment, connections, installation details, mountings, floor inserts, attachments to other work, and operational clearances.
- C. Structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation including loads, point reactions, and locations for attachment of gymnasium equipment to structure.
- D. Coordination Drawings: Court layout plans, drawn to scale, and coordinating floor inserts, game lines, and markers applied to finished flooring.
- E. Samples for Initial Selection: For each type of gymnasium equipment indicated.
- F. Samples for Verification: For the following products:
 - 1. Basketball and Volleyball Net: Full size.
 - 2. Volleyball Floor Insert: Full-size unit.
 - 3. Volleyball Post Standard: Full-size unit with net tensioner.
- G. Product Certificates: For each type of gymnasium equipment, signed by product manufacturer.
- H. Qualification Data: For Installer.
- I. Operation and Maintenance Data: For gymnasium equipment to include in emergency, operation, and maintenance manuals.
- J. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An employer of workers trained and approved by manufacturer.
- B. Source Limitations: Obtain each type of gymnasium equipment through one source from a single manufacturer.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install gymnasium equipment until spaces are enclosed and weatherproof, wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Field Measurements: Verify position and elevation of floor inserts and layout for gymnasium equipment.


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1.7 COORDINATION


- A. Coordinate installation of floor inserts with structural floors and finish flooring installation and with court layout and game lines and markers on finish flooring.
- B. Coordinate layout and installation of overhead-supported gymnasium equipment and suspension system components with other construction including light fixtures, HVAC equipment, fire-suppression-system components, and partition assemblies.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basketball Equipment: Subject to compliance with requirements, provide either the named product or an equal product by one of the other manufacturers specified.
 - 1. Draper Inc. (Basis of Design)
 - 2. Jaypro Sports, LLC.
 - 3. L. A. Steelcraft.
 - 4. Or equal.
- B. Volleyball Equipment: Subject to compliance with requirements, provide either the named product or an equal product by one of the other manufacturers specified.
 - 1. AALCO Manufacturing. (Basis of Design)
 - 2. Draper Inc.
 - 3. Jaypro Sports, LLC.
 - 4. L. A. Steelcraft.
 - 5. Or equal.
- C. Electronic Scoreboard: Subject to compliance with requirements, provide either the named product or an equal product by one of the other manufacturers specified.
 - 1. Daktronics (Basis of Design)
 - 2. Nevco 
 - 3. Bison Inc.
 - 4. Draper.
 - 5. Or equal.

2.2 BASKETBALL EQUIPMENT

- A. Backstop:
 - 1. Type: Ceiling suspended, forward-folding, front-braced basketball backstop; Model TF-20 as manufactured by Draper, Inc. 
 - 2. Distance from court floor to backstop attachment at roof structure: As indicated on Drawings.
 - 3. Main frame: Rigid T design of back-to-back right triangles constructed by welding together steel tubing of the following outside diameters and gauges. Parallelogram frames are not acceptable.

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- a. ~~Bent~~ Main center stem: 6 inches diameter, 11 gauge. ~~Strut suspended diagonally from roof structure at 22 degrees angle from vertical. Bend at lower end provides vertical member~~ of length sufficient to allow backstop height adjustment of plus or minus 6 inches. 1
 - b. Top member of T frame: 4 inches diameter, 11 gauge.
 - c. Folding front brace: Jackknife type, fully adjustable, self-locking in down position constructed from 2-1/2 inches diameter, 13 gauge outer tube and 2-1/4 inches diameter, 14 gauge inner tube.
 - d. Diagonal side braces: 2-1/4 inches diameter, 14 gauge.
4. Pivot point: 1-1/4 inches diameter solid steel shaft and 1/2 inch steel plate hangers.
- B. Electric Winch:
1. Provide for each folding basketball backstop separate electric winch mechanism.
 2. Type: Fully enclosed, direct drive, worm gear, electric winch designed to hold backstop at any position during raising and lowering; Model 503285 Motorized Winch as manufactured by Draper, Inc. 1
 - a. Motor: 3/4 HP, 11.5 AMP capacitor type, 60 cycle, 115 volt, single phase with automatic thermal overload protection manufactured in compliance with NEMA specifications. 1
 - b. Hoist cable: 1/4 inch diameter, 7 by 19, galvanized aircraft cable with 7,000 pounds ultimate breaking strength.
 - c. Roller: Spring-load providing tensioning pressure to ensure cable tracks evenly on grooved drum.
 - d. Limit switches: Rotary counting up and down type, pre-wired to motor as integral part of winch.
 3. Controls: Provide key lock, 3 position, momentary contact wall control switch to lower, raise, and stop backstop.
 - a. Provide two keys, one controlling up direction and second controlling down direction.
 - b. Provide with stainless steel cover plate.
- C. Safety Belt and Lock 1
1. Provide each front folding basketball backstop with safety belt and lock test to withstand 1750 pounds free fall load.
 2. Safety lock: Inertia sensitive to automatically lock backstop in position at any time during storage, raising, or lowering. Sudden increase in either tension or speed shall activate lock.
 3. Safety belt: 2 inches wide nylon belt rated at 6000 pounds breaking strength; Safety Belt 503229 as manufactured by Draper, Inc.
 4. Belt shall extend 36 feet and shall be automatically retracted and stored on reel equipped with constant force spring. Operation and locking action shall be activated by centrifugal force to lock backstop before unit travels 12 feet of free fall.
 5. Unit shall incorporate automatic reset not requiring poles, ropes, levers, or buttons for resetting
- D. Basketball Backboard:
1. Type: Rectangular, fiberglass, official size backboard; Model 503145 as manufactured by Draper, Inc.
 2. Overall size: 72 inches wide by 42 inches high. 1

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3. Construction: Backboard is molded from high strength fiberglass with ribs and heavy flanges for rigidity. Backboard is complete with threaded inserts located at traditional fan backboard mounting dimensions (35" x 20") and factory drilled goal mounting holes.
4. Finish: White finish with permanently silk screened, 2" wide orange perimeter and target area markings.

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E. Basketball Goals:

1. Type: Breakaway goal with tube-tie net attachment and designed to withstand shock loads from player slam dunking or hanging on rim; Model 503581 as manufactured by Draper, Inc.
2. Rim shall deflect down when 230 pounds static load is applied and return to playing position when load is removed. Breakaway point shall be adjustable from 160 to 230 pounds.
3. Ring shall have rebound characteristics identical to those of non-moveable ring. Factory set proper flex and rebound requirements. Goal features easy-adjust system to allow users to adjust the breakaway point from 160 pounds to 230 lbs.
4. Ring: Fabricated from 5/8 inch diameter steel rod formed into 18 inches ring. Rigidly brace with die cut steel braces welded to rim.
5. Mounting plate: Heavy duty steel plate bracket with mounting holes and designed to position inside of ring 6 inches from backboard.
6. Provide series of small tubes welded to bottom of rim providing for attachment of net by threading 1/8 inch nylon cord through tubes.
7. Finish: Powder coated orange paint.
8. Anti-whip net: Top half made of durable fibers encased in nylon to prevent net from whipping up on rim. Lower half all nylon. Color white.
9. Mounting hardware: Zinc plated.

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F. Safety Edge Padding

1. Type: Foam padding for bottom edge and corners of backboard to provide safety protection to meet NCAA and NFHS requirements; Model 5032XX Safe-Edge Padding as manufactured by Draper, Inc.
2. Construction: Molded foam, 2 inches wide and wrapping around edges 3/4 inch. Equip with molded-in steel track and bolt-on attachment system. Padding shall cover bottom edge of backboard and extend 15 inches up sides.
3. Color: Per architect's specifications.

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2.3 VOLLEYBALL EQUIPMENT

A. Product: Spikeline System by AALCO.

1. Adjustable net while at full tension.
2. Internal bevel gear drive mechanism allows exact net height with the turn of the handle.
3. 10-year limited warranty.
4. Winch post 48 lbs., end post 40 lbs.
5. Outer telescoping design.
6. Aluminum anodized finish.
7. SLS-99P Complete Package—1 pair of competition standards complete with pads, 1 competition net, 6 Quick-Tite net draw straps, 2 official antennas, 2 official markers, 1 judges stand complete with pads, 160 lbs.

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2.4 SCOREBOARD

- A. Product: Model# BB-2142 with ALL SPORT 5000 CONTROLLER by Daktronics.
1. Single-sided scoreboard scores basketball, volleyball and wrestling. It scores HOME and GUEST to 99, PERIOD to nine, displays game time to 99:59 and during the last minute of the period, it displays time to 1/10 of a second.
 2. General information:
 - a. Dimensions: 3'-0" high, 6'-6" wide, 0'-6" deep.
 - b. Weight: 90 lb.
 - c. Power requirement: 200 W.
 - d. Color: over 150 colors to choose from.
 3. Construction:
 - a. All-aluminum construction.
 - b. Scoreboard face and perimeter: 0.063" thick.
 - c. Scoreboard back: 0.050" thick.
 - d. Digit faceplates: 0.063" thick.
 - e. Cabinet withstands high-velocity impact from indoor sports balls without the need for protective screens.
 4. Digits:
 - a. AS AlInGaP LED digits.
 - b. Seven bar segments per digit.
 - c. PERIOD digits: 7" high.
 - d. All other digits: 10" high.
 - e. Clock, PERIOD digits and bonus indicators: amber LEDs.
 - f. All other digits and indicators: red LEDs.
 5. Captions:
 - a. HOME and GUEST captions: 4" high.
 - b. All other captions: 4" high.
 - c. All captions: white vinyl applied directly to scoreboard face.
 6. Horn:
 - a. Vibrating horn: mounts behind scoreboard face.
 - b. Sounds automatically when period clock counts down to zero.
 - c. Sounds manually as directed by operator.
 7. Power Cord:
 - a. Cord is 11' long.
 - b. Cord plugs into a standard grounded 120 V AC outlet.
 8. Optional Equipment:
 - a. Double bonus indicators.
 - b. Scoreboard striping.
 - c. Vinyl team name caption in place of the HOME caption.
 - d. Protective screen.
 - e. Suspension installation.
 9. Scoring Console:
 - a. Console is an All Sport® 5000 controller
 - b. Capable of scoring basketball, volleyball, and wrestling through the use of keyboard inserts.
 - c. Capable of controlling other All Sport controlled scoreboards.
 - d. Console has a maximum power requirement of 5 watts.
 - e. Console recalls clock, score, and period information if power is lost.

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- f. Console includes:
 - 1) A rugged aluminum enclosure to house electronics.
 - 2) A sealed membrane water-resistant keyboard
 - 3) A 32-character liquid crystal prompting display to verify entries and recall information currently displayed.
 - 4) A 6' power cord to plug into a standard grounded 120 V AC outlet.
 - 5) A 20' control cable to connect to the control receptacle junction box.
 - 6) A practice timer mode:
 - a) Can sound the horn at the end of each segment.
 - b) 99 programmable segments.
 - c) Displays the segment number and segment length.
 - d) Has a programmable interval time.
- g. Optional Equipment:
 - 1) Carrying case for console.
 - 2) 2.4 GHz spread spectrum radio for scoreboard control.
 - 3) Battery pack.

2.5 SHOT CLOCK

- A. Product: Model BB-2114 shot clock by Daktronics.
 - 1. Single-sided shot timer basketball scoreboard displays times up 59 seconds and counts down from any preset number between 0 and 59.

2.6 ~~OUTDOOR PLAYGROUND EQUIPMENT~~

- A. ~~As indicated on Drawings for the following:~~
 - 1. ~~Tetherball:~~
 - a. ~~Pole: As indicated on Drawings.~~
 - 2. ~~Basketball court:~~
 - a. ~~Pole: As indicated on Drawings.~~
 - b. ~~Backboard, goal, and net: Similar to indoor equipment specified but suitable for outdoor usage.~~

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PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for play court layout, alignment of mounting substrates, installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance.
 - 1. Verify critical dimensions.
 - 2. Examine supporting structure and subfloors and footings below finished floor.
 - 3. Examine wall assemblies, where reinforced to receive anchors and fasteners, to verify that locations of concealed reinforcements have been clearly marked. Locate reinforcements and mark locations.

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

B. Coordination

1. Coordinate provision of basketball backstops with construction of roof and ceiling framing supporting basketball backstop to ensure proper support and method of attachment.
2. Coordinate support of backstops to ensure proper distribution of loads and adequacy of attachment points. Provide additional structural framing members as required.
3. Coordinate electrical requirements for electrically operated winch to ensure proper power source, conduit, wiring, and boxes for keyed switches
4. Prior to installation, verify exact locations of backstops.

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3.2 INSTALLATION, GENERAL

- A. General: Comply with manufacturer's written installation instructions and competition rules indicated for each type of gymnasium equipment. Complete equipment field assembly, where required.
- B. Unless otherwise indicated, install gymnasium equipment after other finishing operations, including painting, have been completed.
- C. Permanently Placed Gymnasium Equipment and Components: Rigid, level, plumb, square, and true; anchored securely to supporting structure; positioned at locations and elevations indicated on Shop Drawings; in proper relation to adjacent construction; and aligned with court layout.
 1. Floor Insert Location: Coordinate location with application of game lines and markers, and core drill floor for inserts after game lines have been applied.
 2. Floor Insert Elevation: Coordinate installed heights of floor insert with installation and field finishing of finish flooring and type of floor plate.
 3. Operating Gymnasium Equipment: Verify clearances for movable components of gymnasium equipment throughout entire range of operation and for access to operating components.
- D. Anchoring to In-Place Construction: Use anchors and fasteners where necessary for securing built-in and permanently placed gymnasium equipment to structural support and for properly transferring load to in-place construction.
- E. Connections: Connect automatic operators to building electrical system.
- F. Removable Gymnasium Equipment and Components: Assemble in place to verify that equipment and components are complete and in proper working order. Instruct Owner's designated personnel in properly handling, assembling, adjusting, disassembling, transporting, storing, and maintaining units. Disassemble removable gymnasium equipment after assembled configuration has been approved by Owner, and store units in location indicated on Drawings.

3.3 INSTALLATION, BASKETBALL BACKSTOPS

- A. Install folding basketball backstops in accordance with approved shop drawings and manufacturer's instructions.

1

Orcutt Union School District
Orcutt Academy HS MUR Building
Construction Documents

- B. Install backstops, backboards, and goals plumb, level, and rigid. Attach to roof framing with anchors of size and type recommended by manufacturer.
- C. Install backboards such that goal is 10 feet above court floor. After installing, verify that mounting height is correct.
- D. Install electrically-operated winches, hoisting cables, safety belt and lock securely to operate properly and smoothly to safely lower and raise folding backstops.

1

3.4 ADJUSTING

- A. Adjust movable components of gymnasium equipment to operate safely, smoothly, easily, and quietly, free from binding, warp, distortion, nonalignment, misplacement, disruption, or malfunction, throughout entire operational range. Lubricate hardware and moving parts.

3.5 FIELD QUALITY CONTROL

- A. Operate each folding basketball backstop a minimum of three times to ensure proper lifting and lowering. Adjust as required to ensure smooth operation and accurate positioning.
- B. Operate each backboard and goal height adjuster to ensure proper movement. Adjust limit switches and mechanism as required to ensure smooth operation and accurate positioning.

1

3.6 CLEANING

- A. After completing gymnasium equipment installation, inspect components. Remove spots, dirt, and debris and touch up damaged shop-applied finishes according to manufacturer's written instructions.
- B. Replace gymnasium equipment and finishes that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion.

3.7 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain gymnasium equipment.
- B. Submit operation and maintenance manuals in accordance with Section 01 77 00 Closeout Procedure

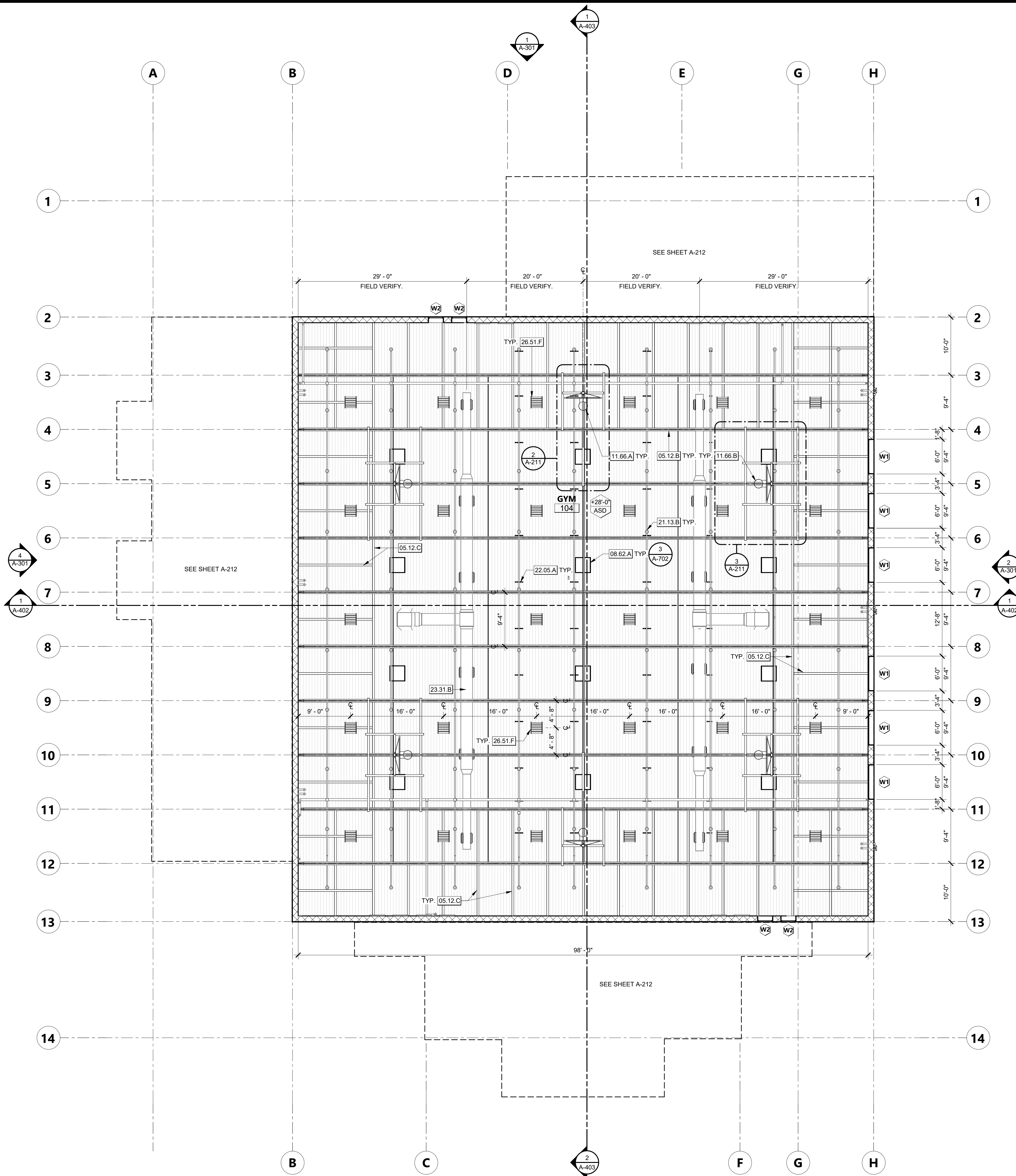
END OF SECTION 11491

Orcutt Union School District
Orcutt Academy HS MUR Building
Construction Documents

Project #20179.01

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KEYNOTES

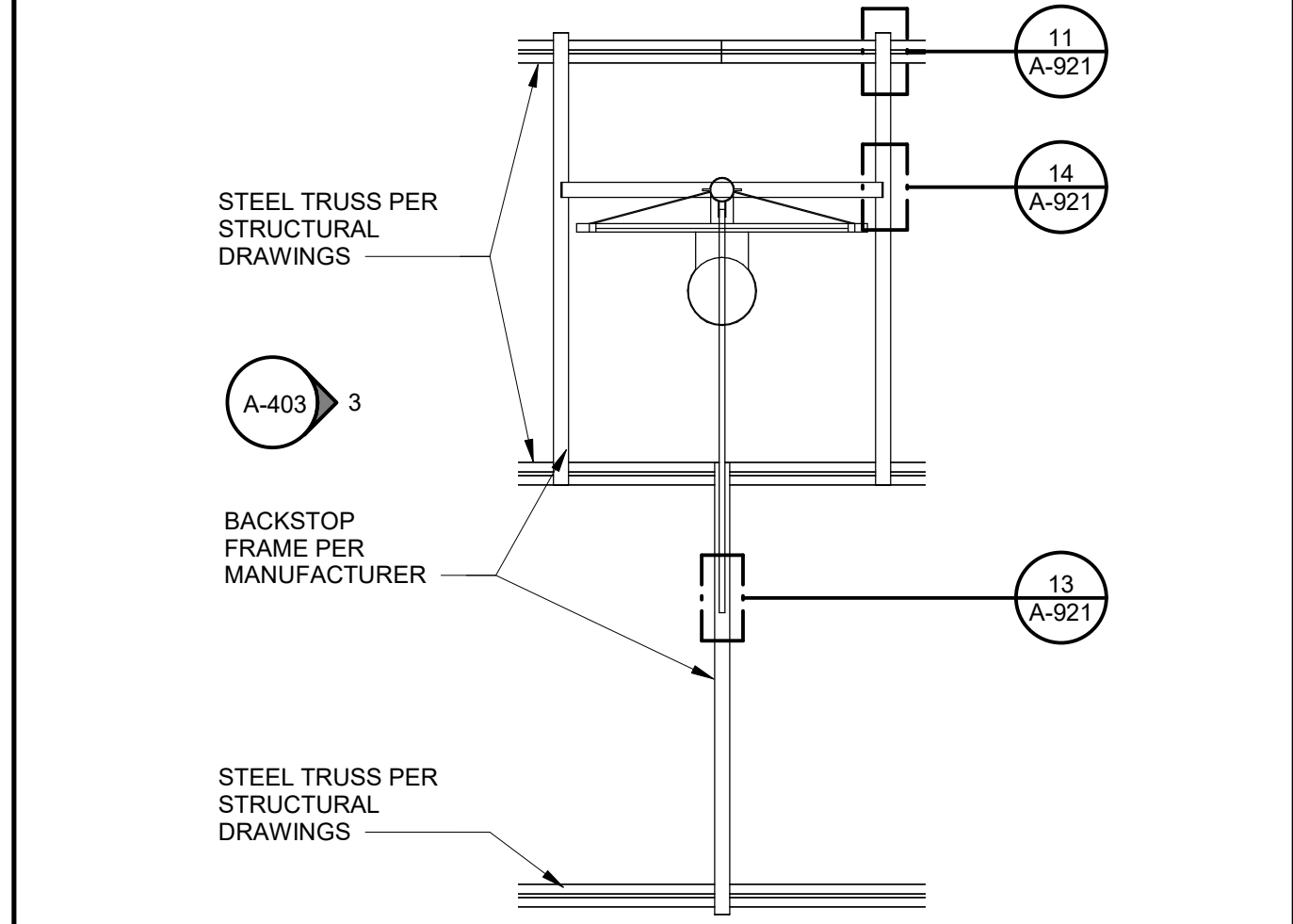
- 05.12.B STRUCTURAL STEEL TRUSS PER STRUCTURAL DRAWINGS
- 05.12.C JOISTS PER STRUCTURAL DRAWINGS
- 08.62.A SKYLIGHTS, 36" X 36", CENTERED BETWEEN ROOF TRUSS. GLAZING TO BE SAFETY GLASS.
- 11.66.A CENTER COURT FORWARD-FOLDING BASKETBALL BACKSTOP.
- 11.66.B SIDE COURT FORWARD-FOLDING BASKETBALL BACKSTOP, CENTERED AT ROOF TRUSS.
- 21.13.B FIRE SPRINKLER HEAD PER FIRE SUPPRESSION DRAWINGS
- 22.05.A HANGER/SUPPORT FOR FIRE SPRINKLER SYSTEM PIPING PER FIRE SUPPRESSION DRAWINGS
- 23.31.B EXPOSED MECHANICAL DUCT PER MECHANICAL DRAWINGS, PAINTED
- 26.51.F HIGH BAY LIGHTING, CENTERED BETWEEN ROOF TRUSS. REFER TO ELECTRICAL DRAWINGS.

CEILING LEGEND

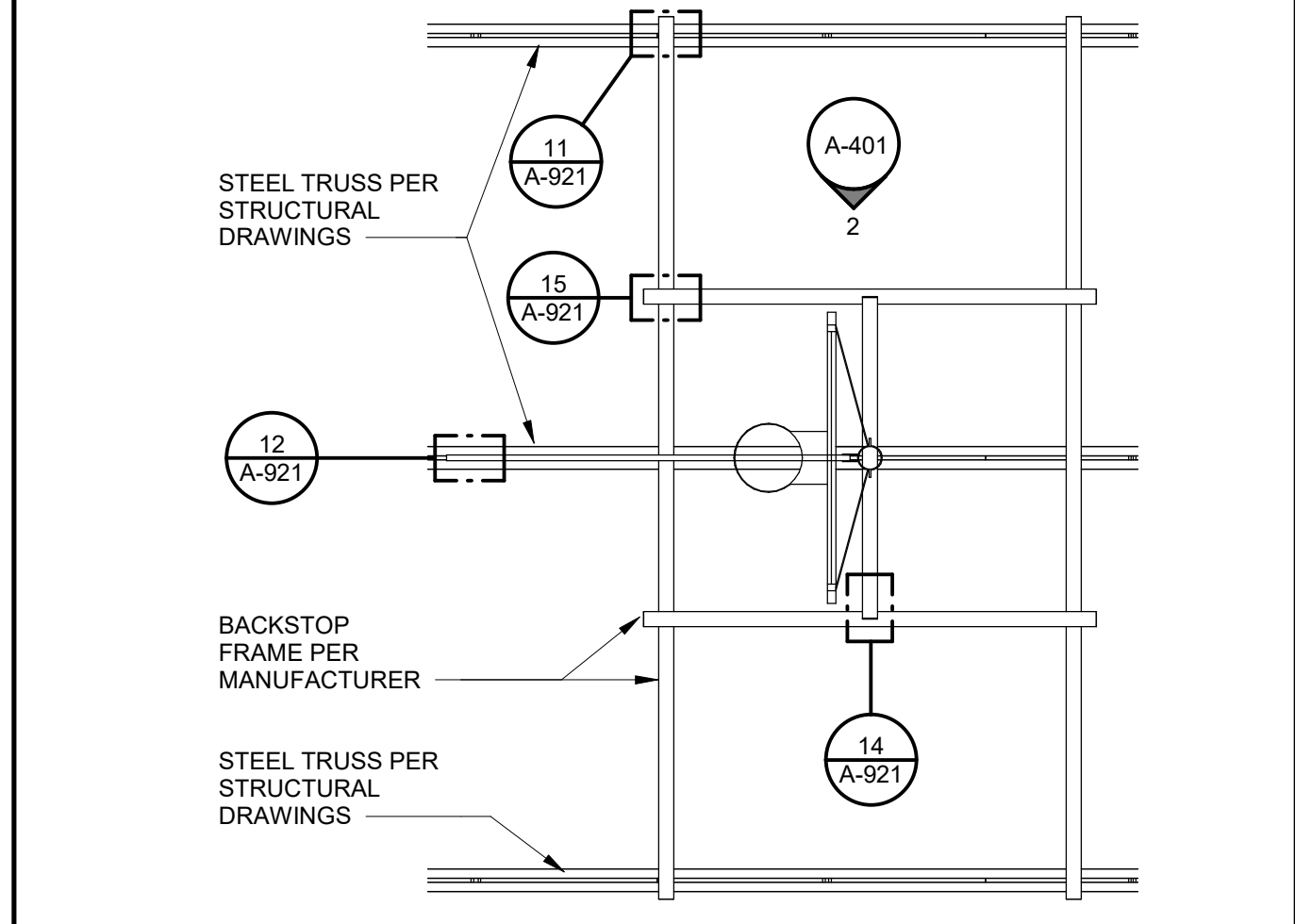
- CEILING HEIGHT ABOVE FIN. FLOOR
- CEILING MATERIAL. REFER TO A-251 FOR FINISHES.
- WINDOW TYPE TAG, SEE A-801
- ACOUSTICAL STEEL DECK, FACTORY PAINTED FINISHED.
- HIGH BAY LIGHTING
- SKYLIGHTS
- FIRE SPRINKLERS. SEE FIRE PROTECTION DRAWINGS.

CEILING PLAN GENERAL NOTES

1. ANY EXPOSED DUCTS, PIPES, CONDUITS AND BACK BOXES TO BE PAINTED.
2. ANY EXPOSED STEEL TO BE PAINTED.
3. NOT USED.
4. SYMBOLS SHOWN FOR LOCATION PURPOSES ONLY. SEE MECHANICAL, ELECTRICAL, & FIRE PROTECTION DRAWINGS FOR DETAILED INFORMATION.



CEILING PLAN - CENTER BACKSTOPS 1/4" = 1'-0" 2



CEILING PLAN - SIDE BACKSTOPS 1/4" = 1'-0" 3

AGENCY APPROVAL DSAE 03-121912



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2	05-06-2022	Addendum 3

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SHEET TITLE
REFLECTED CEILING PLAN AT GYM

DRAWN BY: FC, HC JOB NUMBER: 20179.01

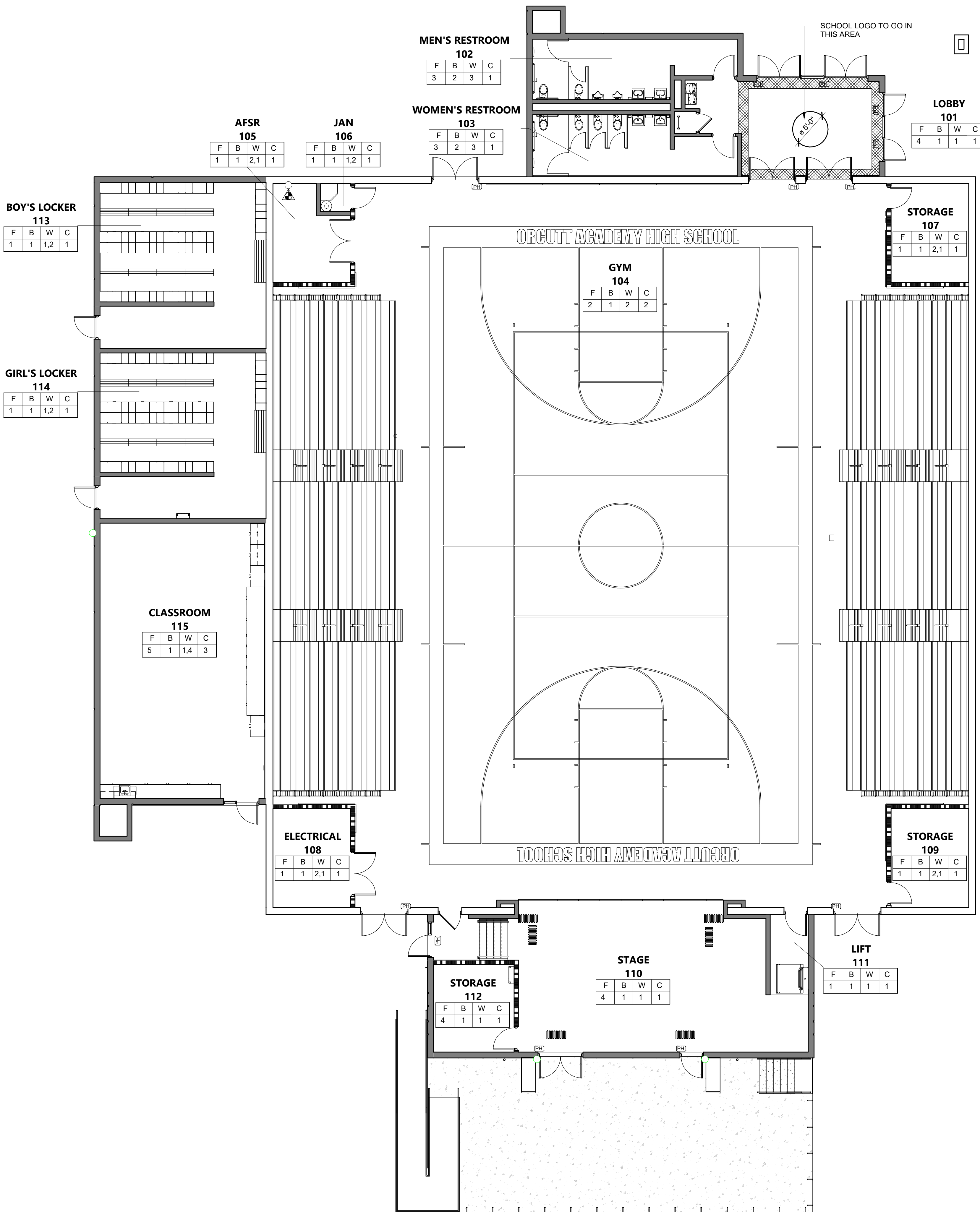
SHEET NO.
A-211

DATE: APRIL 5, 2022

CEILING PLAN 1/8" = 1'-0" 1



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FINISH PLAN 1/8" = 1'-0" 1

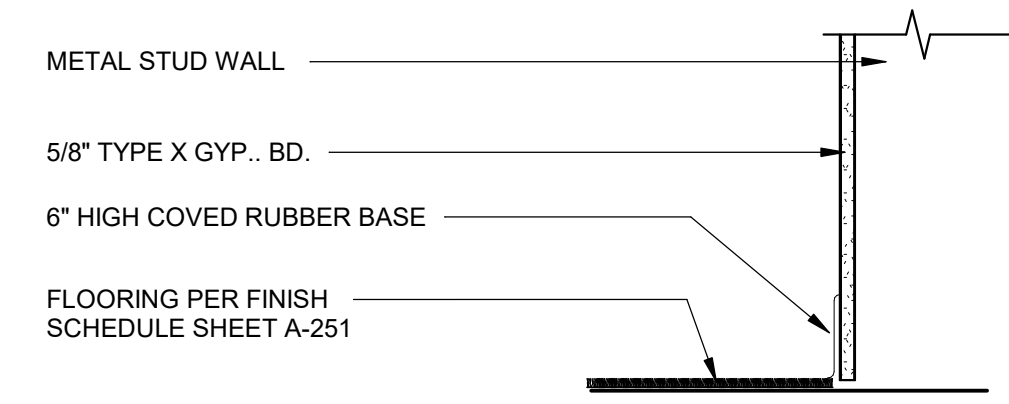
FLOOR FINISHES (F)						
(F)	DESCRIPTION	MANUFACTURER	PRODUCT STYLE	COLOR	SPECIFICATION SECTION	REMARKS
1	SEALED CONCRETE					
2	FLOATING SPORTS WOOD FLOOR	CONNOR SPORTS FLOORING	FLOATING WOOD FLOOR	MAPLE #2	096420	ALLIANCE FLOORING SYSTEM
3	CERAMIC TILE		CERAMIC TILE			
4	VINYL FLOORING		VINYL			LOBBY VINYL - HATCHED AREA TO BE ARMSTRONG VINYL COLOR GENTIAN BLUE (51946)-STANDARD EXCELRON IMPERIAL TEXTURE. LIGHTER AREA TO BE ARMSTRONG VINYL COLOR SOFT WARM GRAY (51801)-STANDARD EXCELRON IMPERIAL TEXTURE. STAGE VINYL WILL BE MARMOLEUM COLOR WALTON 123 BLACK
5	CARPET					

BASE FINISHES (B)						
(B)	DESCRIPTION	MANUFACTURER	PRODUCT STYLE	COLOR	SPECIFICATION SECTION	REMARKS
1	6" RUBBER COVERED BASE					
2	CERAMIC TILE					
3						
4						

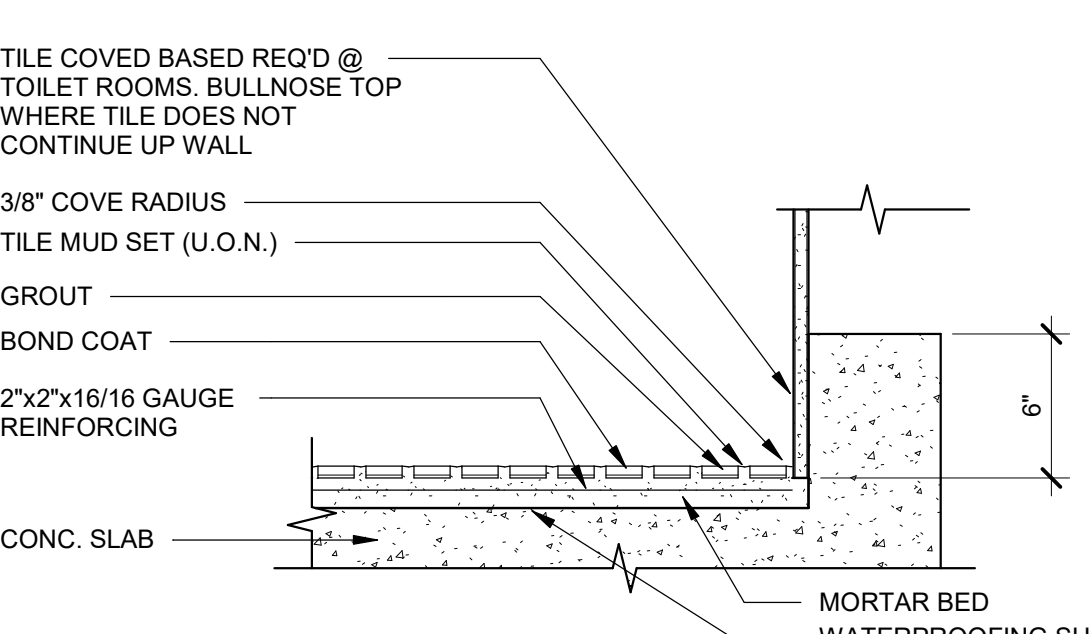
WALL FINISHES (W)						
(W)	DESCRIPTION	MANUFACTURER	PRODUCT STYLE	COLOR	SPECIFICATION SECTION	REMARKS
1	GYP BOARD, SMOOTH FINISH, PAINTED					
2	CMU, PRECISION, PAINTED (INTERIOR); SPLIT-FACED (EXTERIOR)	AIRVOL BLOCK	PRECISION FACED FOR INTERIOR, SPLIT FACED FOR EXTERIOR	MW 04B407A		
3	CERAMIC TILE					
4	TACKBOARD					

CEILING FINISHES (C)						
(C)	DESCRIPTION	MANUFACTURER	PRODUCT STYLE	COLOR	SPECIFICATION SECTION	REMARKS
1	PAINTED GYP BOARD (GYP)					
2	ACOUSTICAL STEEL DECK (ASD)					
3	ACOUSTICAL CEILING TILE (ACT)					FACTORY PAINTED/FINISHED, COLOR TBD.

FINISH PLAN GENERAL NOTES						
1.	CONTRACTOR RESPONSIBLE FOR FIELD VERIFYING MATERIAL DIMENSIONS AT EACH PARTITION IN THE FIELD AS RELATED TO THE OVERALL FINAL PARTITION DIMENSION, PRIOR TO DOOR AND WINDOW SUBMITTALS.					
2.	FOR MATERIAL FINISHES AND LOCATION OF FINISHES, REFER TO FINISH PLAN, INTERIOR ELEVATIONS AND FINISH SCHEDULE.					
3.	SPECIFICATIONS SHALL SUPERCEDE DIMENSIONS IN THIS DETAIL AS NECESSARY; CONTRACTOR TO VERIFY.					



RUBBER BASE A



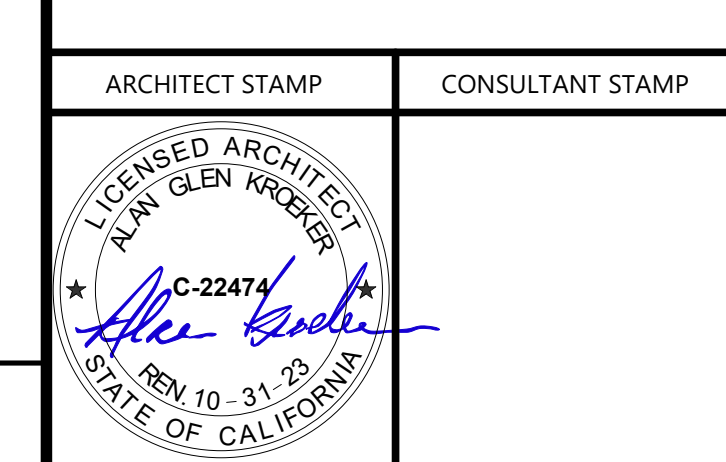
COVERED TILE BASE @ TOILET ROOMS B

FLOOR BASES 1/2" = 1'-0" 2

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SHEET TITLE
FINISH PLAN

DRAWN BY: Author JOB NUMBER: 20179.01
SHEET NO.

A-251
DATE: APRIL 5, 2022

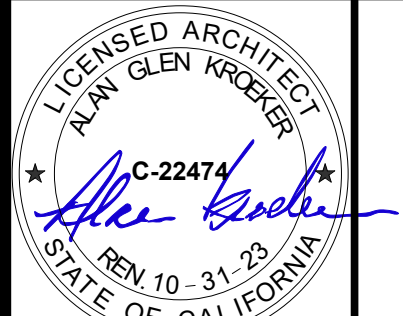


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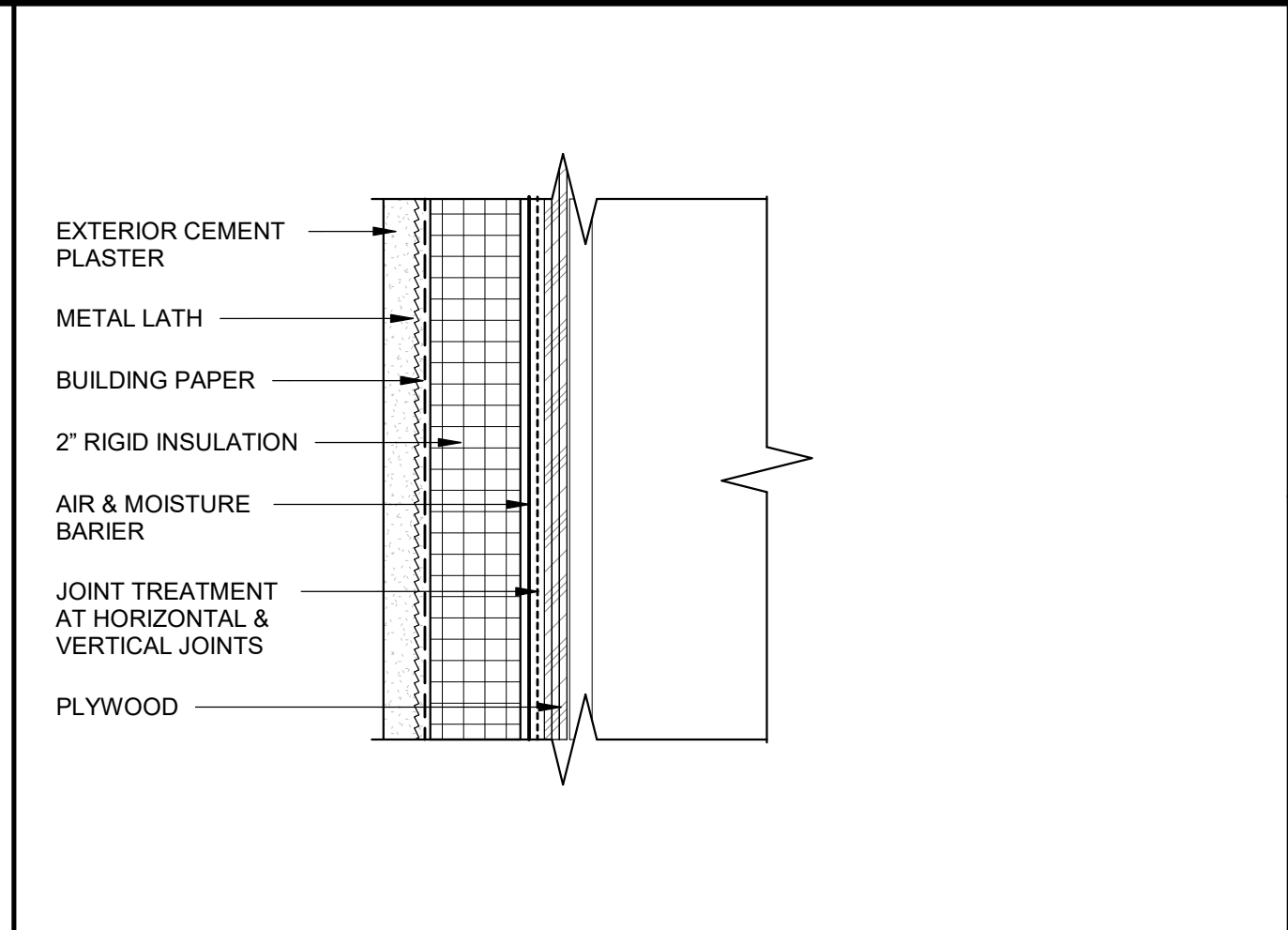
ORCUTT ACADEMY HS MUR BUILDING
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SHEET TITLE
EXTERIOR DETAILS

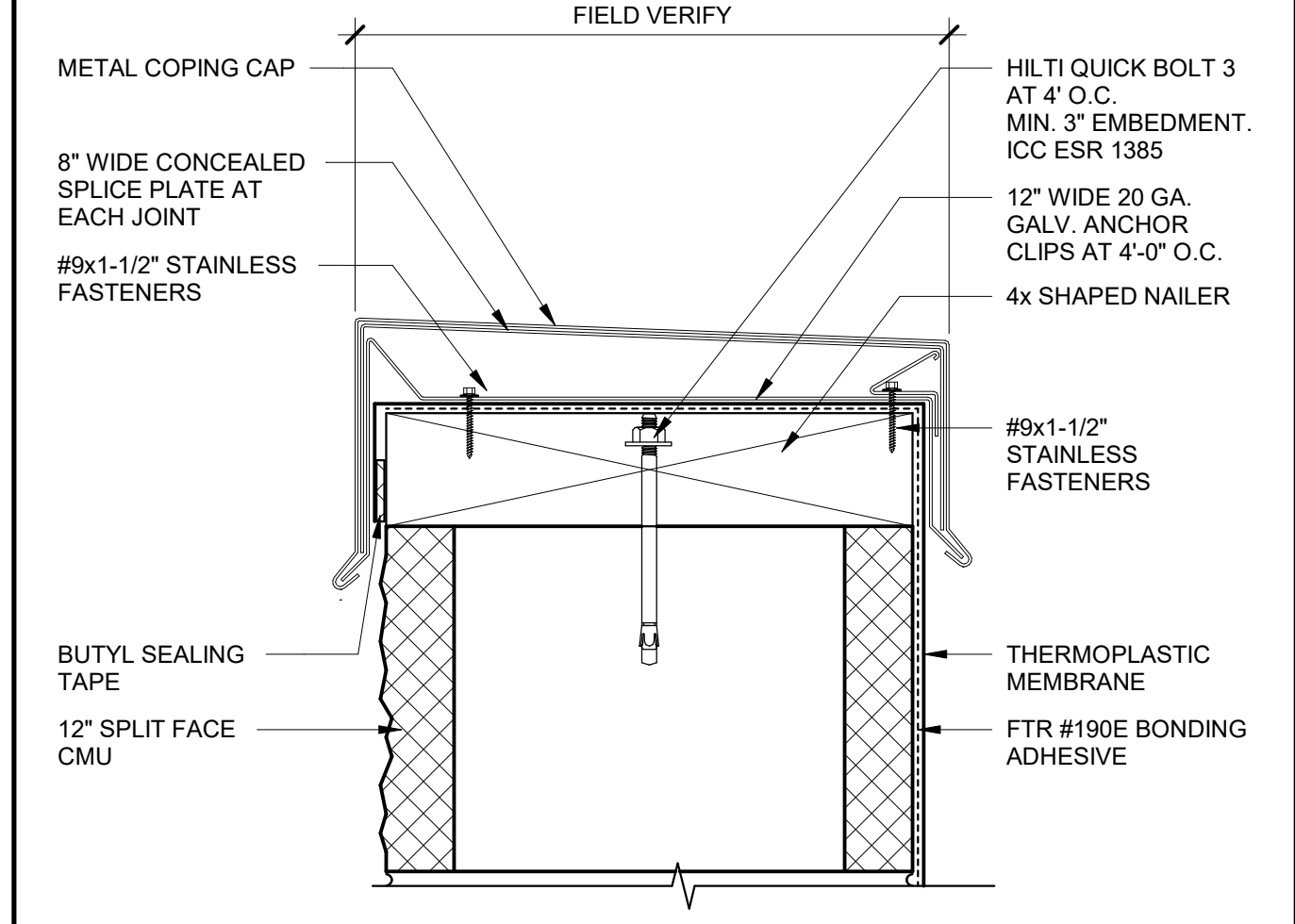
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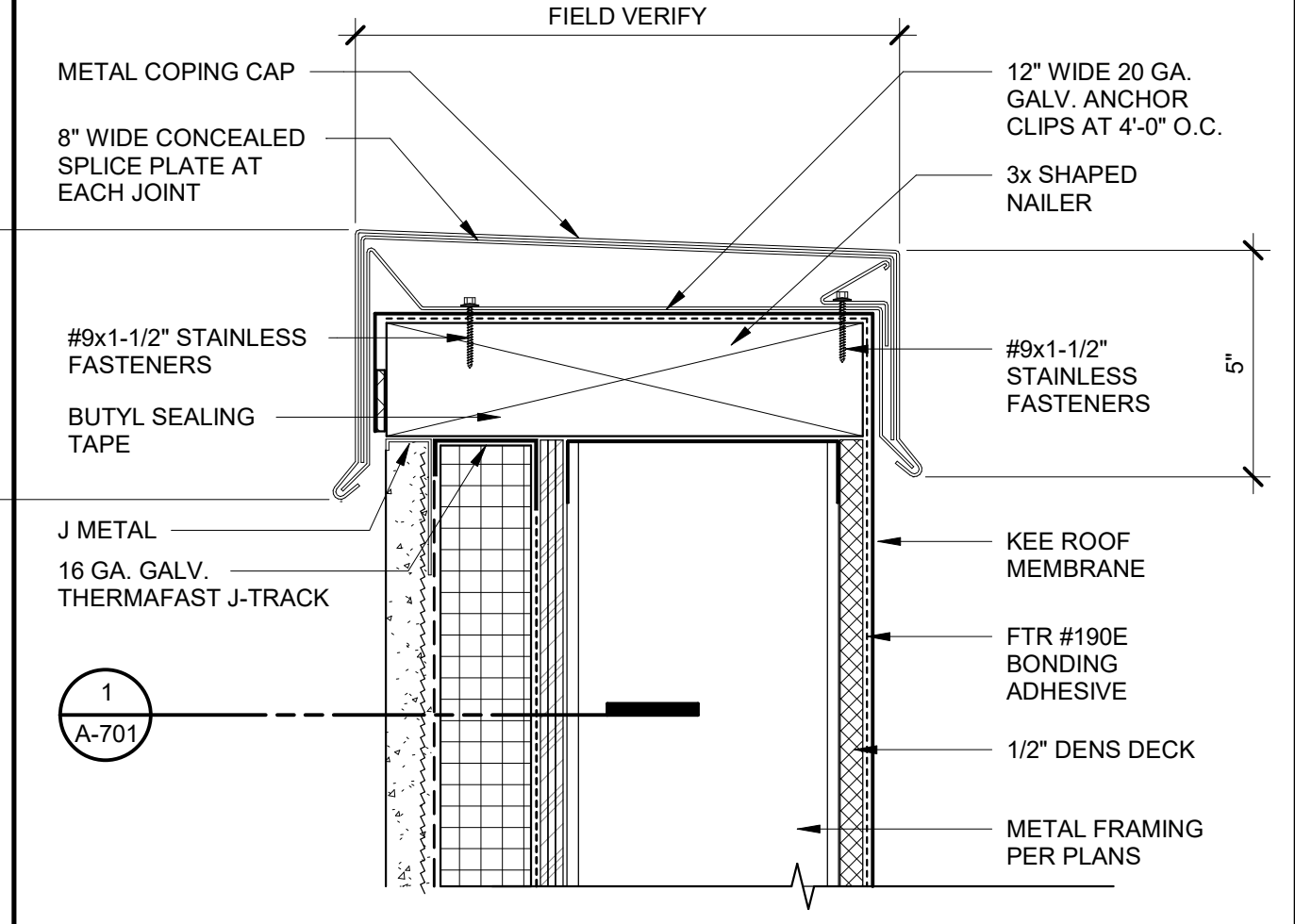
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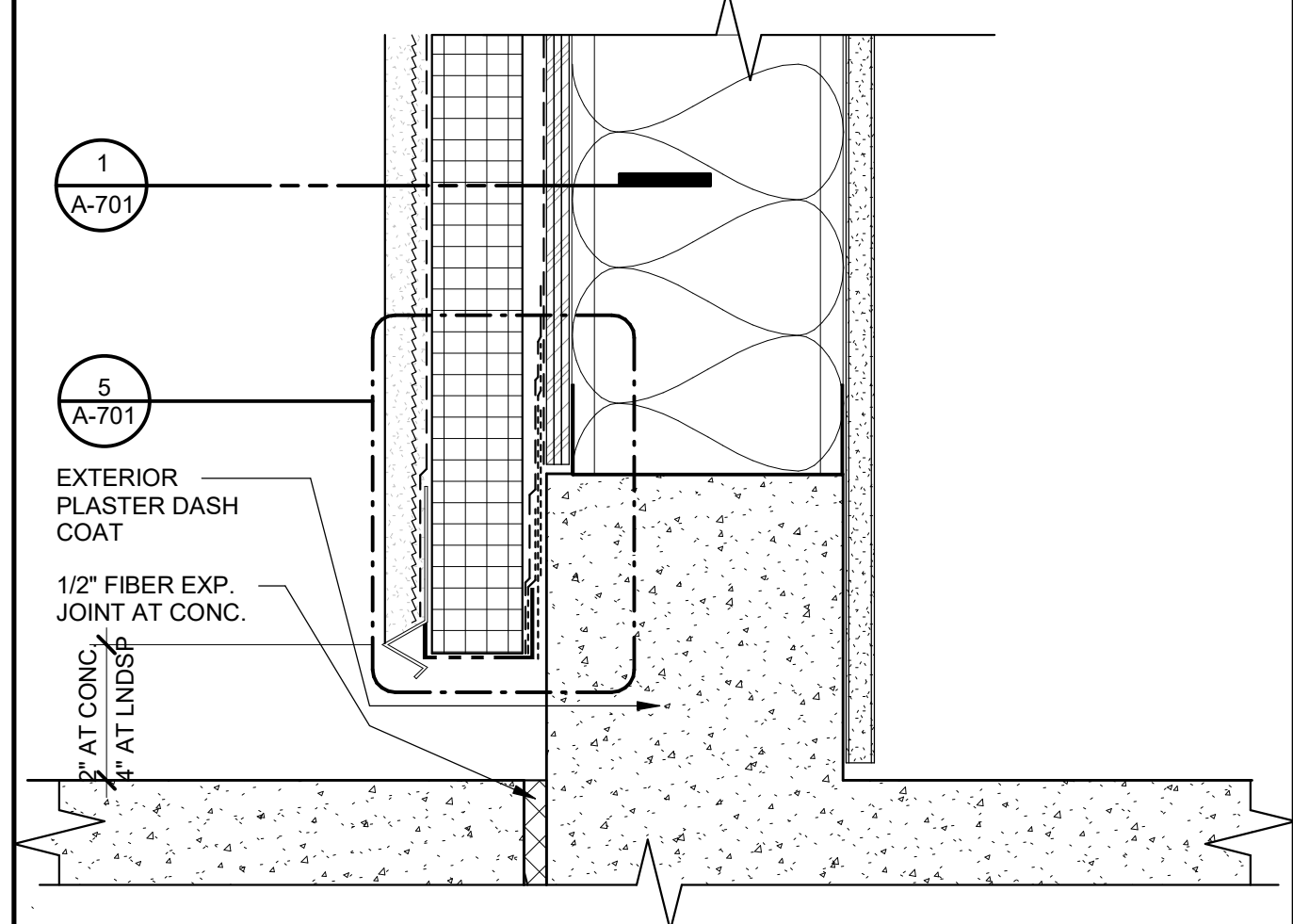
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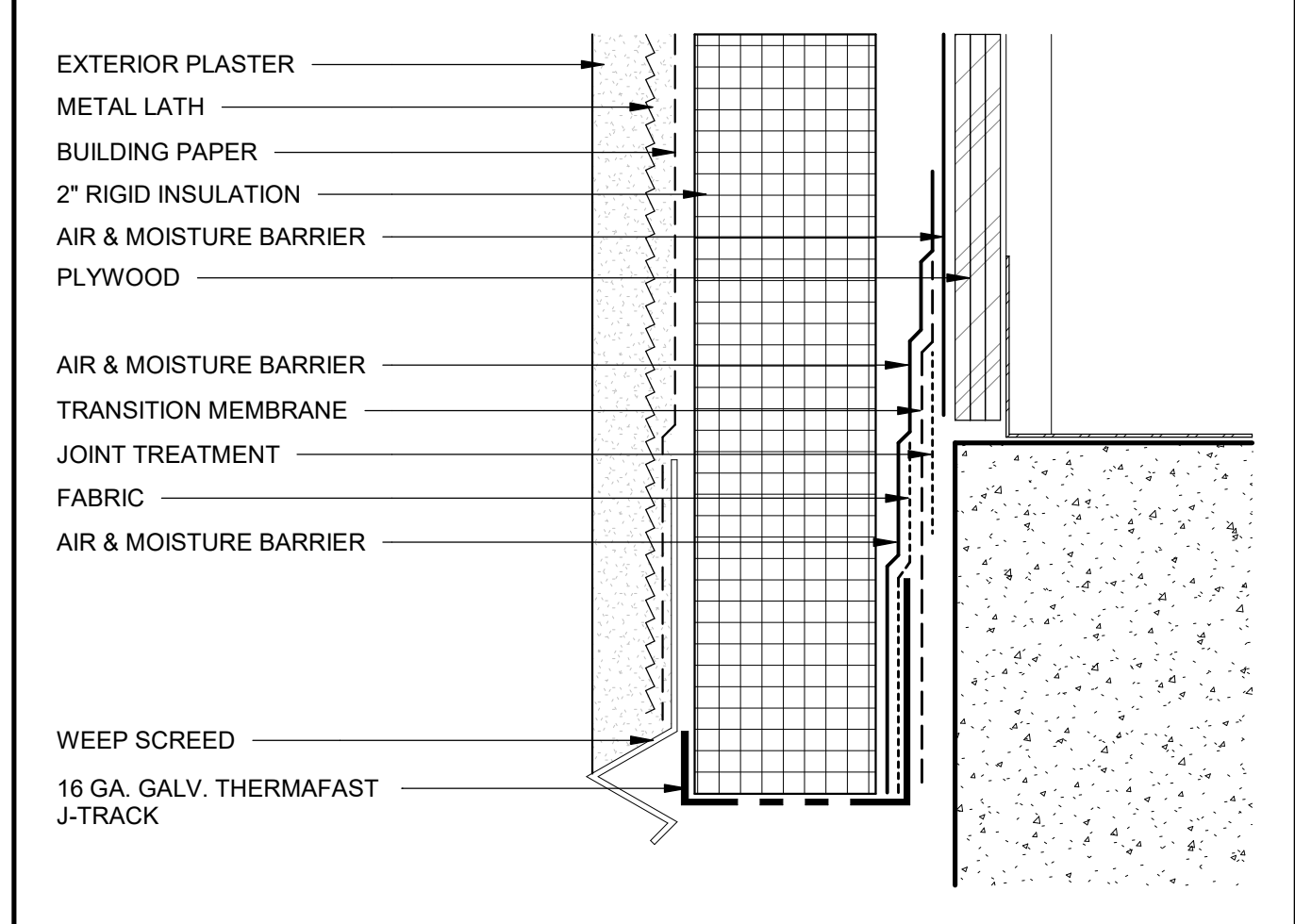
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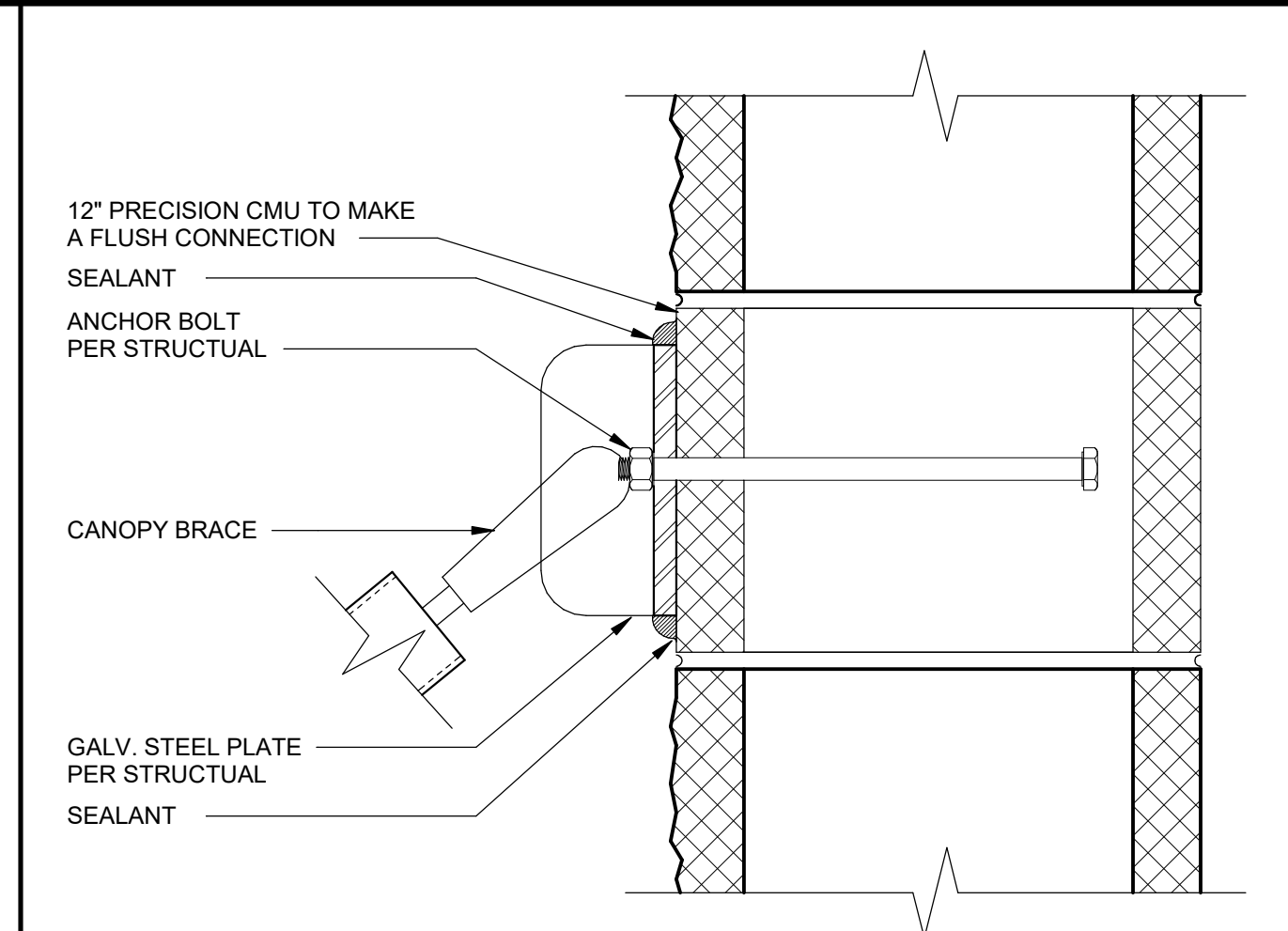
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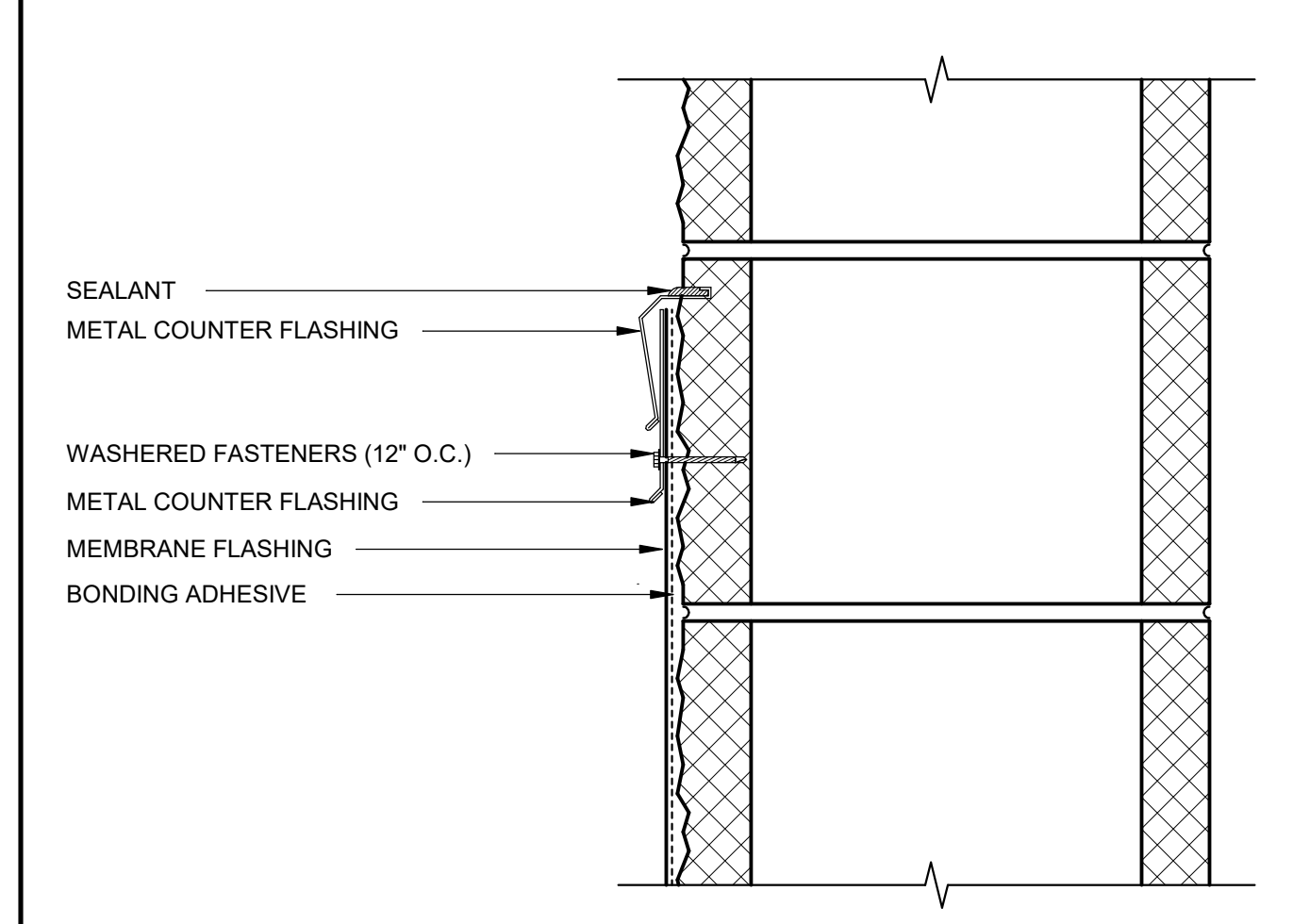
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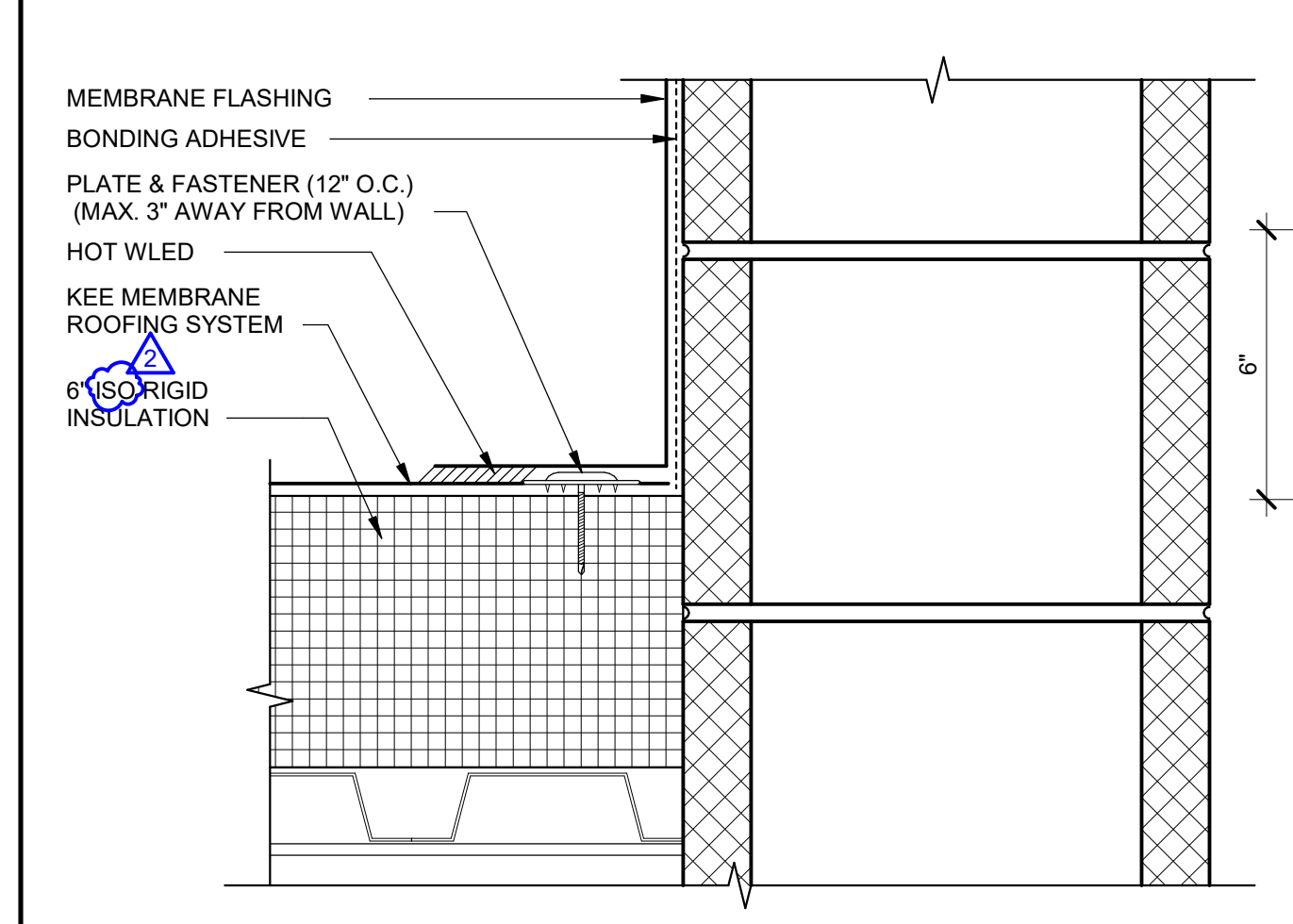
EXTERIOR PLASTER SILL 6" = 1'-0" 5



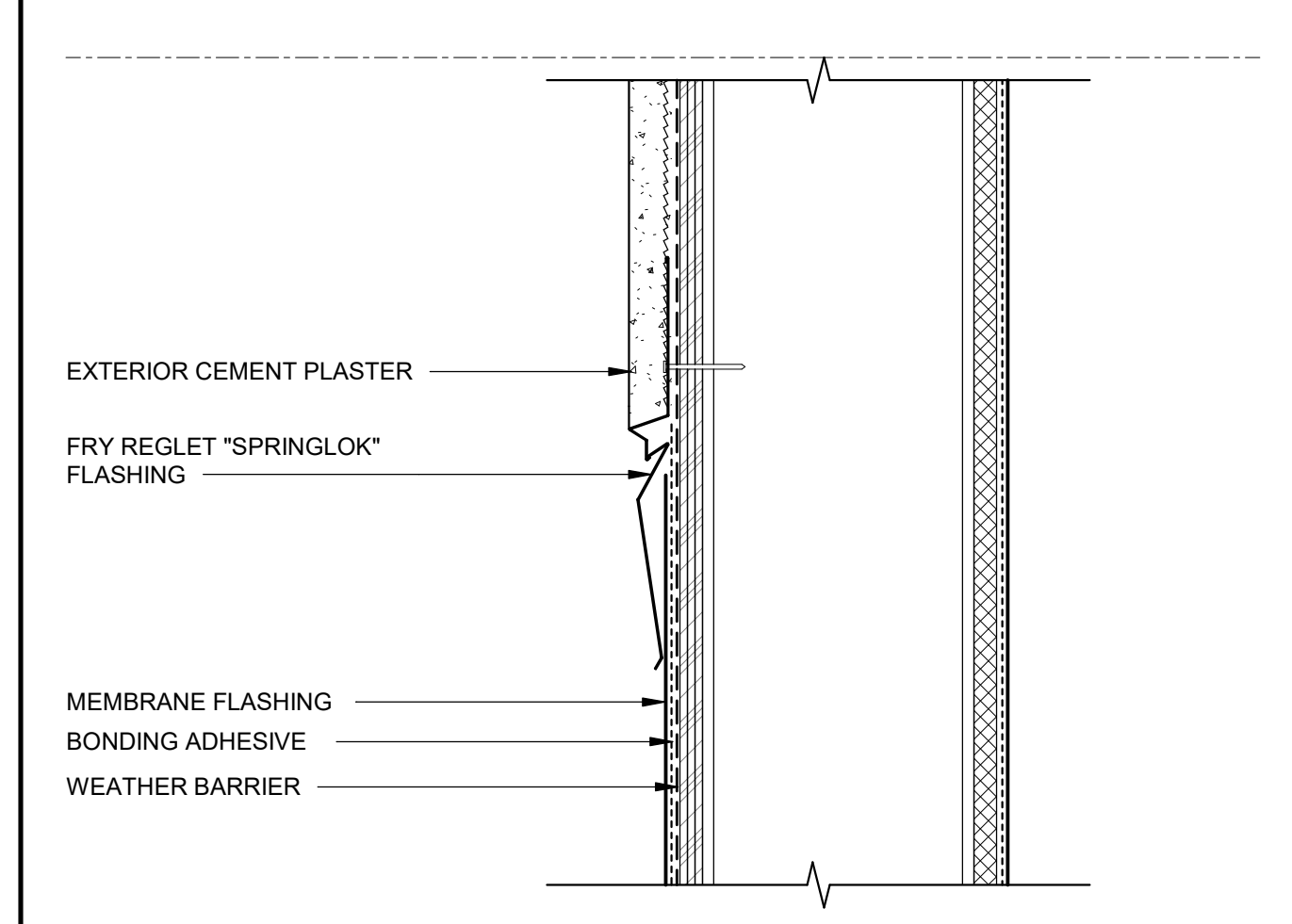
BRACE AT CMU WALL 3" = 1'-0" 6



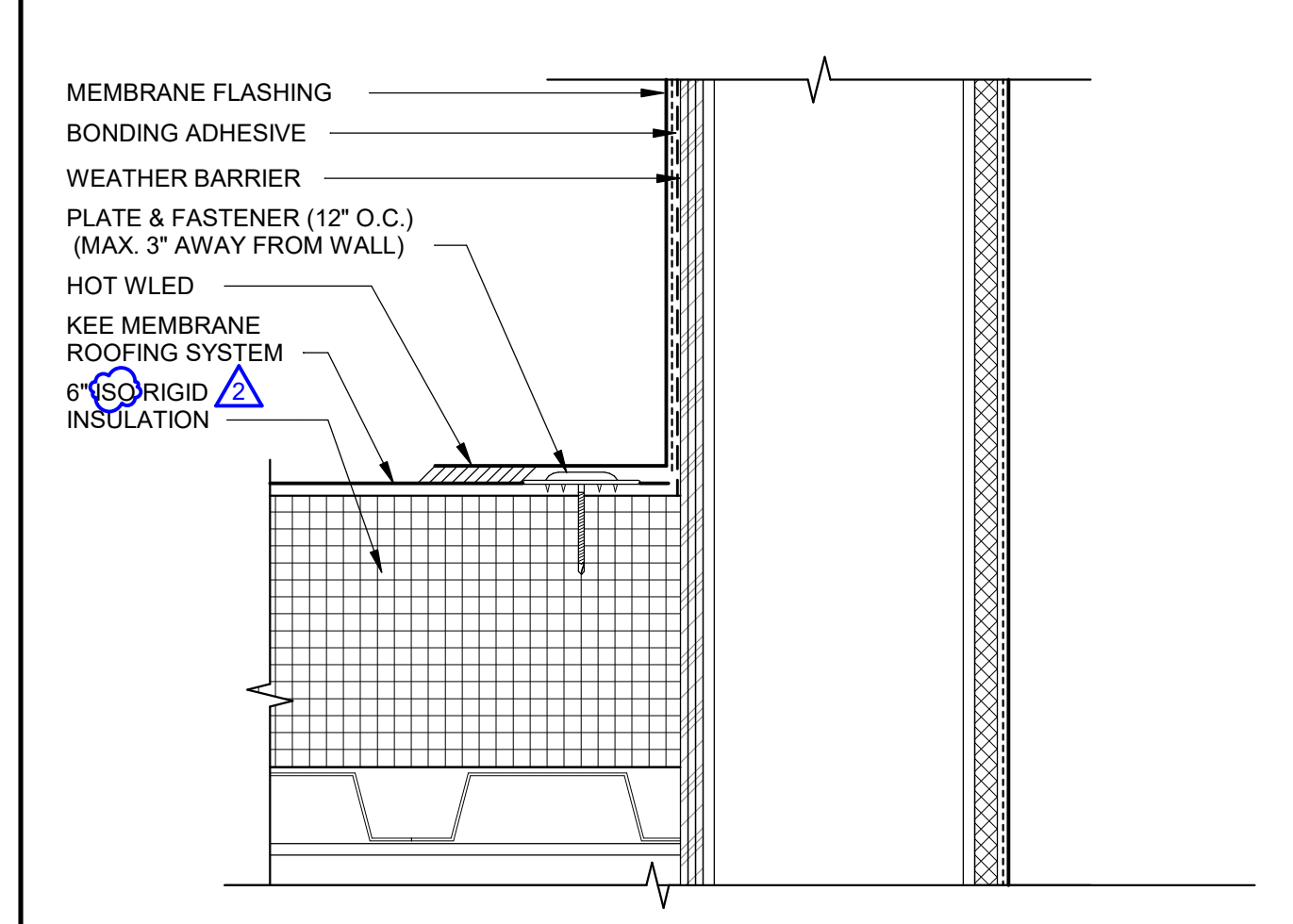
WALL TO ROOF AT CMU 3" = 1'-0" 7



WALL TO ROOF AT CMU BASE 3" = 1'-0" 8



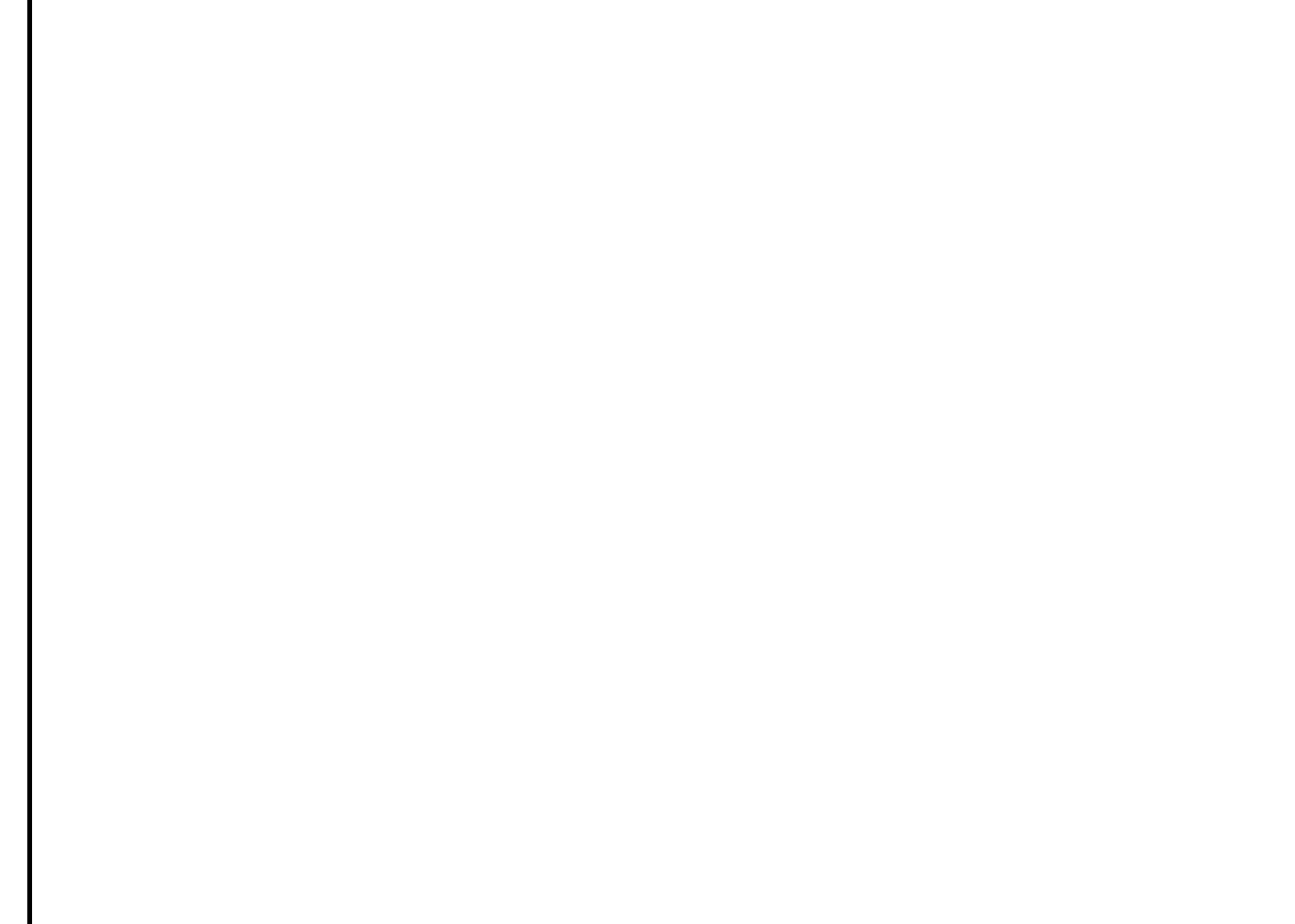
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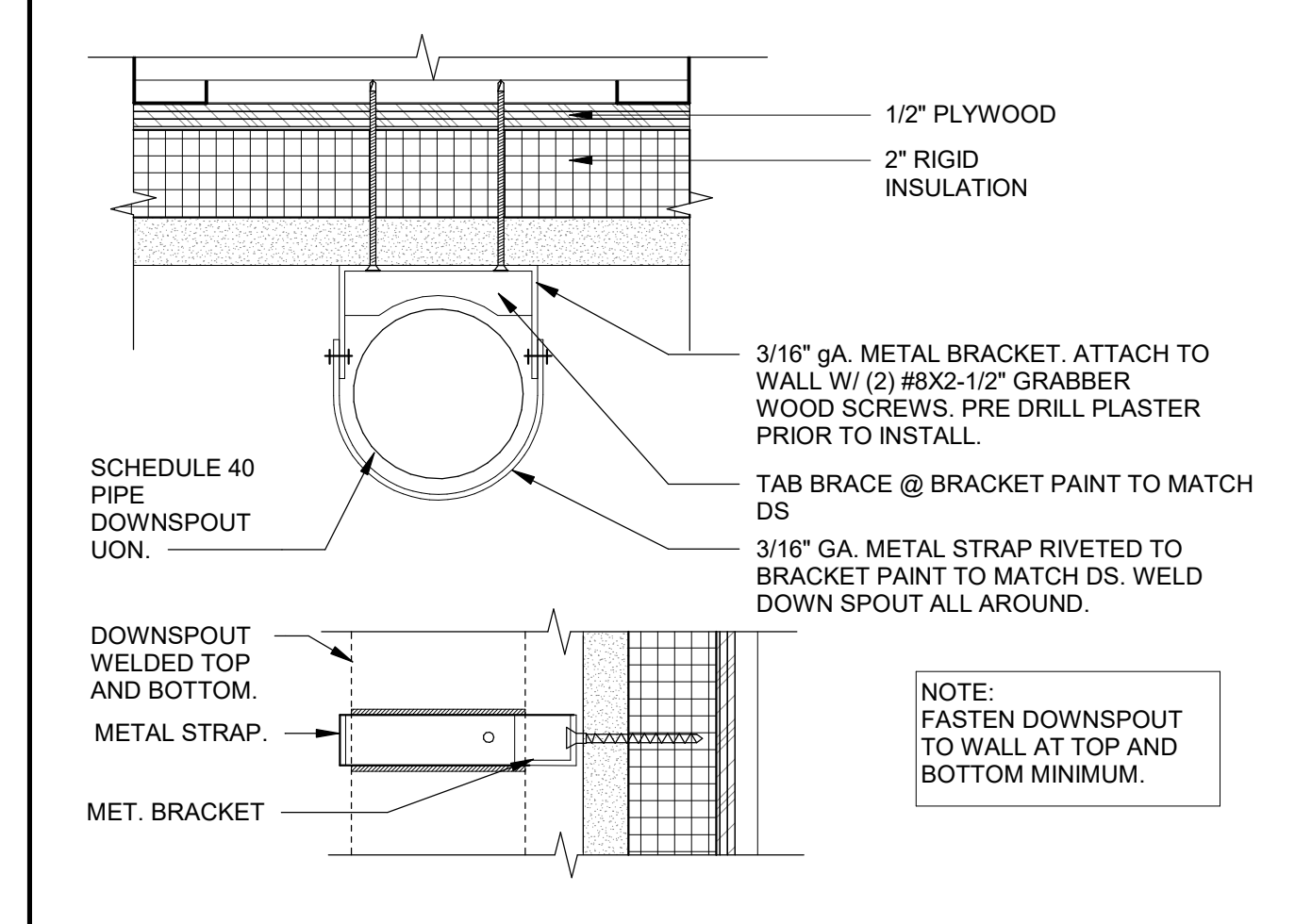
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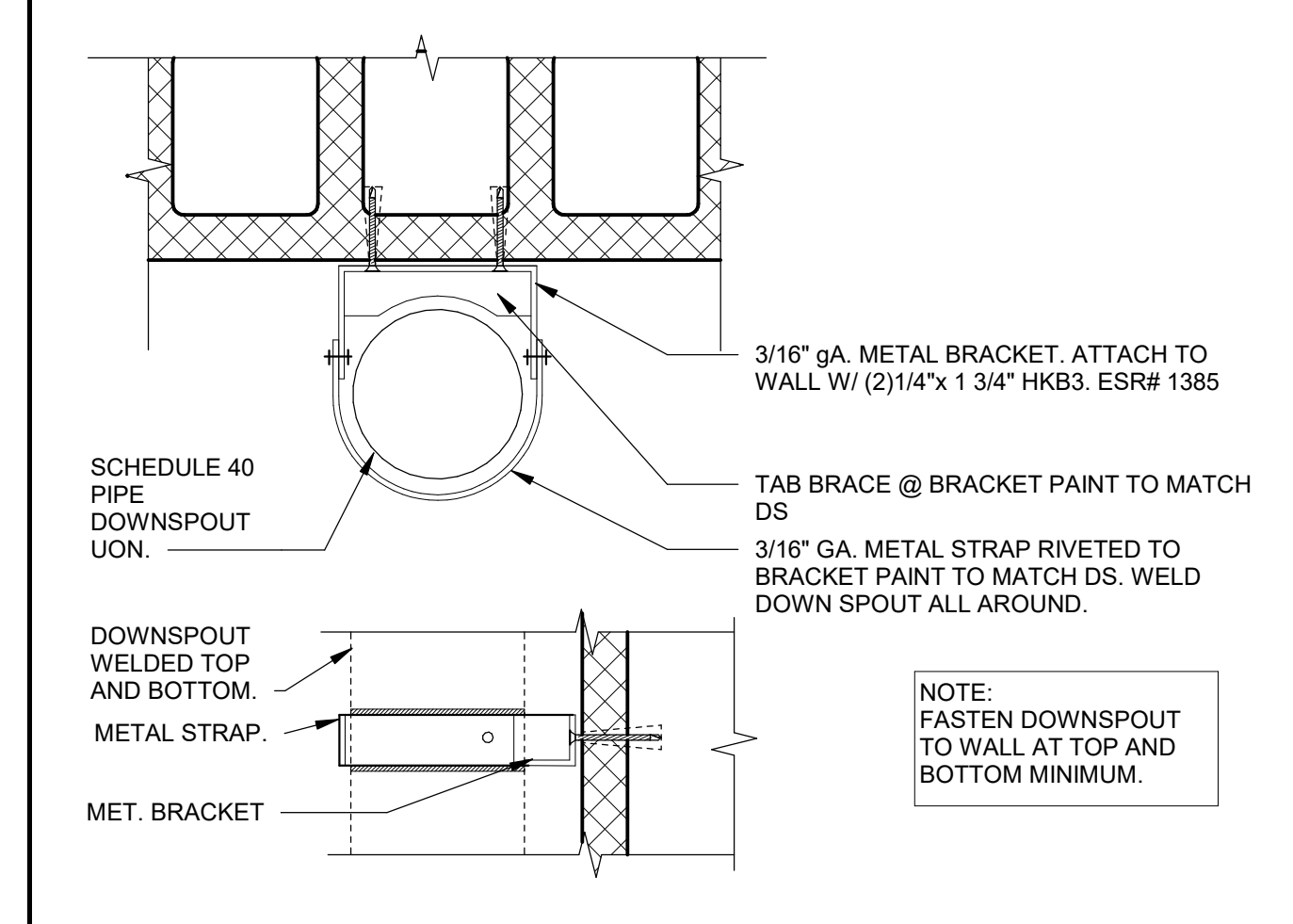
OVERFLOW MTL. 3" = 1'-0" 18



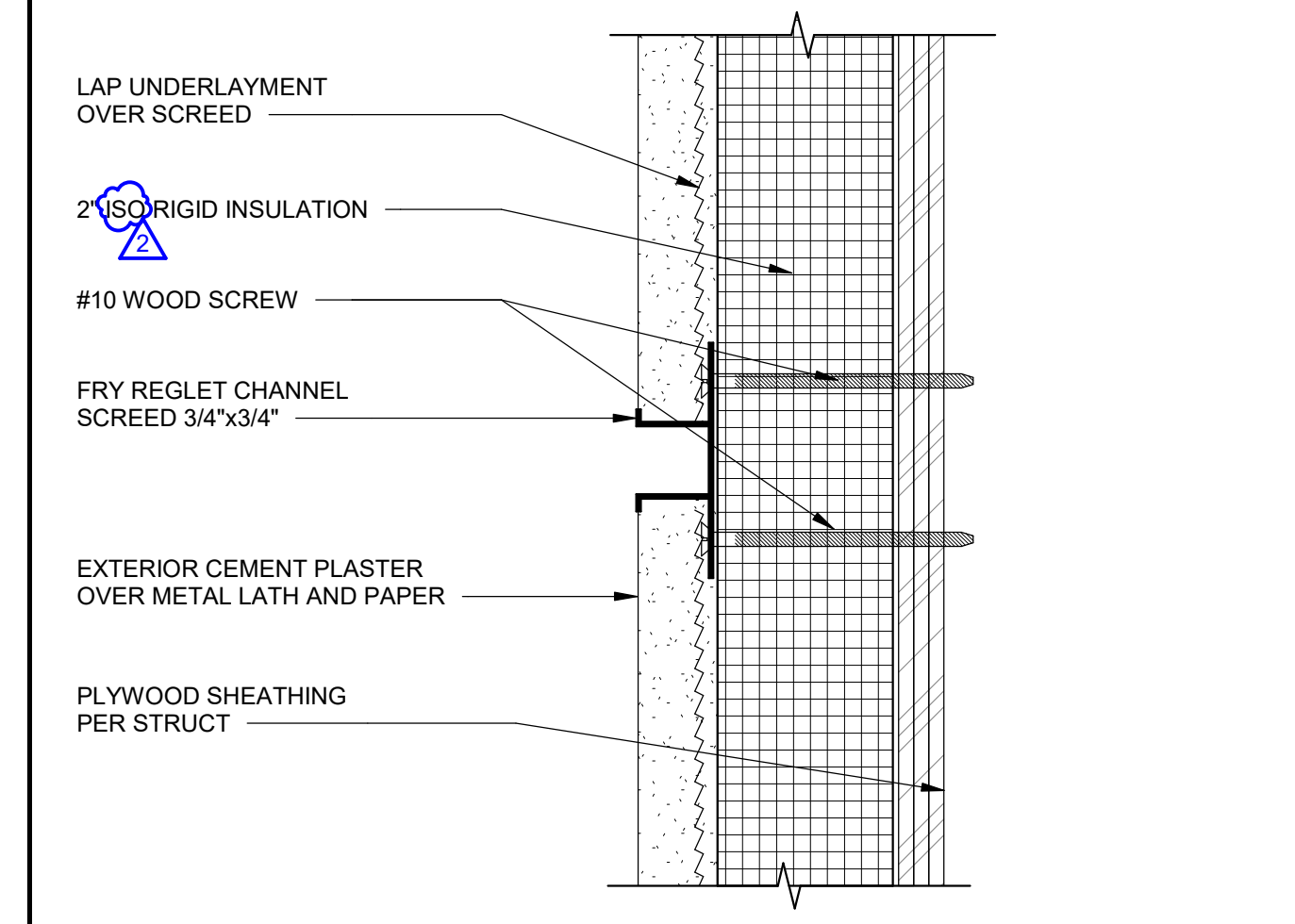
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OVERFLOW CMU 3" = 1'-0" 19



DOWNSPOUT @ CMU WALL 3" = 1'-0" 14



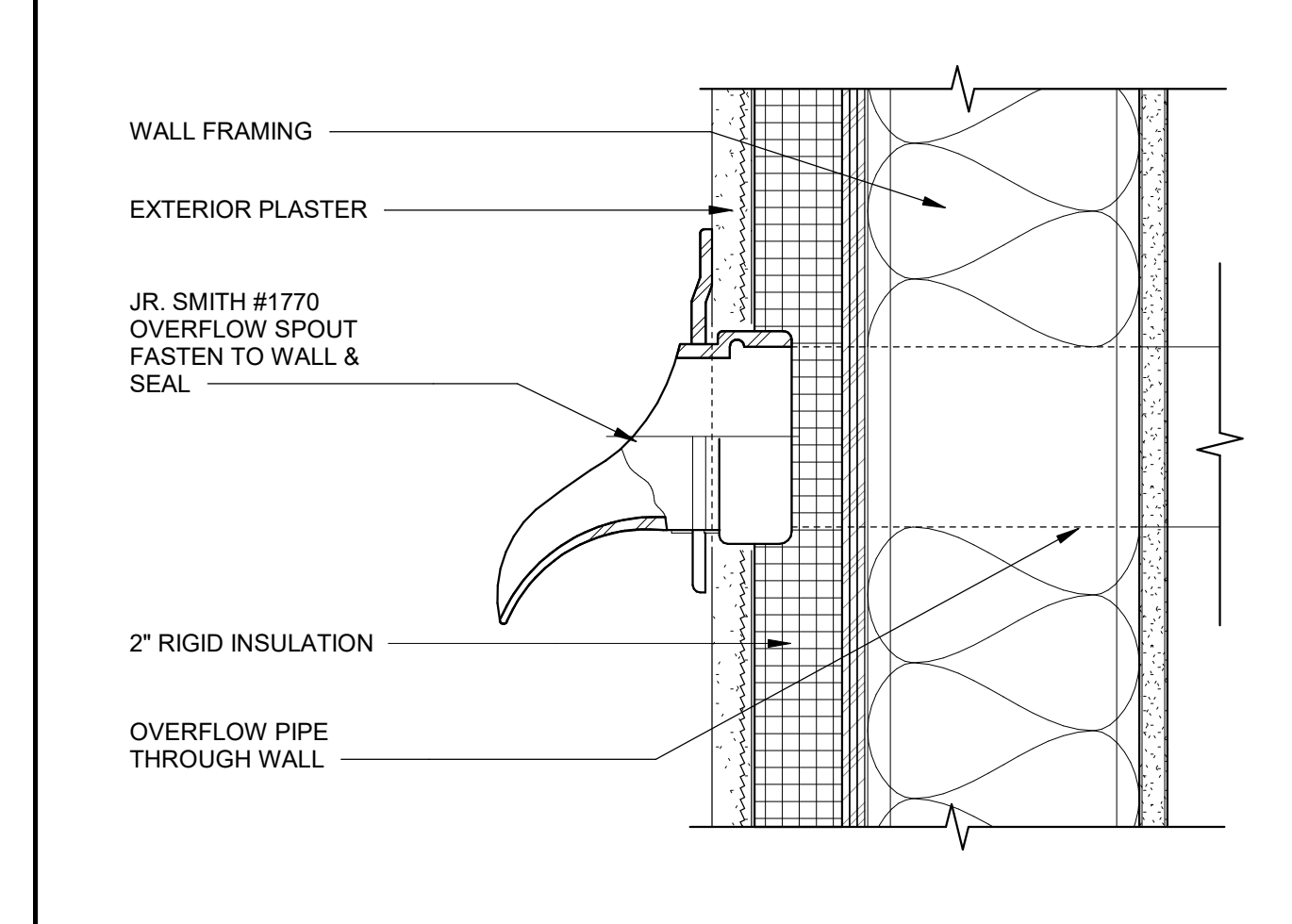
EXTERIOR PLASTER REVEAL MTL. 6" = 1'-0" 15



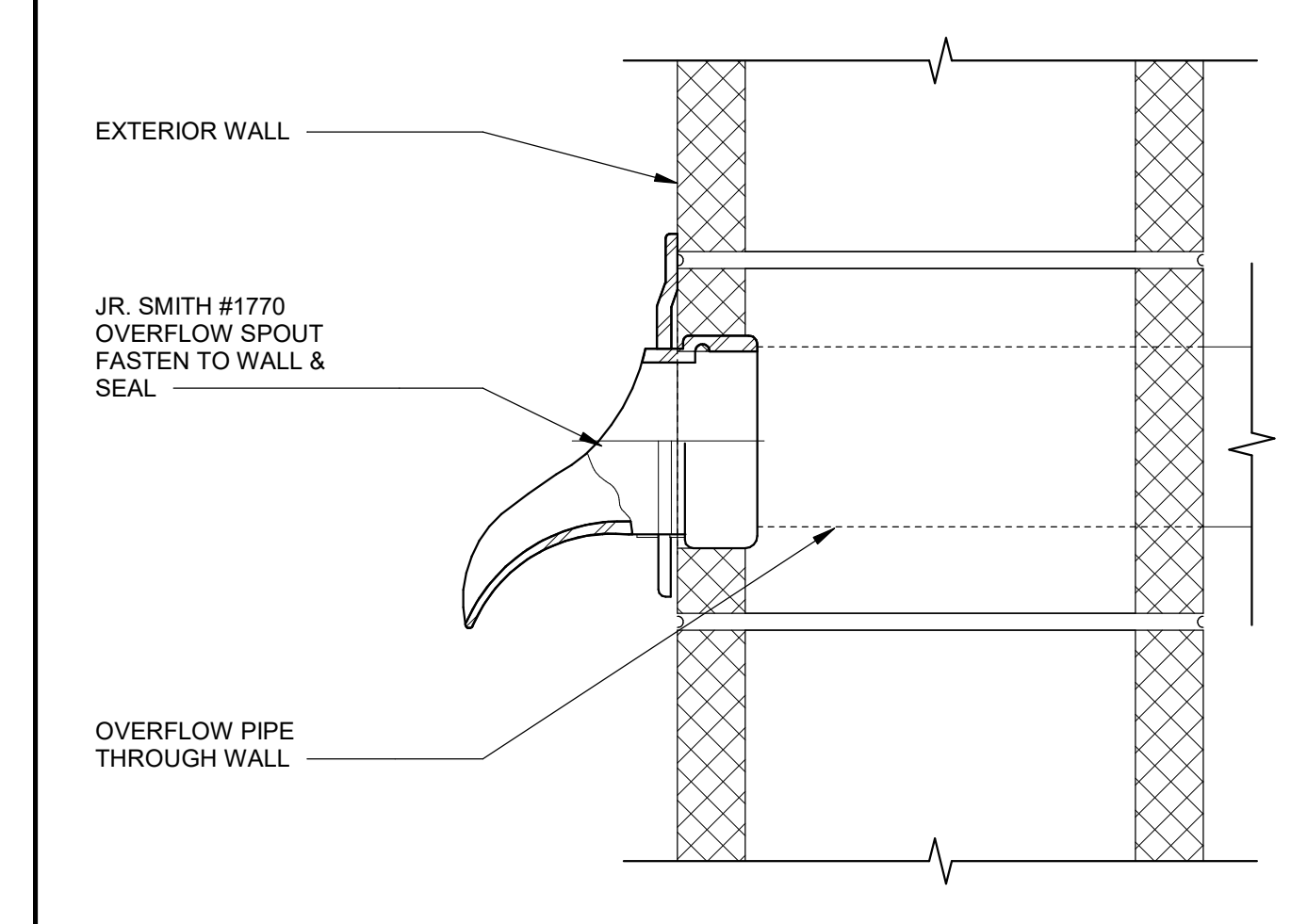
COPING & FLASHING @ PILASTER 1 1/2" = 1'-0" 21



OVERFLOW MTL. 1 1/2" = 1'-0" 21



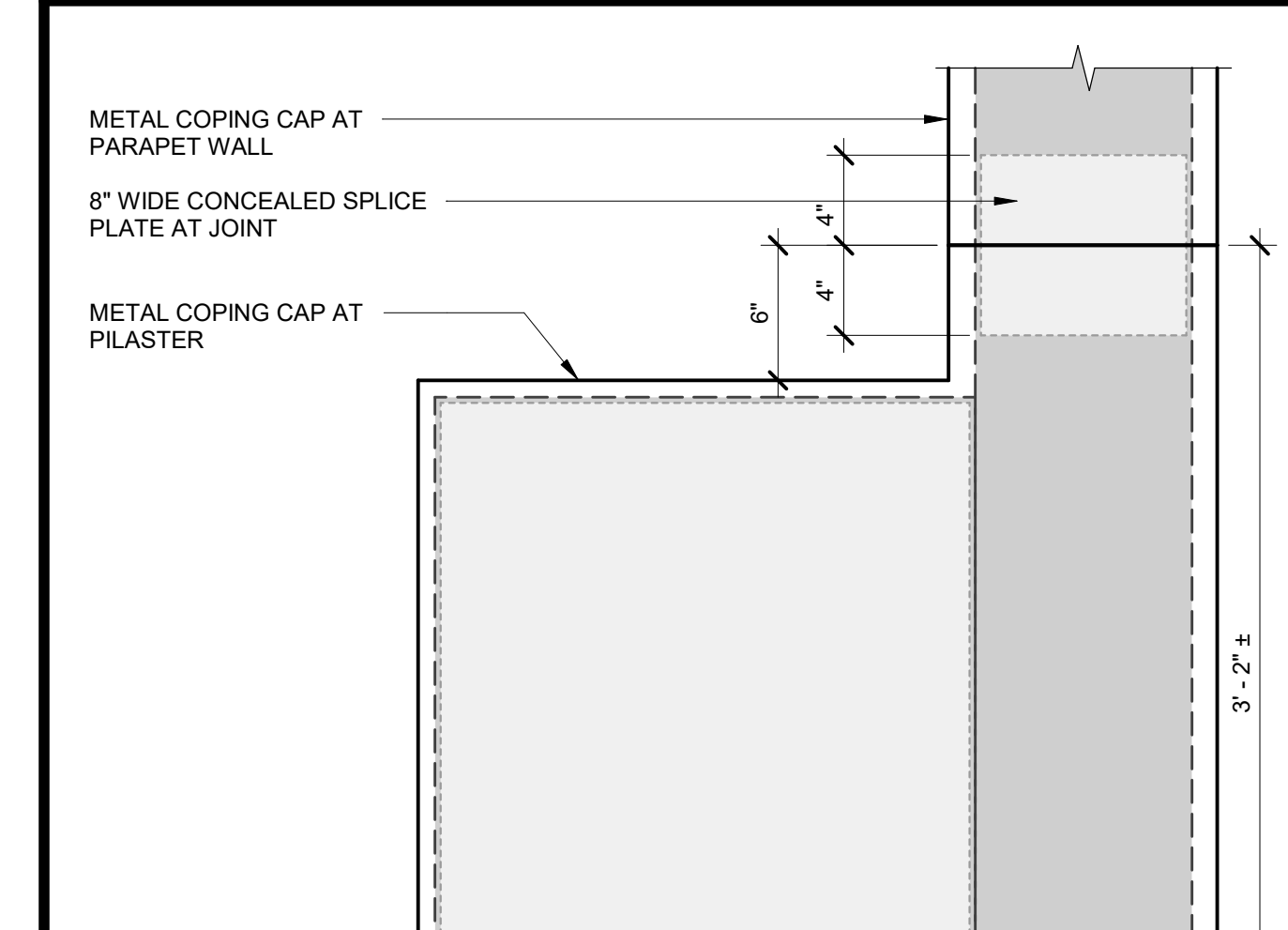
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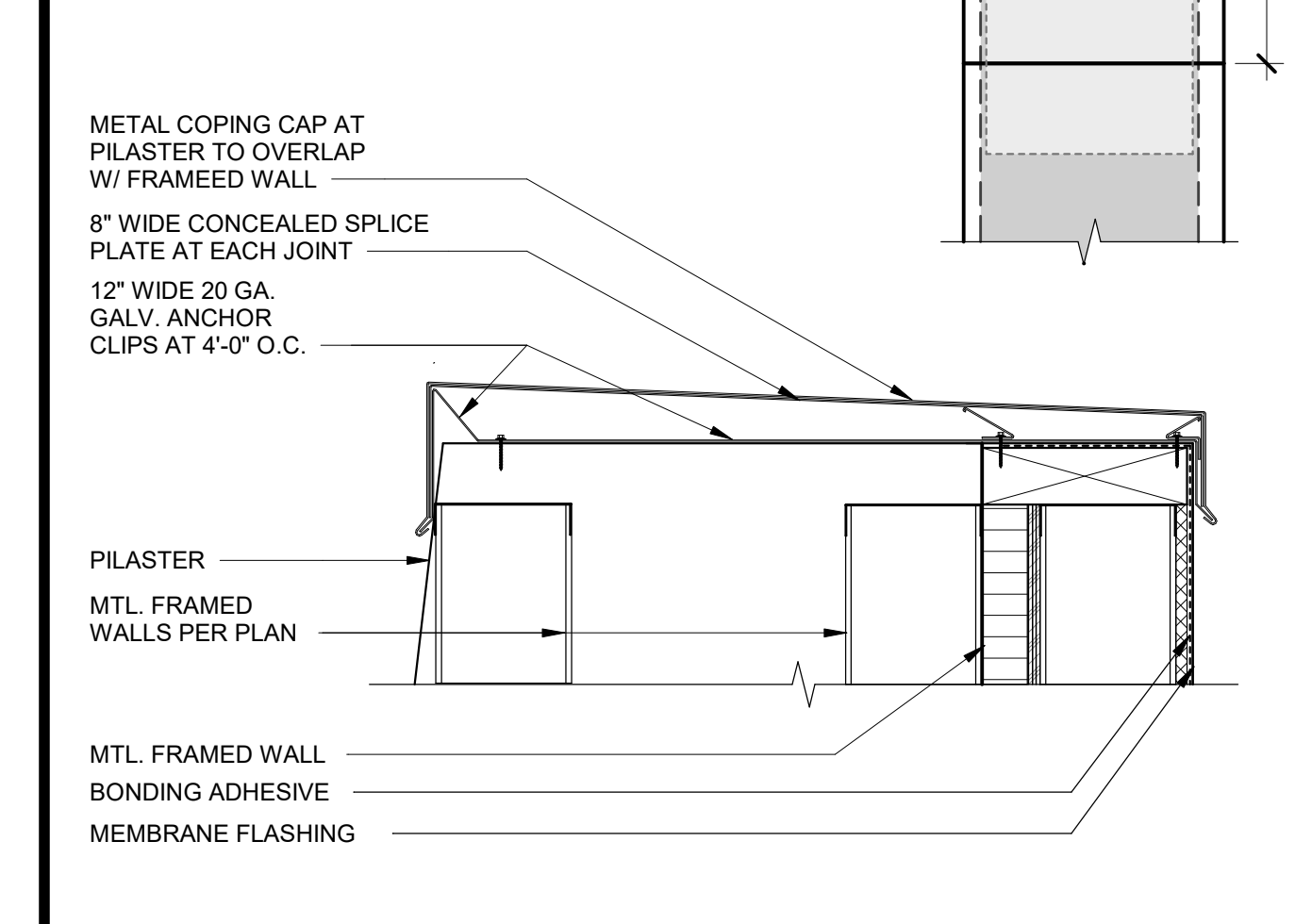
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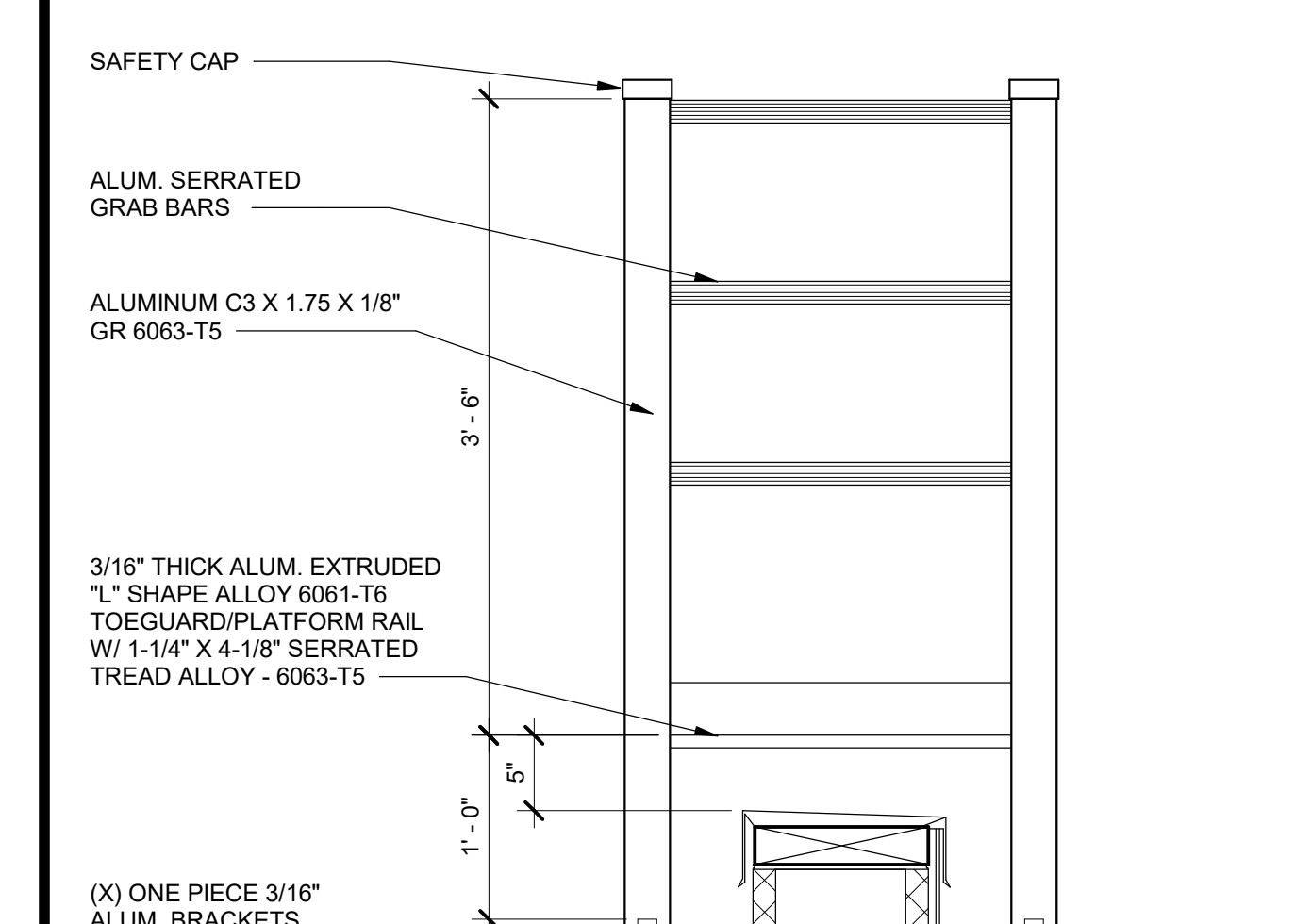
WALL TO ROOF @ FRAMED WALL BASE 3" = 1'-0" 10



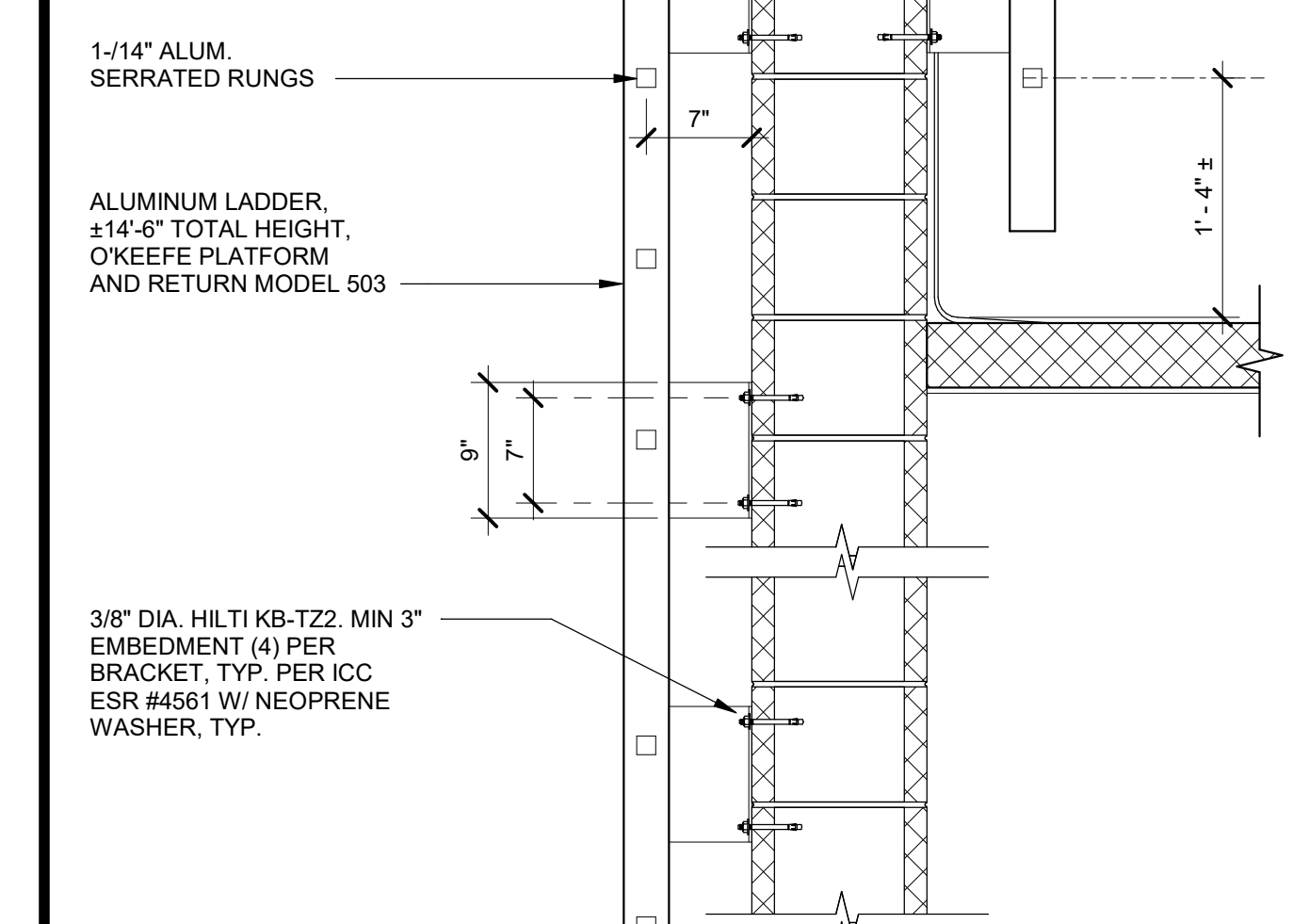
COPING & FLASHING @ PILASTER 1 1/2" = 1'-0" 21



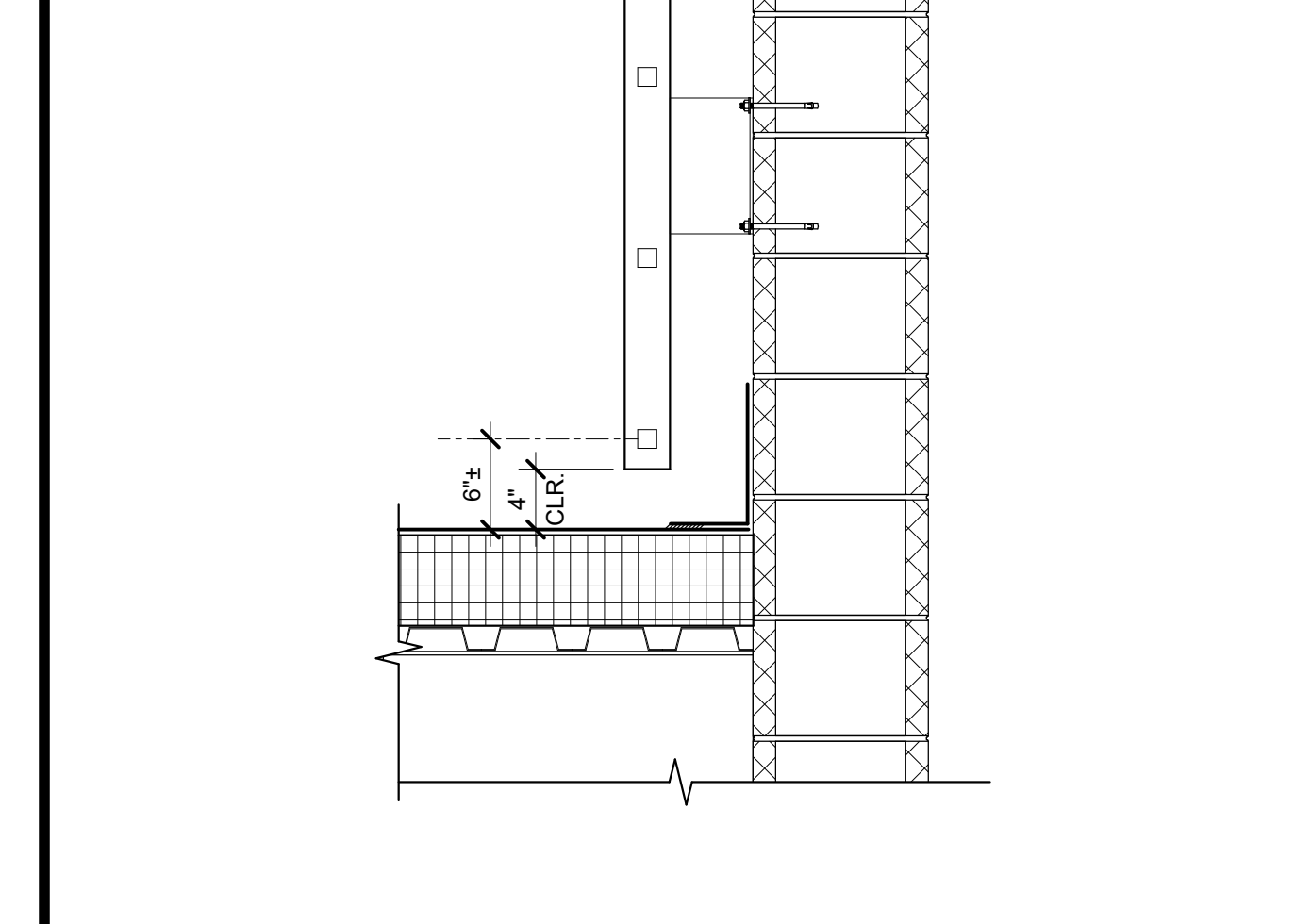
PARAPET LADDER 1" = 1'-0" 25



OVERFLOW CMU 3" = 1'-0" 19



EXTERIOR PLASTER AT GRADE 3" = 1'-0" 4



EXTERIOR PLASTER SILL 6" = 1'-0" 5

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2	05-06-2022	Addendum 3

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SHEET TITLE

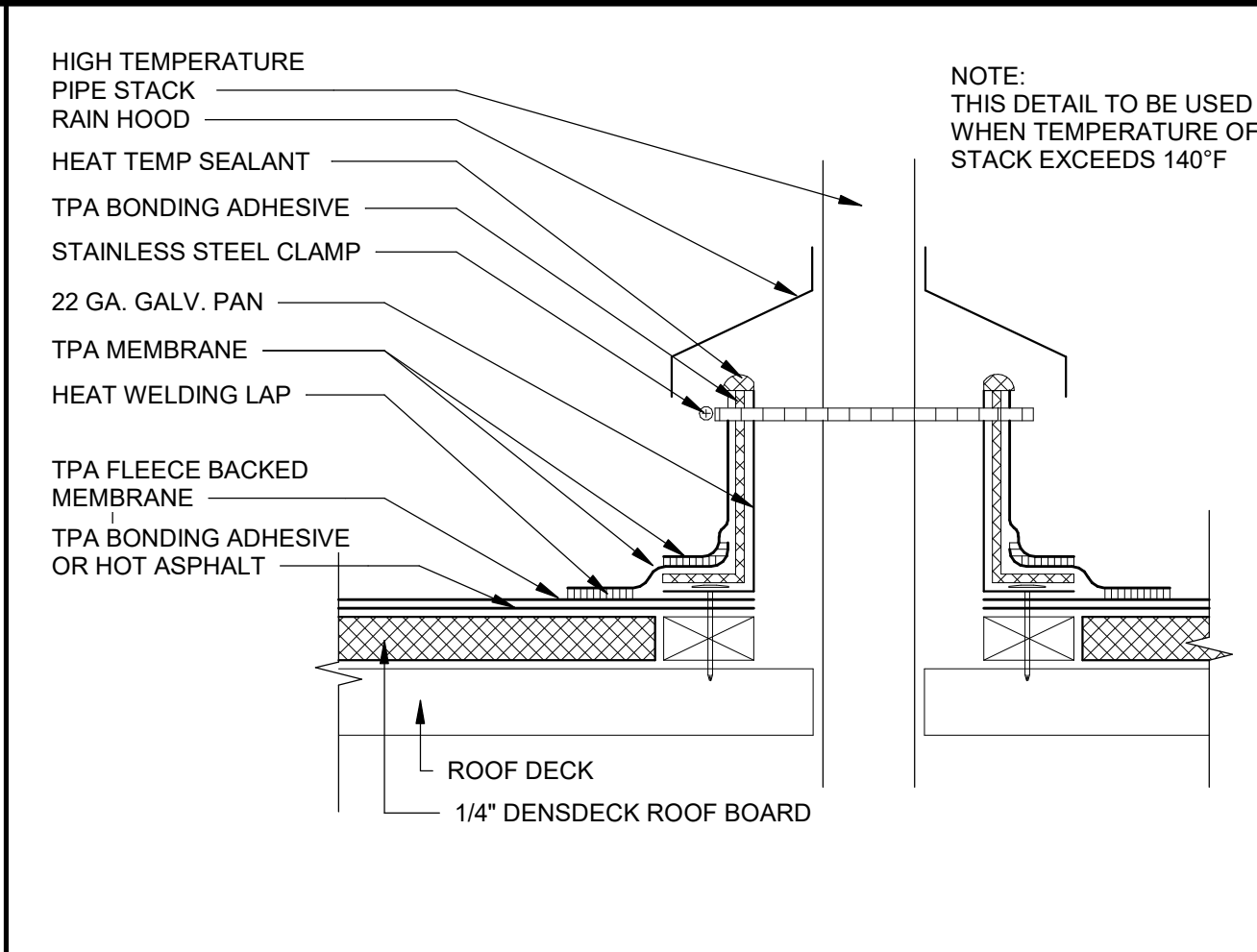
EXTERIOR DETAILS

DRAWN BY: Author JOB NUMBER: 20179.01

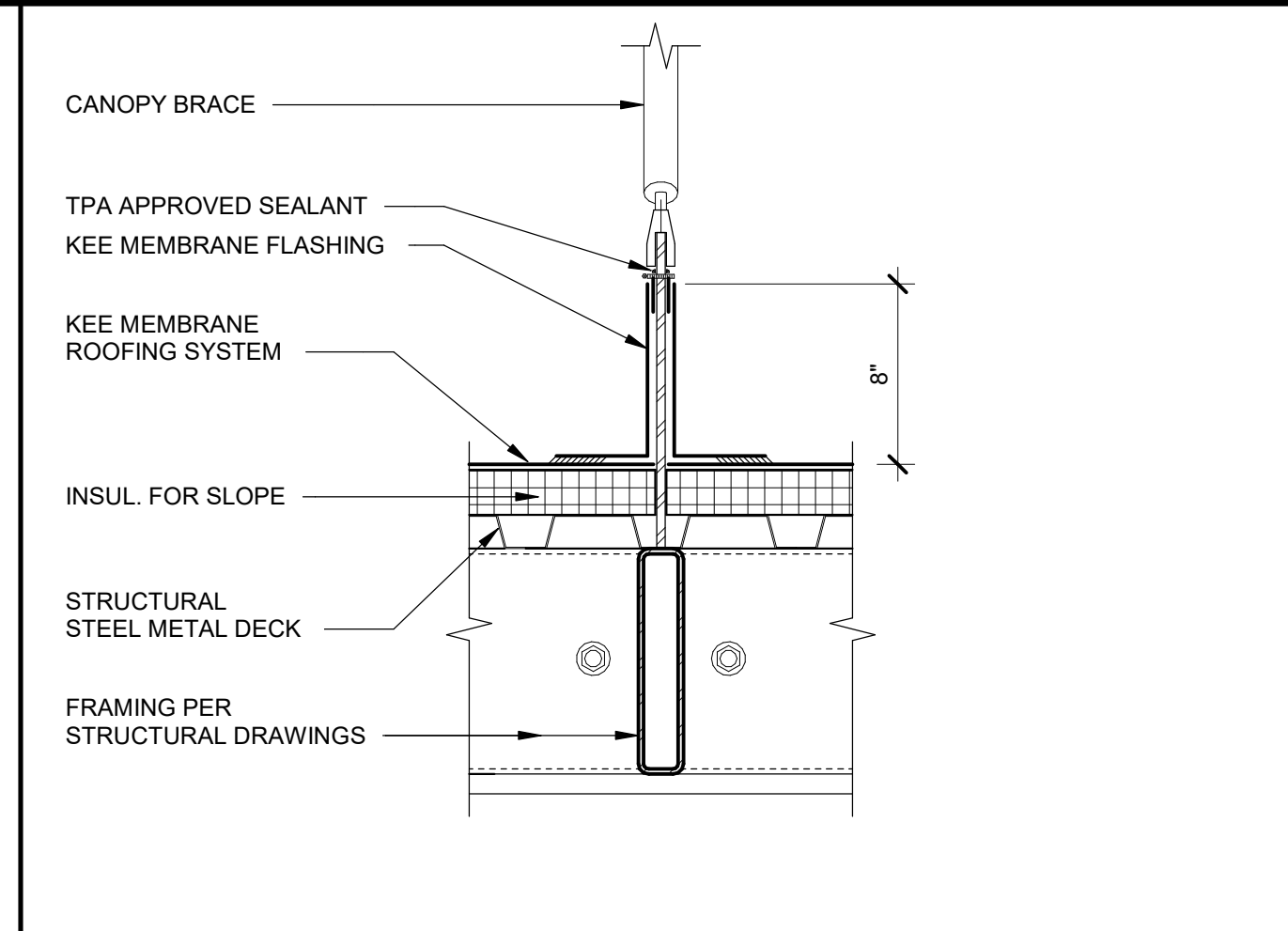
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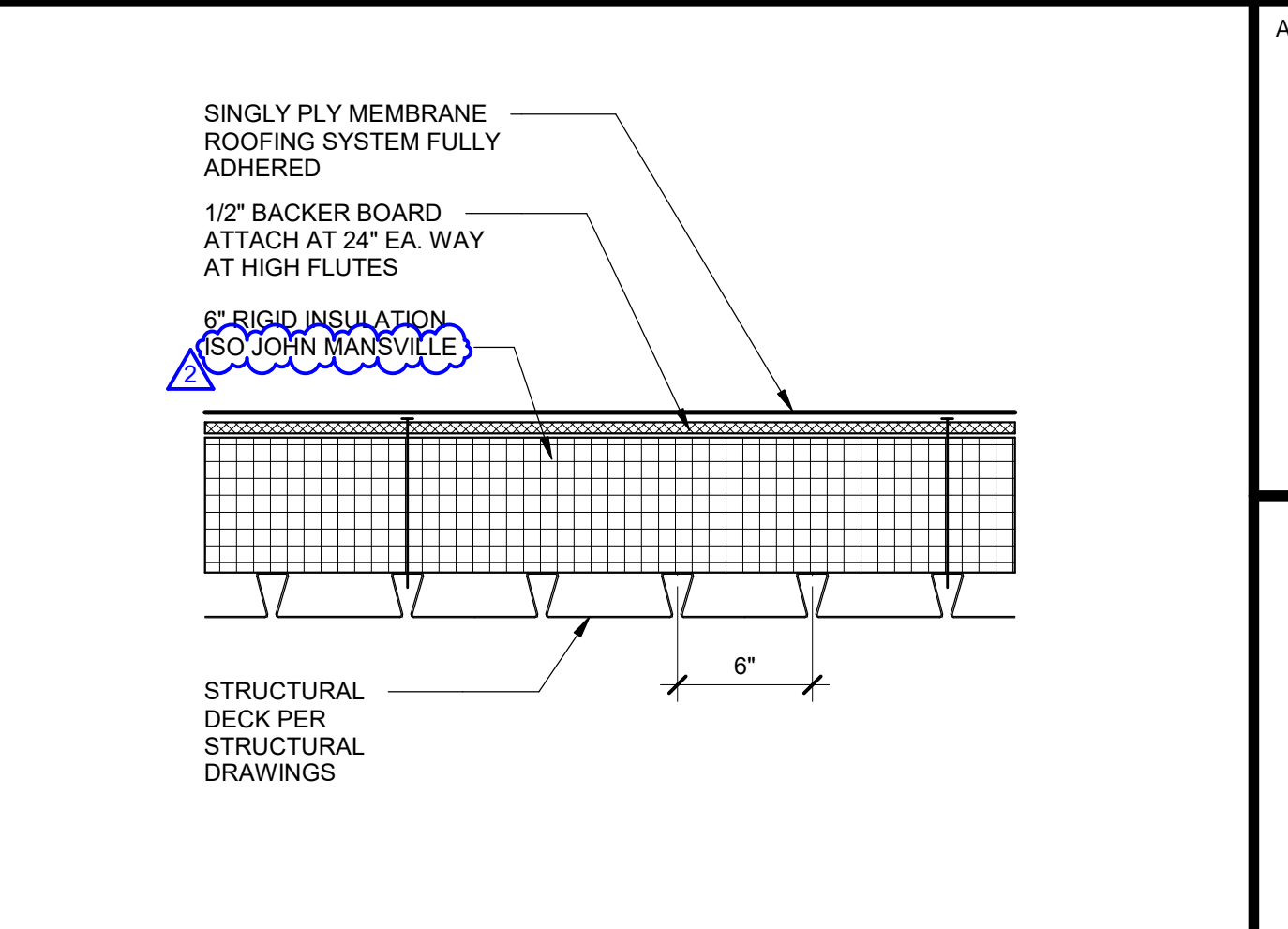
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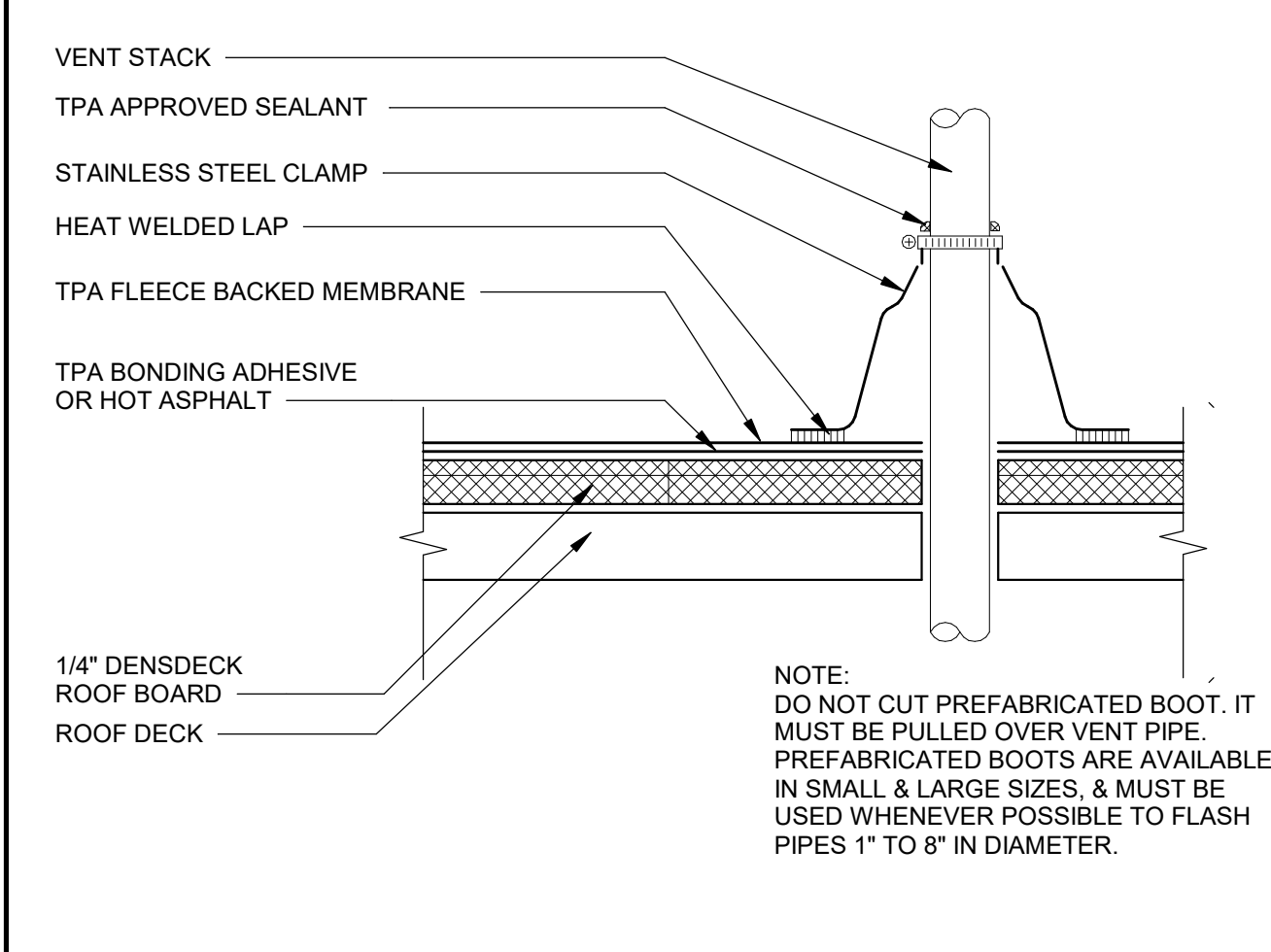
PIPE FLASHING 12" = 1'-0" **11**



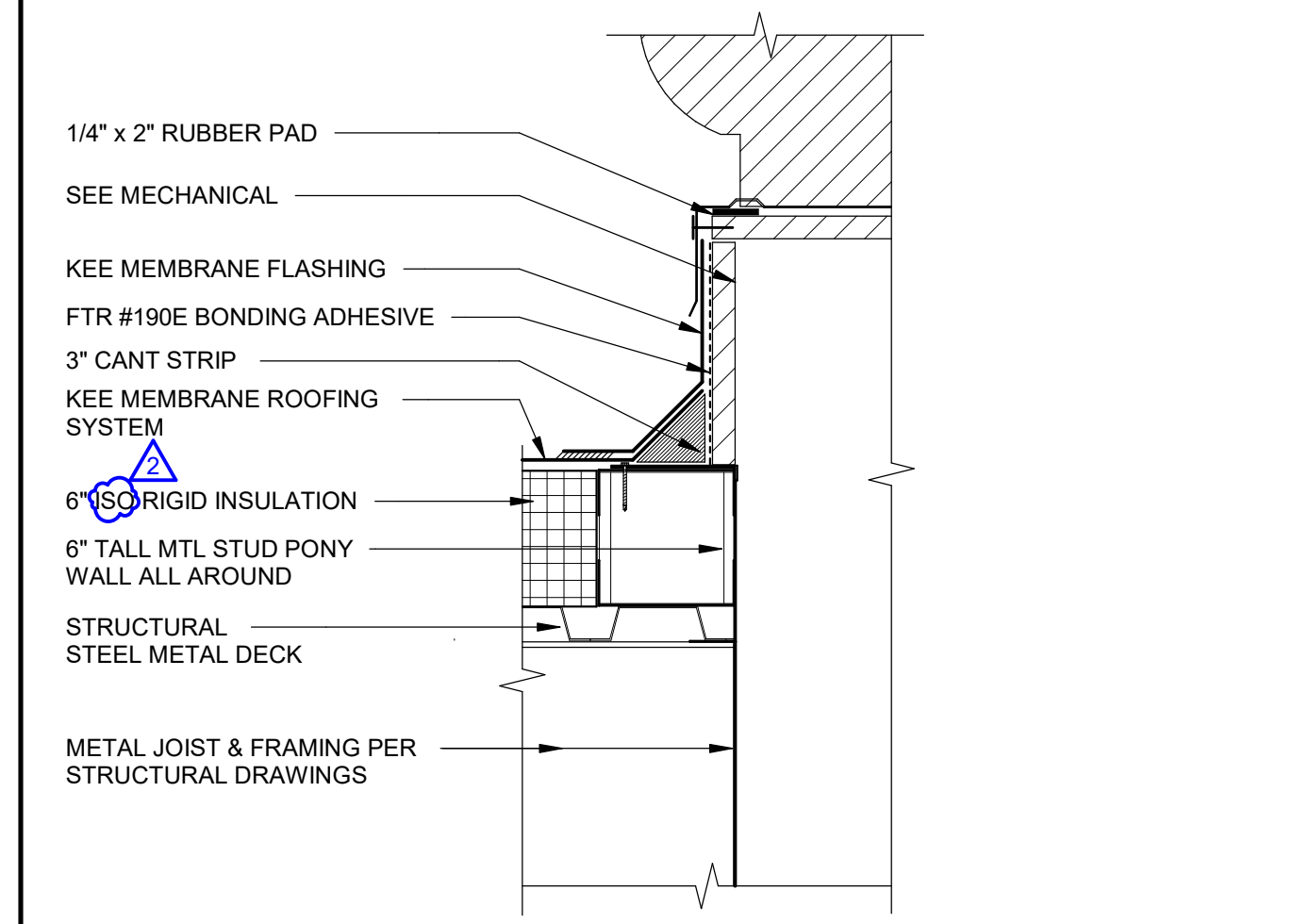
ROOF FLASHING AT BRACE 1 1/2" = 1'-0" **6**



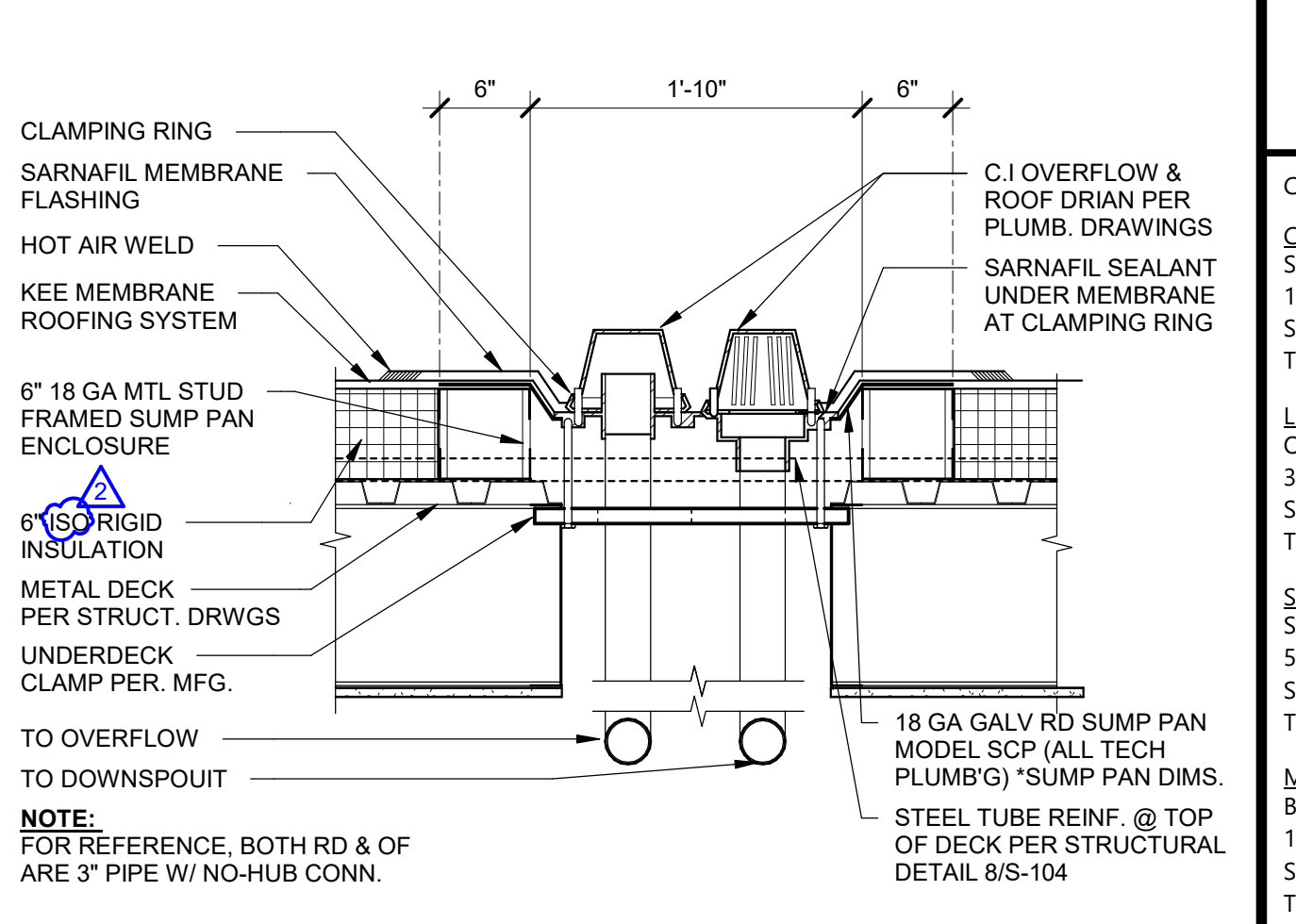
KEE MEMBRANE ROOFING 1 1/2" = 1'-0" **1**



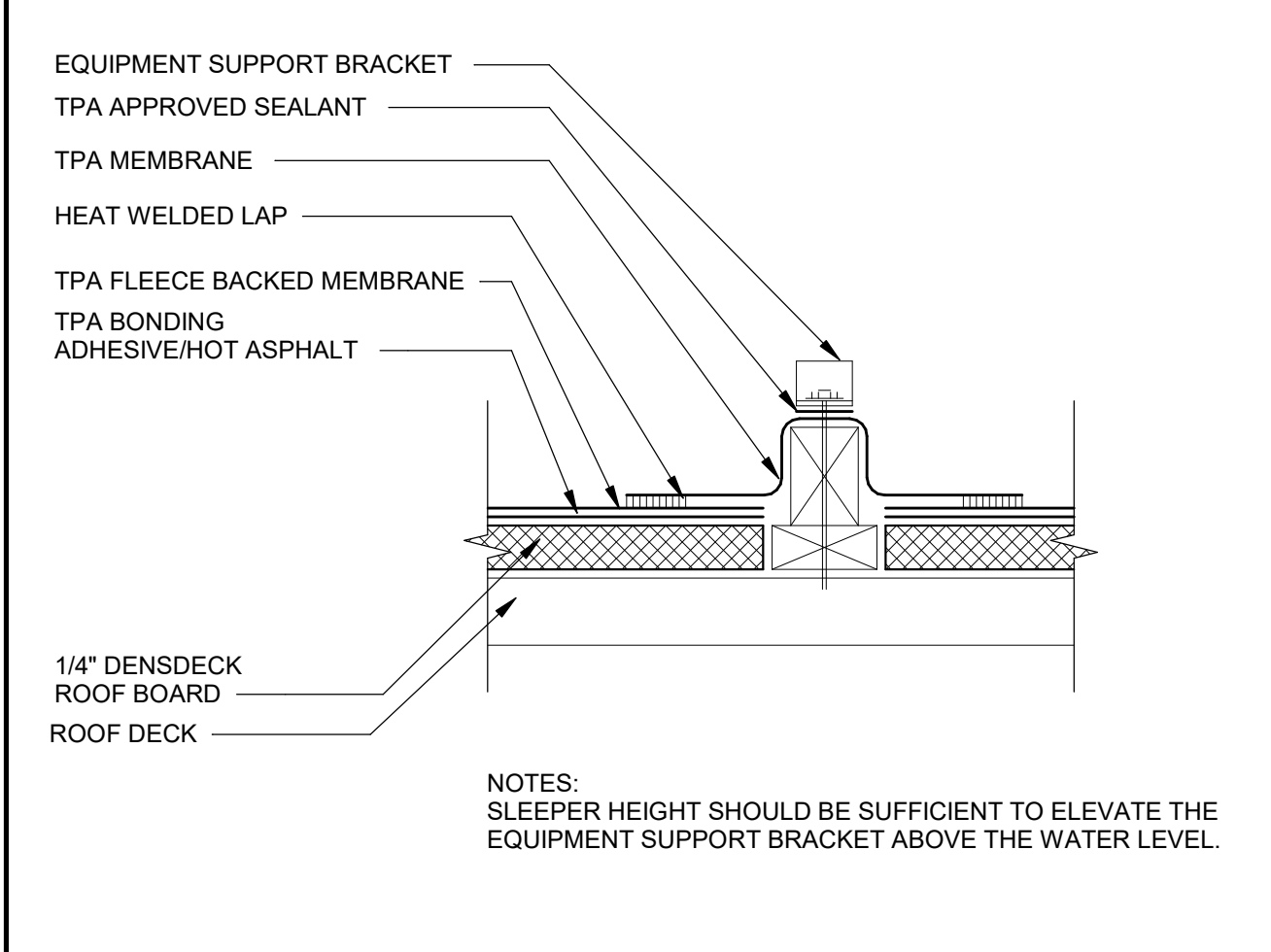
PREFAB VENT FLASHING 12" = 1'-0" **12**



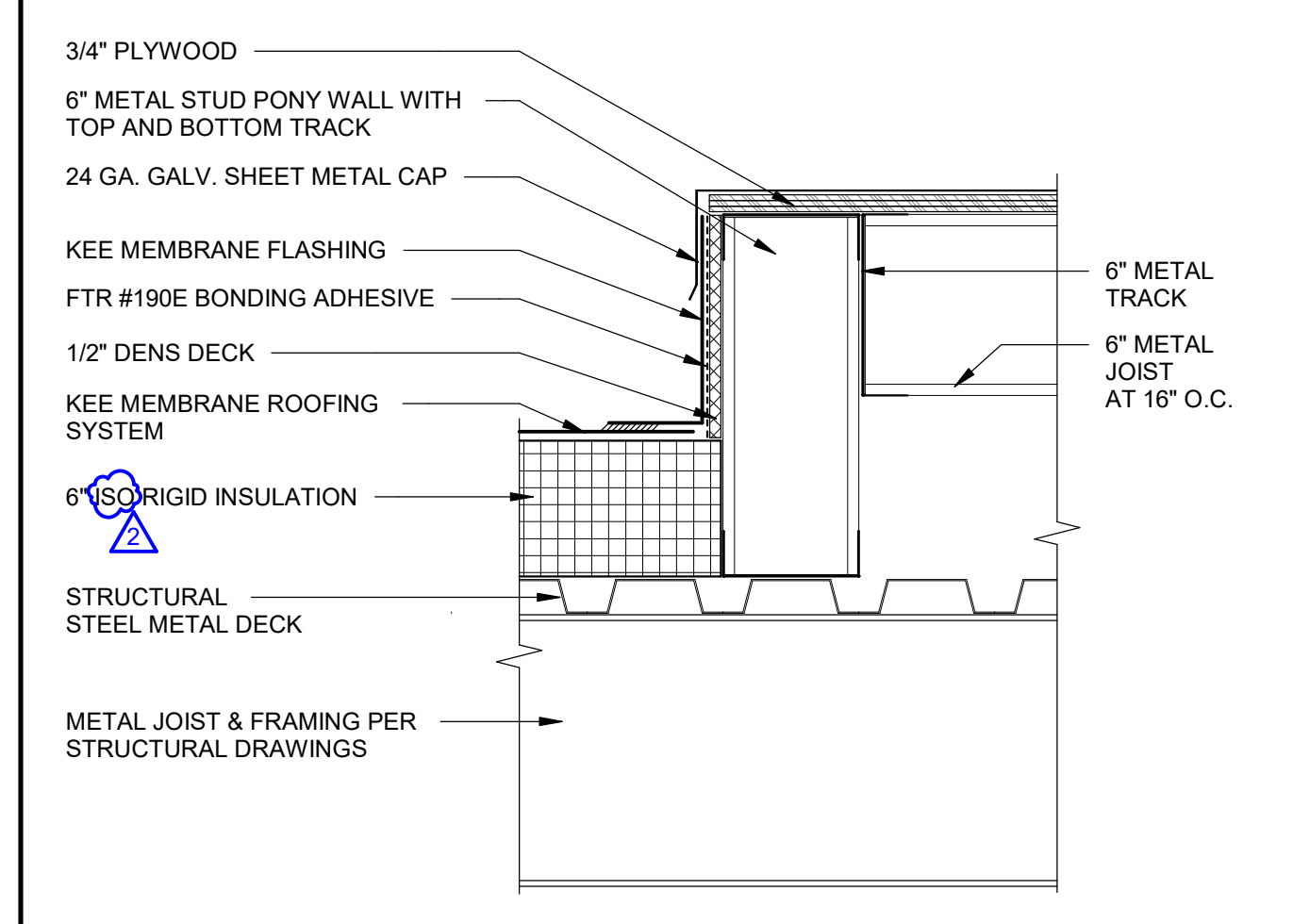
EXHAUST FAN CURB FLASHING 1 1/2" = 1'-0" **7**



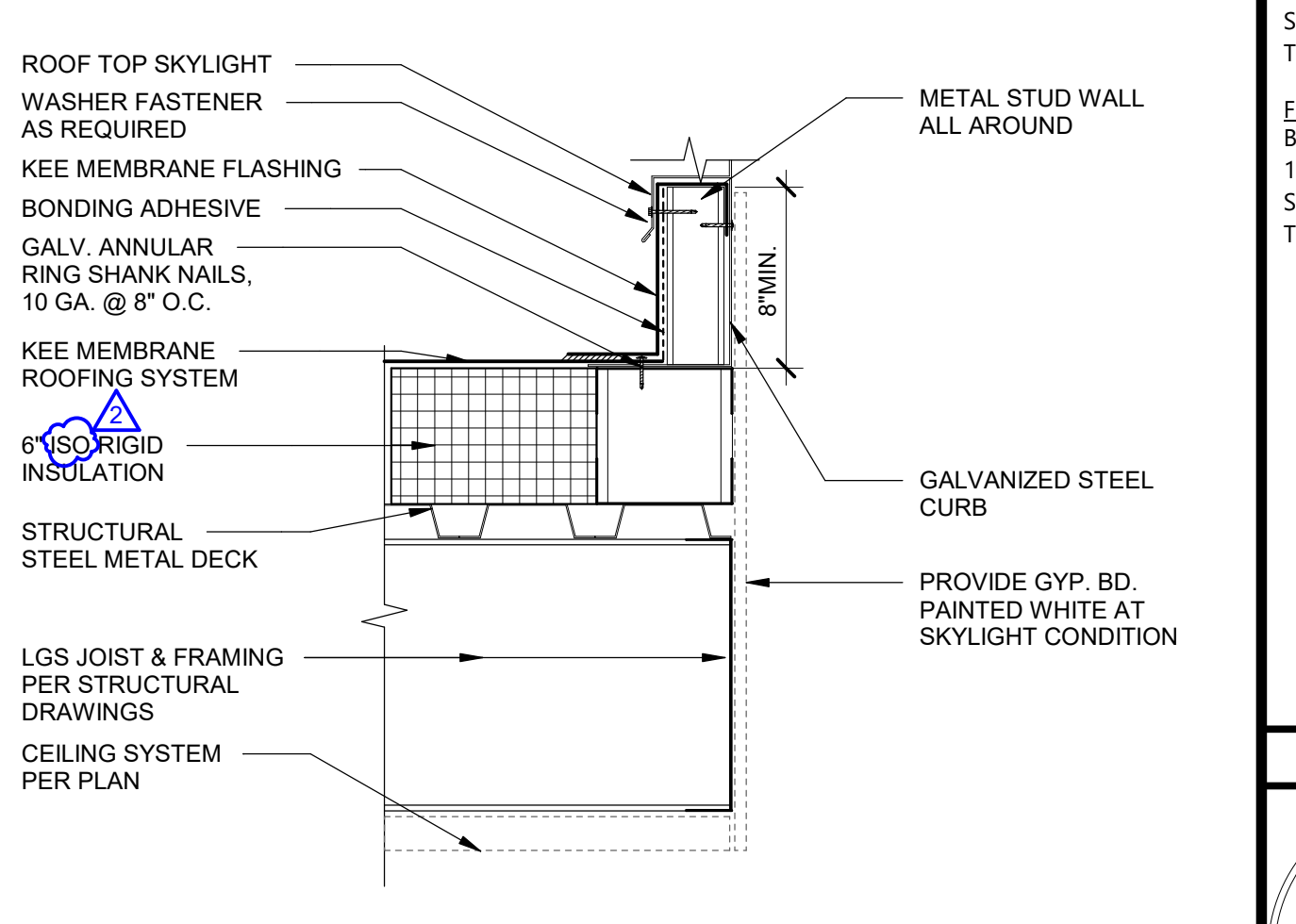
ROOF DRAIN & OVERFLOW 1" = 1'-0" **2**



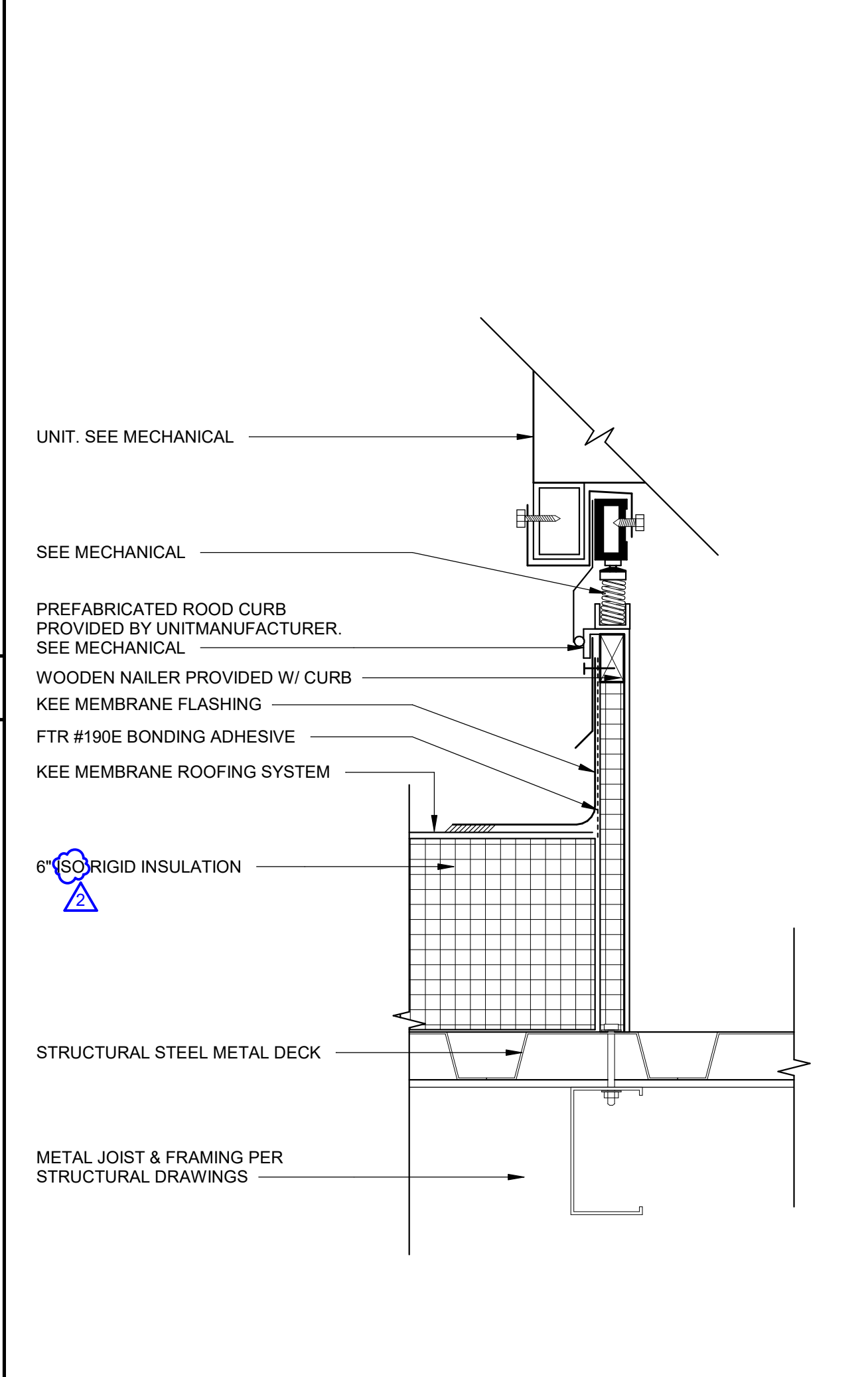
FIXED EQUIPMENT SUPPORT DETAIL 12" = 1'-0" **13**



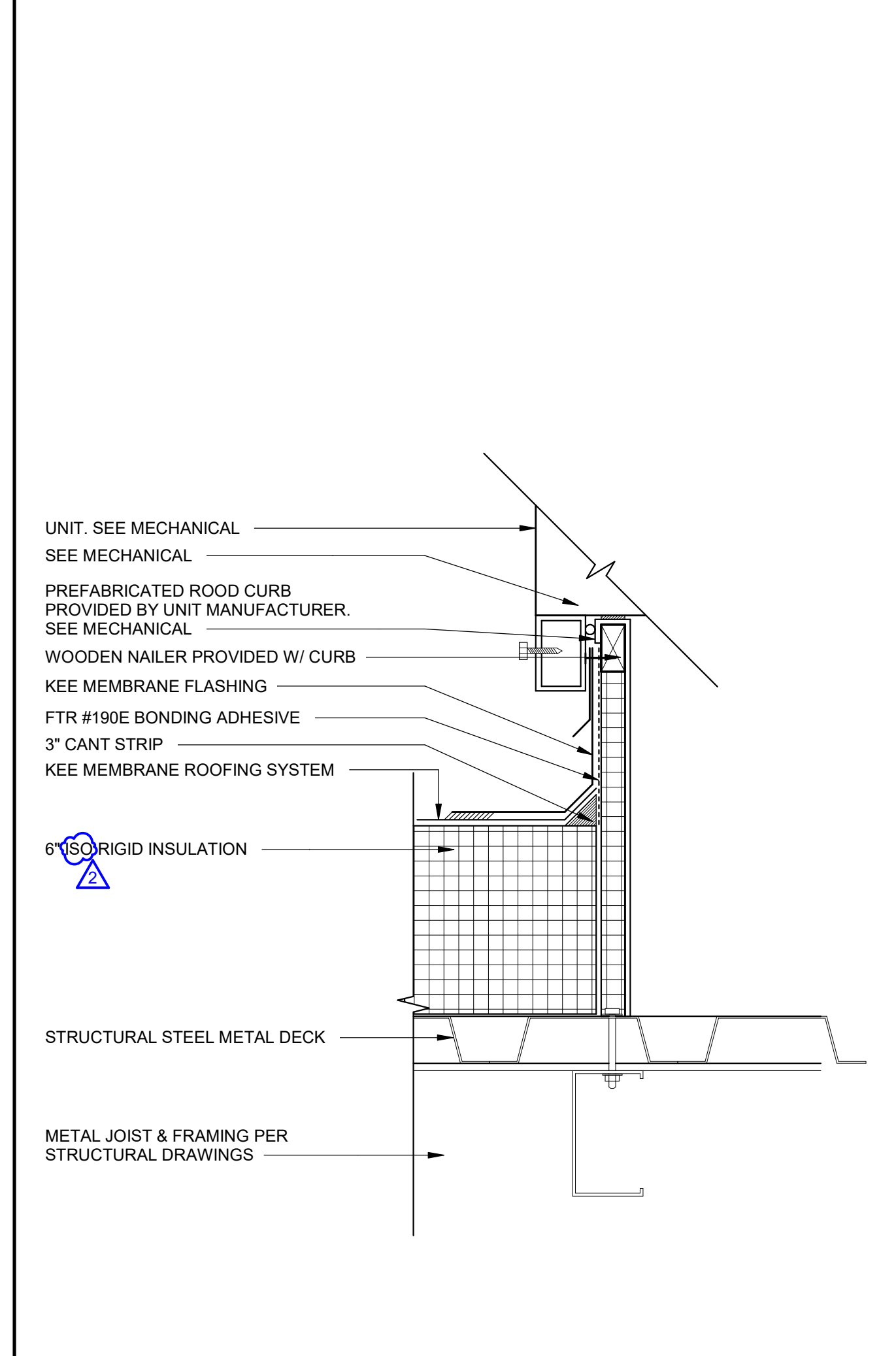
CONDENSING UNIT CURB FLASHING 1 1/2" = 1'-0" **8**



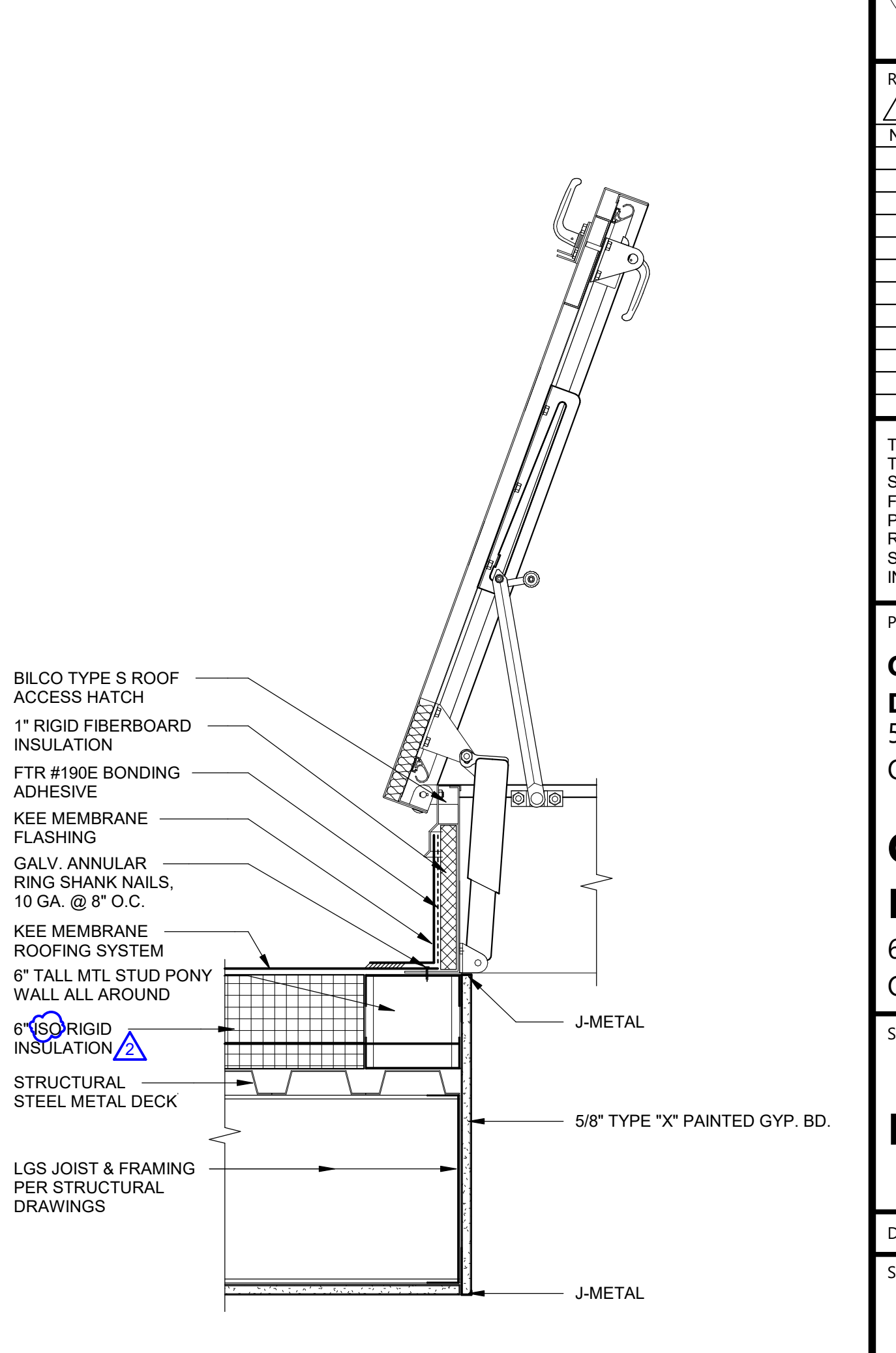
SKYLIGHT CURB FLASHING 1 1/2" = 1'-0" **3**



RTU ISOLATION CURB 3" = 1'-0" **15**



RTU RIGID CURB FLASHING 3" = 1'-0" **10**



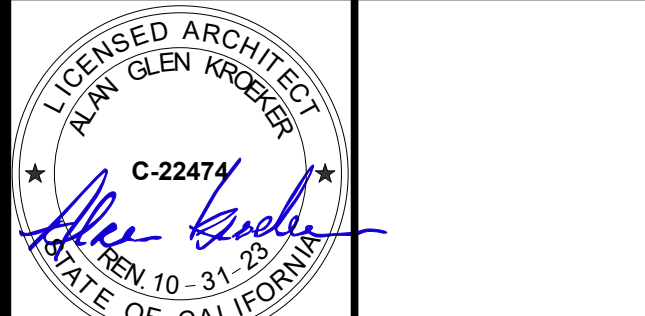
ROOF ACCESS HATCH 1 1/2" = 1'-0" **5**



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REVISIONS

NO.	DATE	DESCRIPTION
1	05-08-2022	Addendum 3

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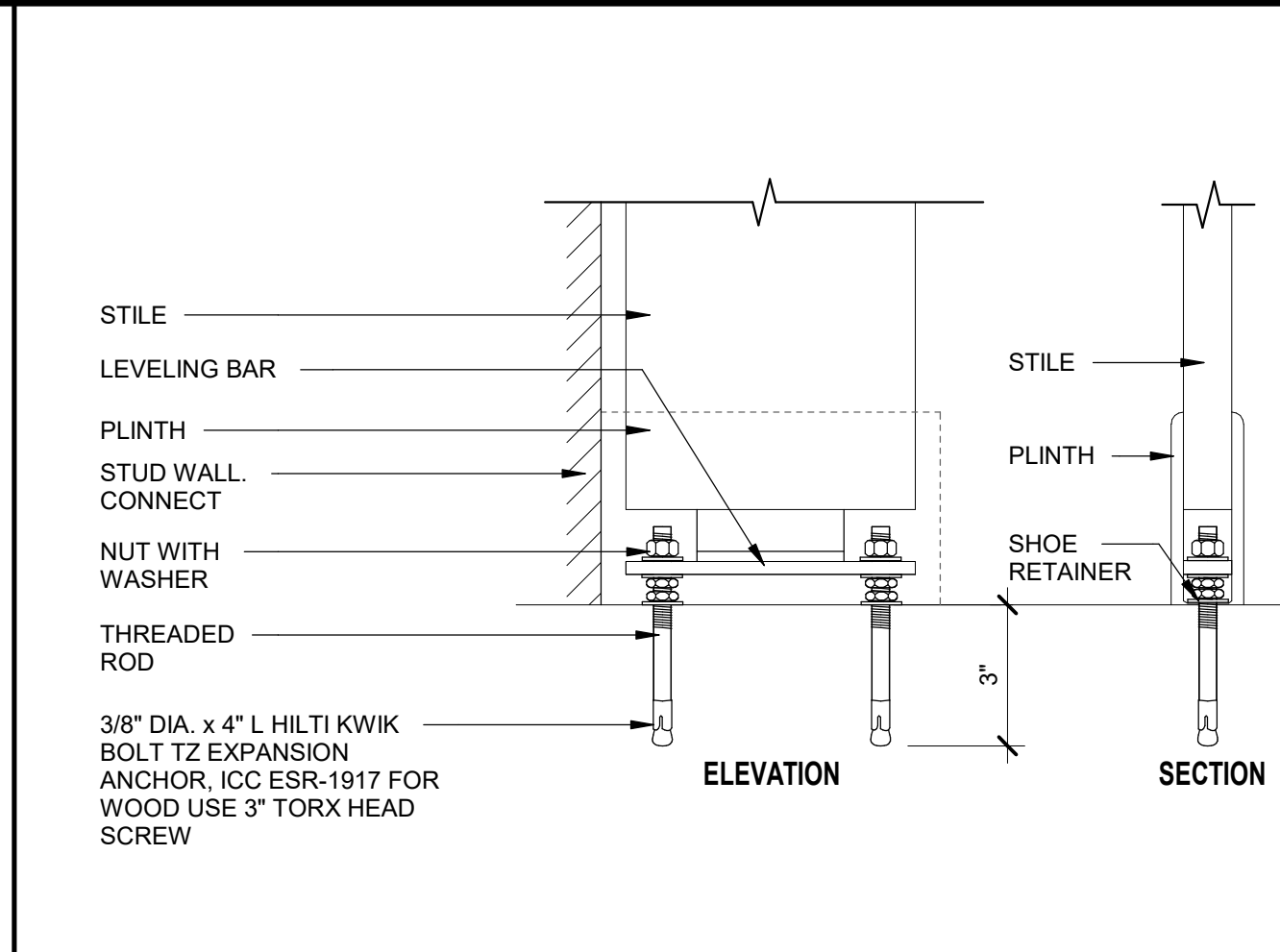
ORCUTT ACADEMY HS MUR BUILDING
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SHEET TITLE
INTERIOR DETAILS

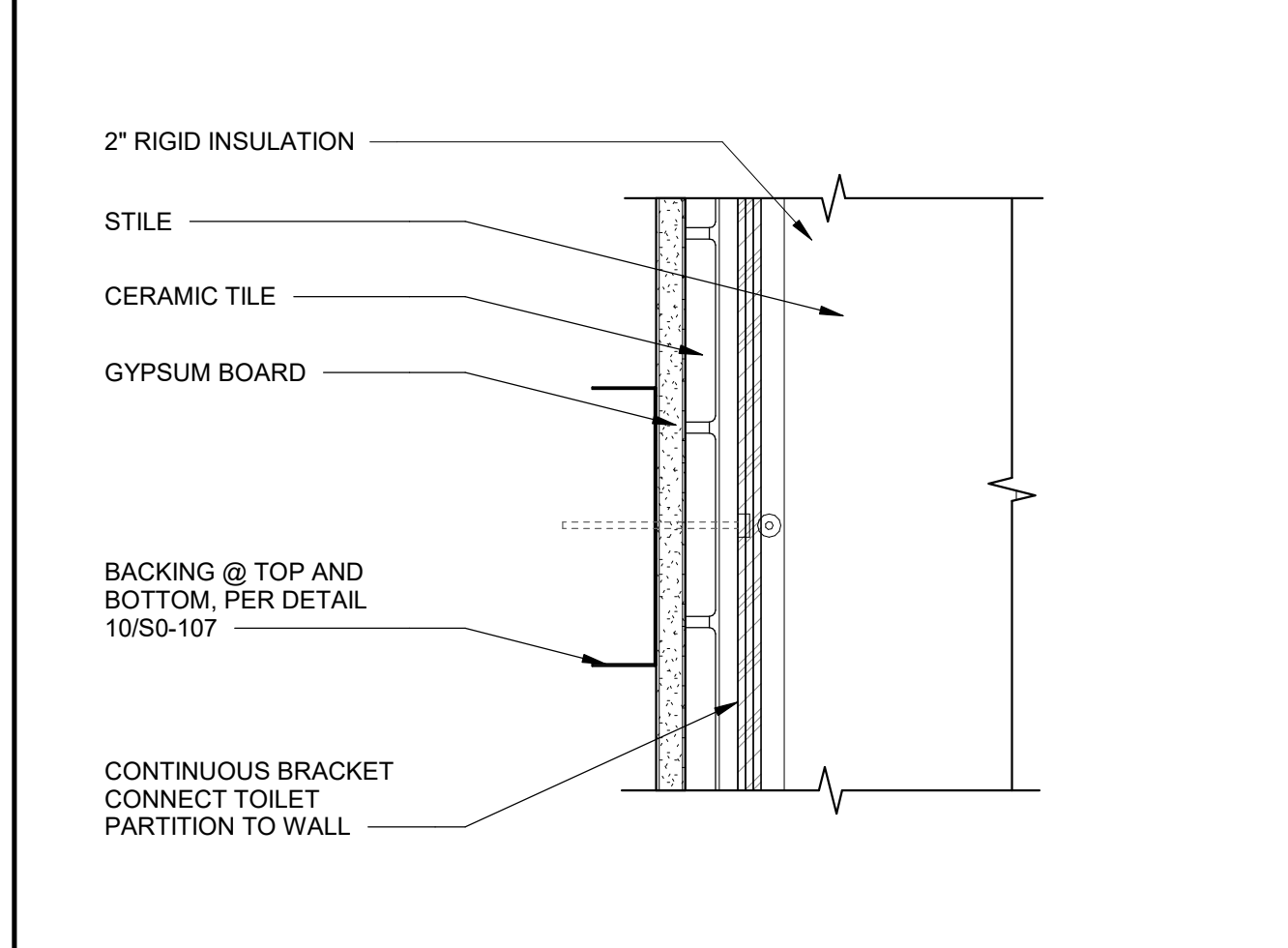
DRAWN BY: XX JOB NUMBER: 20179.01

SHEET NO.
A-921

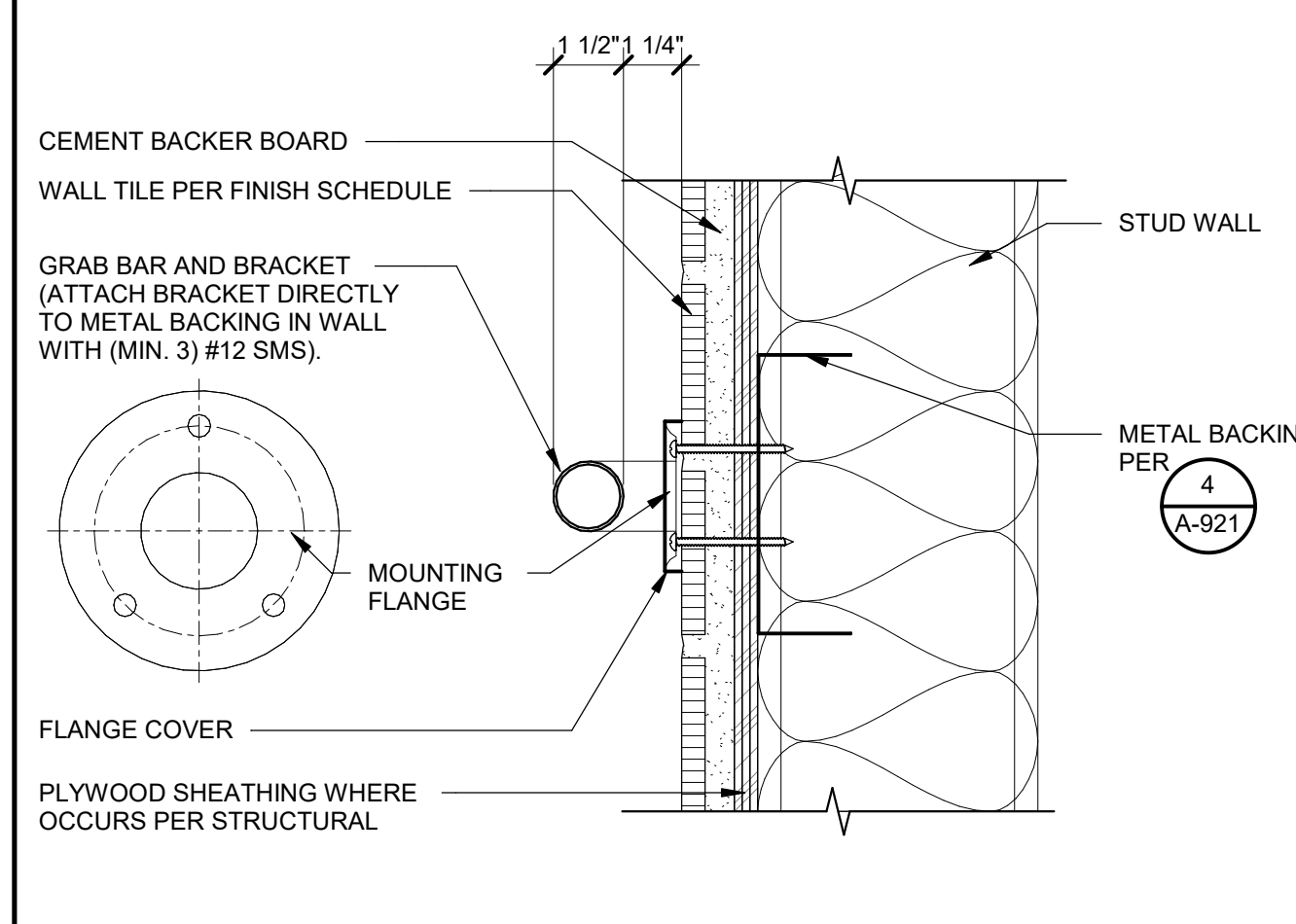
DATE: MARCH 23, 2022



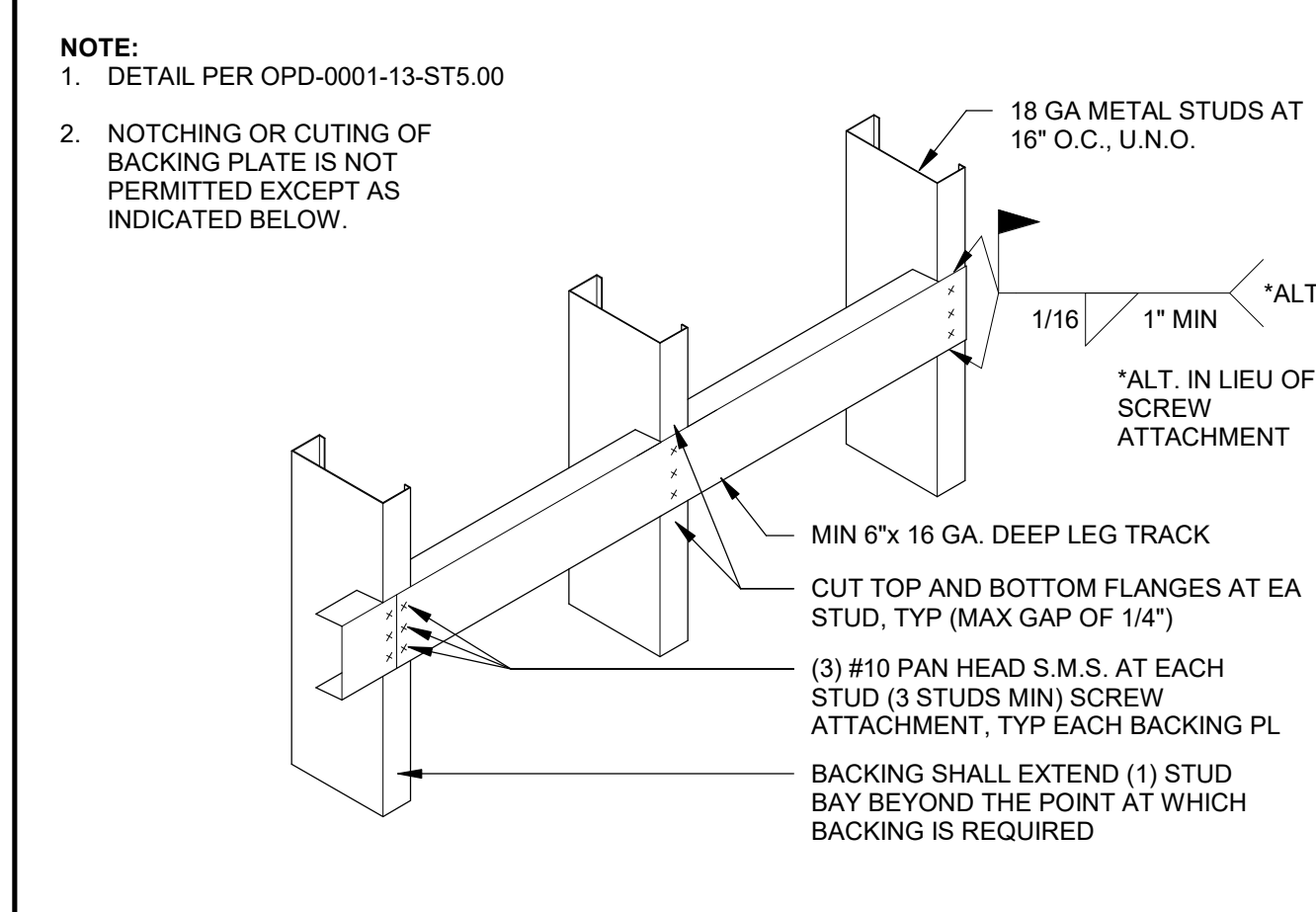
TOILET PARTITION SHOE 3" = 1'-0" 1



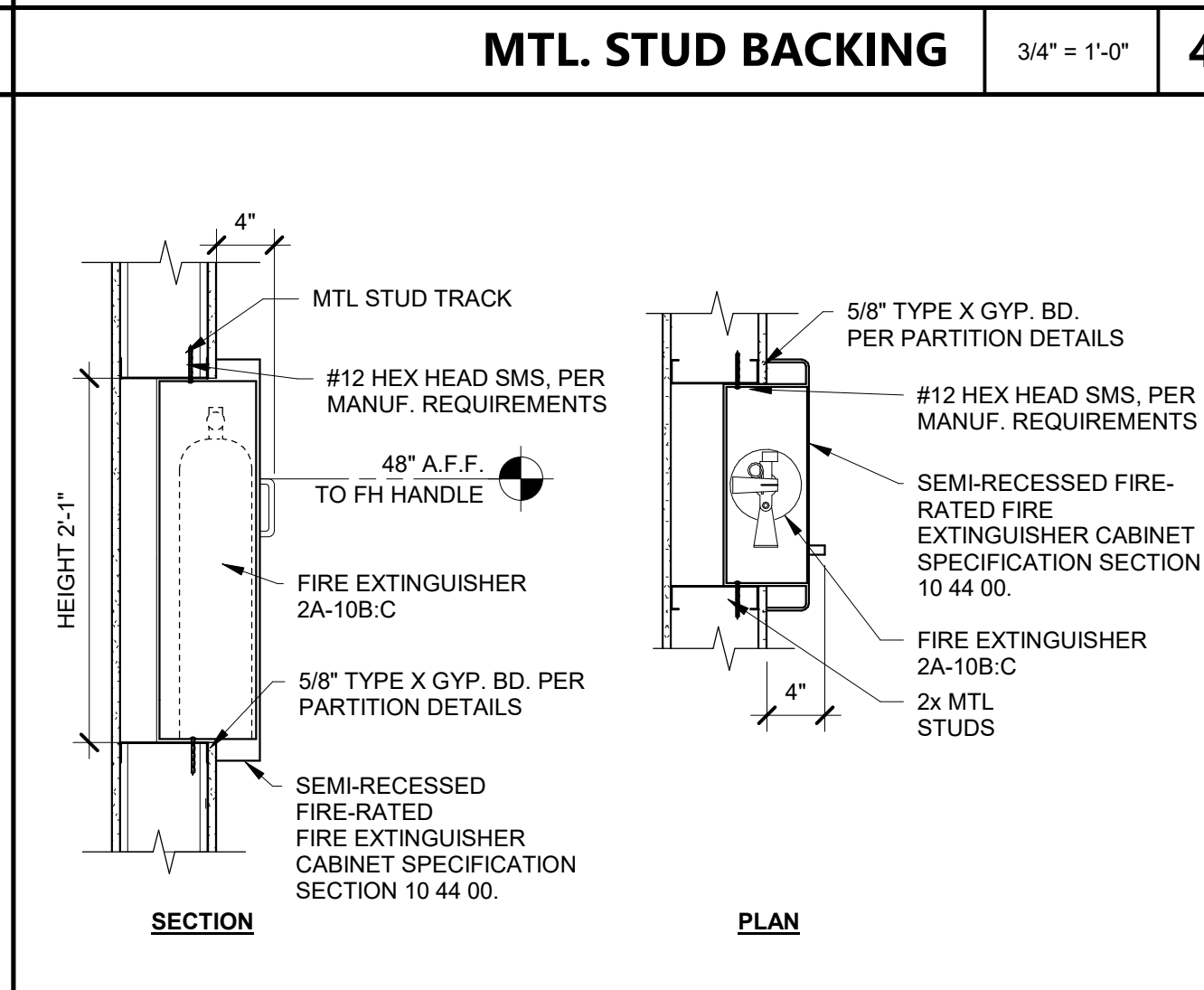
TOILET PARTITION BRACKET MTL 3" = 1'-0" 2



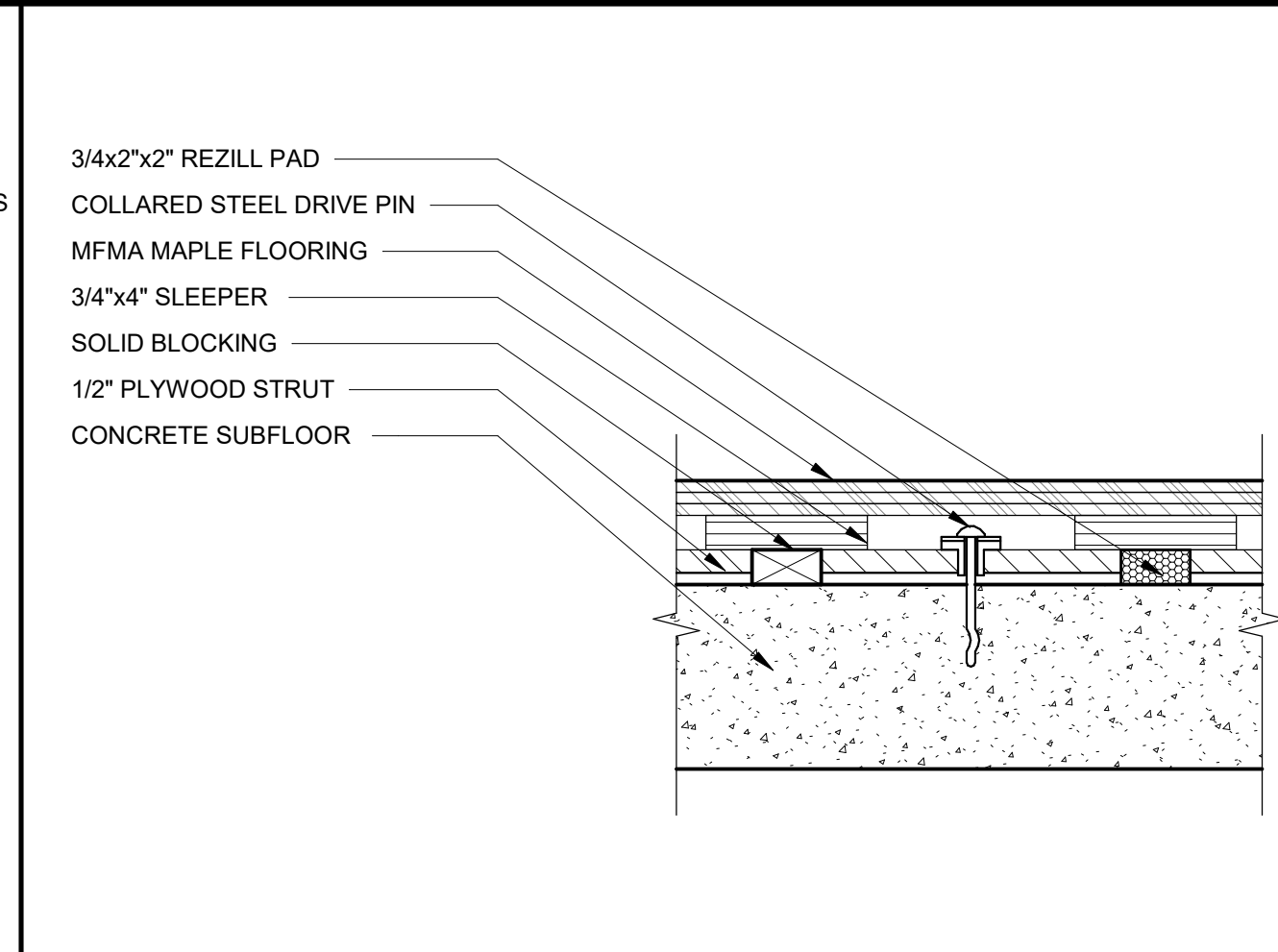
GRAB BAR BLOCKING MTL 3" = 1'-0" 3



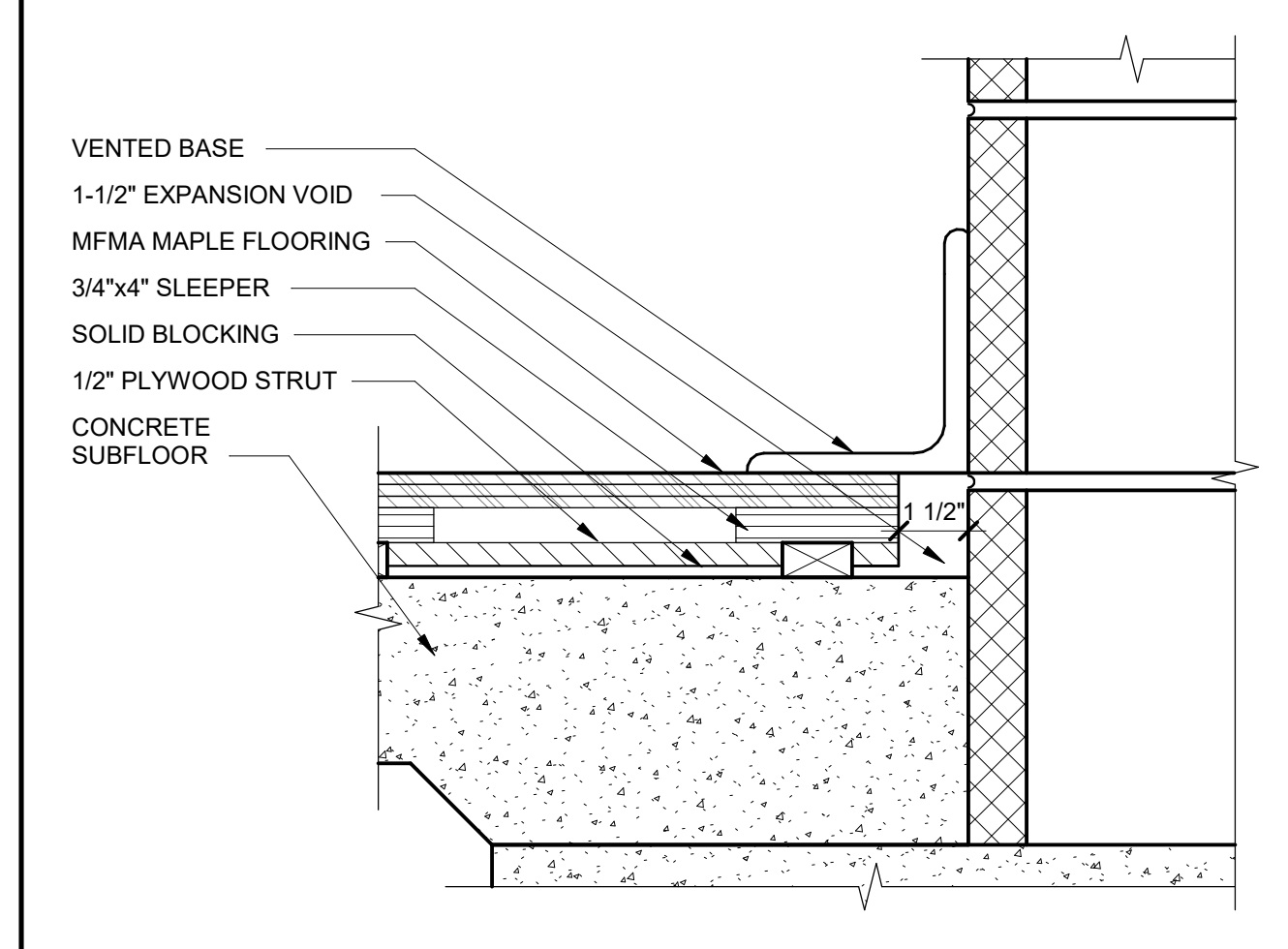
MTL STUD BACKING 3/4" = 1'-0" 4



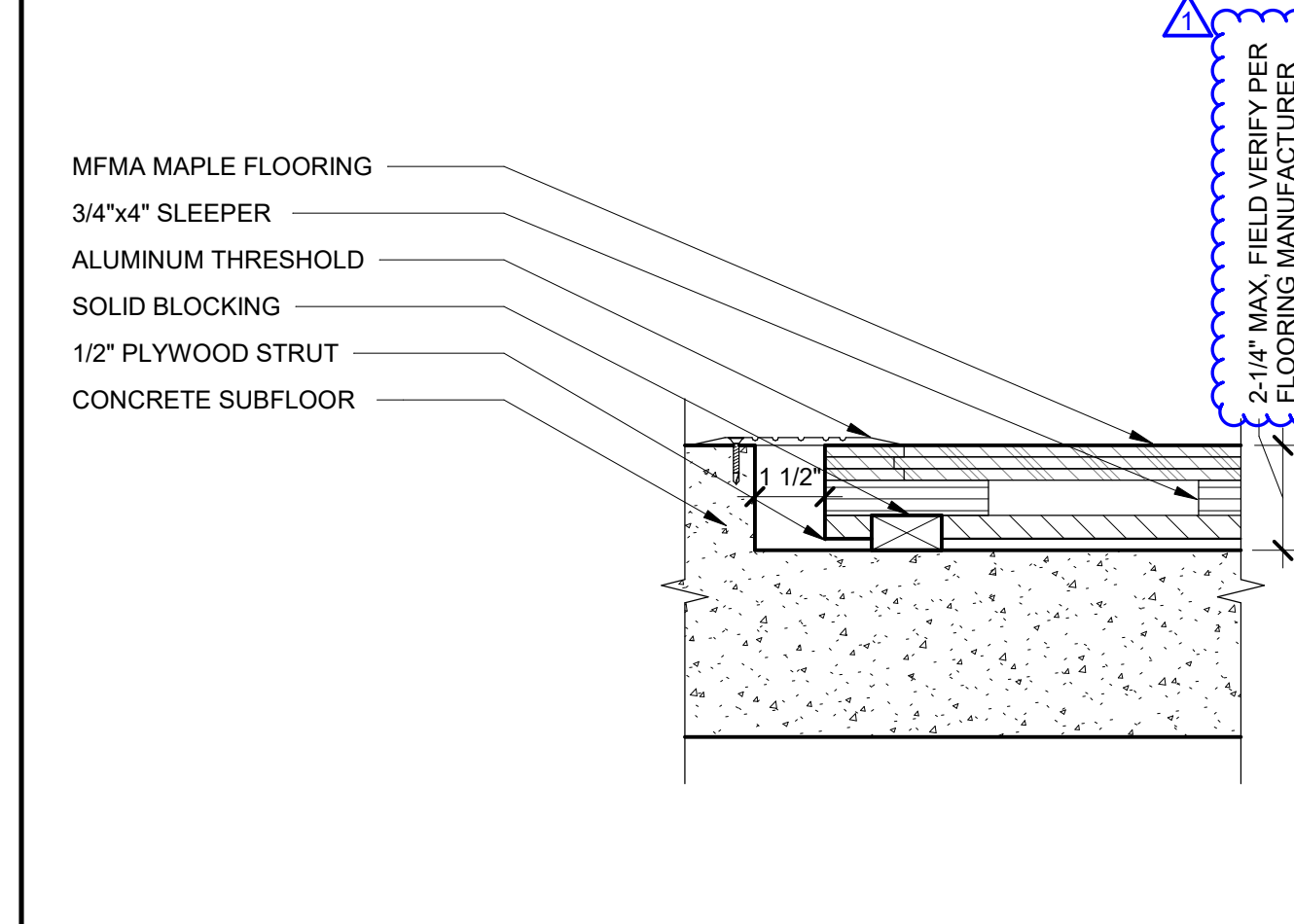
FIRE EXTINGUISHER & CABINET 1" = 1'-0" 5



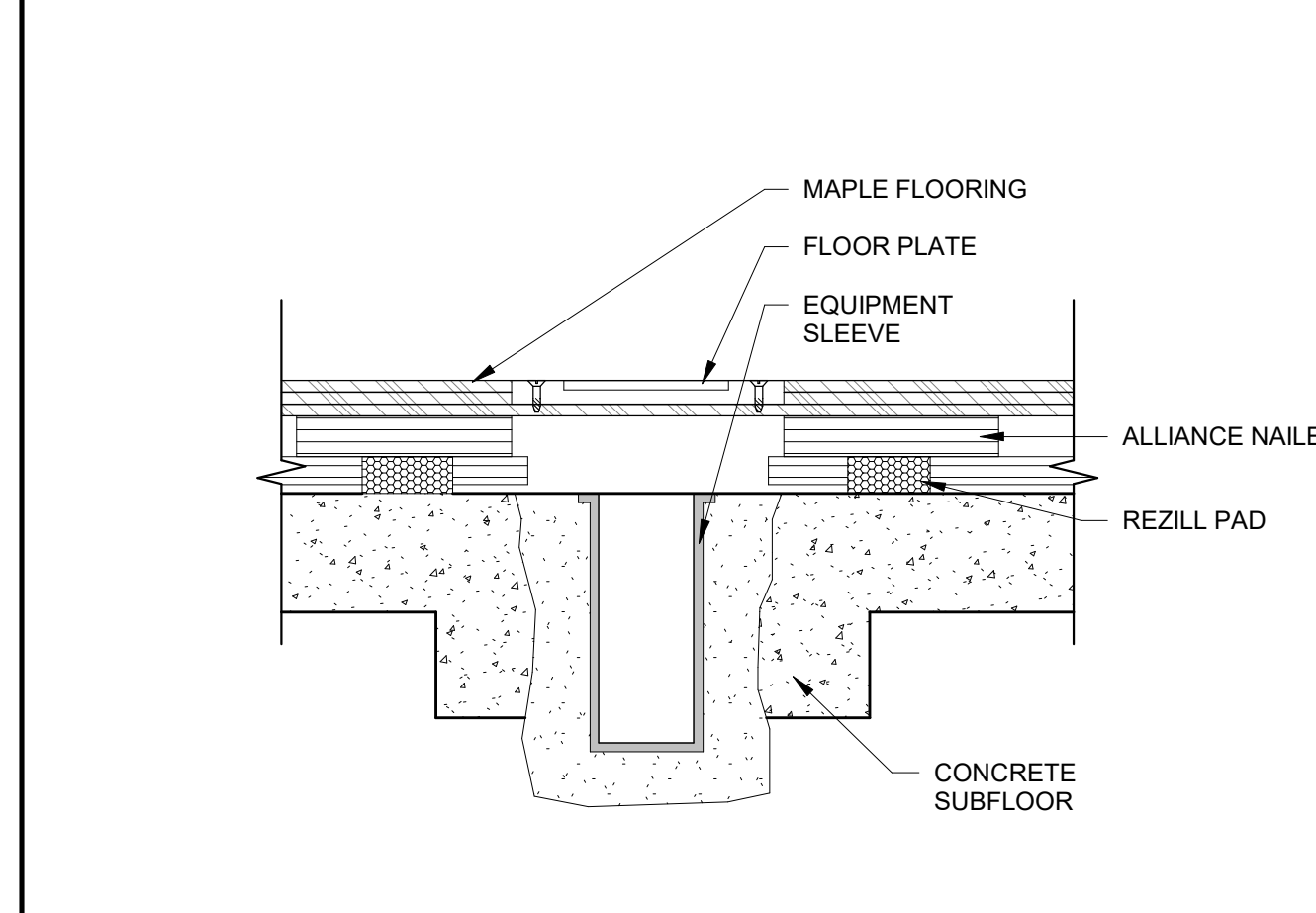
HARDWOOD COURT PINNING 3" = 1'-0" 6



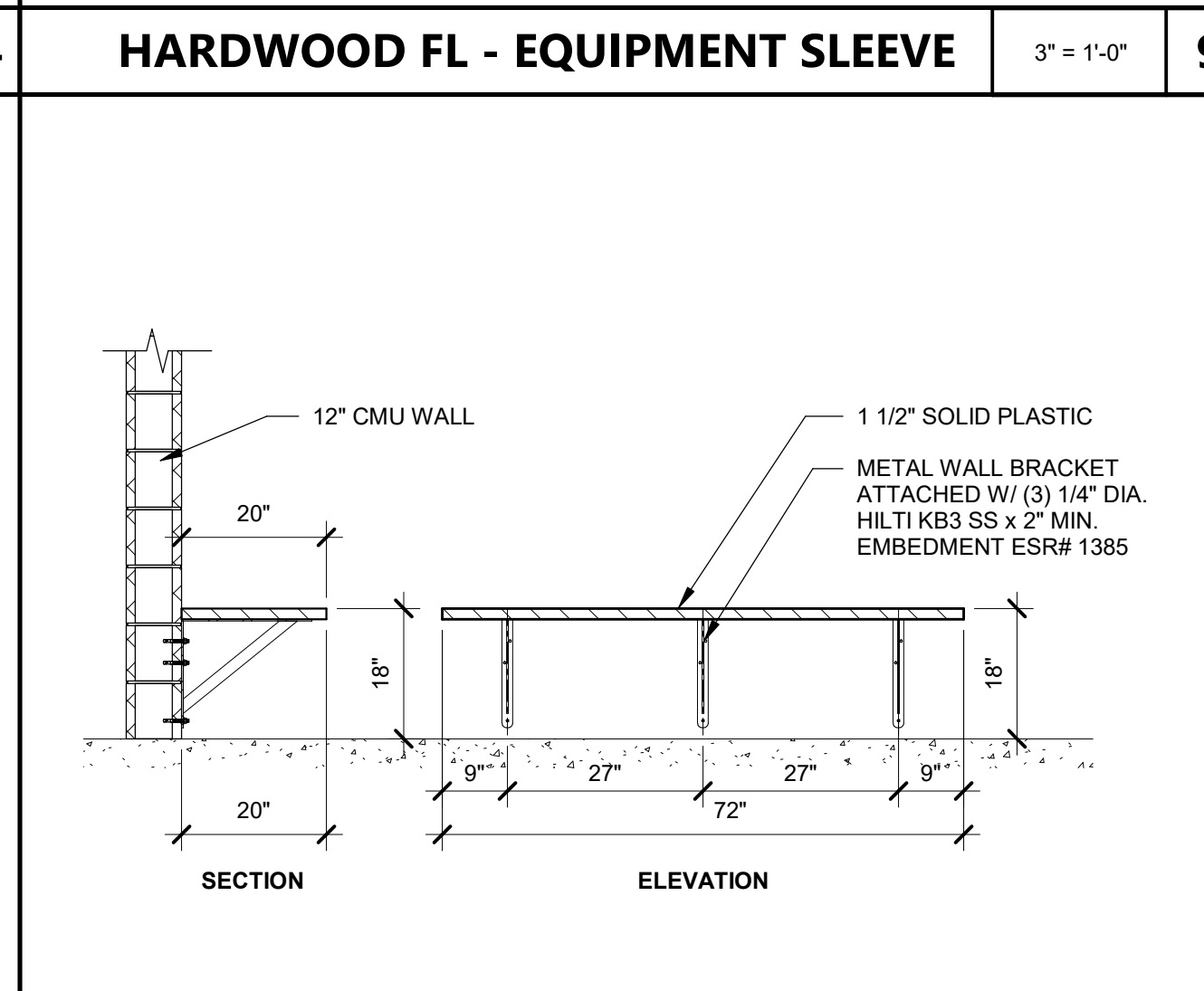
HARDWOOD COURT WALL CONDITION 3" = 1'-0" 7



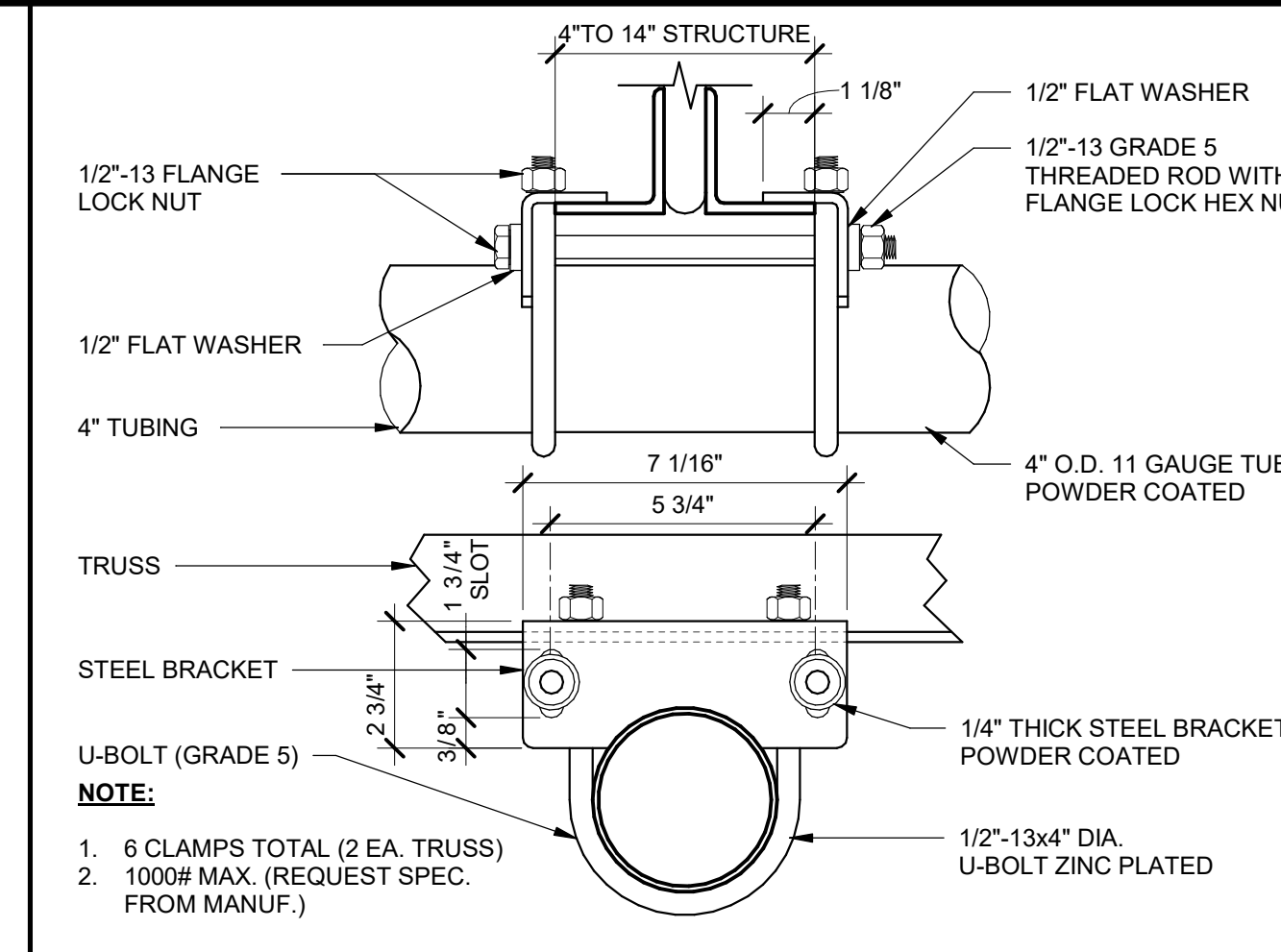
HARDWOOD COURT THRESHOLD 3" = 1'-0" 8



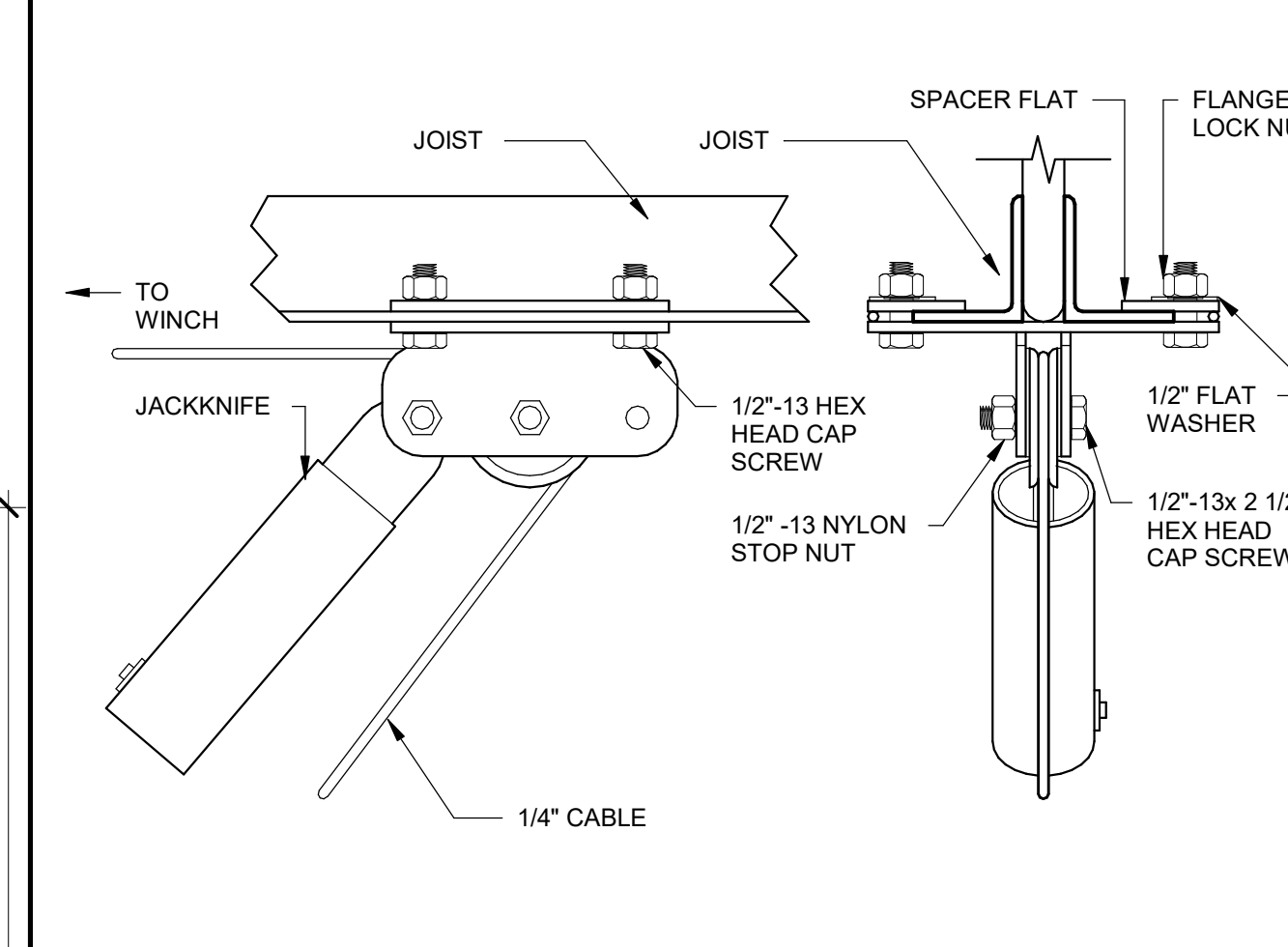
HARDWOOD FL - EQUIPMENT SLEEVE 3" = 1'-0" 9



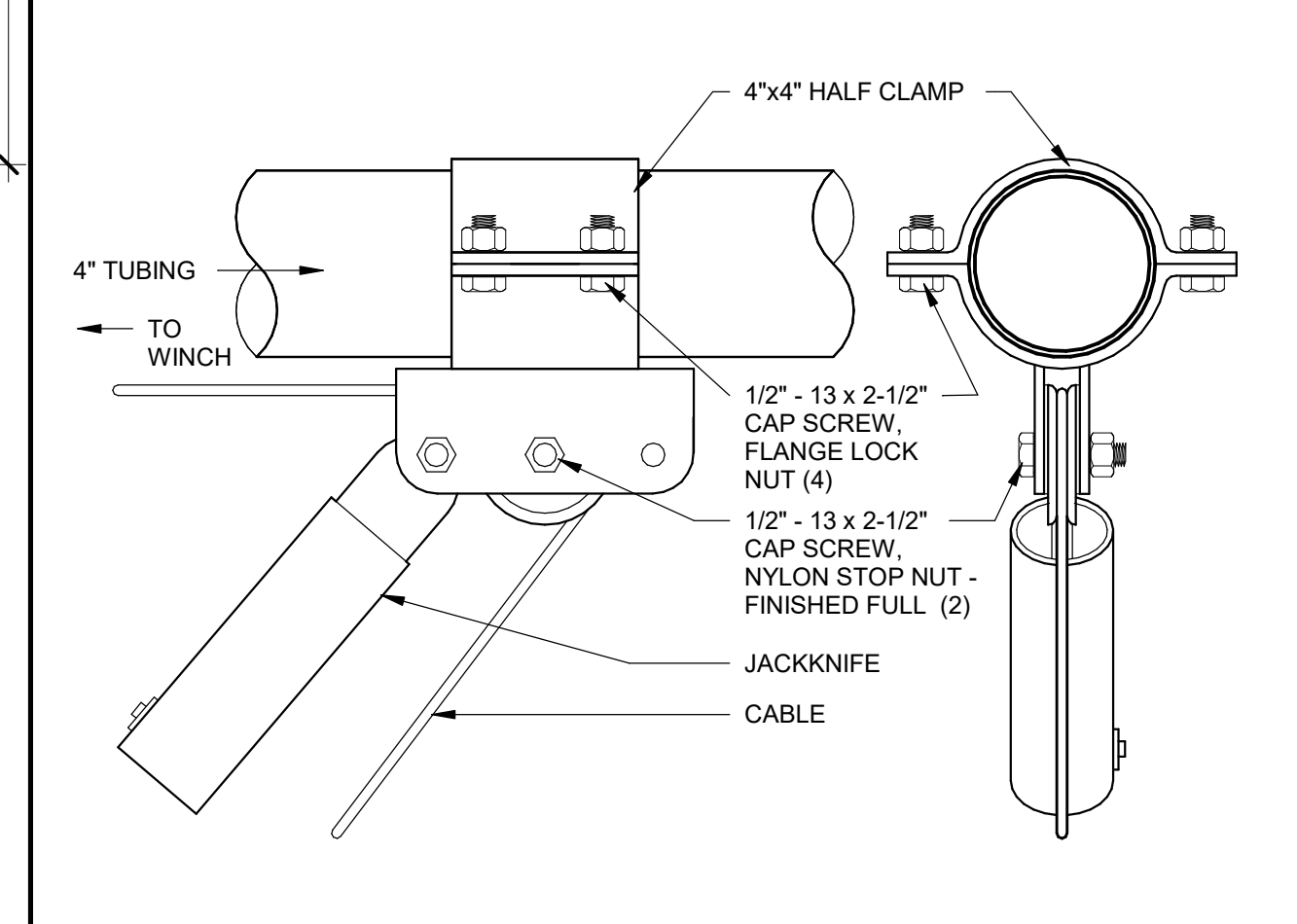
ACCESSIBLE BENCH 1/2" = 1'-0" 10



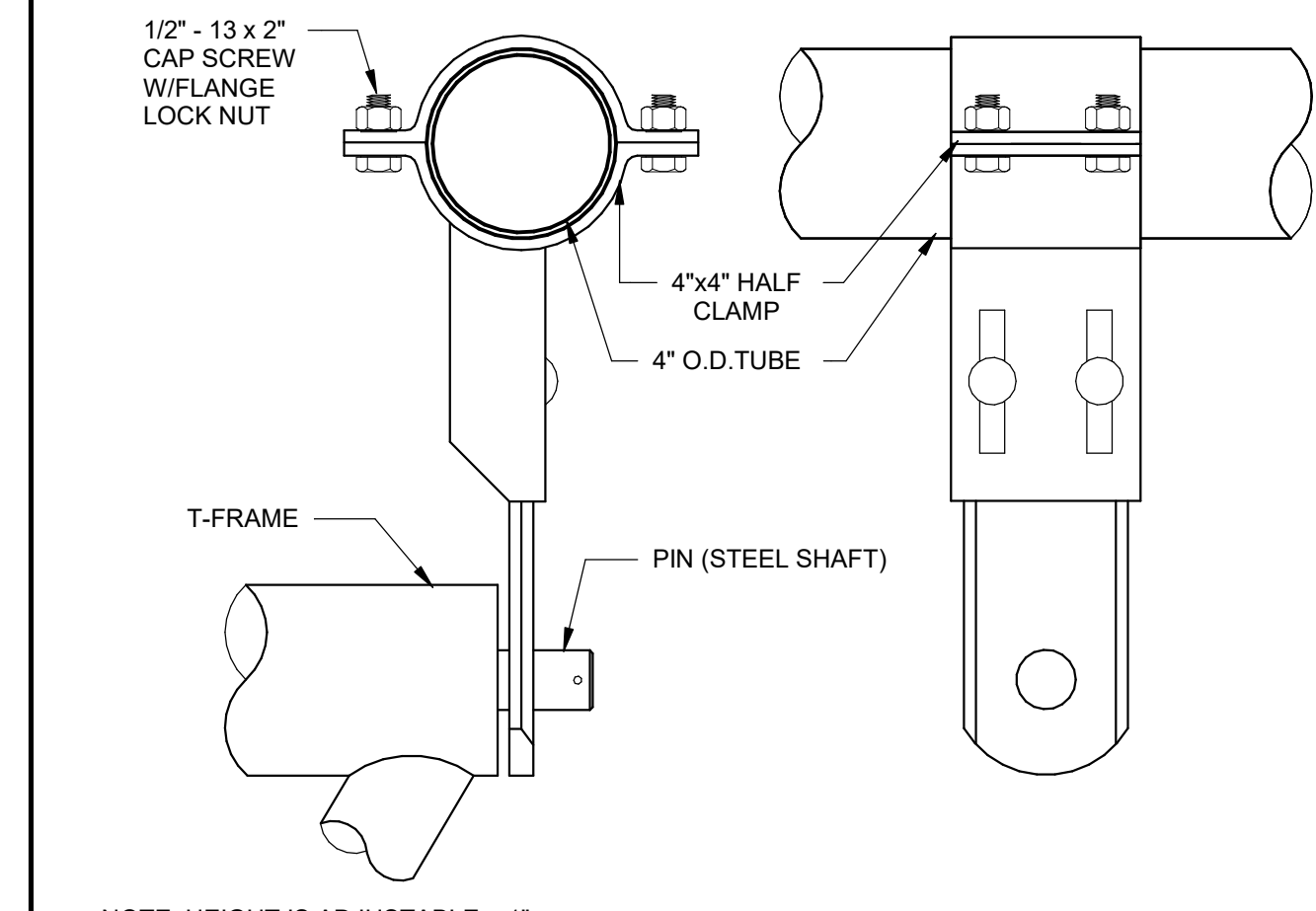
STANDARD JOIST CLAMP 3" = 1'-0" 11



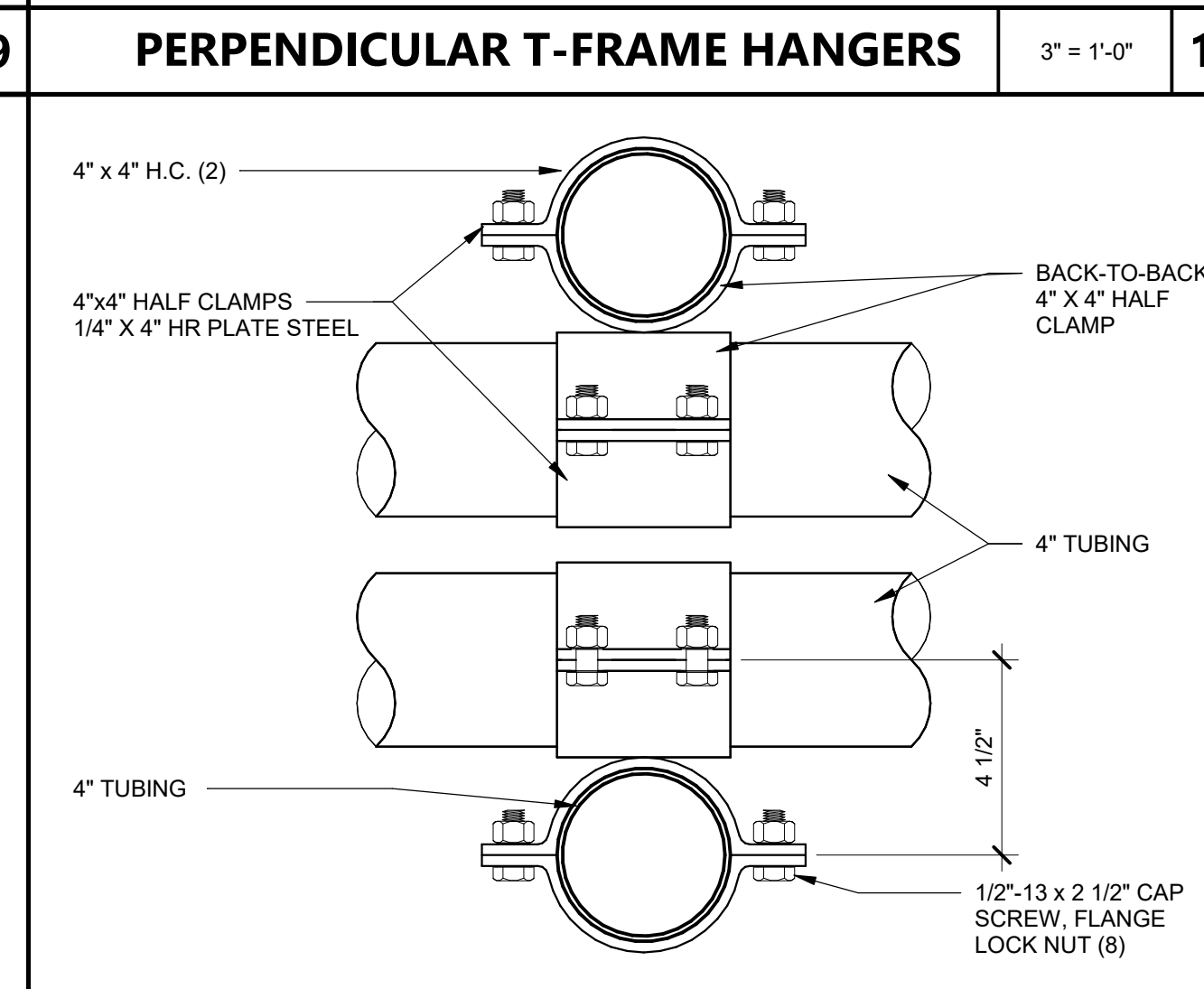
BEAM PERP. JACKKNIFE HANGER 3" = 1'-0" 12



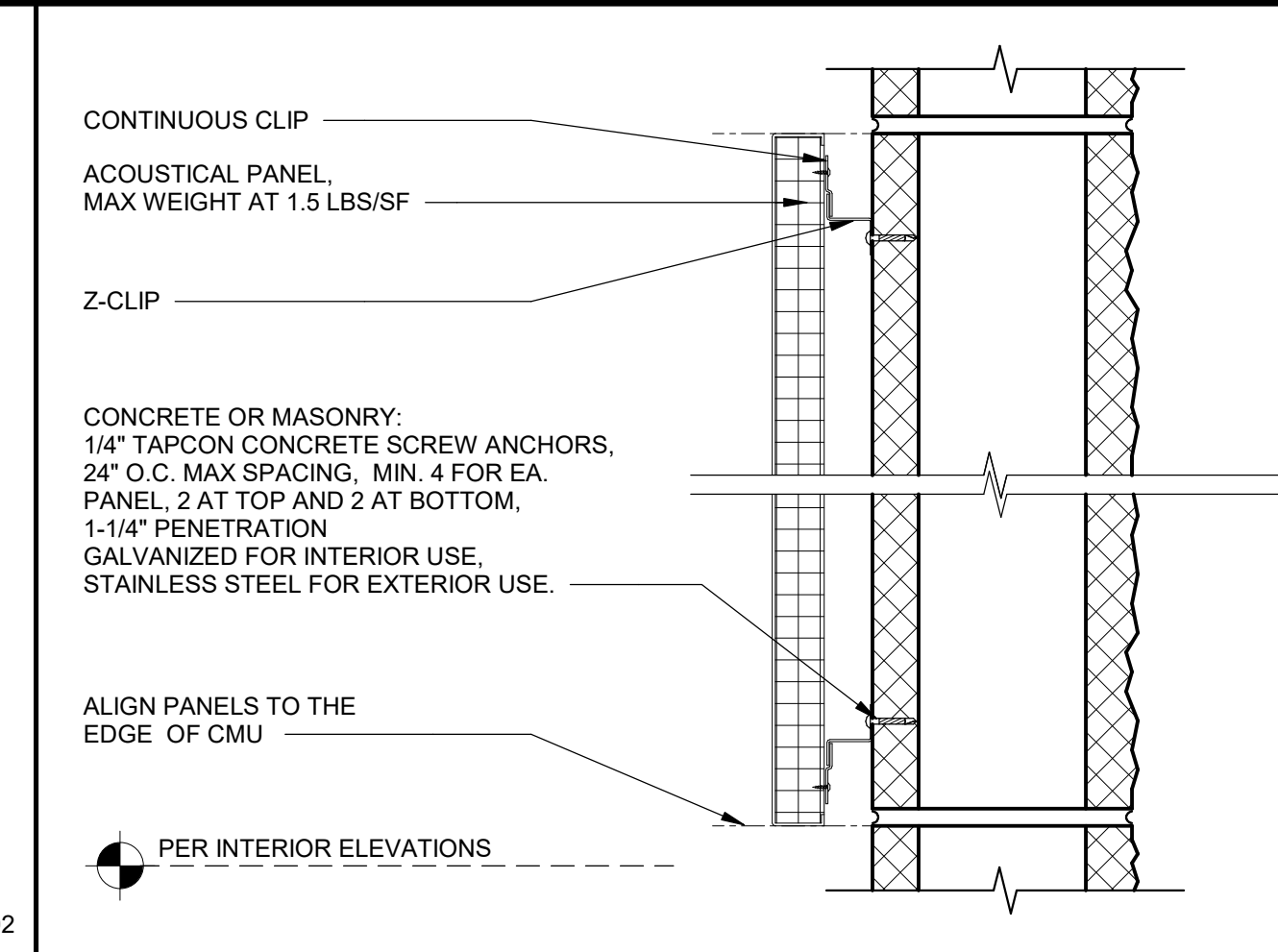
TUBE PERP. JACKKNIFE HANGER 3" = 1'-0" 13



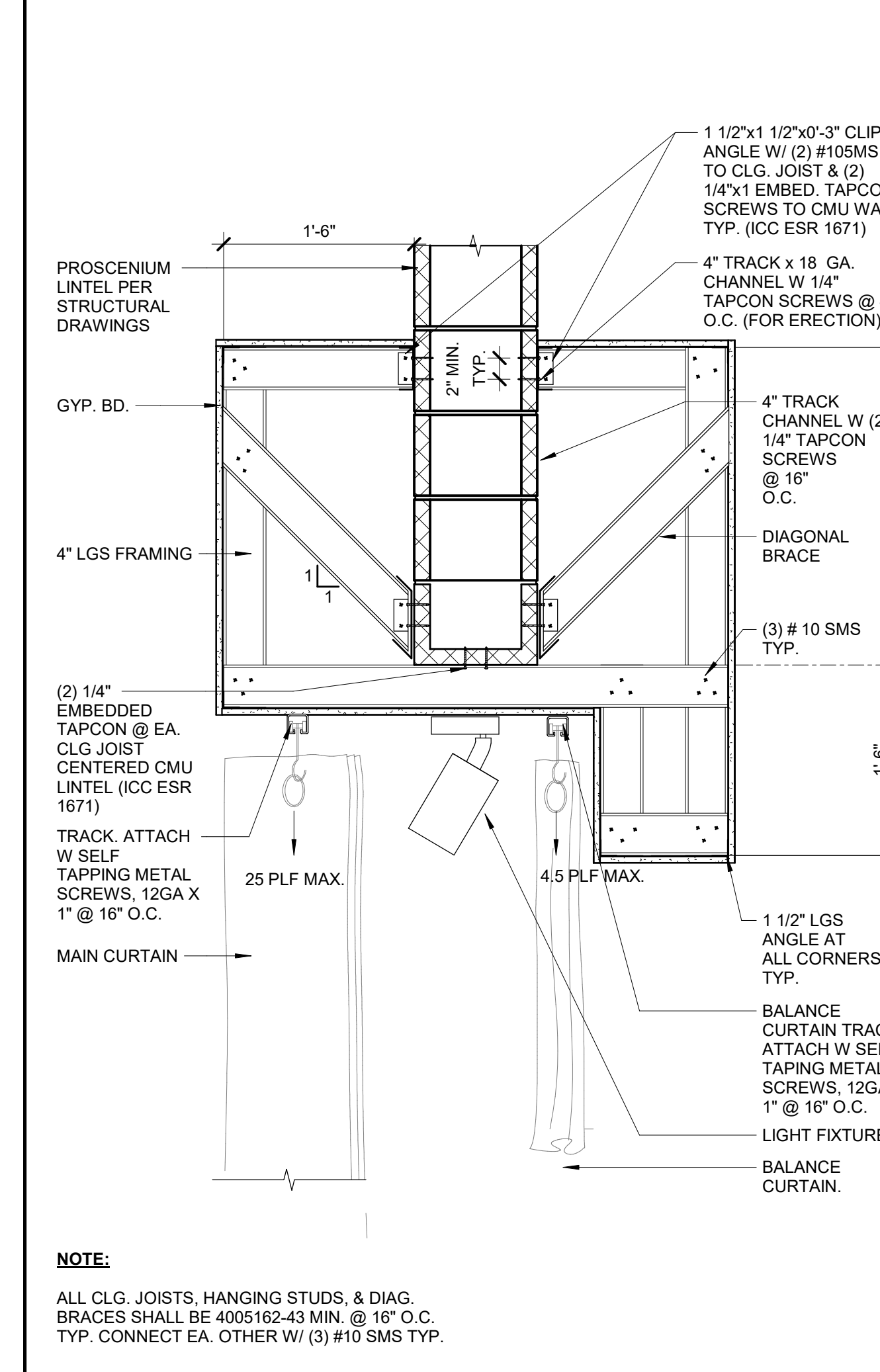
PERPENDICULAR T-FRAME HANGERS 3" = 1'-0" 14



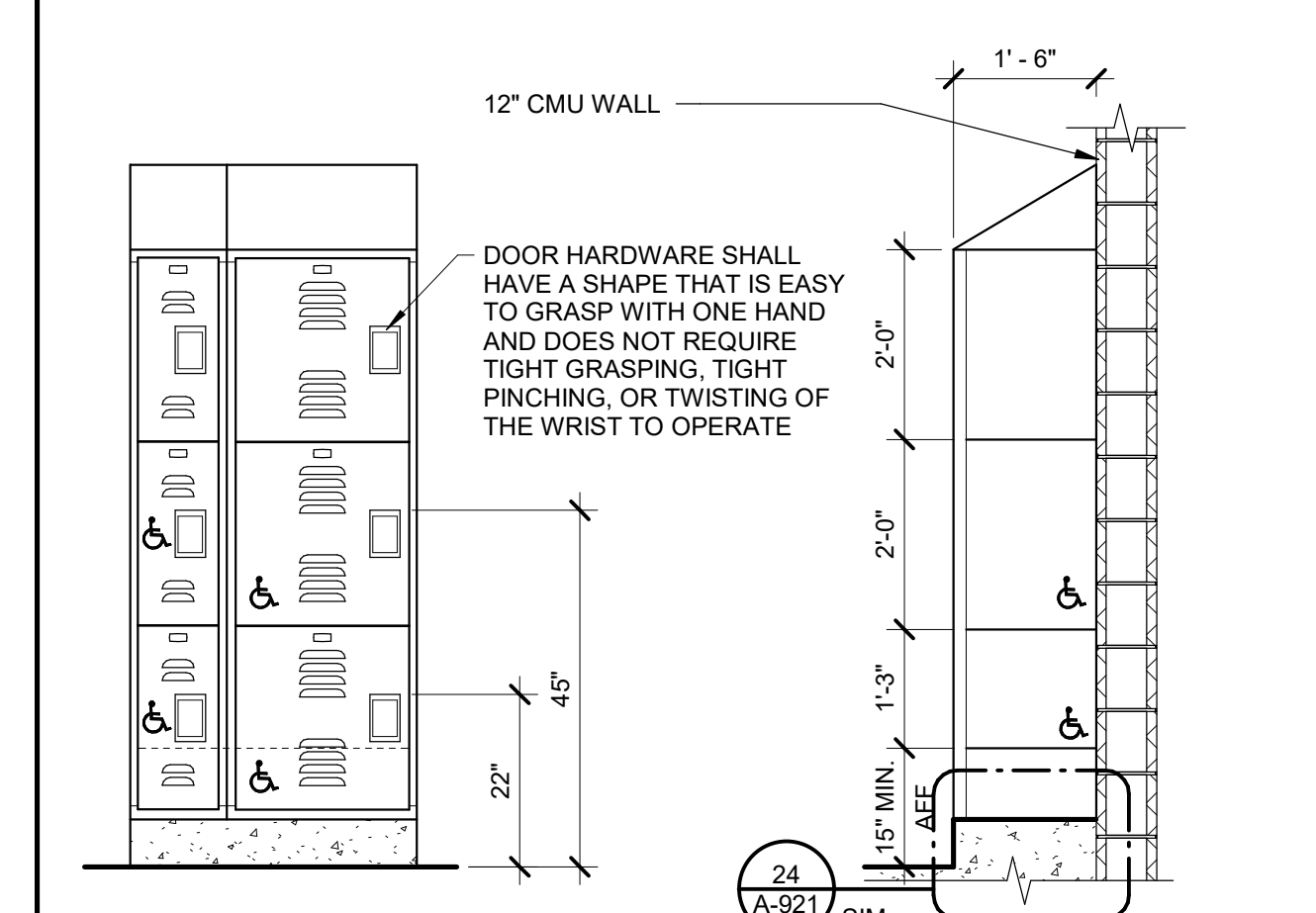
BACK-TO-BACK HALF CLAMP 3" = 1'-0" 15



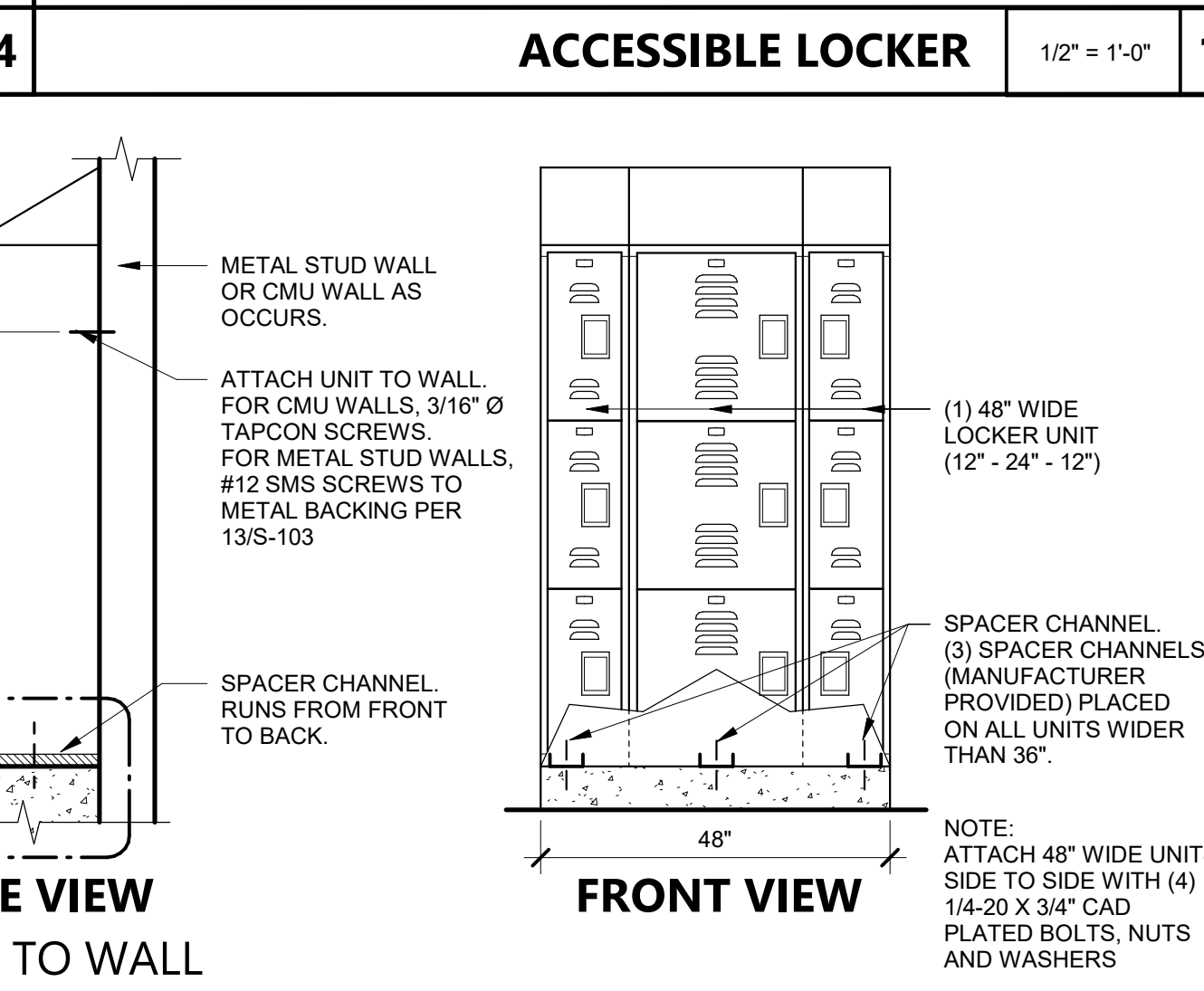
ACOUSTICAL WALL PANELS 3" = 1'-0" 16



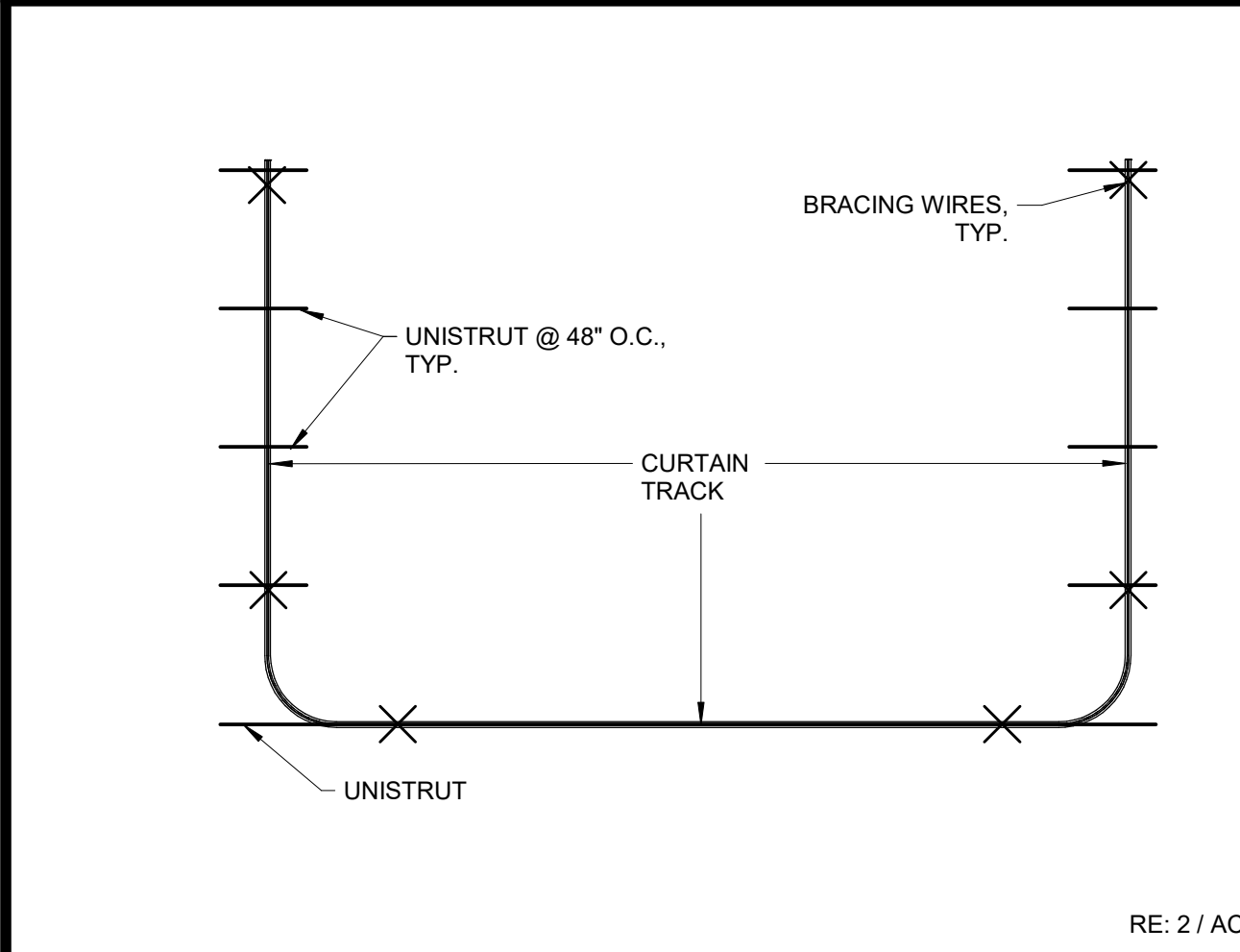
PROCENIUM FRAMING 1" = 1'-0" 18



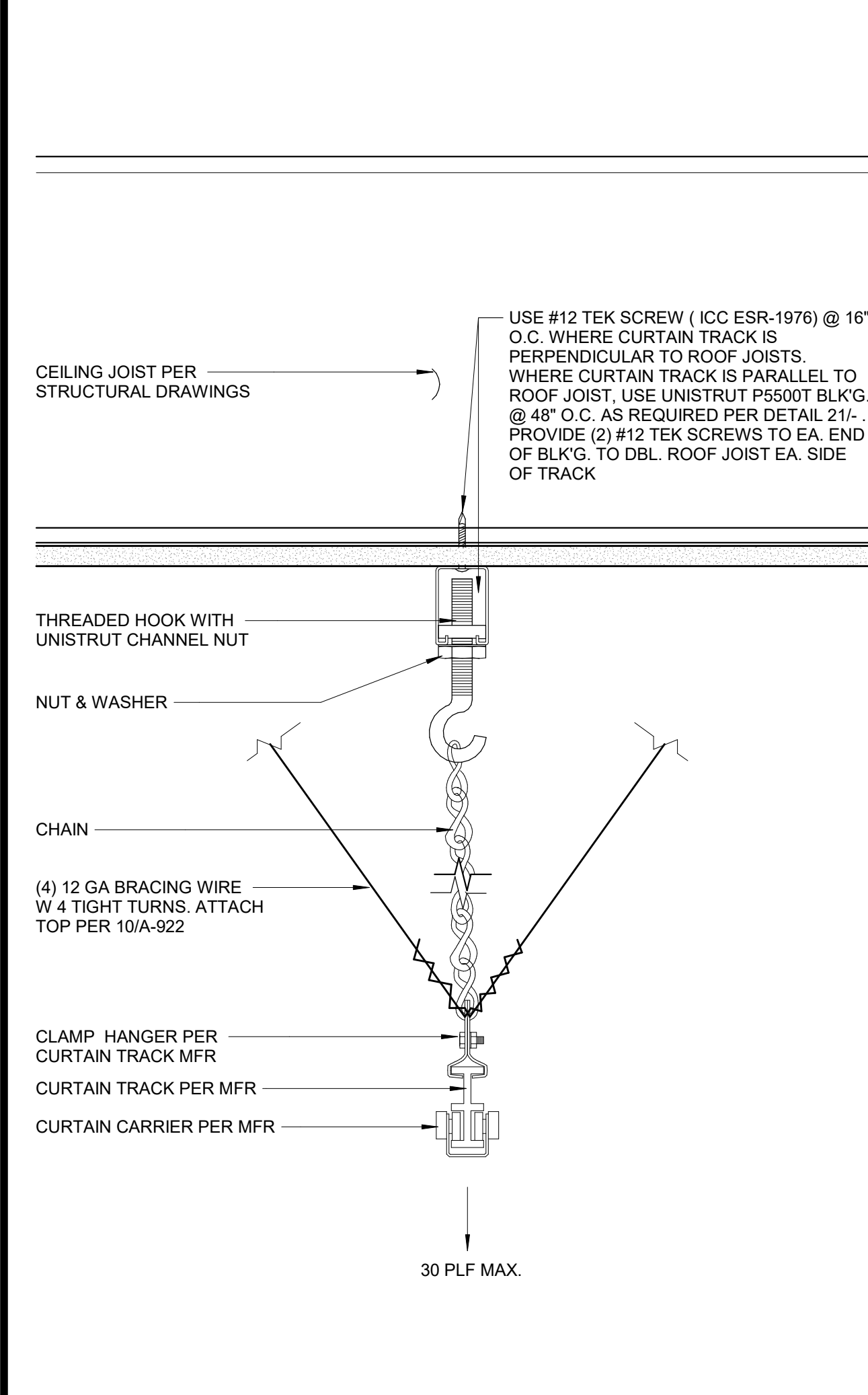
ACCESSIBLE LOCKER 1/2" = 1'-0" 19



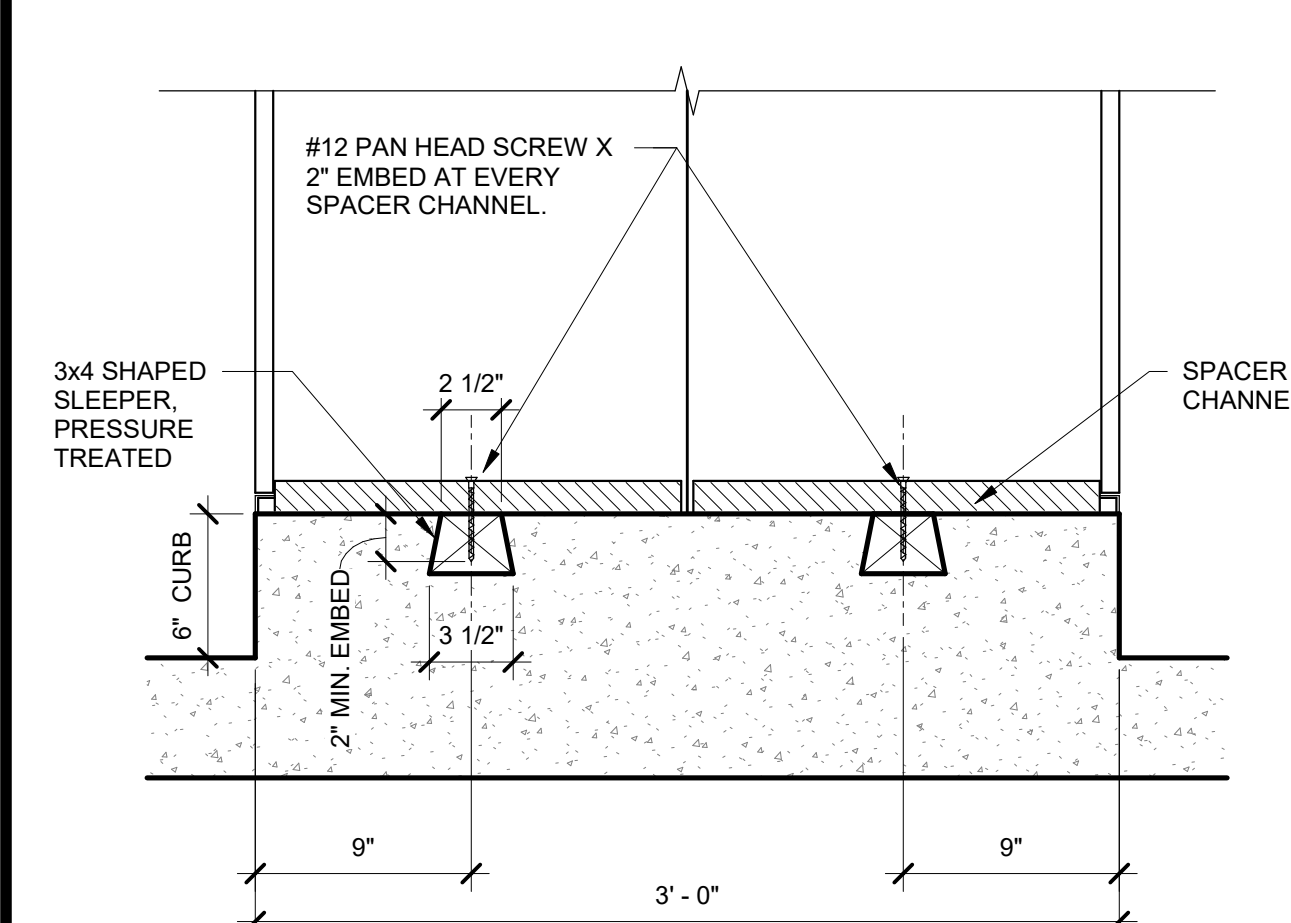
TYP. LOCKER INSTALLATION 1/2" = 1'-0" 20



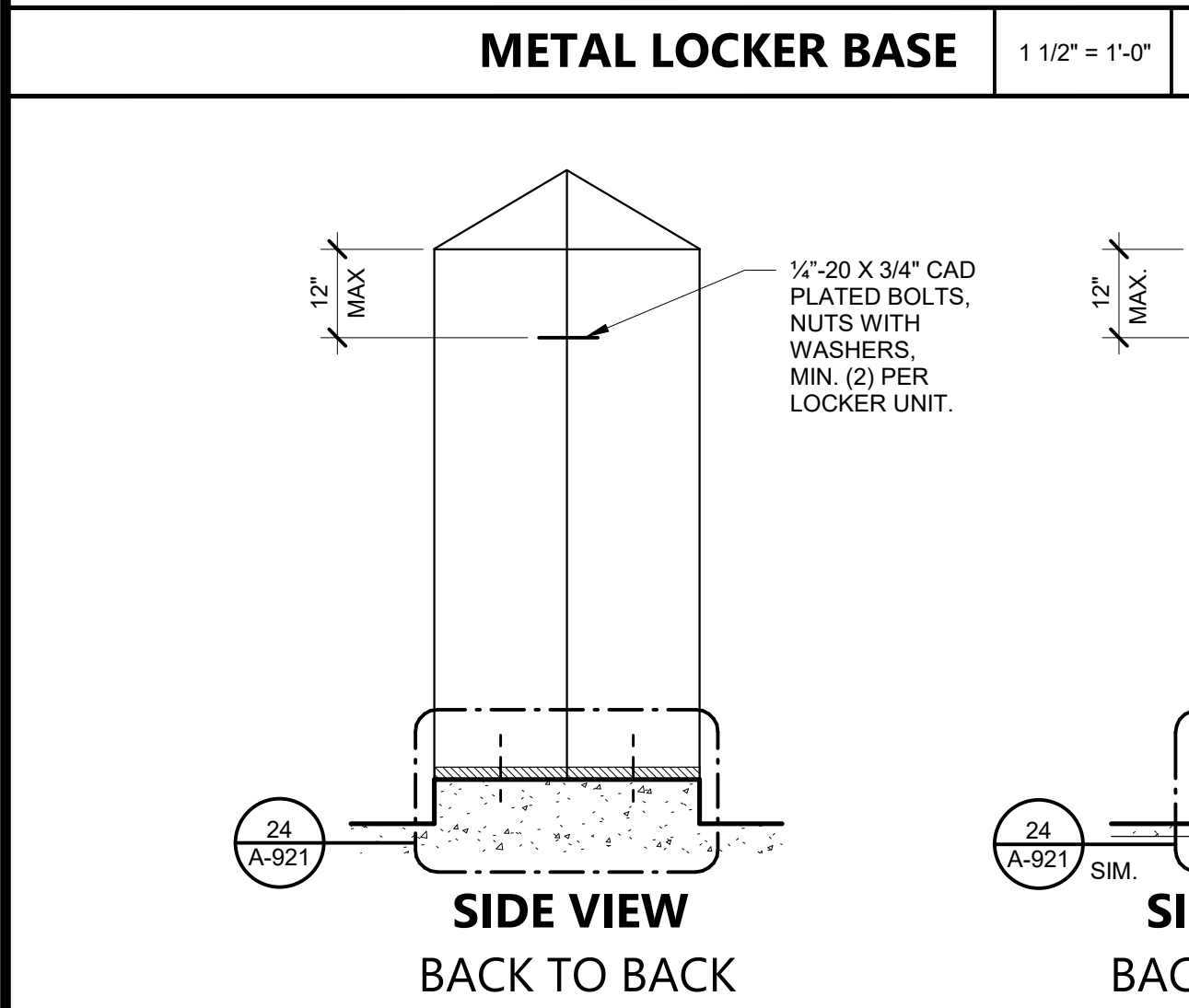
CURTAIN TRACK ATTACHMENT PLAN N.T.S. 21



CURTAIN TRACK ATTACHMENT @ STAGE 3" = 1'-0" 23



METAL LOCKER BASE 1 1/2" = 1'-0" 24



SIDE VIEW BACK TO BACK and **SIDE VIEW BACK TO WALL**

FILE LOCATION: C:\Users\HCrutz\Documents\20179.01_OUSD_OAHS MUR_A20_V2_hcnzy\PB9K.rvt DATE PLOTTED: 3/24/2022 2:03:33 PM

REFERENCE NOTES

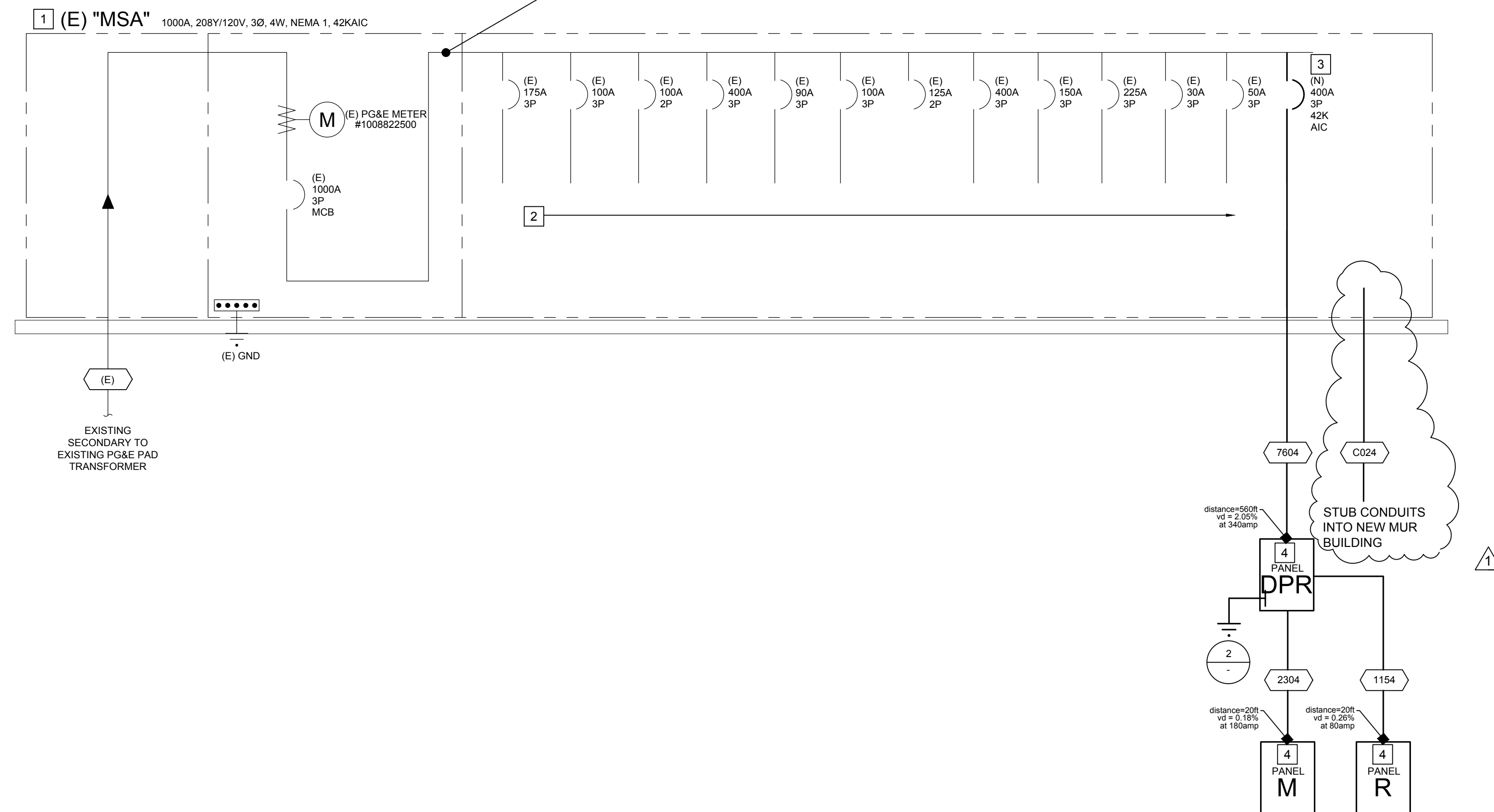
- EXISTING SQUARE D QED MAIN SWITCHBOARD "MSA" 1000 AMP, 120/208V, 3-PHASE, 4-WIRE, NEMA 1 ENCLOSURE INSIDE OF EXISTING BUILDING 10, SEE SITE PLAN FOR LOCATION.
- NO CHANGES TO (E) LOADS ON MAIN SWITCHBOARD "MSA".
- PROVIDE AND INSTALL NEW 600AMP CIRCUIT BREAKER IN EXISTING SWITCHBOARD COMPLETE WITH MOUNTING HARDWARE.
- NEW DISTRIBUTION / ELECTRICAL PANEL AT NEW BLDG, SEE FLOOR PLANS FOR LOCATIONS, REFER TO PANEL SCHEDULES. PANELS TO BE MANUFACTURED TO ACCEPT FUTURE BRANCH CIRCUIT POWER MONITORING EQUIPMENT (SCHNEIDER ELECTRIC #BCPM) TO COMPLY WITH 2019 CEC SECTION 130.5 (B).

SINGLE LINE DIAGRAM NOTES

- ALL CONDUCTORS SHALL BE COPPER WITH TYPE (THHN/THWN) INSULATION UNLESS OTHERWISE NOTED.
- ALL SWITCHES, CIRCUIT BREAKERS AND OTHER EQUIPMENT, AS SPECIFIED, SHALL HAVE TERMINATION PROVISIONS LISTED AND IDENTIFIED FOR USE WITH 75 DEG. CONDUCTORS, AND ALL FEEDER CONDUCTORS, AND CONDUITS, ARE SIZE BASED ON USE OF 75 DEG. C COPPER WIRES TYPE THWN/THHN.
- DESIGN SHOWN IS BASED ON SQUARE D PRODUCT. ENGINEER-APPROVED EQUAL ALTERNATE PRODUCT WILL BE ACCEPTABLE.
- ALL EQUIPMENT SHALL HAVE AN APPROVED TESTING LABORATORY LABEL ATTACHED (UL, CSA, ETC.) (CEC 110-2).
- REFER TO PANEL SCHEDULES FOR INDIVIDUAL BRANCH CIRCUIT VOLTAGE DROP AND/OR SINGLE LINE DIAGRAM FOR FEEDER VOLTAGE DROP CALCULATIONS.
- BRANCH CIRCUIT/FEEDER DISTANCE IS SHOWN FOR REFERENCE ONLY AS THE BASIS OF VOLTAGE DROP CALCULATIONS. CONDUCTOR DISTANCE AS INDICATED SHALL NOT BE USED FOR BIDDING/CONSTRUCTION PURPOSES. SHOULD THE FEEDER DISTANCE EXCEED THE LENGTH NOTED PER INSTALLATION CONDITIONS, NOTIFY THE ENGINEER OF RECORD.
- VERIFY ALL FEEDER, AND BRANCH CIRCUIT CONDUCTOR SIZES AND PROVIDE PROPERLY SIZED LUGS FOR ALL BREAKERS AS REQUIRED FOR SPECIFIED CONDUCTORS.

LOAD SUMMARY: 1000A SWBD "MSA"

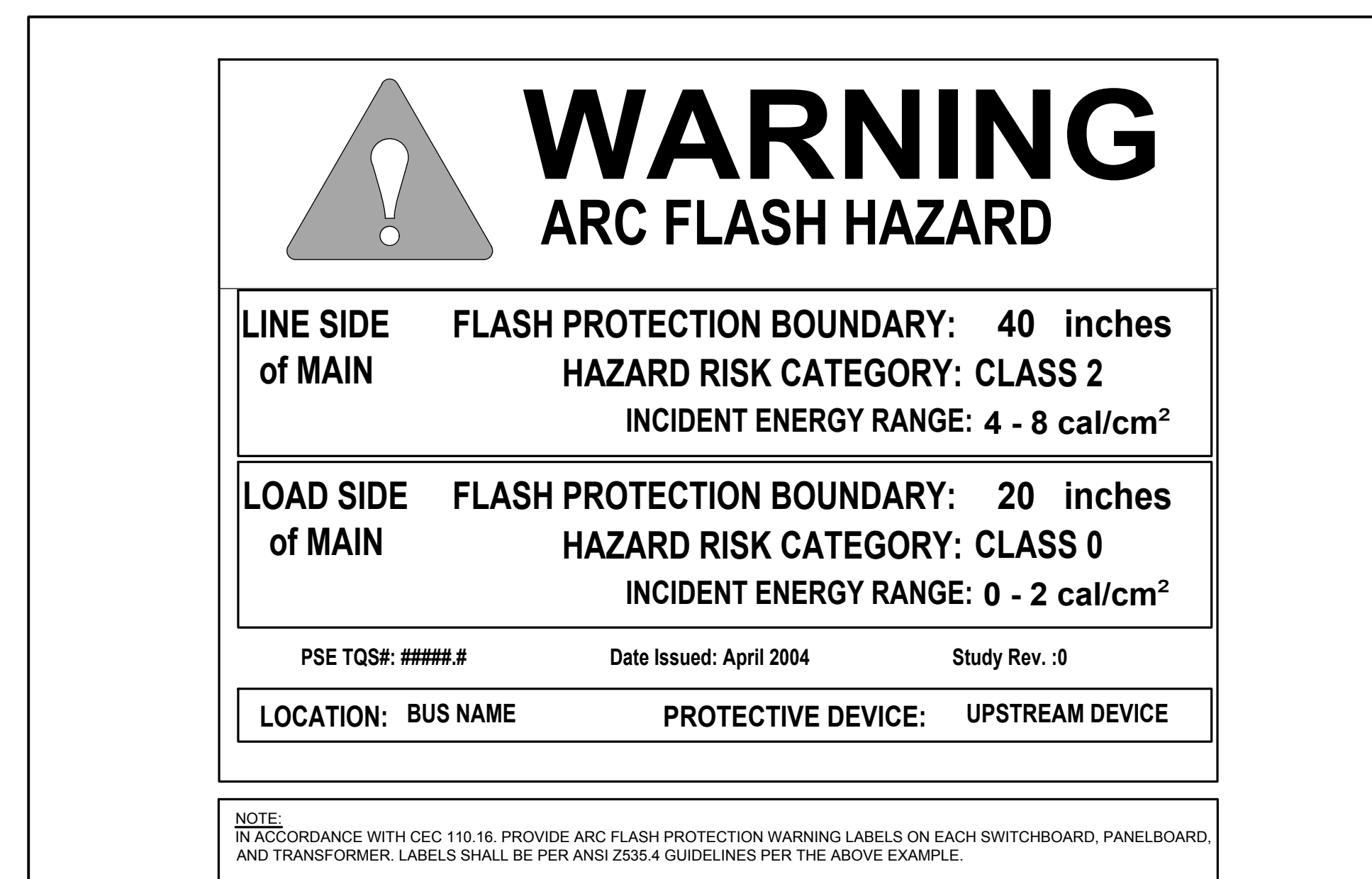
PEAK DEMAND FROM 12 MONTH METER RECORD HISTORY
 EXISTING DEMAND LOAD = 53.0 KVA
 CEC 25% SAFETY FACTOR = 13.3 KVA
 ADDED LOAD = 117 KVA
 DISTRIBUTION PANEL DPR = 117 KVA
 TOTAL CALCULATED LOAD = 184 KVA
 184 KVA AT 208V, 3PH = 510AMPS



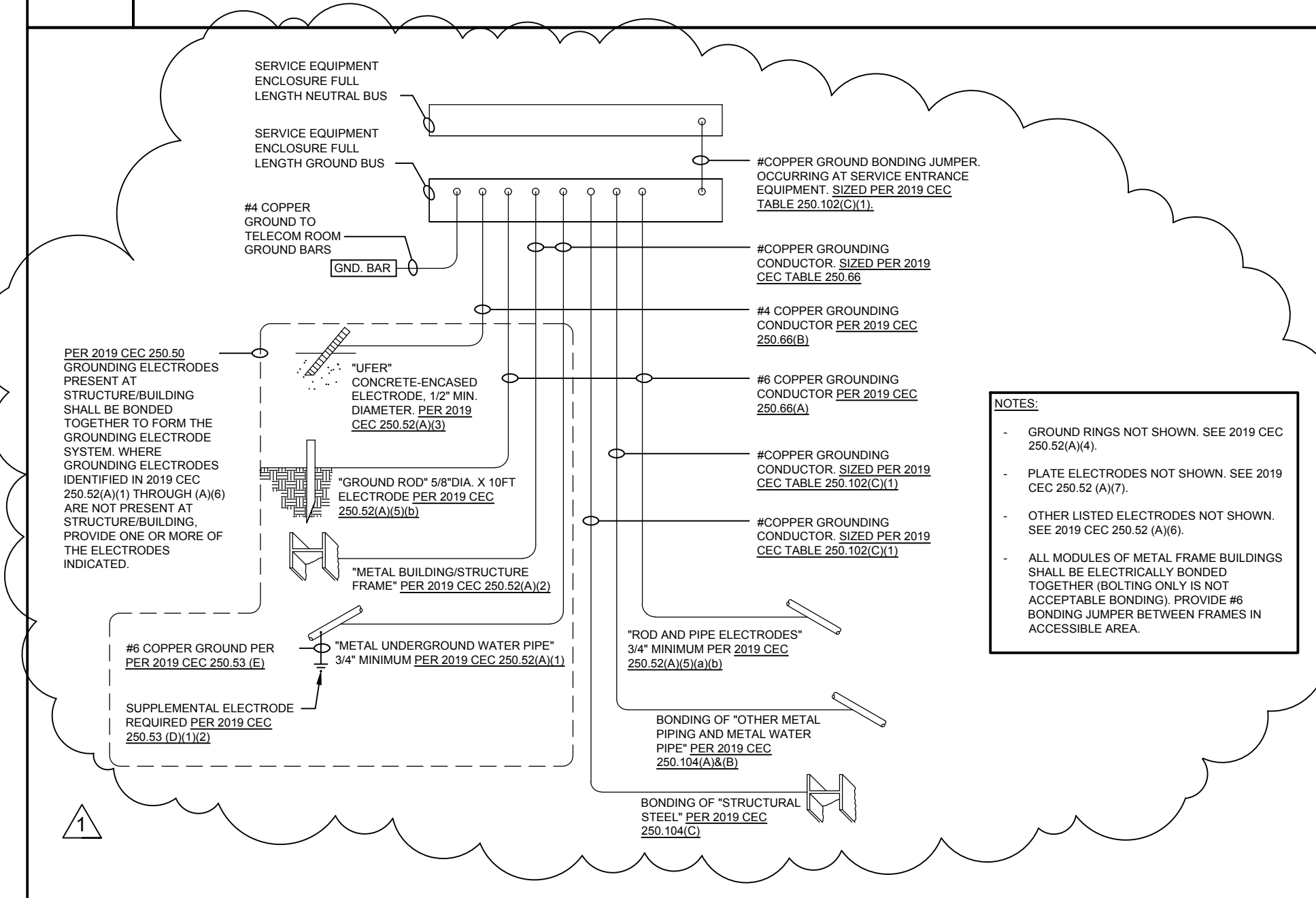
ELECTRICAL SINGLE LINE DIAGRAM

COPPER FEEDER SCHEDULE

FEEDER NO.	RACEWAY QUANTITY/SIZE	CONDUCTORS
C024	(2) 4" C	CONDUIT ONLY WITH PULL ROPE
1154	(1) 1-1/2" C	(4) #2 THWN & (1) #6 GND.
2304	(1) 2-1/2" C	(4) #4/0 THWN & (1) #4 GND.
6204	(2) 4" C	(4) #350 KCMIL THWN & (1) #1 GND, EACH
7604	(2) 4" C	(4) #500 KCMIL THWN & (1) #1/0 GND, EACH



1 TYPICAL ARCH FLASH SIGNAGE DETAIL



2 TYPICAL GROUND / BOND DETAIL



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LICENSED ARCHITECT
A. GLEN REEDER
C-22474
EXPIRES: 06/30/23
THOMA #21-8016

REVISIONS

NO.	DATE	DESCRIPTION
1	05-06-2022	ADDENDUM 3

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SINGLE LINE DIAGRAM

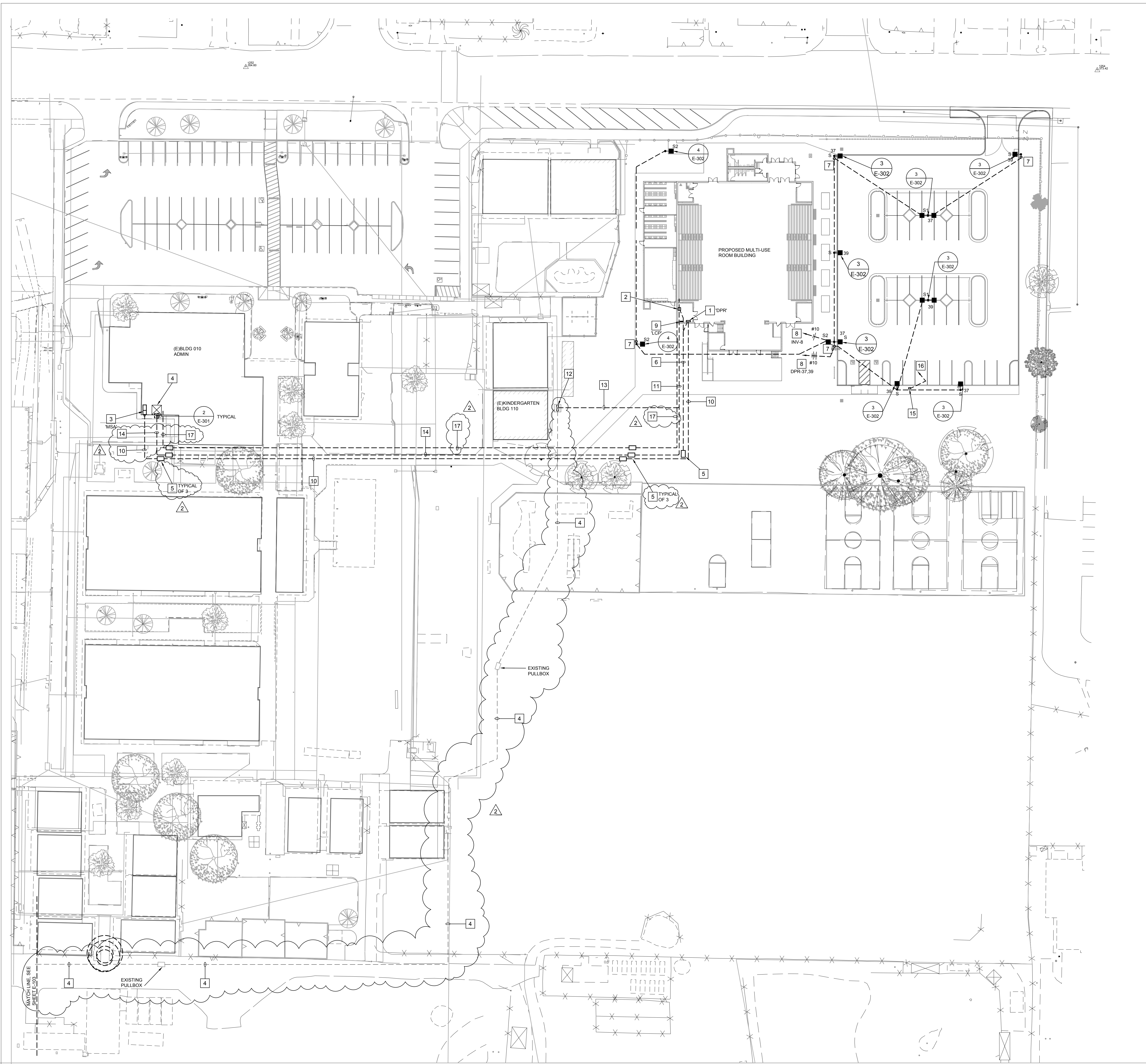
DRAWN BY: TR JOB NUMBER: 20179.01

SHEET NO.

E-002

DATE: OCTOBER 26, 2021

FILE LOCATION: DATE PLOTTED:



REFERENCE NOTES

1. DISTRIBUTION PANEL 'DPR', SEE SINGLE LINE DIAGRAM.
2. DATA DISTRIBUTION RACK, SEE SHEET E-501.
3. EXISTING MAIN SWBD MSA, SEE SINGLE LINE DIAGRAM.
4. (1) 3" EXISTING DATA / COMMUNICATIONS SYSTEM CONDUIT WITH PULLROPE TO REMAIN, INSTALL NEW FIBER OPTIC CABLING THRU EXISTING CONDUIT.
5. 3' X 5' CONCRETE PULLBOX, SEE MOUNTING DETAIL 9/E-301.
6. PROVIDE (2) 2" C.O. FROM DATA RACK AND (2) 2" C.O. FROM DISTRIBUTION PANEL DPR, STUB AND CAP CONDUITS FOR FUTURE USE.
7. 11" X 17" CONCRETE PULLBOX, PROVIDE WITH STEEL CHECKER PLATE LID WITH HOLD DOWN BOLTS, MOUNT FLUSH IN GRADE, SET OVER 12" OF CRUSHED ROCK.
8. ROUTE BRANCH CIRCUITS THROUGH LIGHTING CONTROL PANEL 'LCP', SEE LIGHTING CONTROL PANEL SCHEDULE ON SHEET E-303.
9. LIGHTING CONTROL PANEL 'LCP', SEE SHEET E-303.
10. UNDERGROUND FEEDER FROM MAIN SWBD MSA TO NEW DISTRIBUTION PANEL DPR WITH SPARE CONDUITS, SEE SINGLE LINE DIAGRAM.
11. (3) 4" COMMUNICATION SYSTEM CONDUITS, SEE COMMUNICATIONS RISER DIAGRAM FOR CABLING.
12. EXISTING COMMUNICATIONS PEDESTAL.
13. (1) 4" COMMUNICATION SYSTEM CONDUIT, SEE COMMUNICATIONS RISER DIAGRAM FOR CABLING.
14. (2) 4" COMMUNICATION SYSTEM CONDUITS, SEE COMMUNICATIONS RISER DIAGRAM FOR CABLING.
15. 11" X 17" U.L. LISTED FLUSH IN GRADE PULLBOX FOR FUTURE EVCS POWER.
16. (1) 2" C.O. TO PANEL DPR FOR FUTURE EVCS POWER CONNECTION, TERMINATE CONDUIT IN PULLBOX AS SHOWN.
17. (2) 4" SPARE CONDUITS, SEE SINGLE LINE DIAGRAM.

CONDUIT LEGEND

- NEW
- EXISTING TO REMAIN

SITE PLAN GENERAL NOTES

- A. TRENCHING AND BACKFILLING FOR ALL CONDUIT SYSTEMS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL CONDUITS SHALL HAVE MINIMUM COVER REQUIREMENTS AS SPECIFIED IN CEC 300-9. JOINT TRENCHING MAY BE UTILIZED WHERE PRACTICABLE AND WHERE PERMITTED BY THIS SPECIFICATION. TRENCHING OR BORING WILL BE AT CONTRACTORS OPTION.
- B. LOCATIONS OF EXISTING UNDERGROUND (UG) UTILITY SYSTEMS SHALL BE DETERMINED BY CALLING UNDERGROUND SERVICE ALERT (USA) WHEN PLANNING UNDERGROUND WORK, AND BEFORE YOU DIG, CONTACT UNDERGROUND SERVICE ALERT (USA) AT LEAST 48 HOURS PRIOR TO EXCAVATION (WEEKENDS EXCLUDED) FOR THE LOCATION OF UNDERGROUND GAS AND ELECTRIC LINES OR EQUIPMENT.
- C. MAINTAIN REQUIRED CLEARANCES FROM ALL SANITARY SEWER, WATER AND STORM DRAIN PIPING. REFER TO CIVIL PLANS FOR EXACT LOCATIONS AND DEPTHS OF PIPING.
- D. THE EXACT QUANTITY, LOCATION AND DEPTHS OF EXISTING UNDERGROUND PIPING AND CONDUITS IS UNKNOWN. FIELD VERIFY AND MAINTAIN EXISTING UTILITIES IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION AND EXCAVATION OPERATIONS.
- E. REPAIR AND RECONNECT ALL EXISTING UNDERGROUND PIPING UNCOVERED AND DAMAGED BY NEW WORK AS REQUIRED TO MAINTAIN PROPER SYSTEM FUNCTIONS. RE-TEST ALL SYSTEMS DAMAGED BY NEW WORK.
- F. SAWCUT AND PATCH ALL SURFACES TO MATCH EXISTING SURFACES (CONCRETE, AC PAVING, ETC.) AS REQUIRED FOR INSTALLATION OF NEW WORK. COMPLETE FIELD VERIFICATION OF THIS WORK IS REQUIRED BY CONTRACTOR.
- G. SEE DETAIL 4/E-301 FOR ELECTRICAL/DATA/COMMUNICATION TRENCH DETAIL.



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REVISIONS

NO.	DATE	DESCRIPTION
1	4/13/2022	ADDENDUM 1
2	05-08-2022	ADDENDUM 3

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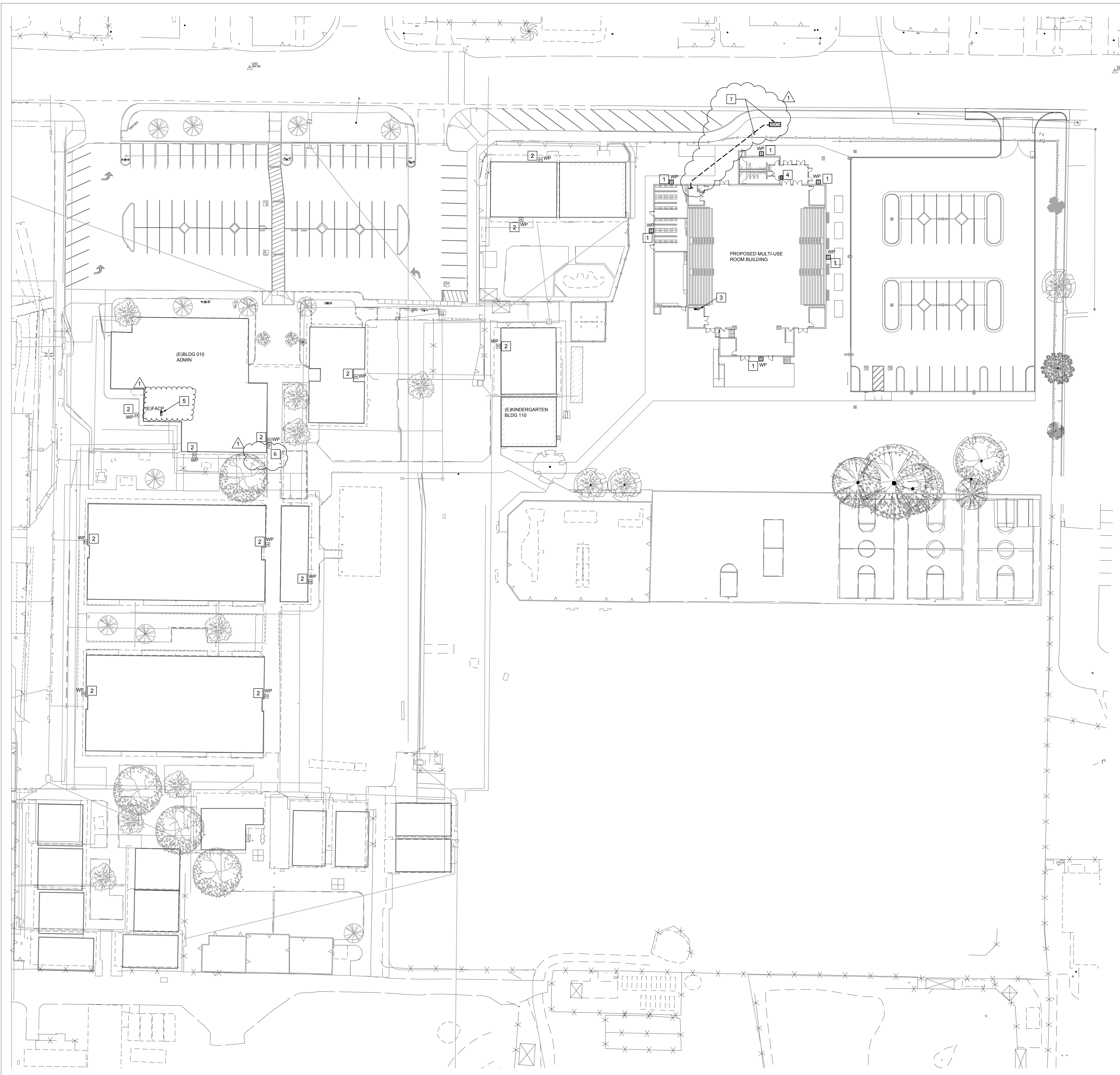
SHEET TITLE
SITE ELECTRICAL PLAN

DRAWN BY: TR JOB NUMBER: 20179-01

SHEET NO.
E-101
DATE: OCTOBER 26, 2021

SITE ELECTRICAL PLAN
SCALE: 1"= 30'-0"
NORTH

DATE PLOTTED: FILE LOCATION:



REFERENCE NOTES

1. NEW BUILDING MOUNTED EXTERIOR FIRE ALARM DEVICE.
2. EXISTING BUILDING MOUNTED EXTERIOR FIRE ALARM DEVICE, SHOWN FOR REFERENCE ONLY.
3. NEW MULTI-USE ROOM BUILDING FIRE ALARM CONTROL PANEL, SEE FIRE ALARM RISER DIAGRAM.
4. NEW REMOTE ANNUNCIATOR, SEE FIRE ALARM RISER DIAGRAM.
5. EXISTING CAMPUS FIRE ALARM CONTROL PANEL.
6. EXISTING MANUAL FIRE ALARM PULLSTATION ON EXISTING FIRE ALARM SYSTEM.
7. FIRE SPRINKLER DOUBLE DETECTOR CHECK VALVE AND 3/4" UNDERGROUND CONDUIT WITH FIRE ALARM CONDUCTORS. SEE FIRE ALARM FLOOR PLAN CONTINUATION AND RISER DIAGRAM FOR FIRE ALARM CONNECTION.



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- FIRE PROTECTION ENGINEER**
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TEL (805) 544-42-69

ARCHITECT STAMP 	CONSULTANT STAMP
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REVISIONS

NO.	DATE	DESCRIPTION
1	05-06-2022	ADDENDUM 3

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PROJECT OWNER & TITLE
ORCUTT UNION SCHOOL DISTRICT
500 Dyer Street
Orcutt, CA 93455

ORCUTT ACADEMY HS MUR BUILDING
610 Pinal Avenue
Orcutt, CA 93455

SHEET TITLE
SITE FIRE ALARM PLAN

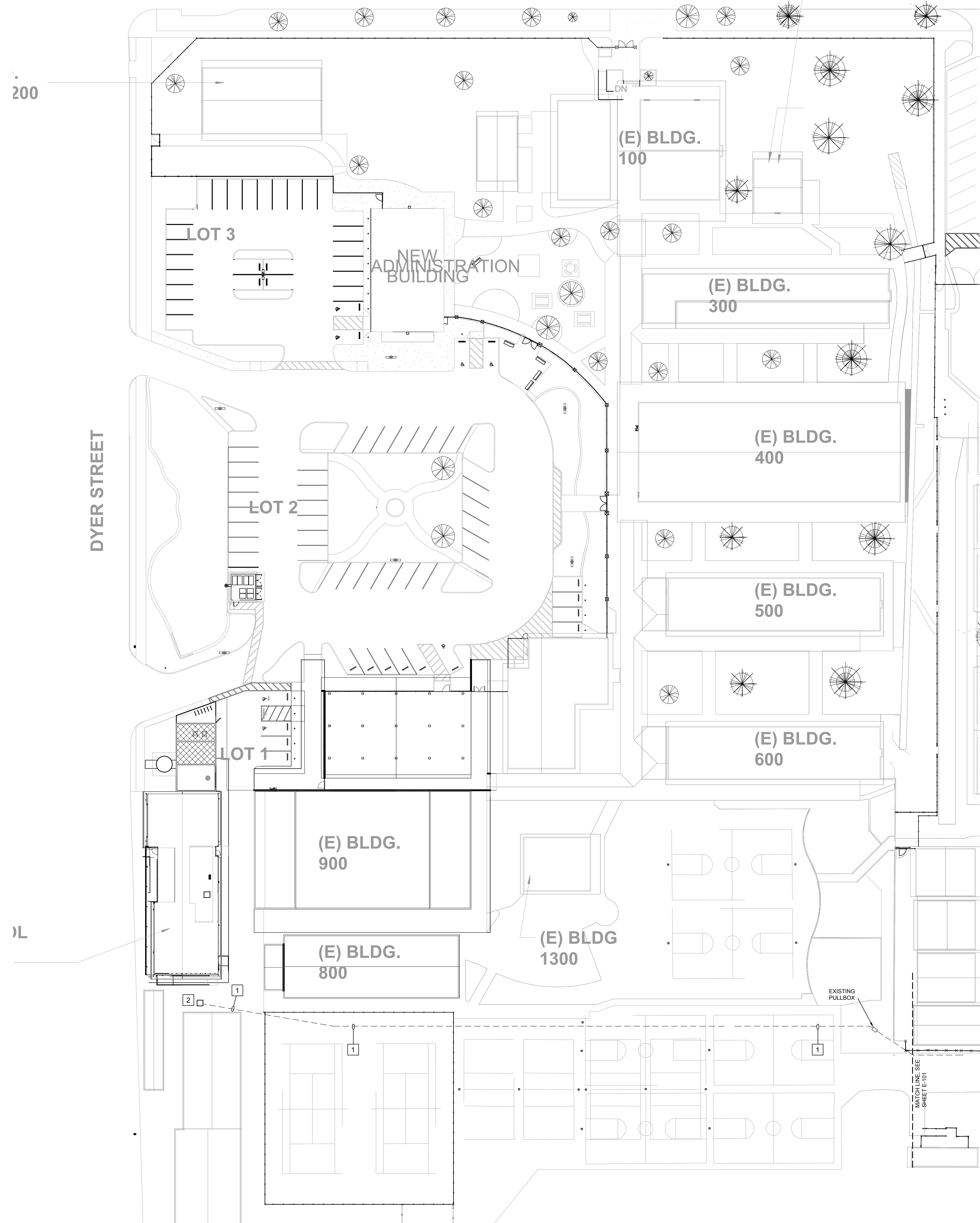
DRAWN BY: TR JOB NUMBER: 20179-01

SHEET NO.
E-102

DATE: OCTOBER 26, 2021

DATE PLOTTED:

SITE FIRE ALARM PLAN
SCALE: 1"= 30'-0"
NORTH



REFERENCE NOTES

- 1) 3" EXISTING DATA / COMMUNICATIONS SYSTEM CONDUIT WITH PULLROPE TO REMAIN. INSTALL NEW FIBER OPTIC CABLING THRU EXISTING CONDUIT.
- 2) DISTRICTS I.T. BUILDING. CONNECT NEW FIBER CABLING FOR NEW MUR BUILDING TO EXISTING HEAD END EQUIPMENT IN I.T. BUILDING. COMPLETE FIELD VERIFICATION OF EXISTING I.T. BUILDING. EXISTING INFRASTRUCTURE. AND CONNECTION REQUIREMENTS IS REQUIRED. CONTRACTOR TO COORDINATE WORK DIRECTLY WITH OWNER'S I.T. DEPARTMENT.

CONDUIT LEGEND

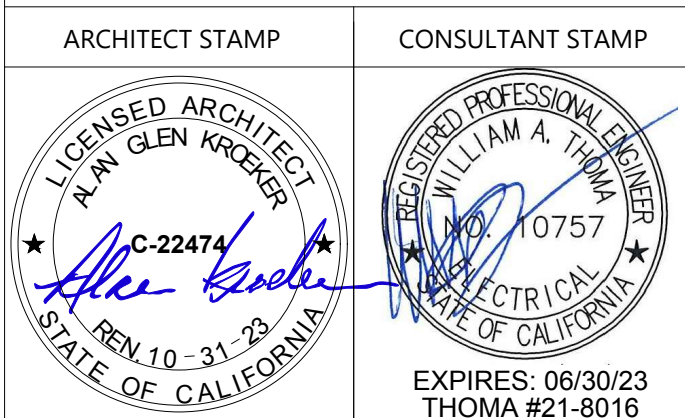
- NEW
- EXISTING TO REMAIN

SITE PLAN GENERAL NOTES

- TRENCHING AND BACKFILLING FOR ALL CONDUIT SYSTEMS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL CONDUITS SHALL HAVE MINIMUM COVER REQUIREMENTS AS SPECIFIED IN CEC 300-9. JOINT TRENCHING MAY BE UTILIZED WHERE PRACTICABLE AND WHERE PERMITTED BY THIS SPECIFICATION. TRENCHING OR BORING WILL BE AT CONTRACTORS OPTION.
- LOCATIONS OF EXISTING UNDERGROUND (UG) UTILITY SYSTEMS SHALL BE DETERMINED BY CALLING UNDERGROUND SERVICE ALERT (USA) WHEN PLANNING UNDERGROUND WORK, AND BEFORE YOU DIG, CONTACT UNDERGROUND SERVICE ALERT (USA) AT LEAST 48 HOURS PRIOR TO EXCAVATION (WEEKENDS EXCLUDED) FOR THE LOCATION OF UNDERGROUND GAS AND ELECTRIC LINES OR EQUIPMENT.
- MAINTAIN REQUIRED CLEARANCES FROM ALL SANITARY SEWER, WATER AND STORM DRAIN PIPING. REFER TO CIVIL PLANS FOR EXACT LOCATIONS AND DEPTHS OF PIPING.
- THE EXACT QUANTITY, LOCATION AND DEPTHS OF EXISTING UNDERGROUND PIPING AND CONDUITS IS UNKNOWN. FIELD VERIFY AND MAINTAIN EXISTING UTILITIES IN SERVICE AND PROTECT THEM AGAINST DAMAGE DURING DEMOLITION AND EXCAVATION OPERATIONS.
- REPAIR AND RECONNECT ALL EXISTING UNDERGROUND PIPING UNCOVERED AND DAMAGED BY NEW WORK AS REQUIRED TO MAINTAIN PROPER SYSTEM FUNCTIONS. RE-TEST ALL SYSTEMS DAMAGED BY NEW WORK.
- SAWCUT AND PATCH ALL SURFACES TO MATCH EXISTING SURFACES (CONCRETE, AC PAVING, ETC.) AS REQUIRED FOR INSTALLATION OF NEW WORK. COMPLETE FIELD VERIFICATION OF THIS WORK IS REQUIRED BY CONTRACTOR.
- SEE DETAIL 4/E-301 FOR ELECTRICAL/DATA/COMMUNICATION TRENCH DETAIL.



- CONSULTANTS**
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 - LANDSCAPE ARCHITECT**
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REVISIONS

NO.	DATE	DESCRIPTION
1	05-06-2022	ADDENDUM 3

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ORCUTT ACADEMY HS MUR BUILDING
610 Pinal Avenue
Orcutt, CA 93455

SITE ELECTRICAL PLAN

DRAWN BY: TR JOB NUMBER: 20179.01

SHEET NO. **E-103**
DATE: OCTOBER 28, 2021

SITE ELECTRICAL PLAN
SCALE: 1"=30'-0"
NORTH

DATE PLOTTED: FILE LOCATION:

REFERENCE NOTES

1. WALL MOUNTED DATA DISTRIBUTION CABINET.
2. PROVIDE STEEL WIREGUARD OVER THIS DEVICE.
3. PROVIDE 1 HOUR FIRE RATED PYLWOOD BKBD ON THIS WALL AS SHOWN.



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COMMUNICATIONS LEGEND

- WP** = (N) WEATHER PROOF (WP) VOIP ENABLED OUTDOOR SPEAKER WITH ENCLOSURE AND BAFFLE EQUIPMENT. RAILAND MACC1415. EC SHALL PROVIDE (N) (1) CAT6 CABLE PER DEVICE TERMINATED IN ACCESSIBLE CEILING SPACE (INSIDE WALL) WITHIN 3'-0" OF DEVICE. PROVIDE MIN. 1' SERVICE LOOP. ALL MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE. EC SHALL COORDINATE WITH DISTRICT REPRESENTATIVE FOR FINISHED MOUNTING HEIGHT.
- W** = (N) VOIP ENABLED INDOOR SPEAKER WITH ENCLOSURE AND BAFFLE EQUIPMENT. RAILAND MACC1401. EC SHALL PROVIDE (N) (1) CAT6 CABLE TERMINATED IN BISCUIT IN ACCESSIBLE CEILING SPACE PER DEVICE WITH MINIMUM 1' SERVICE LOOP. ALL MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE. EC SHALL COORDINATE WITH DISTRICT REPRESENTATIVE FOR FINISHED MOUNTING HEIGHT.
- AP** = INTERIOR WIRELESS ACCESS POINT (PROVIDED BY DISTRICT, INSTALLED BY EC). PROVIDE (N) (2) CAT6A CABLES EACH TERMINATED IN 2-PORT BISCUIT IN ACCESSIBLE CEILING. ALL CAT6A MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE WHITE.
- V** = DATA OUTLET AT LOCATION SHOWN IN PLAN. 'N' = NUMBER OF CAT6 DATA DROPS. ALL CAT6 MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE.
- LC** = (N) FUTURE CAMERA LOCATION. PROVIDE 2-PORT BISCUIT MOUNTED IN ACCESSIBLE CEILING AT LOCATION SHOWN IN PLAN. PROVIDE (N) (2) CAT6 CABLES TERMINATED IN 2 PORT BISCUIT. ALL CAT6 MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE.
- = (N) RAILAND 2500 SERIES WIRED DIGITAL CLOCK TO MATCH CAMPUS EXISTING CLOCKS. COORDINATE WITH DISTRICT REPRESENTATIVE FOR MOUNTING HEIGHT.
- MS** = CEILING SECURITY MOTION SENSOR LOCATION. PROVIDE CAT5E/CAT6 CABLE FROM EACH MOTION SENSOR AND KEYPAD TO ELECTRICAL ROOM 209. INSTALL 2 1-PAIR #16AWG CABLES, 1-4/4AWG THWN TO MAIN MDF FOR CONNECTION TO EXISTING SECURITY PANEL DETECTOR AND KEYPAD LOGS. KEYPAD AND MOTION SENSOR DEVICES TO BE PROVIDED AND INSTALL BY DISTRICT OUTSIDE OF THIS CONTRACT.
- SP** = SECURITY PAD LOCATION. PROVIDE CONDUIT STUB UP TO CEILING SPACE. INSTALL 4X BOX WITH SINGLE GANG RING. COORDINATE EXACT LOCATION WITH DISTRICT STAFF.
- CBM** = FUTURE CAMERA LOCATION. PROVIDE J-BOX WITH CONDUIT STUB TO CEILING SPACE WITH ADDITIONAL CONDUIT STUBS AT ELECTRICAL ROOM 209 FROM CEILING SPACE THROUGH HARD LID CEILING INTO THE ROOM SPACE. CAMERA HEIGHT LOCATION TO BE CONFIRMED WITH DISTRICT PRIOR TO INSTALLATION OF J-BOXES.

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NO.	DATE	DESCRIPTION
1	4/13/2022	ADDENDUM 1
2	05-06-2022	ADDENDUM 3

GENERAL COMMUNICATION PLAN NOTES

- A. SIGNAL AND COMMUNICATIONS SYSTEMS RACEWAYS AND BOXES: PROVIDE AND INSTALL TRUE SS RECESSED BACK BOX WITH 1-GANG RING AND (1) 1-1/4" CONDUIT STUB TO ACCESSIBLE CEILING SPACE ABOVE OR UNDER FLOOR SPACE BELOW AS APPLICABLE AT EACH WALL TELECOMMUNICATIONS (VOICE, VOICEDATA, DATA) OUTLETS, HDMI, AND TELEVISION OUTLET LOCATION SHOWN ON THE PLANS UNLESS OTHERWISE NOTED. PROVIDE PATHWAYS BETWEEN COMMUNICATIONS EQUIPMENT ROOM LOCATIONS AND ACCESSIBLE CEILINGS FOR ROUTING OF DATA CABLES.
- WHERE NO ACCESSIBLE CEILING EXIST; RUN CONDUIT FROM OUTLETS (FLOOR OR WALL) TO COMMUNICATIONS EQUIPMENT LOCATION.
 PROVIDE 1-1/4" CONDUIT MINIMUM FOR FLOOR BOX TELECOM AND AV, AS SHOWN ON TELECOM PLANS.
 BEFORE CONSTRUCTION, COORDINATE AND VERIFY TELECOMMUNICATIONS OUTLET LOCATIONS WITH OWNER OR ARCHITECT.
- B. PROVIDE EQUIPMENT RACKS, PATCH PANELS, CABLING, TERMINAL BLOCKS & COMPLETE OUTLET ASSEMBLIES.
- C. DEVICE LOCATIONS SHOWN ARE SCHEMATIC AND APPROXIMATE. EXACT LOCATIONS SHALL BE FIELD VERIFIED DURING ROUGH-IN WITH ARCHITECTURAL ELEVATIONS, CASEWORK SHOP DRAWINGS, FURNITURE, ETC. AND SHALL BE COORDINATED WITH OTHER TRADES TO AVOID CONFLICT WITH OTHER EQUIPMENT.
- D. ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN FIRE RATED, OR SOUND RATED (STC) ASSEMBLIES SHALL BE PROVIDED WITH PUTTY PADS LISTED FOR THE APPLICATION.
- E. ELECTRICAL AND COMMUNICATIONS OUTLETS SHOWN IN THE SAME LOCATION, SHALL BE MOUNTED ON OPPOSITE SIDES OF THE SAME STUD. COORDINATE BETWEEN ELECTRICAL AND COMMUNICATIONS PLANS. ALTERNATIVELY, A DEVICE BRACKET MAY BE USED BETWEEN STUDS WITH 4-INCH SEPARATION BETWEEN POWER AND LOW VOLTAGE BOXES.
- F. WHERE UNDERGROUND CONDUIT IS USED, TELECOM CABLES SHALL BE WET LISTED.
- G. WHERE EQUIPMENT IS NOTED AS PROVIDED BY DISTRICT (OWNER), EC SHALL COORDINATE AT CONTRACT NOTICE TO PROCEED. ACQUIRE ALL EQUIPMENT REQUIRED FROM DISTRICT STAFF. UNLESS OTHERWISE DIRECTED BY DISTRICT STAFF ALL OWNER FURNISHED EQUIPMENT SHALL BE INSTALLED BY ELECTRICAL CONTRACTOR.

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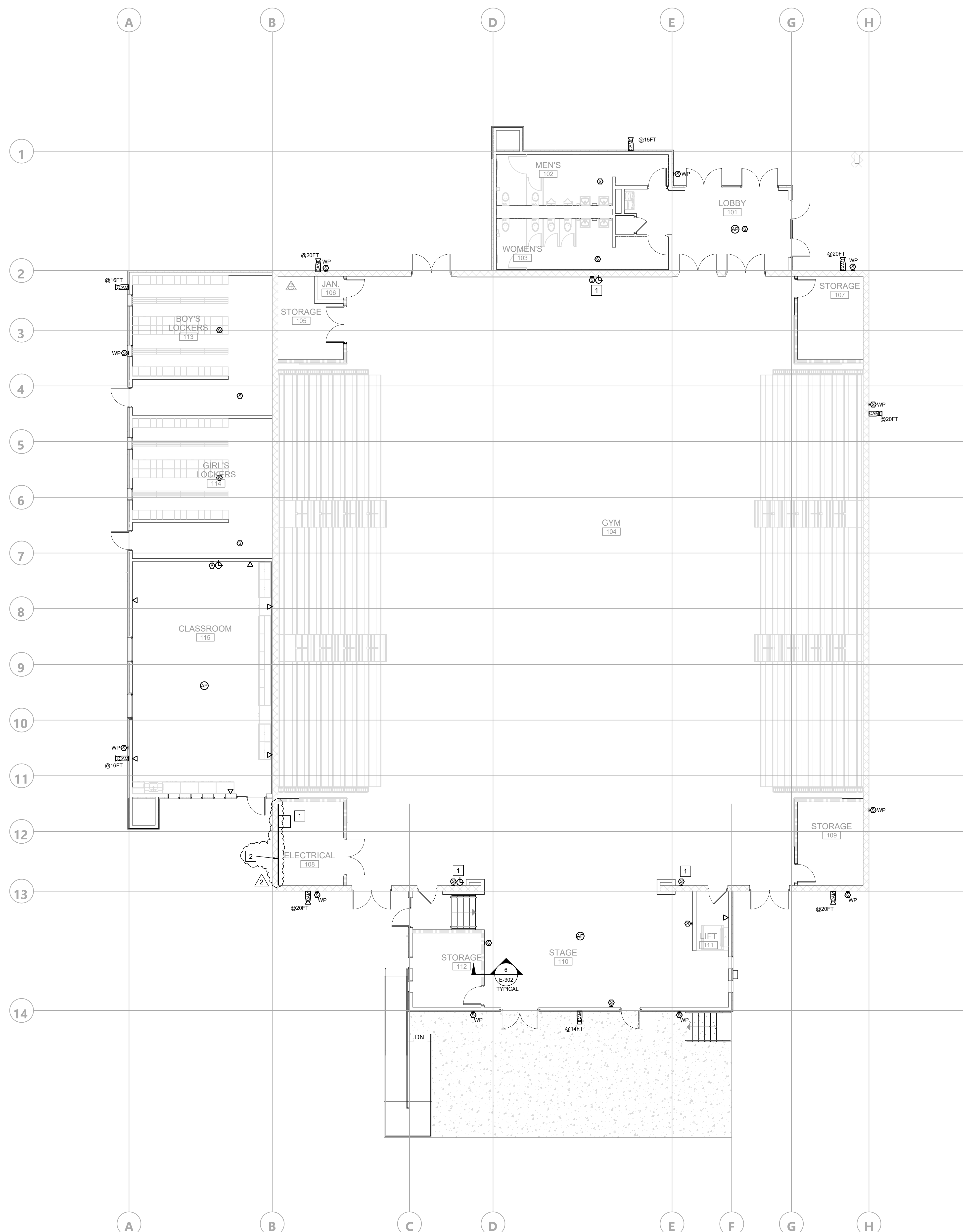
SHEET TITLE
COMMUNICATIONS FLOOR PLAN

DRAWN BY: TR JOB NUMBER: 20179.01

SHEET NO.

E-221

DATE: OCTOBER 26, 2021



DATE PLOTTED: FILE LOCATION:

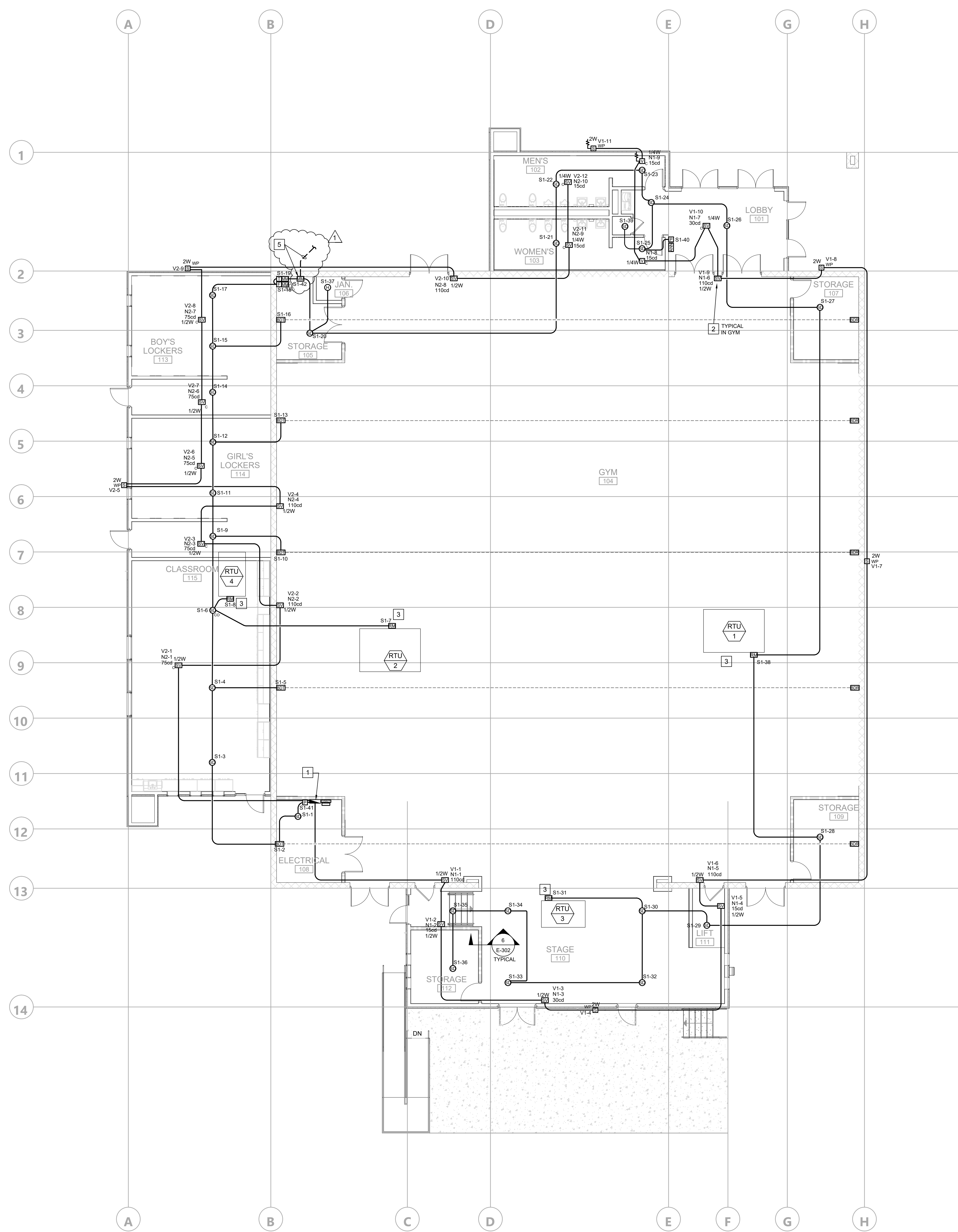


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REFERENCE NOTES

- FIRE ALARM CONTROL PANEL, SEE FIRE ALARM RISER DIAGRAM.
- PROVIDE STEEL WIREGUARD OVER SIGNALING DEVICE, TYPICAL IN GYMNASIUM.
- RELAY CONTROL MODULE FOR UNIT SHUTDOWN, VERIFY COMPLETE REQUIREMENTS WITH MECHANICAL DRAWINGS.
- MOUNT DEVICE WITH-IN 3" OF PEAK OF CEILING.
- PROVIDE FIRE ALARM MONITOR MODULE WITH 3/4" UNDERGROUND CONDUIT TO FIRE SPRINKLER DOUBLE DETECTOR CHECK VALVE. CONTINUE ON SITE PLAN E-102. SEE WIRING DETAIL 9/E-403.



WALL LEGEND

--- 1HR. RATED WALLS

ARCHITECT STAMP 	CONSULTANT STAMP
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1	05-06-2022	ADDENDUM 3

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SHEET TITLE
FIRE ALARM FLOOR PLAN

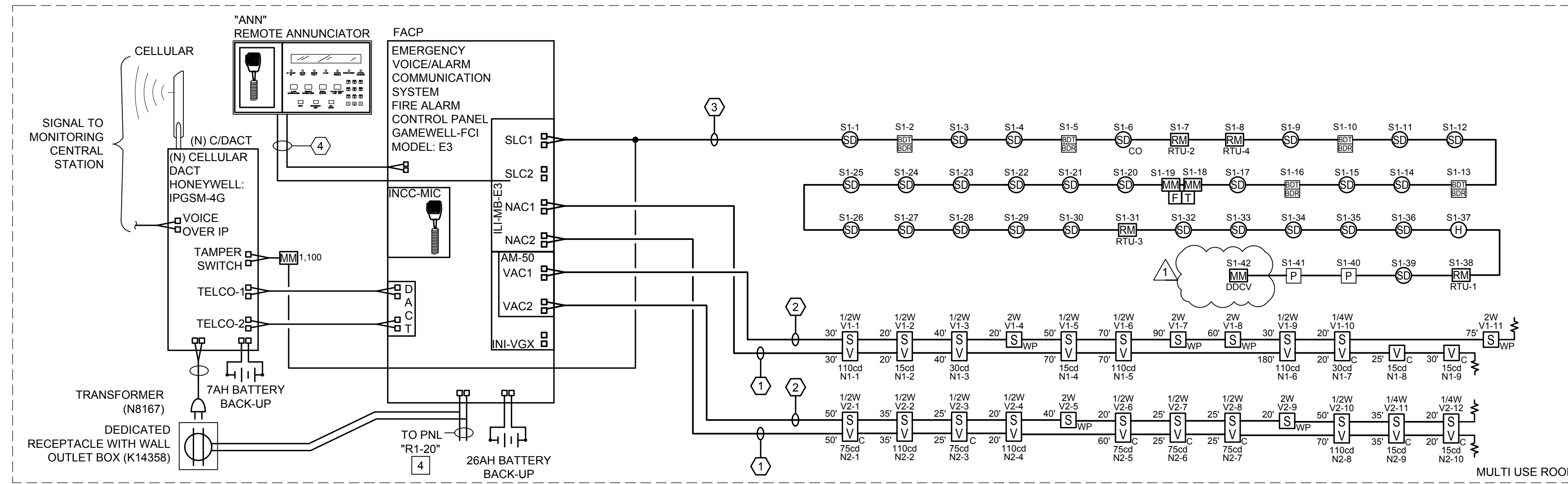
DRAWN BY: TR JOB NUMBER: 20179.01

SHEET NO.
E-231

DATE: OCTOBER 26, 2021

FILE LOCATION:
DATE PLOTTED:

FIRE ALARM FLOOR PLAN
SCALE: 1/8" = 1'-0"
NORTH



NOTE: FIRE ALARM SYSTEM SHALL TRANSMIT THE ALARM, SUPERVISORY AND TROUBLE SIGNAL TO AN APPROVED SUPERVISING STATION IN ACCORDANCE WITH NFPA 72. THE SUPERVISING STATION SHALL BE LISTED AS EITHER UL/ULX (CENTRAL STATION) OR UL/US (REMOTE & PROPRIETARY) BY THE UNDERWRITERS LABORATORY INC. (UL) OR OTHER APPROVED LISTED AND TESTING LABORATORY OR SHALL COMPLY WITH THE REQUIREMENTS OF FM 3011. 2019 CBC SECTION 907.6.5.3.

FIRE ALARM RISER DIAGRAM

FIRE ALARM SYMBOLS LEGEND:		
SYMBOL	MODEL #	CSFM #
	EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM(EVACS) FIRE ALARM CONTROL PANEL GAMEWELL-FCI: MODEL E3 WITH: INTELLIGENT LOOP INTERFACE MASTER BOARD: ILH-MB-E3 DIGITAL ALARM COMMUNICATOR TRANSMITTER: DACT-E3 LCD KEYPAD DISPLAY: LCD-E3 ADDRESSABLE SWITCH MODULE: ASM-16 TRANSPONDER VOICE GATEWAY: INI-VGX AMPLIFIER: AM-50 MICROPHONE: INCC-MIC POWER SUPPLY MODULE: PM-9	7165-1703.0125
	CELLULAR DIGITAL ALARM COMMUNICATOR TRANSMITTER HONEYWELL (ADEMCO): HWF2-COM	7300-1645.0511
	REMOTE ANNUNCIATOR PANEL: GAMEWELL-FCI: LCD-E3-DISPLAY GAMEWELL-FCI: INCC-MIC GAMEWELL-FCI: CABINET 'A'	7165-1703.0125
	REMOTE POWER SUPPLY: GAMEWELL-FCI: HPP-PS6	7315-1637.0505
	INTELLIGENT NETWORK TRANSPONDER GAMEWELL-FCI: -INI-VGX -AM-50 -PM-9	7165-1703.0125
	PHOTO SMOKE DETECTOR GAMEWELL-FCI: ASD-PL3 BASE: GAMEWELL-FCI: B300-E	7272-1703.0501 7300-1653.0109
	PHOTO SMOKE DETECTOR GAMEWELL-FCI: MCS-COF3 BASE: GAMEWELL-FCI: B300-E	7272-1703.0508 7300-1653.0109
	HEAT DETECTOR GAMEWELL-FCI: ATD-L3 BASE-GAMEWELL-FCI: B210LP PROVIDE ACCESS PANEL / HATCH FOR ALL ATTIC MOUNTED DETECTORS. SEE ARCH PLANS.	7270-1703.0502 7300-1653.0109
	BEAM SMOKE DETECTOR TRANSMITTER AND REFLECTOR GAMEWELL-FCI: ABD-RT2F	7260-1703.0120
	MONITOR MODULE GAMEWELL-FCI: AMM-2F	7300-1703.0102
	RELAY MODULE GAMEWELL-FCI: AOM-2RF	7300-1703.0102
	PULL STATION GAMEWELL-FCI: MS95-SL	7150-1703.0136
	SPEAKER (WEATHER PROOF) WHEELLOCK: ET1010-R (2W EXTERIOR)	7320-0785.0105
	SPEAKER INTERIOR WHEELLOCK: LSPKR (**SIZES AS PER PLANS)	7320-0785.0502
	SPEAKER/STROBES-WALL WHEELLOCK: LSPSTR3 (**SIZES AS PER PLANS) (**SIZES AS PER PLANS)	7320-0785.0502
	SPEAKER/STROBES-CEILING WHEELLOCK: LSPSTR3 (**SIZES AS PER PLANS) (**SIZES AS PER PLANS)	7320-0785.0502
	STROBE-WALL MOUNTED WHEELLOCK: LSTR3 (**SIZES AS PER PLANS)	7135-0785.0501
	VISUAL-CEILING WHEELLOCK: EXCEDER LSTR3 (**SIZES AS PER PLANS)	7135-0785.0501
	FIRE SPRINKLER TAMPER SWITCH (BY OTHERS)	-
	FIRE SPRINKLER FLOW SWITCH (BY OTHERS)	-
	POST INDICATOR VALVE (BY OTHERS)	-
	FIRE SPRINKLER DOUBLE DETECTOR CHECK VALVE (BY OTHERS)	-
	SMOKE FIRE DAMPER (BY OTHERS)	-
	END OF LINE RESISTOR (EOLR)	-

** DEVICE HAS MULTIPLE CANDELA RATINGS. THE E.C. IS RESPONSIBLE FOR CORRECTLY SETTING EACH STROBE OR AUDIBLE/STROBE DEVICE ACCORDING TO THESE FIRE ALARM DRAWINGS.

*** DEVICE HAS MULTIPLE WATTAGE SETTINGS. THE E.C. IS RESPONSIBLE FOR CORRECTLY SETTING EACH SPEAKER OR SPEAKER/STROBE DEVICE ACCORDING TO THESE FIRE ALARM DRAWINGS.

VOICE NOTIFICATION MESSAGE

EVACS SHALL HAVE THE FOLLOWING PROGRAMMED MESSAGES IN BOTH ENGLISH AND SPANISH:
-THIS IS A TEST OF THE EMERGENCY AUDIO SYSTEM.
-MAY I HAVE YOUR ATTENTION PLEASE! MAY I HAVE YOUR ATTENTION PLEASE! THE SIGNAL YOU JUST HEARD INDICATED A REPORT OF AN EMERGENCY IN THIS BUILDING. PLEASE PROCEED TO THE NEAREST EXIT AND LEAVE THE BUILDING. DO NOT RE-ENTER THE BUILDING UNLESS DIRECTED TO DO SO BY THE PROPER AUTHORITIES.
-YOUR ATTENTION PLEASE. THE BUILDING EMERGENCY CONDITION HAS BEEN CLEARED. YOU MAY RETURN TO YOUR NORMAL ACTIVITY. THE BUILDING EMERGENCY CONDITION HAS BEEN CLEARED. YOU MAY RETURN TO YOUR NORMAL ACTIVITY.

GENERAL NOTES

- FIRE ALARM SIGNALING DEVICES WIRING SHALL BE #12 AWG THHN/THWN, U.O.N.
- 120 VAC WIRING WILL BE MINIMUM #12 AWG.
- ALL FIRE ALARM WIRING WITHIN NON ACCESSIBLE CEILINGS AND WALLS SHALL BE INSTALLED IN CONDUIT OR RACEWAY SYSTEM. WIRING WITHIN ACCESSIBLE CEILING SPACE MAY BE 'OPEN WIRE' AND SUPPORTED FROM STRUCTURE.
- WIRING SHALL NOT BE LOOPED THROUGH DEVICE; WIRE MUST BE CUT FOR IN AND OUT.
- ALL DEVICES POLARITY MUST BE OBSERVED.
- FIRE ALARM CONDUIT AND WIRING INSTALLATION SHALL COMPLY WITH CALIFORNIA ELECTRICAL CODE #760.
- THIS IS A COMPLETE FIRE ALARM SUBMITTAL: If an alternate system is proposed, Contractor shall submit a separate set of engineered plans, specifications, and engineering calcs. for prior approval to the Owner, Division of State Architect (DSA), Architect, and Engineer including but not necessarily limited to:
 - All CSFM listing numbers and Manufacturers model numbers for all system components proposed for this system.
 - Complete Riser Diagram with point to point wiring diagrams including battery and voltage drop calculations for the entire system.
 - Indication of conductor type(s), power-limited or non-power limited system.
 - Information as required to demonstrate compliance with all applicable code(s) and to obtain approval of all Authority(ies) having Jurisdiction (AHJ). In the event of a substitution, installation shall not begin until separate approval has been obtained and all of the above has been accepted and signed by the (AHJ) and the Architect. If routing differs significantly from these plans, approval of the Engineer must be obtained before installation. After construction, provide an accurate set of field record drawings to Owner.

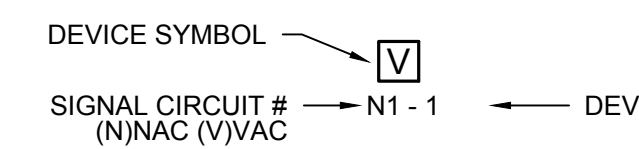
FEEDER SCHEDULE

- 3/4" C. - (2)#12 AWG FPL PAIR WEST PENN WIRE 998.
 - 3/4" C. - (2)#14 AWG FPL SHIELDED TWISTED PAIR WEST PENN WIRE 995
 - 3/4" C. - (2)#16 AWG FPL UNSHIELDED TWISTED PAIR WEST PENN WIRE D990.
 - 3/4" C. - 50/125UM FIBER 6 STRAND WITH ST CONNECTOR.
 - 120 VAC DEDICATED CIRCUIT. PROVIDE CIRCUIT BREAKER LOCKING DEVICE. SEE FLOOR PLANS AND PANEL SCHEDULES FOR CIRCUIT DESIGNATION(S). #12 AWG THHN/THWN SOLID OR STRANDED.
- *** CONDUIT SIZE SHOWN IS MINIMUM, UNLESS OTHERWISE NOTED ON PLANS. REFER TO SITE AND FLOOR PLANS FOR ADDITIONAL FIRE ALARM CONDUIT SIZE REQUIREMENTS.

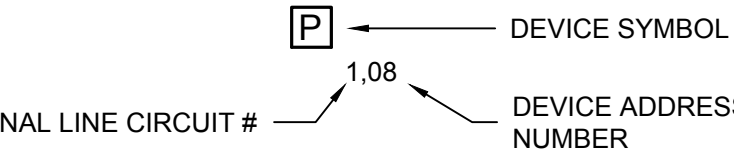
SYSTEM DESCRIPTION

INITIATING CIRCUIT CLASS: 'B'
SYSTEM TYPE: AUTOMATIC
INDICATING CIRCUIT CLASS: B STYLE: Y
THE FIRE ALARM SYSTEM SHALL BE OF A TYPE THAT UPON ACTIVATION INITIATES NOTIFICATION BY MEANS OF AND EMERGENCY VOICE/ALARM COMMUNICATION SYSTEM (EVACS).

SIGNAL DEVICE CIRCUITING LEGEND



INITIATING DEVICE CIRCUITING LEGEND



COMPLETE AUTOMATIC FIRE ALARM SYSTEM SUBMITTAL

FIRE ALARM DESIGNER:
TODD HYMAS
THOMA ELECTRIC INC.

FIRE ALARM SYSTEM NOTES

- FIRE ALARM SYSTEM SHALL BE SUPERVISED BY AN APPROVED, UL LISTED CENTRAL STATION (ULFX) OR REMOTE STATION (ULUS) MONITORING COMPANY. (REF: CFC, 907.2.3.5)
- DOCUMENTATION CABINET TO BE INSTALLED PROXIMAL TO THE FACU. (NFPA 72, 7.7.2.1)
- ALL RECORD DOCUMENTATION SHALL BE STORED IN THE DOCUMENTATION CABINET. (NFPA 72, 7.7.2.2)
- THE DOCUMENTATION CABINET TO BE PROMINENTLY LABELED "SYSTEM RECORD DOCUMENTS". (NFPA 72, 7.7.2.4)



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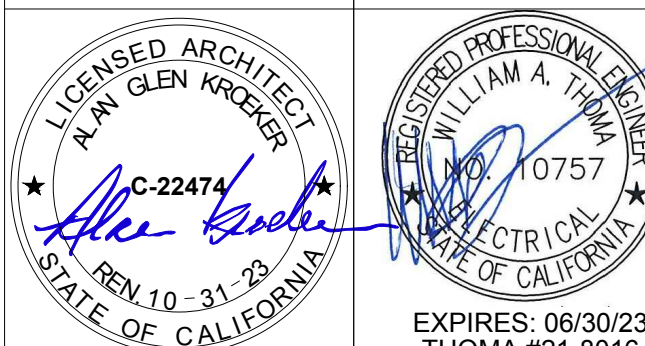
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NO.	DATE	DESCRIPTION
1	05-06-2022	ADDENDUM 3

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SHEET TITLE
FIRE ALARM RISER DIAGRAM

DRAWN BY: TR JOB NUMBER: 20179.01

SHEET NO.
E-401

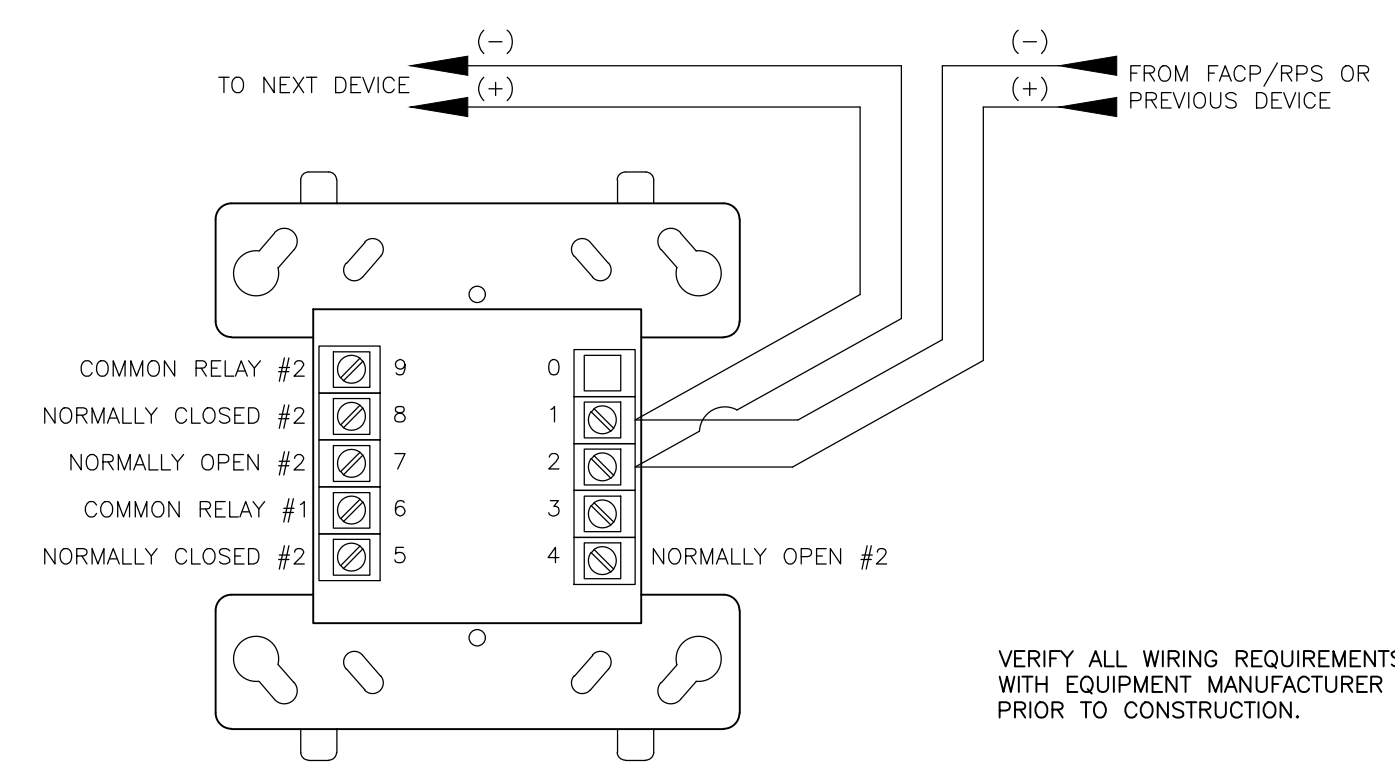
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FILE LOCATION:

DATE PLOTTED:

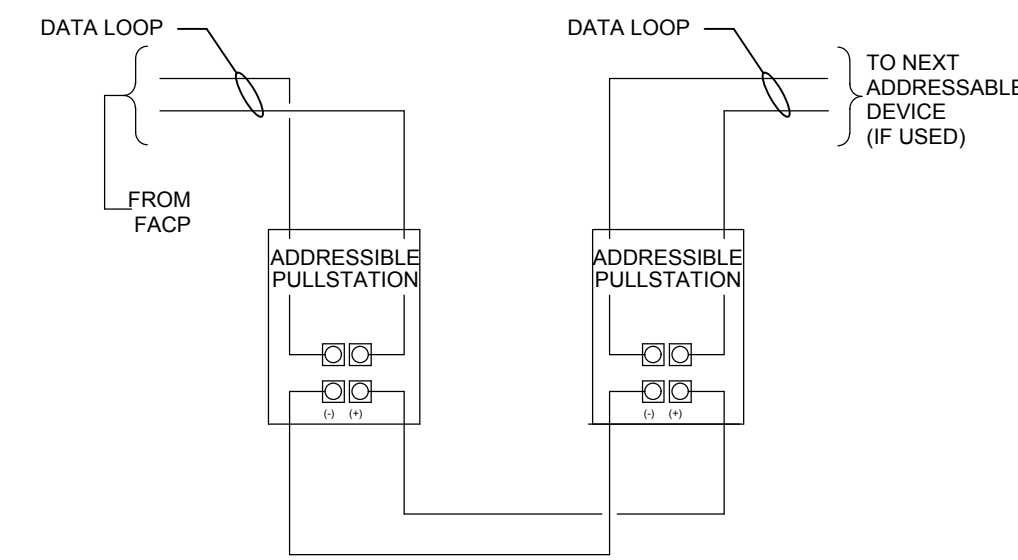
GL-2 FIRE ALARM NOTES CHECKLIST:

1. APPLICABLE STANDARD NFPA 72, AS ADOPTED AND AMENDED IN CBC CHAPTER 35
2. INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM, HAS BEEN APPROVED BY DSA.
3. UPON COMPLETION OF SYSTEM INSTALLATION, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
4. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE JOB SITE AND USED FOR INSTALLATION.
5. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
6. DSA, ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND /OR TESTING.
7. ALL PENETRATIONS THROUGH RATED ASSEMBLIES REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED IN CBC CHAPTER 7, UL OR OTHER APPROVED LAB TESTING CRITERIA. APPROVED TYPES OF MATERIALS SHALL BE IDENTIFIED WITHIN THE PROJECT SPECIFICATIONS WITHIN THE FIRE ALARM SECTION.
8. WALL MOUNTED VISIBLE NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 60" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
9. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THAN 6" TO A HORIZONTAL STRUCTURE.
10. AUDIBLE DEVICES SHALL PROVIDE A SOUND PRESSURE LEVEL OF 15 DECIBELS (DBA) ABOVE THE AVERAGE AMBIENT SOUND LEVEL OR FIVE DBA ABOVE THE MAXIMUM SOUND LEVEL HAVING A DURATION OF AT LEAST 90 SECONDS, WHICHEVER IS GREATER, IN EVERY OCCUPIABLE SPACE WITHIN THE BUILDING.
11. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
2.16 APPLICABLE CODES: ENSURE THE CURRENT CODES ARE LISTED ON THE PLANS.
12. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
13. VISIBLE DEVICES SHOULD NOT EXCEED TWO FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN ONE FLASH EVERY SECOND. THE DEVICE SHALL HAVE A PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELLA. VISIBLE DEVICES WITHIN 55' FROM EACH OTHER SHALL BE SYNCHRONIZED.
14. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATER TIGHT FITTINGS AND WIRE TO BE APPROVED FOR WET LOCATIONS.
15. ALL FIRE ALARM WIRING SHALL BE FPL OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED FLEXIBLE) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE TYPE THHN OR THWN.
16. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DO NOT SPLICE THE WIRE. ALL BOXES TO BE SIZED PER CEC.
17. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1' FROM FIRE SPRINKLERS OR 3' FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION ON NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
18. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT, SURFACE RACEWAY OR OPEN RUN ABOVE CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANNER AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
19. FIRE ALARM PANEL, REMOTES, AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACES PER MANUFACTURERS SPECIFICATIONS. NO SINGLE DEVICE SHALL EXCEED 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
20. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM THE COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS. THE BREAKER SHALL HAVE A RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION. THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL." CIRCUIT ID TO BE LABELED AT FIRE PANEL/EXTENDERS.
21. THE INSTALLING CONTRACTOR SHALL PROVIDE A COMPLETED "SYSTEM RECORD OF COMPLETION" PER NFPA 72, FIGURE 17.8.2.
22. FIRE ALARM CONTROL PANELS AND REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48" ABOVE THE FINISHED FLOOR.
23. MICROPHONES ASSOCIATED WITH EMERGENCY VOICE ALARM COMMUNICATION SYSTEMS (EVAC) SHALL BE ACCESSIBLE FOR USE, INSTALLED IN COMPLIANCE WITH CBC SECTIONS 11B-305 AND 11B-308.
24. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2.
25. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
26. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS.



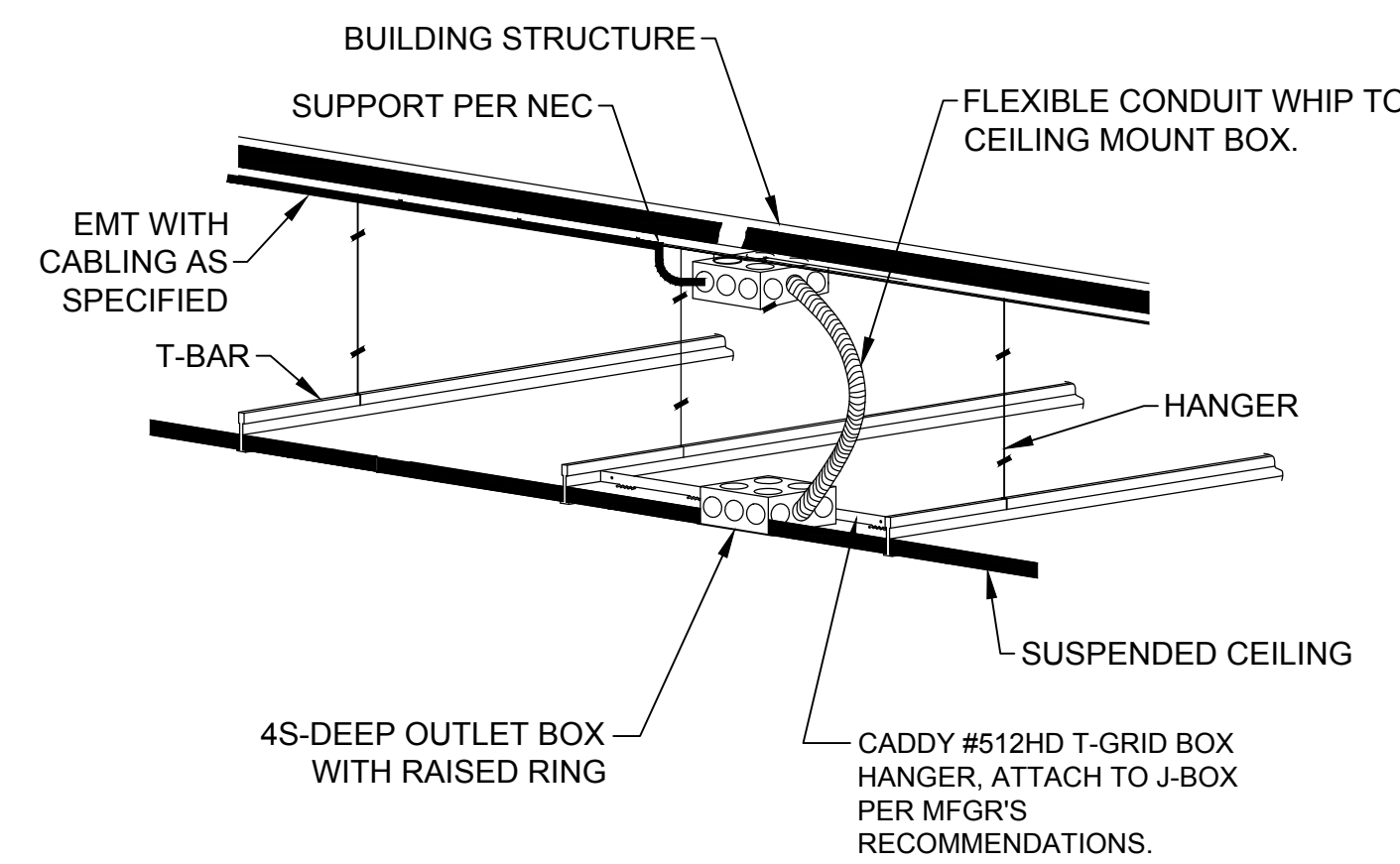
6 TYPICAL ADDRESSABLE CONTROL MODULE WIRING DIAGRAM

6 NTS



7 TYPICAL ADDRESSABLE PULL STATION - WIRING DIAGRAM

7 NTS

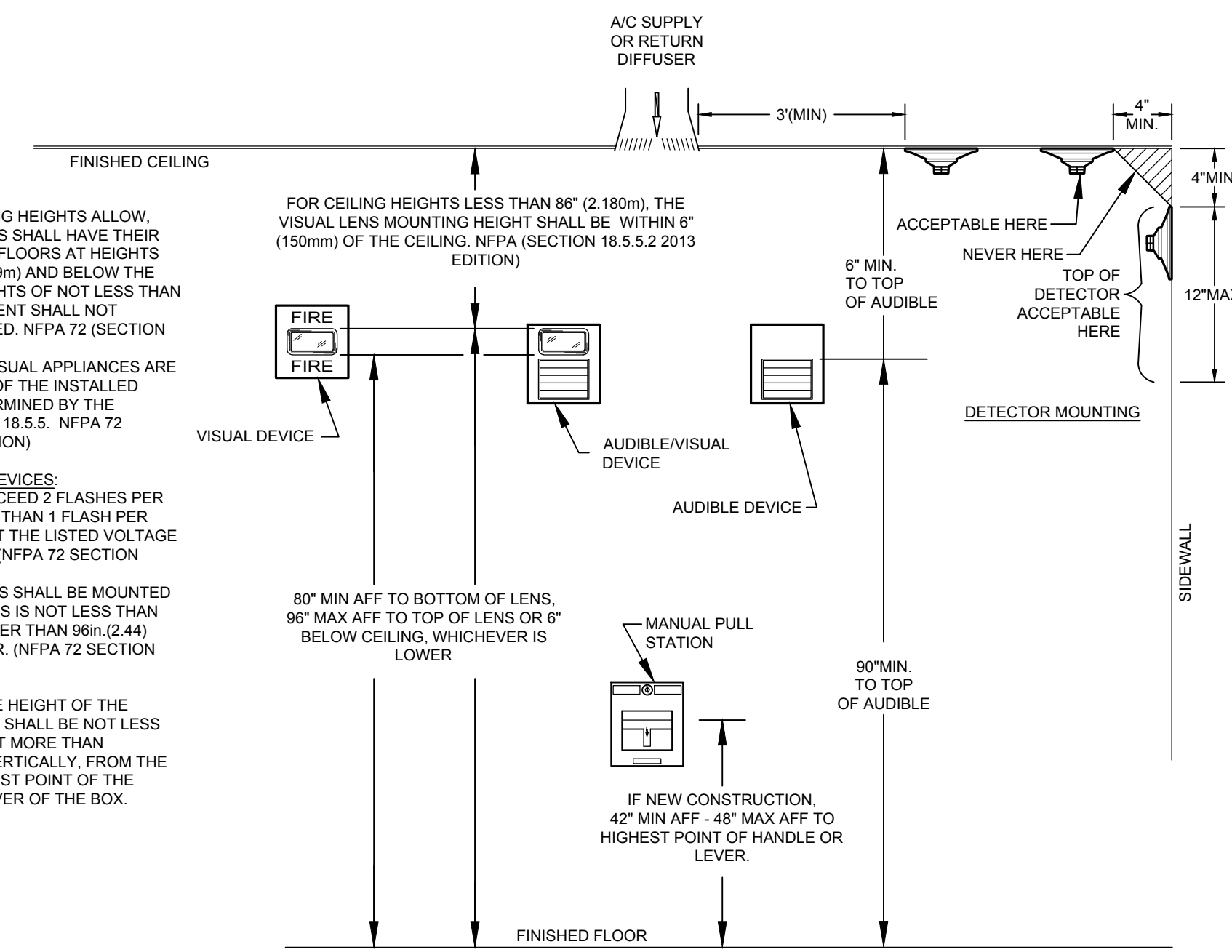
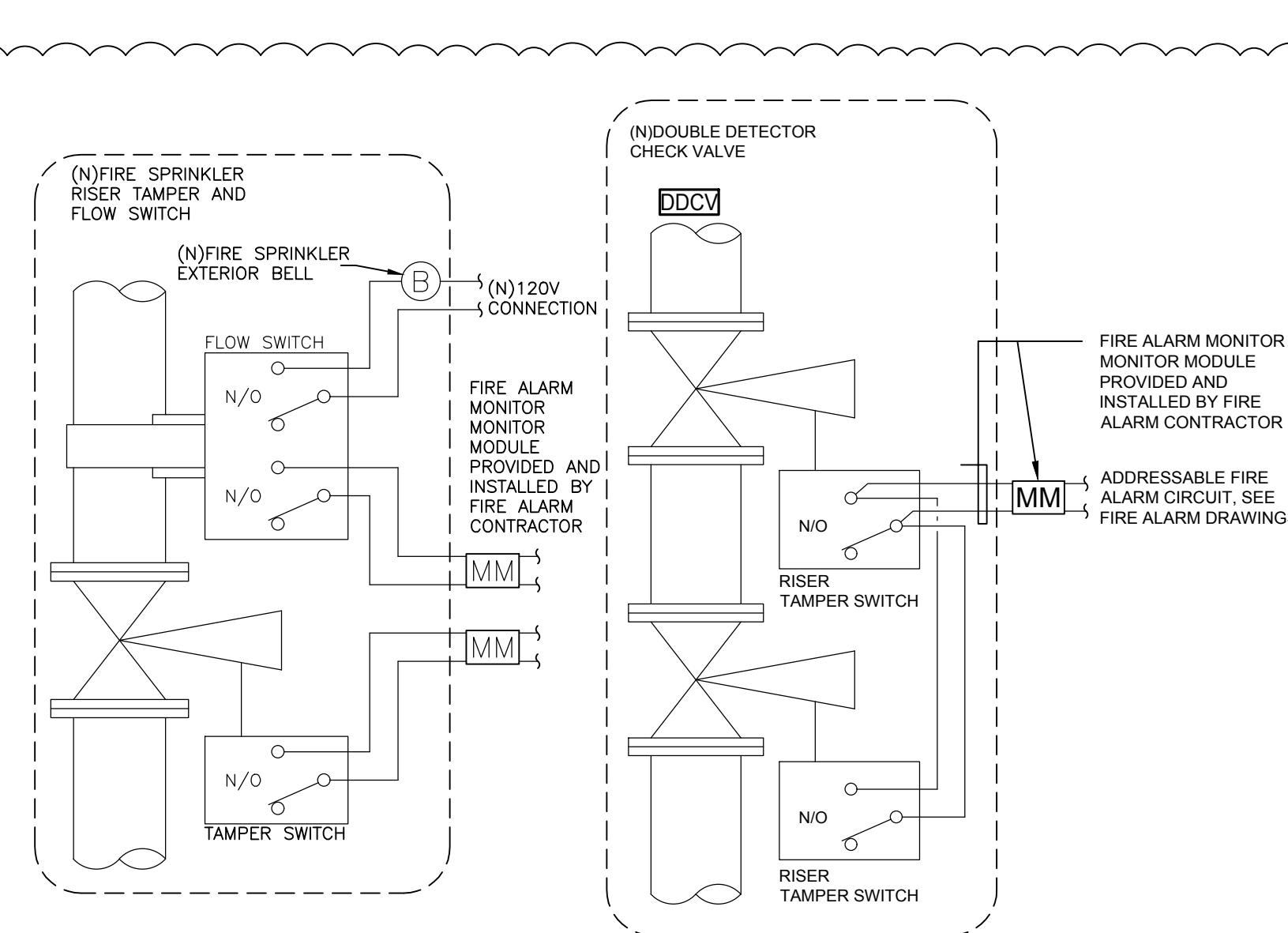


8 TYPICAL SMOKE DETECTOR MOUNTING DETAIL

8 NTS

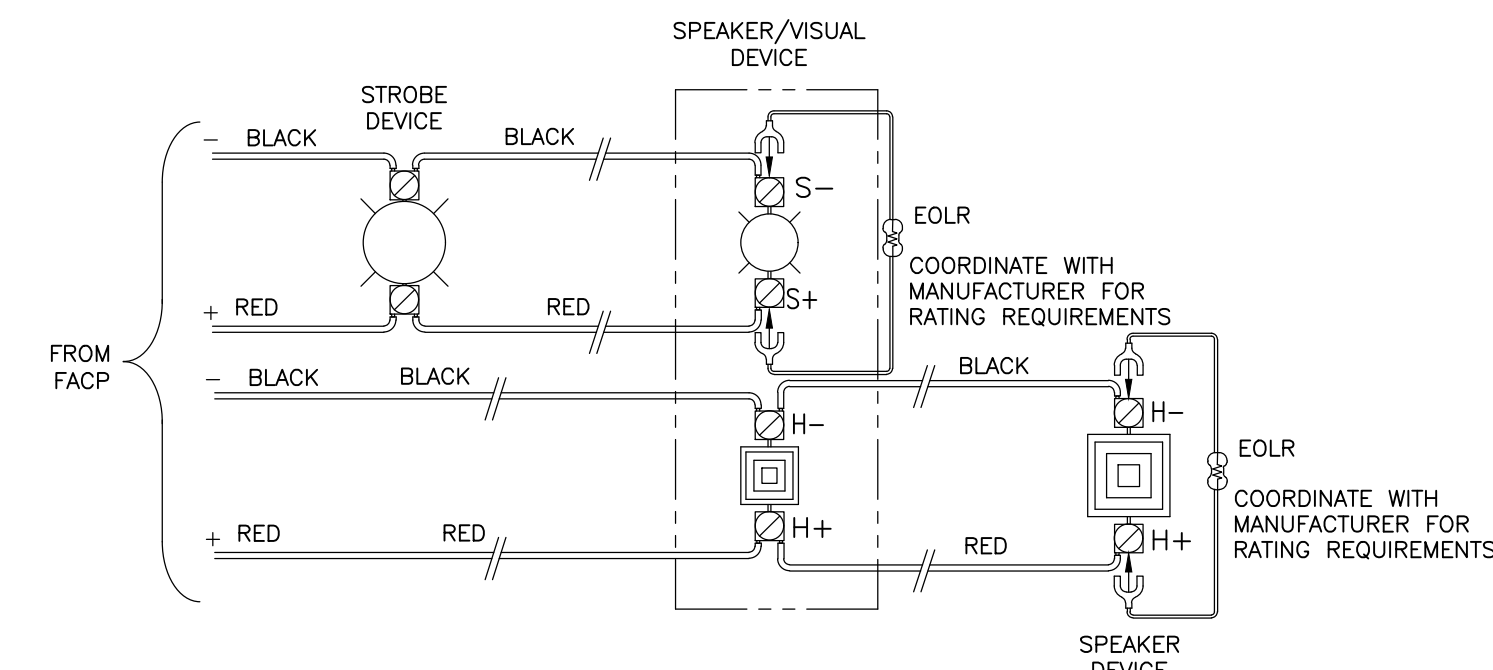
9 FIRE SPRINKLER RISER & DOUBLE DETECTOR CHECK VALVE (DDCV) WIRING DIAGRAM

9 NTS



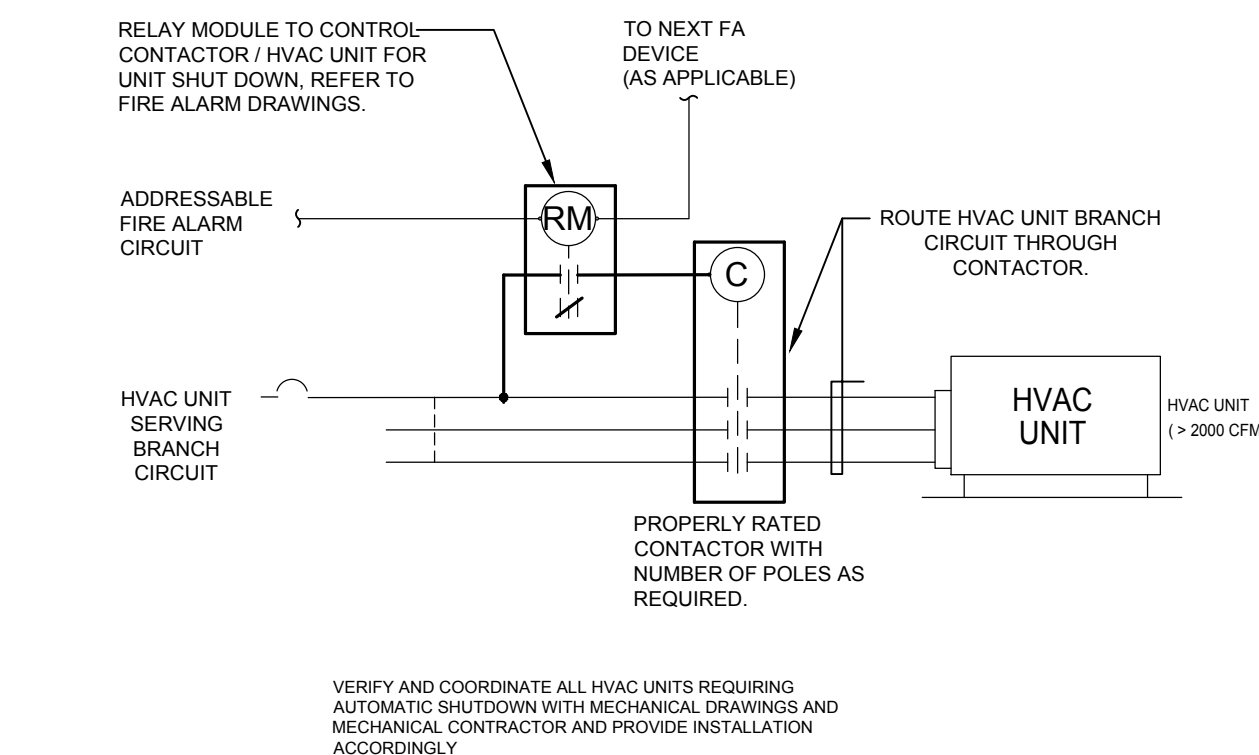
1 DEVICE ELEVATION DETAIL

1 NTS



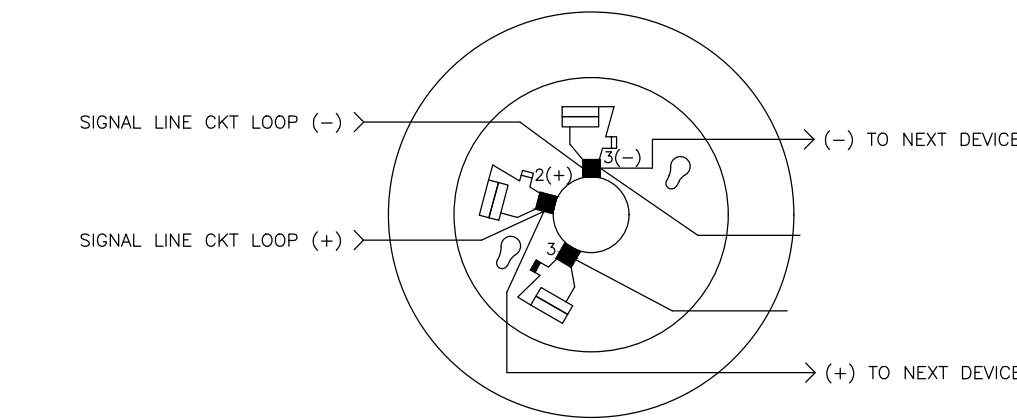
2 TYPICAL NOTIFICATION CIRCUIT WIRING DIAGRAM

2 NTS



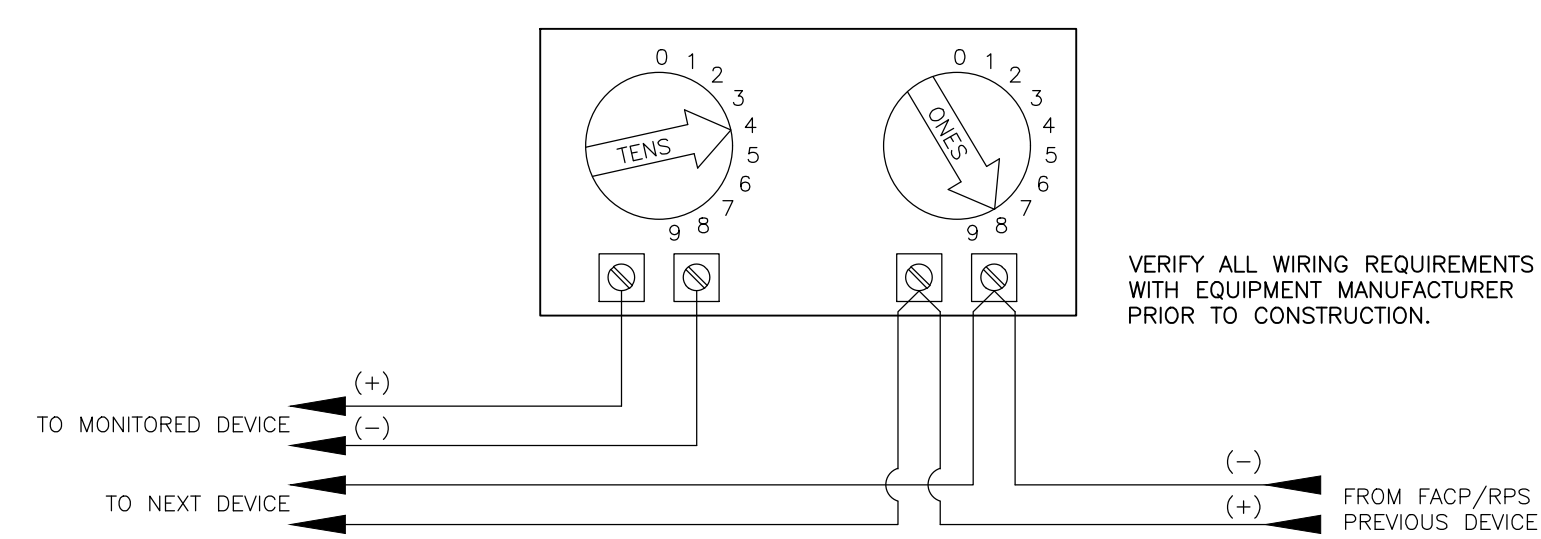
3 TYPICAL RELAY MODULE WIRING DIAGRAM AT AIR-MOVING UNIT

3 NTS



4 ADDRESSABLE SMOKE AND HEAT DETECTOR WIRING DIAGRAM

4 NTS



5 TYPICAL ADDRESSABLE MONITOR MODULE WIRING DIAGRAM

5 NTS



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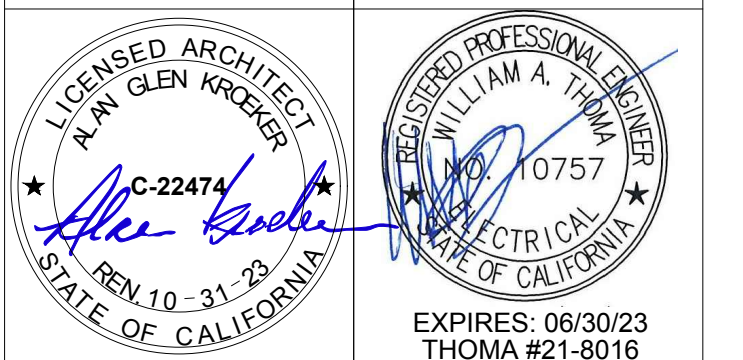
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SHEET TITLE

FIRE ALARM DETAILS

DRAWN BY: TR JOB NUMBER: 20179.01

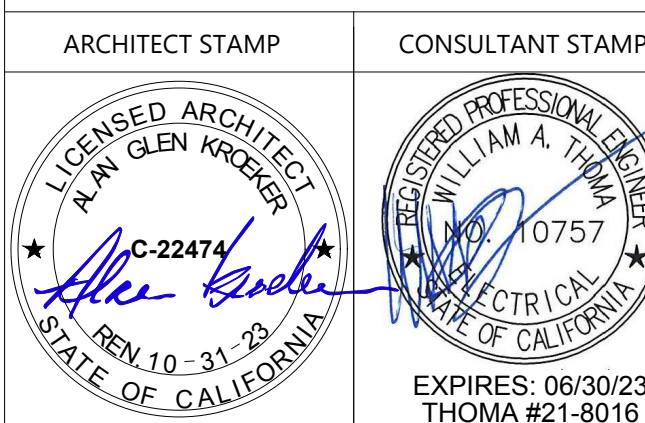
SHEET NO.

E-403

DATE: OCTOBER 26, 2021



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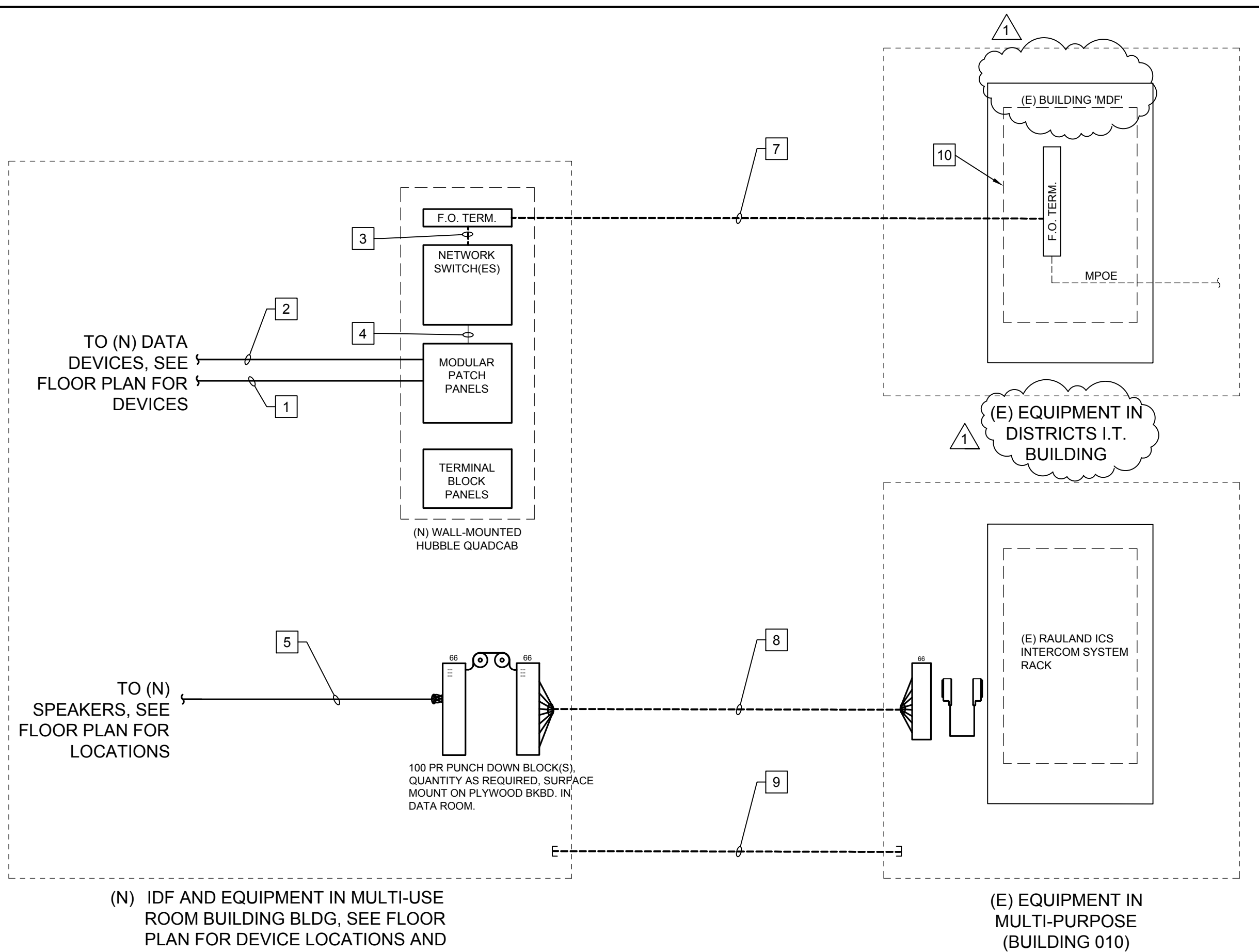
SHEET TITLE
COMMUNICATIONS RISER DIAGRAM

DRAWN BY: TR JOB NUMBER: 20179.01

SHEET NO.

E-501

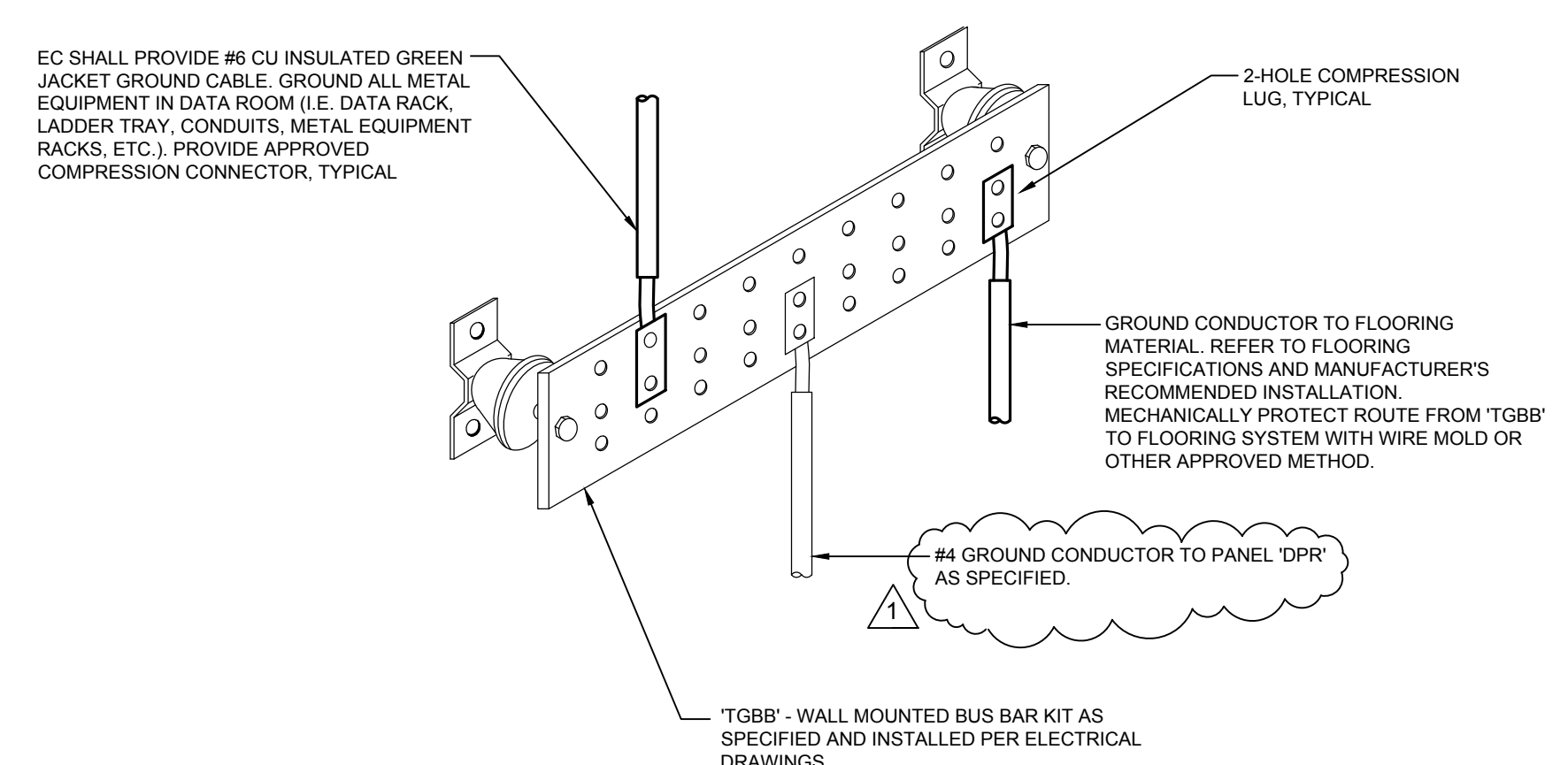
DATE: OCTOBER 26, 2021



- REFERENCE NOTES**
- (N) (2) CAT6 CABLES AT EACH ROOM DATA OUTLET (BLUE JACKET CABLE).
 - (N) (2) CAT6A CABLES AT EACH 2-PORT BISCUIT IN ACCESSIBLE CEILING SPACE FOR WAP (WHITE JACKET CABLE).
 - F.O. JUMPERS - TO MATCH CABLE PLANT (2M MAX).
 - CAT 6/6A JUMPERS - TO MACH CABLE PLANT (2M MAX).
 - (N) WEST PENN CLOCK SYSTEM CABLING TO MATCH CAMPUS EXISTING CLOCK SYSTEM CABLING, CONTRACTOR TO FIELD COORDINATE CABLING WITH EXISTING EQUIPMENT.
 - (E) FIBER OPTIC OUTDOOR PLANT CABLING TO REMAIN.
 - NEW (1) 4" C AND EXISTING 3" C WITH NEW HYBRID FIBER OPTIC CABLE, WITH 6-STRANDS SINGLE-MODE (OS2) AND 8-STRANDS MULTI-MODE (OM3, 50UM) IN A SINGLE JACKET (AGUA IN COLOR) AND PLACED IN CONDUIT (SIZES/QUANTITIES PER SITE PLAN). ALL STRANDS SHALL BE TERMINATED IN FIBER SPLICE ENCLOSURES AT EACH END OF THE CABLE INSTALLATION. CABLING TO MATCH EXISTING CAMPUS CABLING, VERIFY CABLE TYPES WITH DISTRICT PRIOR TO SUBMITTALS. INSTALL CABLING IN NEW AND EXISTING COMMUNICATION CONDUITS SHOWN ON SHEETS E-101 AND E-103.
 - (1) 4" WITH NEW 50 PAIR GEL FILLED WET LOCATION RATED CLOCK SYSTEM CABLING, INSTALL CABLING IN CLOCK SYSTEM CONDUIT SHOWN ON SHEET E-101.
 - (1) 4" SPARE CONDUIT.
 - CONNECT NEW FIBER OPTIC CABLING TO EXISTING EQUIPMENT AS REQUIRED FOR CONNECTION OF NEW CABLING. FIELD VERIFY EXISTING CAMPUS EQUIPMENT HEAD END EQUIPMENT AND NEW FIBER OPTIC CABLING CONNECTION REQUIREMENTS.

- GENERAL NOTES**
- CATEGORY CABLING, MODULAR JACKS, AND PATCH CABLES SHALL MATCH COLOR OF (N) CABLE PLANT AS FOLLOWS:
 - CAT6 = BLUE IN COLOR.
 - CAT6A = WHITE IN COLOR.
 - CAT6 AND CAT6A CABLES: TOTAL LENGTH FROM IDF TO ENDPOINT SHALL NOT BE MORE THAN 295'-0". CONTRACTOR SHALL BRING TO THE ATTENTION OF THE ENGINEER ANY LENGTHS IN EXCESS OF 295'-0".
 - CAT6 AND CAT6A CABLES SHOWN AS ROUTED UNDERGROUND BETWEEN BUILDINGS SHALL BE OUTDOOR PLANT RATED AS SHOWN (AS APPLICABLE).
 - CONTRACTOR SHALL PROVIDE 10' SERVICE LOOP AT EACH (E) AND (N) PULL BOX.
 - DISTRICT TO PROVIDE AND INSTALL VOIP (VOICE OVER INTERNET PROTOCOL) PHONE HAND SETS.
 - CABLING TYPES SHALL BE SUITABLE AND RATED FOR THE APPLICATION INSTALLED (PLENUM, UNDERGROUND, ETC.).

- COMMUNICATIONS LEGEND**
- WP = (N) WEATHER PROOF (WP) VOIP ENABLED OUTDOOR SPEAKER & ENCLOSURE DEVICE (PROVIDED BY DISTRICT, INSTALLED BY EC). EC SHALL PROVIDE (N) (1) CAT6 CABLE PER DEVICE TERMINATED IN ACCESSIBLE CEILING SPACE (INSIDE WALL WITHIN 5'-0" OF DEVICE, PROVIDE MIN. 10' SERVICE LOOP. ALL MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE. EC SHALL COORDINATE WITH DISTRICT REPRESENTATIVE FOR FINISHED MOUNTING HEIGHT.
 - IP = (N) VOIP ENABLED INDOOR SPEAKER DEVICE & ENCLOSURE DEVICE (PROVIDED BY DISTRICT, INSTALLED BY EC). EC SHALL PROVIDE (N) (1) CAT6 CABLE TERMINATED IN BISCUIT IN ACCESSIBLE CEILING SPACE PER DEVICE WITH MINIMUM 10' SERVICE LOOP. ALL MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE. EC SHALL COORDINATE WITH DISTRICT REPRESENTATIVE FOR FINISHED MOUNTING HEIGHT.
 - AP = INTERIOR WIRELESS ACCESS POINT (PROVIDED BY DISTRICT, INSTALLED BY EC). PROVIDE (N) (2) CAT6A CABLES EACH TERMINATED IN 2-PORT BISCUIT IN ACCESSIBLE CEILING. ALL CAT6A MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE WHITE.
 - DO = DATA OUTLET AT LOCATION SHOWN IN PLAN. 'N' = NUMBER OF CAT6 DATA DROPS. ALL CAT6 MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE.
 - LC = (N) FUTURE CAMERA LOCATION, PROVIDE 2-PORT BISCUIT MOUNTED IN ACCESSIBLE CEILING AT LOCATION SHOWN IN PLAN. PROVIDE (N) (2) CAT6 CABLES TERMINATED IN 2-PORT BISCUIT. ALL CAT6 MODULAR JACKS, CABLE, AND PATCH CABLES SHALL BE BLUE.
 - DC = (N) RAULAND 2500 SERIES WIRED DIGITAL CLOCK TO MATCH CAMPUS EXISTING CLOCKS. COORDINATE WITH DISTRICT REPRESENTATIVE FOR MOUNTING HEIGHT.



2 CAMPUS COMMUNICATIONS RISER DIAGRAM
 SCALE: NTS

1 TELECOMMUNICATIONS GROUND BUS BAR
 SCALE: NTS

FILE LOCATION: DATE PLOTTED:



Pre-Bid RFIs: 6 to 12

Project: Orcutt Academy HS Multi-Use Building
Project No: 2-2022-02-22-01
Addendum 005

6. Pre-Bid RFI #6: Key Personnel form

6.1. Section 5g. of the Instruction to Bidders requires Bidders to submit the Key Personnel form. Will you be providing the form or should the bidder include General Conditions page 00 70 00 – 13?

6.1.1. Response: Bidders are to include General Conditions page 00 70 00 – 13 with their bid.

7. Pre-Bid RFI #7: Stage Curtain Clarifications

7.1. Do fees need to be included for Management tolls (ie, Textura, etc)?

7.1.1. Response: Question has been withdrawn by bidder.

7.2. Are the Front Stage Curtains to be manually operated, with a floor-mounted tension block, motorized, or walk-along?

7.2.1. Response: Front stage curtains to be floor-mounted tension block. Revise specification section 11 06 30 to identify curtain operation. Revised page 4 of specification section 11 06 30 has been included in 19-6 Addendum #3.

7.3. Onstage curtains are shown tracking on a single curved track. We assume these are walk-along curtain panels. Please confirm.

7.3.1. Response: Confirming onstage curtains are walk-along curtain panels. Revise specification section 11 06 30 to identify curtain operation. Revised page 4 of specification section 11 06 30 has been included in 19-6 Addendum #3.

7.4. Based on A-201, we are estimating the front curtain to be approx. 30' wide. Based on A-403, what is the height?

7.4.1. Response: Front curtain is approximately 30' wide, field verify. Height for front curtain is approximately 13'-6", field verify.

7.5. What is the height of the Front Valance (11.61A)?

7.5.1. Response: Front valance height is approximately 4'-0", field verify.

7.6. 6 Based on A-403, we are estimating stage curtains at 22' ht. What are the widths of the (4) curtain panels?

7.6.1. Response: Stage curtain height is approximately 20'-6". Widths for the side curtains - approximately 18'-0" per side/panel. For the rear, approximately 13'-0" wide for each of the 2 rear panels (approximate total rear width 26'-0"). Field verify all dimensions and measurements.

8. Pre-Bid RFI #8: Painting Clarifications

8.1. As it relates to painting, do the following items need to be painted?

- Brace Plates on Exterior - **Yes**



- Cabinets/Casework - **No**
- Gym Ceilings (**Acoustical Steel Deck will be factory painted/ finished, response is No**). **Revised sheet A-211 and A-251 has been included in 19-6 Addendum #3.**
- Basket Ball Backboards/Frames (**Will be factory powder-coated black, response is No**)
- Fire Sprinklers (**Pipes – Yes. Ceiling Plan General Note #1 reflects this.**)
- Exterior Split-Face CMU (**Exterior face of CMU will not be painted but will need clear CMU sealer**).
- Exterior Work other than the Building – Entry Canopy, Railings and Fencing
Entry Canopy will be factory finished, response is No; Railings will be galvanized finished smooth; response is No, Fencing will be factory coated black; response is No.

9. Pre-Bid RFI #9: DVBE Clarification

9.1. Section 5 of Instructions to Bidders, lists "Disabled Veteran's Business Enterprise Participation Certification" as a document to submit with the Bid Form. However; section 5f of the Instructions to Bidders notes "Bidders should not submit these forms with their bids".

9.1.1. Response: The Disabled Veteran's Business Enterprise Participation Certification requirement has been removed and is no longer required to bid this project.

10. Pre-Bid RFI #10: Masonry Block Color

10.1. Confirming what block color to use for this project. Masonry specs call for Air Vol Color #60B620C but on Architectural Sheet A-251 Finish Plan it calls out for Air Vol Color MW 04B407A, which color is to be used? There is a price difference between the 2 colors.

10.1.1. Response: Color is MW04B407A. Revise Specification Section 04 20 00. Revised page 6 of specification section 04 20 00 has been included in 19-6 Addendum #3

11. Pre-Bid RFI #11: Project Duration

11.1. What is the project duration?

11.1.1. Response: As stated in Bid Manual section 00 01 15, the anticipated project duration is May 23, 2022 to July 31, 2023.

12. Pre-Bid RFI #12: Roofing Clarifications

12.1. On Sheet A-702, #8, the drawings call out XPS Rigid Insulation. Kip found that if ISO insulation is used instead, the price would be cut in half. Is it permissible to quote for ISO instead of XPS?

12.1.1. Response: It is permissible to quote ISO instead of XPS. Drawings have been changed to reflect ISO instead of XPS. Revised sheet A-701 and A-702 have been included in 19-6 Addendum #3.

12.2. On Sheets A-703, #20, and A-701, #8, the drawings call for 6" rigid insulation. With the canopy, 6" of rigid insulation (R30) would neither be necessary nor functional (especially with



metal deck as foundation) and recommends 1" or 2" rigid insulation with ¼ in. taper – is this an acceptable substitute??

12.2.1. Response: No, it is not acceptable to substitute 6" (R30) with 1" or 2". R30 is Code required.