



# Office of General Services

DESIGN & CONSTRUCTION GROUP  
THE GOVERNOR NELSON A. ROCKEFELLER  
EMPIRE STATE PLAZA  
ALBANY, NY 12242

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## ADDENDUM NO. 1 TO PROJECT NO. 46075

### CONSTRUCTION, HVAC, PLUMBING AND ELECTRICAL WORK PROVIDE MAINTENANCE SUB-HEADQUARTERS DOT REGION 8 COLUMBIA COUNTY 1373 STATE ROUTE 203 CHATHAM, NY

March 3, 2025

**NOTE:** This Addendum forms a part of the Contract Documents. Insert it in the Project Manual. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

#### GENERAL REQUIREMENTS – CONSTRUCTION WORK

1. SECTION 015213 STATE FIELD OFFICE, Paragraph 1.04 C.: Delete this paragraph in its entirety.

#### CONSTRUCTION WORK SPECIFICATIONS

2. SECTION 133419 PRE-ENGINEERED METAL BUILDING: Discard the Document bound in the Project Manual and substitute the accompanying Document (pages 133419 - 1 through 133419 - 18) noted "REVISED 02/28/2025".
3. SECTION 323113 CHAIN LINK FENCE BROADSCOPE: Discard the Document bound in the Project Manual and substitute the accompanying Document (pages 323113 - 1 through 323113 - 5) noted "REVISED 02/28/2025".

#### CONSTRUCTION WORK DRAWINGS

4. Revised Drawings:
  - a. Drawing Nos. G-002, C-108, C-502, S-101, S-502, A-103, A-501, A-601 noted "Revised Drawing 02/28/2025", accompany this Addendum and supersede the same numbered originally issued drawings.

#### HVAC WORK DRAWINGS

5. Revised Drawing:
  - a. Drawing No. G-002 noted "Revised Drawing 02/28/2025", accompanies this Addendum and supersedes the same numbered originally issued drawing.

**PLUMBING WORK DRAWINGS**

6. Revised Drawings:
  - a. Drawing Nos. G-002, P-103, P-402, P-501, and P-502 noted “Revised Drawing 02/28/2025”, accompany this Addendum and supersede the same numbered originally issued drawings.

**ELECTRICAL WORK DRAWINGS**

7. Revised Drawings:
  - a. Drawing Nos. G-002 and E-502 noted “Revised Drawing 02/28/2025”, accompany this Addendum and supersede the same numbered originally issued drawings.

**END OF ADDENDUM**

Brady M. Sherlock, P.E.  
Director, Division of Design  
Design & Construction

**SECTION 133419****PRE-ENGINEERED METAL BUILDING****PART 1 GENERAL****1.01 PRODUCTS FURNISHED BUT NOT INSTALLED UNDER THIS SECTION**

- A. Anchor Bolts and Tie Rods: Installed under the work of Section 033000.
- B. Embedded Sill Members: Installed under the work of Section 033000.

**1.02 RELATED WORK SPECIFIED ELSEWHERE**

- A. Concrete Formwork: Section 031100.
- B. Concrete Reinforcement: Section 032100.
- C. Cast-In-Place Concrete: Section 033000.
- D. Standing Seam Metal Roofing: Section 076100.
- E. Sectional Overhead Doors: Section 083324.
- F. Finish Hardware: Section 087100.
- G. Glass and Glazing Windows: Section 088100.

**1.03 REFERENCES**

- A. Reference Standards: Comply with the following as applicable:
  - 1. AISI S100, *North American Specification for the Design of Cold-Formed Steel Structural Members*, 2016
  - 2. AISC 360, *Specification for Structural Steel Buildings*, American Institute of Steel Construction, 2016.
  - 3. AISC, *Steel Design Guide Series 3, Serviceability Design Considerations for Steel Buildings*, Second Edition, 2003.
  - 4. ANSI/ASHRAE/IES Standard 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, 2016.
  - 5. ASTM A36-14, *Standard Specification for Carbon Structural Steel*.
  - 6. ASTM A123-17, *Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products*.
  - 7. ASTM A153-16a, *Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware*.
  - 8. ASTM A307-14e1, *Standard Specification for Carbon Steel Bolts, Studs and Threaded Rod 60,000 psi Tensile Strength*.
  - 9. ASTM F3125-19e2, *Standard Specification for High Strength Structural Bolts and Assemblies, Steel and Alloy Steel, Heat Treated, Inch Dimensions 120 ksi and 150 ksi Minimum Tensile Strength*.

10. ASTM A463-15, Standard Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process.
11. ASTM A475-03(2014), *Standard Specification for Zinc-Coated Steel Wire Strand*.
12. ASTM A500-13, *Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes*.
13. ASTM A501-14, *Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing*.
14. ASTM A529-14, *Standard Specification for High-Strength Carbon-Manganese Steel of Structural Quality*.
15. ASTM A572-15, *Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Structural Steel*.
16. ASTM A653-17, *Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process*.
17. ASTM A792-10(2015), *Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process*.
18. ASTM A1011-14, *Standard Specification for Steel, Sheet and Strip, Hot Rolled, Carbon, Structural, High Strength Low-Alloy, High Strength Low-Alloy with Improved Formability, and Ultra-High Strength*.
19. ASTM E1514-98(2017)e1, *Standard Specification for Structural Standing Seam Steel Roof Panel Systems*.
20. ASTM E1592-05(2017), *Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference*
21. ASTM E1646-95(2011), *Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference*.
22. ASTM E1680-16, *Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems*.
23. AWS A2.4, *Standard Symbols for Welding Brazing, and Nondestructive Examination*.
24. AWS D1.1, *Structural Welding Code – Steel*.
25. AWS D1.3, *Structural Welding Code - Sheet Steel*.
26. MBMA, *Metal Building Systems Manual*.
27. SSPC, (The Coatings Society) - SP2 - *Specification for Hand Tool Cleaning*, 2004 (Part of Steel Structures Painting Manual, Vol. Two).
28. SSPC, - Paint 15 - *Steel Joist Shop Primer/Metal Building Primer*; ; 2004 (Part of Steel Structures Painting Manual, Vol. Two).
29. SSPC, - Paint 20 - *Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic)*; Society for Protective Coatings; 1991 (Part of Steel Structures Painting Manual, Vol. Two).
30. UL 580, - *Standard for Tests for Uplift Resistance of Roof Assemblies*, 2006 (with Revisions through July 2009).
31. Welding: Comply with the provisions of the “Structural Welding Code - Steel, AWS D1.1” or the “Structural Welding Code - Sheet Steel, AWS D1.3”, by the American Welding Society (AWS Codes).
32. High-Strength Bolting: Provide high strength bolting in accordance with the “Specification for Structural Joints Using ASTM A325 or A490 Bolts” approved by the Research Council on Riveted and Bolted

Structural Joints of the Engineering Foundation on August 14, 1980 except as follows:

- a. Item 1(c): Wind connections and all other connections transferring moment shall be included among the connections limited to friction-type.
  - b. Item 5(b): All high strength bolts shall have a hardened washer under the element (nut or bolt head) turned in tightening, regardless of the method of tightening.
  - c. Item 6: The inspection of bolt tightening shall be as specified under Item 6(d). Furnish the calibration device and the inspection torque wrench, and make them available, upon request, to representatives of the State or designated inspection laboratory during the entire period when steel is being fabricated and erected. The inspection torque wrench shall be capable of indicating that the job inspecting torque has been reached by a second method in addition to direct observation of the wrench dial. The inspection wrench calibration and the bolt tightening inspection shall be performed by the Contractor, and shall be witnessed by a representative of the Director or the designated inspection laboratory.
33. Gages:
- a. Sheet Steel: U.S. Standard.
  - b. Steel Wire: U.S. Steel Wire Gage.

#### 1.04 DESIGN REQUIREMENTS

- A. Delegated Design: Engage a licensed professional engineer, registered in New York State, to design metal building system.
- B. Design Criteria: Except as shown or specified otherwise, building design shall conform to the Metal Building Manufacturers Association's (MBMA) "Design Practices" and "Code of Standard Practice", and with the following criteria:
  1. Structural Loads and Design Criteria: As indicated on Drawings.
  2. Building Size: Not less than the size indicated on the Drawings.
    - a. Actual building length shall be to the inside face of exterior end wall panels and shall be equal to the nominal building length.
    - b. Actual building width shall be to the inside face of exterior side wall panels and shall be equal to the nominal building width.
  3. Grounding: Building shall be grounded.
  4. Deflection Limits shall be in accordance with the applicable provisions of the Metal Building Systems Manual (MBMA), latest edition.
  5. Vertical Deflections:
    - a. Roof Secondary (Purlins) – L/240 Total, L/360 Live
    - b. Main Frame roof beams – L/240 Total, L/360 Live.
  6. Horizontal Deflections:
    - a. Wall Secondary (Girts) – L/180.
    - b. Main Frames – H/200.
  7. Vertical deflection limits apply for snow load (50-year mean-recurrence interval) plus collateral load, or the code required live load. The horizontal drift and deflections limits apply for the loads induced by a basic wind speed corresponding to a 10 year mean-recurrence interval.

- C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
  - 1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.
- D. Structural Performance for Metal Roof and Wall Panels: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:
  - 1. Wind Loads: As indicated on Drawings.
- E. Air Infiltration for Metal Roof Panels: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E1680 or ASTM E283 at the following test-pressure difference:
  - 1. Test-Pressure Difference: 1.57 lbf/sq. ft.
- F. Air Infiltration for Metal Wall Panels: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E283 at the following test-pressure difference:
  - 1. Test-Pressure Difference: 1.57 lbf/sq. ft.
- G. Water Penetration for Metal Roof Panels: No water penetration when tested according to ASTM E1646 or ASTM E331 at the following test-pressure difference:
  - 1. Test-Pressure Difference: 2.86 lbf/sq. ft.
- H. Water Penetration for Metal Wall Panels: No water penetration when tested according to ASTM E331 at the following test-pressure difference:
  - 1. Test-Pressure Difference: 2.86 lbf/sq. ft.

## 1.05 SUBMITTALS

- A. Shop Drawings: Drawings shall show specific application to this Project and stamped by a licensed professional engineer, registered in New York State. Submit all required drawings in one submission, except as noted. Indicate components by others. Include full building plan, elevations, sections, details, and the following:
  - 1. Erection Drawings: Manufacturer's complete erection drawings. Indicate manufacturer's identification marking for the components.
  - 2. Structural Drawings:
    - a. Manufacturer's drawings showing base plate dimensions and foundation loads for all columns and/or rigid frames.
    - b. Manufacturer's drawings showing anchoring details for the sill members, door jambs, and other miscellaneous items requiring connections to the concrete foundation.
    - c. Manufacturer's details for any proposed wall wind bracing system and portal frame system.

- d. Anchor bolt plan showing the location of all columns and/or rigid frames, and the location of all necessary anchor bolts or other main framing connections to the concrete foundation.
- e. Anchor bolt and tie rod details.
- 3. Metal Roof and Wall Panel Layout Drawings: Show layouts of panels including methods of support. Include details of edge conditions, joints, panel profiles, corners, anchorages, clip spacing, trim, flashings, closures, and special details. Distinguish between factory- and field-assembled work; show locations of exposed fasteners.
  - a. Show roof-mounted items including equipment supports, pipe supports and penetrations, and items mounted on roof curbs.
  - b. Show wall-mounted items including doors, windows, louvers, and lighting fixtures
- 4. Architectural Drawings: Architectural detail drawings for all auxiliary building components and accessories.

**Note:** Drawings required under 2.d. and 2.e. shall not be submitted until the manufacturer's drawings required under 2.a., 2.b., and 2.c. have been approved.

**Note:** Manufacturer's standard sheets showing loads or details for a multiple range of building spans, heights, and loadings will not be accepted.

- B. Submit an Environmental Product Declaration (EPD) from the manufacturer for steel within this specification section, if available. A statement of the contractor's good faith effort to obtain the EPD shall be provided if not available.
  - 1. Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services*.
- C. Design Calculation Package: Engage a licensed professional engineer, registered in New York State, to design and stamp the metal building system.
  - a. Refer to contract documents for design criteria.
- D. Product Data: Manufacturer's catalog sheets, specifications and installation instructions for the following:
  - 1. Insulated metal roofing panels.
  - 2. Insulated metal exterior wall panels.
  - 3. Interior metal liner panels.
  - 4. Metal soffit panels.
  - 5. Windows.
  - 6. Trim, exterior and interior.
  - 7. Flashings.
  - 8. Sealants and gaskets.
  - 9. Snow fences.
- E. Samples:
  - 1. Twelve inch square corner sections:
    - a. Insulated metal roofing panel.
    - b. Insulated metal exterior wall panel.

- c. Interior metal liner panel.
    - d. Metal soffit panel.
  - 2. Twelve inch long sections:
    - a. Purlin.
    - b. Girt.
    - c. Corner, rake and eave trim.
    - d. Ridge cover.
  - 3. Color Samples: Manufacturer's standard colors for exterior wall and roofing panels, trim, and other factory color-coated components.
- F. Quality Control Submittals:
  - 1. Design Calculations: Manufacturer's design calculations, signed and sealed by a licensed Professional Engineer registered in the State of New York, for the structural framing and exterior wall and roofing panels.
    - a. The Engineer's cover letter shall state that he or she has received a set of the Contract Drawings and Specifications and that the design calculations are based on the requirements of the Contract Drawings and Specifications.
  - 2. Certificates: Metal building manufacturer's written certification that the structure has been designed in conformance to the specified design loading and other design requirements. Note: This is a pre-award submittal; refer to Supplementary Instructions to Bidders - Condition of Award.
- G. Contract Closeout Submittals:
  - 1. Warranties:
    - a. Roofing Panels: Metal building manufacturer's year warranty on roofing panels and related trim against rupture, structural failure, or perforation due to atmospheric corrosion.
    - b. Exterior Wall Panels: Metal building manufacturer's year warranty for factory applied color finish on exterior surfaces of exterior wall panels and related trim against blistering, peeling, cracking, flaking, checking, chipping, color change exceeding 5 N.B.S. units (per ASTM D-2244), and chalking exceeding a rating of 8 (per ASTM D-659).

## 1.06 QUALITY ASSURANCE

- A. Fabricate structural steel members in accordance with MBMA *Metal Building Systems Manual*, and, for items not covered, AISC - *Specification for Structural Steel Buildings*.
- B. Manufacturer's Qualifications: The manufacturer of the pre-engineered metal building to be regularly engaged in the design and fabrication of pre-engineered, pre-fabricated metal buildings, to have furnished such buildings for five similar projects that have been in use for not less than five years, and to be subject to the approval of the Director's Representative. The building manufacturer to be capable of furnishing compatible auxiliary building components and accessories shown or specified.

1. If requested, furnish to the Director’s Representative the names and addresses of five similar projects where the manufacturer’s building has been in use for five years.
- C. Installer’s Qualifications: The person supervising the installation of the work of this Section to be experienced in pre-engineered metal building work, and to have been regularly employed by a company engaged in the erection and installation of such buildings for a minimum of three years.
1. If requested, furnish to the Director’s Representative the names and addresses of three similar projects for which the supervisor has supervised the erection and installation of pre-engineered metal buildings.
- D. Regulatory Requirements:
1. Code: Comply with the applicable provisions of the New York State Uniform Fire Prevention and Building Code.
  2. Building Grounding: Comply with National Electrical Code.
- E. Inspection: Quality assurance inspection may be made by the State. If quality assurance inspection is made by the State, it will not relieve the fabricator or erector of responsibility for their own quality control program.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver building components, except structural steel, to the Site in unopened cartons, crates, or other protective containers bearing the manufacturer’s labels.
- B. Components to have manufacturer’s identification marking corresponding to the marking shown on the erection drawings.
- C. Keep materials dry while in storage.
- D. Handle materials by a method which will prevent damage to components, including finishes.
- E. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- F. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

**1.08 WARRANTY**

- A. Special Warranty: The one year period required by Paragraph 9.8 of the General Conditions is extended to 2 years for the pre-engineered metal building. Refer to Supplementary Conditions.

- B. Special Warranty on Metal Panel Finishes: Manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
    - a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
    - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
    - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
  2. Finish Warranty Period: 30 years from date of Substantial Completion.
- C. Special Weathertightness Warranty for Standing-Seam Metal Roof Panels: Manufacturer agrees to repair or replace standing-seam metal roof panel assemblies that leak or otherwise fail to remain weathertight within specified warranty period.
1. Warranty Period: 20 years from date of Substantial Completion.

## PART 2 PRODUCTS

### 2.01 MANUFACTURER

- A. Manufacturer: Subject to compliance with requirements, provide product by one of the following or approved comparable manufacturer:
1. Nucor Building Systems.
  2. Star Building Systems.
  3. Ceco Building Systems.

### 2.02 PERFORMANCE REQUIREMENTS

- A. Metal roofing panels (insulated panels and standing seam).
1. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:
    - a. Wind Loads: As indicated on Drawings.
    - b. Other Design Loads: As indicated on Drawings.
    - c. Deflection Limits: For wind loads, no greater than 1/240 of the span.
  2. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E 1646 or ASTM E 331 at the following test-pressure difference:
    - a. Test-Pressure Difference: 5.0 lbf/sq. ft.
  3. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
    - a. Uplift Rating: UL 60.
  4. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface

temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

- a. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

## 2.03 MATERIALS

- A. Basic Materials: Except as otherwise specified or indicated on the Drawings, building components and assemblies shall be fabricated from the following applicable materials as required to produce units conforming to the design and types of fabrications required for the building.
  1. Structural Steel Members: ASTM A36, A529 or A572 except as otherwise indicated.
  2. Cold-Rolled Structural Steel: ASTM A446, Grade A except higher strength grade if needed to comply with design criteria.
  3. Cold-Formed Structural Steel: ASTM A570.
  4. Structural Steel Tubing: ASTM A500, Grade B or A501.
  5. Steel Plate and Bar Stock: ASTM A529 or A572.
  6. Steel Pipe: ASTM A53, type and weight as required, Grade B.
  7. Anchor Bolts and Tie Rods: ASTM A36 or A675, Grade 70.
  8. Clevises, Turnbuckles, and Sleeve Nuts: Similar to those shown in Part 4 of the AISC Manual. The safe working loads shall be adequate for the building furnished.
  9. High Strength Bolts: ASTM F3125.
  10. Common (Standard) Bolts: ASTM A307.
  11. Steel for Shims and Fillers: ASTM A569.
  12. Welding Materials: AWS Codes, type required for materials being welded.
  13. Covering Fasteners:
    - a. Screw Bolts: Type 300 series stainless steel capped low profile head, 200 inch lb min stripping tongue, color finish on exposed exterior surfaces matching adjacent panels/trim.
    - b. Sheet Metal Screws: Type 300 series stainless steel or ASTM A165 cadmium plated case hardened carbon steel, self-drilling or self-tapping, standard hexagonal head or hex-washer head, color finish on exposed exterior surfaces matching adjacent panels/trim.
    - c. Rivets: Aluminum, pull type, self-petalling, 1400 lb setting strength, 1650 lb shear strength, 350 lb min push out strength, color cap on exposed exterior surface matching adjacent panels/trim.
    - d. Sealing Washers: Neoprene washers, ASTM D735.
  14. Shop Primer Paint for Framing: Manufacturer's standard lead- and chromate-free, nonasphaltic, rust-inhibiting primer complying with SSPC No. 15 and compatible with topcoat specified in Section 099101 "Construction Painting."
  15. Bedding Mortar:
    - a. Shrink-Resistant Grout: Factory-packaged, shrink-resistant, non-staining, non-ferrous mortar grouting compound selected from the following:
      - 1) Masterflow 713 by Master Builders.

- 2) SonogROUT by Sonneborn.
  - 3) Five Star Grout by U.S. Grout Corporation.
  - 4) Crystex by L&M Construction Chemicals.
  - 5) Non-Corrosive, Non-Shrink Grout by A.C. Horn.
- B. Assembly and Installation Accessories: Building manufacturer's standard reinforcements, extensions, clips, brackets, miscellaneous fasteners and anchoring devices, spacers, furring strips, closures, flashings, expansion joints, thermal breaks, adhesives, and other components needed for a complete, permanently weatherproof installation. Materials shall be non-deteriorating, corrosion resistant, and compatible with adjoining materials.
- C. Connections: Fasteners to be of size and in quantities to securely and permanently join building components, and to be complete with necessary hardware and accessories as required for the application. Connections to allow for expansion and contraction in accordance with the approved design. Screw bolts and rivets to have metal-backed sealing washers. Except as otherwise indicated, provide the following fastener types for the following locations:
1. Roofing Panels to Structural Members: Screw bolts or rivets.
  2. Wall Panels to Structural Members: Screw bolts or standard bolted connection.
  3. Wall Panels to Wall Panels: Screw bolts, sheet metal screws or rivets.
  4. Trim: Same fasteners as adjacent panels.
- D. Sealants, Gaskets and Closures:
1. Tape Sealant: Flat shaped, elastomeric, non-hardening, ribbon sealant; type recommended by building manufacturer for the particular use and conditions of application.
  2. Tube or Pumpable Sealant: Polybutenebutyl or acrylic terpolymer base sealant, or other type sealant recommended by building manufacturer for the particular use and conditions of application.
  3. Gaskets: Rubber, building manufacture's standard shapes.
  4. Closures: Closed cell foam or rubber material, formed to match panel profiles, sized to provide weathertightness.
- E. Galvanizing: Complying with the following requirements except where otherwise specified.
1. Formed Sheet Steel: ASTM A653, coating designation G-90.
  2. Assembled Steel Products: ASTM A123.
  3. Iron and Steel Hardware: ASTM A153.
  4. Products Fabricated from Rolled, Pressed and Forged Steel Shapes, Plates, Bars and Strip: ASTM A123.

## 2.04 PRIMARY BUILDING FRAMING

- A. Columns, roof beams, trusses, and rigid frames to be factory fabricated, with required holes in webs and flanges accurately punched or drilled unless otherwise indicated or approved. Enlarging or gouging holes at the site will not be permitted. Base plates, splice plates, stiffener plates, and other required plates to be shop fabricated and welded in place where applicable.

- B. Rigid Frames: Clear span, solid web framing, tapered or uniform depth, welded-up plate section columns and beams.
- C. Endwall Framing: Corner posts, endposts and rake beams; hot rolled sections, cold formed shapes, or built-up shapes of welded plate construction.
- D. Bracing: Wind bracing and struts, flange and knee bracing, sag rods, and other bracing and support members as required by the building design; steel angles and rods recommended by building manufacturer unless otherwise indicated.
- E. Bolts for Field Assembly of Primary Building Framing and Bracing: High strength bolts.
- F. Shop Painting: Comply with the following requirements except where otherwise specified:
  - 1. Steel framing to be thoroughly cleaned of loose mill scale, loose rust, weld slag, and other foreign material. Oil and grease shall be removed with solvent.
    - a. Galvanized items to be rinsed in hot alkali or in an acid solution and then in clear water. Welded and abraded galvanized surfaces to be repaired with a 2 mil thick coating of cold galvanizing compound applied in accordance with compound manufacturer's instructions.
  - 2. One coat of primer paint to be applied to all steel surfaces except surfaces to be welded and contact surfaces of high strength bolted connections.

## **2.05 SECONDARY BUILDING FRAMING**

- A. Purlins: Cold formed steel shapes, or cold formed open web welded trusses.
- B. Girts: Cold formed steel shapes.
- C. Eave Members: Cold formed steel shapes.
- D. Sill Members: Roll formed galvanized steel base angle (or zee), or galvanized steel base tube with anchors.
- E. Overhead Door Frames: Frames to be fabricated from structural shapes and bars as required to receive overhead doors, with corners fully welded and ground smooth, or field bolted, and with provisions for bracing to building framing. Exterior frames to be galvanized after fabrication.
- F. Framing for Miscellaneous Openings: All openings to be framed for proper support and attachment. Frames to be fabricated from structural shapes and bars with corners fully welded and ground smooth, or field bolted, and with provisions for bracing to building framing. Exterior frames to be galvanized after fabrication.
- G. Shop Painting: Comply with the requirements specified for Primary Building Framing.

**2.06 INSULATED ROOFING PANELS**

- A. General:
1. Roofing panels to include all related components and accessories necessary for a complete roof system.
  2. Metal sheets to be prefinished (coil coated) prior to forming and panel fabrication.
  3. Panels shall be fabricated in maximum lengths possible as necessary to minimize end laps.
- B. Basis of Design Product: Subject to compliance with requirements, provide the following or approved comparable product:
1. Metl Span; CFR – Insulated Metal Roof Panel.
    - a. Exterior Color: As selected by the Director’s Representative from the manufacturer’s standard colors.
- C. Description:
1. Type: Self-contained, factory assembled, foam core, insulated units.
  3. Covering Width: 40 inches.
  3. Seam Design (Sidejoint): Double interlocking standing seam, field formed (locked) with special machine.
  4. Core/Insulation Thickness: 4-inches minimum
  5. Attachment to Supporting Members: Special concealed clips designed to allow panel movement to compensate for thermal effects.
  6. Sidejoint Sealant: Factory applied.
- D. Materials:
1. Panel Sheet: 26 gage galvanized steel.
  2. Core: Foamed-in-place polyisocyanurate foam having a density of 2.2 to 2.5 lb/cu ft, foamed-in-place between panel faces.
- E. Coatings and Finishes:
1. Front Surface: G90 galvanized coating designation.
    - a. Finish: High-Performance Organic Finish (Two-Coat Fluoropolymer): AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: conversion coating; Organic Coating: manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2605 and with coating and resin manufacturers' written instructions.
    - b. Color and Gloss: As selected by the Director’s Representative from manufacturers standard colors
  2. Back Surface: G90 galvanized coating designation, and panel manufacture’s standard rust-inhibitive back surface finish used with specified front surface color finish.
- F. Panel Insulation Values (Tested at 40 degrees F and 5 year age):

1. R Value: 30 or more.
- G. Roof System Trim, Flashing, and Accessories: Materials to be the same materials used for the panels, unless otherwise indicated or required by the application. Configurations to be the standard with the building manufacturer for the specified roofing panels, unless otherwise indicated. Coatings and finishes to match roofing panels, except building manufacturer's standard finishes (as required by application) may be furnished on special use accessories.
1. Eave Trim.
  2. Gable/Rake Trim.
  3. Ridge Caps.
  4. Roof Penetration Flashings:
    - a. Pipe Flashing: Pleated, one-piece, ethylene propylene diene monomer rubber units with aluminum alloy reinforcing ring bonded to base flange, sized for pipe diameter.
    - b. High-Temperature Pipe Flashing: Pleated, one-piece, silicone units with aluminum alloy reinforcing ring bonded to base flange, sized for pipe diameter. Rated for up to 500° F.
  5. Snow Fences: Aluminum snow fence bar and brackets manufactured by Alpine Snow Guards, 289 Harrel St. Morrisville, VT 05661; (888) 766-4273; [www.alpinesnowguards.com](http://www.alpinesnowguards.com).
    - a. Model: SnowMax UT2 attachment brackets with SnowMax bar.
    - b. Finish: Mill finish.
    - c. Provide 0.032 aluminum insert strips in SnowMax bar matching color and finish of roof panels.
  6. Snow Diverters: Powder coated 14 ga. steel snow diverter surface mounted to roof panels at pipe penetrations. 18-inches wide by 25-inches long by 16-inches high. Basis of Design: Snow Terminator by Roof Things, LLC.
    - a. Color: Matching roof panels and as selected by the Director's Representative.

## 2.07 EXTERIOR WALL PANELS

- A. General:
1. Exterior wall panels to include all related components and accessories necessary for a complete exterior wall system.
  2. Metal sheets to be prefinished (coil coated) to the greatest extent possible prior to forming and panel fabrication.
  3. Panels to be fabricated in one-piece length from sill to roof line, except where panels are interrupted by auxiliary building components such as windows. Upper end of panels to be fabricated to form a close fit with roof system. Provisions to be made for a weathertight closure at ends of panels.
    - a. Self-contained insulated units to be self draining to the exterior.
- B. Basis of Design Product: Subject to compliance with requirements, provide the following or approved comparable product:
1. Metl Span; CF Mesa Insulated Metal Wall Panel.
    - a. Exterior Color: As selected by the Director's Representative from the manufacturer's standard colors.

- C. Description:
1. Type: Self-contained, factory assembled, insulated units.
  2. Covering Width: 42 inches.
  3. Seam Design (Sidejoint): Double tongue and groove with seals.
  4. Panel Thickness: 4 inches.
  5. Attachment to Supporting Members: Concealed fasteners.
  6. Sidejoint Sealant/Gasket/Seal: Factory applied.
- D. Materials:
1. Panel Sheet: 26 gage galvanized steel.
  2. Core: Foamed-in-place polyisocyanurate foam having a density of 2.2 to 2.5 lb/cu ft, foamed-in-place between panel faces..
- E. Coatings and Finishes:
1. Front Surface: G90 galvanized coating designation.
    - a. Finish: High-Performance Organic Finish (Two-Coat Fluoropolymer): AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: conversion coating; Organic Coating: manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2605 and with coating and resin manufacturers' written instructions.
    - b. Color and Gloss: As selected by the Director's Representative from manufacturers standard colors
  2. Back Surface: G90 galvanized coating designation, and panel manufacturer's standard rust-inhibitive back surface finish used with specified front surface color finish.
- F. Panel Insulation Values (Tested at 40 degrees F and 5 year age):
1. R Value: 30 or more.
- G. Exterior Wall System Trim, Flashing, and Accessories: Materials to be the same materials used for the panels, unless otherwise indicated or required by the application. Configurations to be the standard with the building manufacturer for the specified wall panels, unless otherwise indicated. Coatings and finishes to match wall panels, except building manufacturer's standard finishes (as required by application) may be furnished on special use accessories.
1. Corner Trim/Assemblies.
  2. Opening Trim.
  3. Base Angle/Channel/Tube Trim/Flashing.
  4. Base Closure.
  5. Solid Soffits.
- H. Perforated Soffit Panels:
1. Basis of Design: Metl Span EcoScreen BR5-36.
  2. Height: 1-1/2-inches.
  3. Material: 0.040-inch aluminum.

- a. Finish: High-Performance Organic Finish (Two-Coat Fluoropolymer): AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: conversion coating; Organic Coating: manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2605 and with coating and resin manufacturers' written instructions.
- b. Color and Gloss: As selected by the Director's Representative from manufacturers standard colors.

**2.08 INTERIOR LINER PANELS**

- A. Description:
  - 1. Type: Roll formed metal sheet.
  - 2. Height: As indicated.
  - 3. Cross Section Profile: As selected by the Director's Representative from manufacturer's standard profiles.
- B. Material: 24 gage, G60 coated galvanized steel.
- C. Finish: Silicone modified polyester.
  - 1. Color: As selected by the Director's Representative from manufacturer's standard colors.
- D. Trim: Provide corner, cap, and base trim profiles for a complete system as indicated. Match material and finish of the liner panels.

**2.09 WINDOWS**

- A. References:
  - 1. AAMA/WDMA/CSA 101/I.S.2/A440, NAFS - North American Fenestration Standard/Specification" for windows, doors, and skylights; jointly published by the American Architectural Manufacturers Association (AAMA), the Window & Door Manufacturers Association (WDMA), and the Canadian Standards Association (CSA).
- B. Performance:
  - 1. Thermal Transmittance: Provide aluminum windows with a whole-window, U-factor maximum indicated at 15-mph exterior wind velocity and winter condition temperatures when tested according to AAMA 1503.
    - a. Fixed Windows: U-Factor to be 0.38 Btu/sq. ft. x h x degree F or less.
    - b. Operable Windows: U-Factor to be 0.45 Btu/sq. ft. x h x degree F or less.
  - 2. Solar Heat-Gain Coefficient (SHGC): Provide aluminum windows with a whole-window SHGC maximum of 0.38, determined according

- C. Windows to be the metal building manufacturer’s standard frame and operable sash units fabricated of extruded aluminum sections, complete with glass, hardware, weatherstripping, and insect screens, and complying with applicable sections of AAMA/WDMA/CSA 101/I.S.2/A440.
  - 1. Type:
    - a. Double hung and projected - Light Commercial LC-30.
    - b. Fixed - Commercial CW-30.
  - 2. Frame Construction: Fabricated to a configuration for self-framing and self-flashing installation in the wall covering system.
  - 3. Finish: High-Performance Organic Finish (Two-Coat Fluoropolymer): AA-C12C40R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: conversion coating; Organic Coating: manufacturer's standard two-coat, thermocured system consisting of specially formulated inhibitive primer and fluoropolymer color topcoat containing not less than 70 percent polyvinylidene fluoride resin by weight). Prepare, pretreat, and apply coating to exposed metal surfaces to comply with AAMA 2605 and with coating and resin manufacturers' written instructions.
    - a. Color and Gloss: As selected by the Director’s Representative from manufacturers standard colors.
  - 4. Hardware: Manufacturer’s standard operating hardware.
  - 5. Glass: Type M per Section 088100.
  - 6. Weatherstripping: Manufacturer’s standard.
  - 7. Insect Screens: Minimum 3/4 inch wide extruded or roll-formed aluminum frames; 18 x 14 mesh, 0.0123 inch diameter, 5056 clad aluminum screen cloth secured in frame with plastic or aluminum splines.

**2.10 FABRICATION**

- A. Tolerances: Conform to tolerances set forth in MBMA Code of Standard Practice, except as follows:
  - 1. Alignment and fit-up of welded joints shall conform to the “Structural Welding Code - Steel” (AWS D1.1).

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verification of Conditions: Examine surfaces to receive the metal building for defects that will adversely affect the execution and quality of the Work. Do not proceed until unsatisfactory conditions are corrected.

**3.02 PREPARATION**

- A. Protect factory applied finishes from damage during erection.
- B. Clean surfaces to receive the work of this Section.

- C. Isolation: Isolate aluminum in contact with cementitious materials and dissimilar metals, except compatible metals. Separate the materials by applying a heavy coat of bituminous paint or 10 mil self-adhesive polyethylene tape on the contact surfaces. Use gasketed fasteners where needed to eliminate the possibility of corrosive or electrolytic action between metals.

### 3.03 ERECTION AND INSTALLATION

- A. General: Erect and install the metal building and appurtenances in accordance with the manufacturer's printed instructions except as otherwise specified or required by the Reference Standards. Install the work of this Section so the structure is secure and weathertight, and exposed materials are free of visible dents, scratches, tool marks, cuts, and other imperfections. Install building systems free of rattles, wind whistles, and noise due to thermal movement.
- B. Framing Erection:
1. Provide temporary bracing to securely hold members in proper position until permanent bracing is fastened in place.
  2. Erect primary and secondary structural members in their designed positions, and fasten each securely in place.
    - a. Prepare, place, and cure shrink-resistant grout in accordance with grout manufacturer's printed instructions.
  3. Do not field cut or alter structural members without approval of the Director.
  4. After erection, touch-up welded and abraded surfaces, bare spots, and field bolts with shop primer paint.
    - a. For galvanized items, first repair galvanized coating with a 2 mil thick coating of cold galvanizing compound applied in accordance with compound manufacturer's instructions.
- C. Roofing System:
1. Assemble and anchor panels in place, in straight alignment, with provision for necessary thermal and structural movement. Locate panel end laps over supports. Lap panel ends minimum 6 inches. Fasten panels to each structural support.
  2. Seal longitudinal joints and transverse end laps with sealants provided or recommended by the insulated metal panel manufacturer.
    - a. Seal longitudinal joints with electrically operated seaming machine.
  3. Flash and seal roof covering at ridges, hips, rakes, eaves, and junctions with all related building components and accessories so that the roof is watertight.
- D. Wall System:
1. Assemble and anchor panels in place, aligned and plumb, with provision for necessary thermal and structural movement. Use panels of one-piece length from sill to roof line with no horizontal joints, except where panels are interrupted by auxiliary building components such as windows. Fasten panels to each structural support.
  2. Seal longitudinal joints with sealant with sealants provided or recommended by the insulated metal panel manufacturer.

3. Flash and seal wall covering at sill, roof lines, and junctions with all related building components and accessories so that the walls are watertight.
- E. Related Building Components: Install related components in their designed locations, fitted with required accessories. Securely fasten items to structural supports. Adjust and lubricate operative units for smooth and easy operation. Seal components watertight at junctions with wall and roof systems.
- F. Tolerances: Conform to tolerances set forth in MBMA Code of Standard Practice, except as follows:
  1. Alignment and fit-up of welded joints shall conform to the “Structural Welding Code - Steel” (AWS D1.1).

#### **3.04 ADJUSTING**

- A. Restore minor visual damage to factory applied finishes in a manner to match the appearance and performance of the original finish, or remove the damaged parts and replace them with undamaged parts.

#### **3.05 CLEANING**

- A. Remove strippable protective coatings after completion of work liable to damage the finish. Comply with manufacturer’s recommendations for coating removal.
- B. Clean exposed exterior and interior surfaces of exterior wall panels. Remove any residue from strippable coatings. Comply with panel manufacturer’s printed recommendations for cleaning.

**END OF SECTION**

**SECTION 323113**  
**CHAIN LINK FENCE**

**PART 1 GENERAL**

**1.01 REFERENCES**

- A. Comply with ASTM A 53 for requirements of Schedule 40 piping.

**1.02 DEFINITIONS**

- A. Height of Fence: Distance measured from the top of concrete footing to the top of fabric.

**1.03 SUBMITTALS**

- A. Shop Drawings: Complete detailed drawings for each height and style of fence and gate required. Include separate schedule for each listing all materials required and technical data such as size, weight, and finish, to ensure conformance to specifications.
- B. Submit an Environmental Product Declaration (EPD) from the manufacturer for concrete and steel this specification section, if available. A statement of the contractor's good faith effort to obtain the EPD shall be provided if not available.
1. Manufacturer-provided EPDs must be Product Specific Type III (Third-Party Reviewed), in adherence with ISO 14025 *Environmental labels and declarations*, ISO 14044 *Environmental management – Life cycle assessment*, and ISO 21930 *Core rules for environmental product declarations of construction products and services*.
- C. Product Data: Manufacturer's catalog cuts, specifications, and installation instructions for each item specified.
- D. Samples:
1. Fence Fabric: Minimum one square foot.
  2. Fence and Gate Posts: Two each, one foot long, if requested.
  3. Miscellaneous Materials and Accessories: One each, if requested.

**1.04 QUALITY ASSURANCE**

- A. Comply with standards of the Chain Link Fence Manufacturer's Institute.
- B. Provide steel fence and related gates as a complete compatible system including necessary erection accessories, fittings, and fastenings.
- C. Posts and rails shall be continuous without splices.

- D. Concrete batching plants shall be currently approved as concrete suppliers by the New York State Department of Transportation.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. Class B Steel Tubing (Option):
  - 1. SS-40 Fence Pipe by Allied Tube & Conduit Corp., 16100 S. Lathrop Ave., Harvey, IL, 60426, (800) 882-5543.
  - 2. Tuf-40 Fence Framework by American Tube and Pipe Co., Inc., 2525 N. 27th Ave., Phoenix, AZ 85009, (800) 669-8823.

**2.02 STEEL FRAMEWORK (FOR FENCES 6'-1" - 10'-0" HIGH)**

- A. End Posts, Corner Posts and Pull Posts:
  - 1. Pipe: 2.875 inches OD, 5.79 pounds per linear foot (Schedule 40).
  - 2. Square Tubing: 2.50 inches OD, 5.70 pounds per linear foot.
  - 3. Class B Steel Tubing: 2.875 inches OD, 4.64 pounds per linear foot.
  - 4. Roll Formed C-Section: ASTM A 570 Grade 45, 3.5 inches by 3.5 inches by 0.128 inch thick, with minimum bending strength of 486 pounds under a 6 foot cantilever load.
- B. Line Posts:
  - 1. Pipe: 2.375 inches OD, 3.65 pounds per linear foot (Schedule 40).
  - 2. Class B Steel Tubing: 2.375 inches OD, 3.11 pounds per linear foot.
  - 3. H-section: 2.25 inches by 1.95 inches by 0.143 inches, 4.10 pounds per linear foot.
  - 4. Roll Formed C-Section: ASTM A 570 Grade 45, 2.25 inches by 1.70 inches by 0.121 inch thick, with minimum bending strength of 316 pounds under a 6 foot cantilever load.

**2.03 STEEL FABRIC**

- A. One-piece widths for fence heights up to 12'-0".
- B. Chain link, 2 inch mesh, No. 9 gauge.
- C. Selvages: Top edge twisted and barbed; bottom edge knuckled.

**2.04 MISCELLANEOUS MATERIALS AND ACCESSORIES**

- A. Rails and Post Braces:
  - 1. Pipe: 1.660 inches OD, 2.27 pounds per linear foot (Schedule 40).

2. Class B Steel Tubing: 1.660 inches OD, 1.84 pounds per linear foot.
  3. Roll formed C-Section: 1.625 inches by 1.25 inches by 0.0747 inch thick with minimum bending strength of 192 pounds on a 10 foot span.
- B. Fittings and Post Tops: Steel, wrought iron, or malleable iron.
1. Fasteners: Tamper-resistant cadmium plated steel screws.
- C. Stretcher Bars: One piece equal to full height of fabric, minimum cross-section 3/16 inch by 3/4 inch.
- D. Metal Bands (for securing stretcher bars): Steel, wrought iron, or malleable iron.
- E. Wire Ties: Conform to American Steel Wire gauges.
1. For tying fabric to line posts, rails and braces: 9 gauge (.1483 inch) steel wire.
  2. For tying tension wire to fabric: 11 gauge (.1205 inch) steel hog rings.
- F. Truss Rods: 3/8 inch diameter.
- G. Concrete: Portland Cement concrete having a minimum compressive strength of 5000 psi at 28 days.
- H. Spiral Paper Tubes:
1. Sonotube by Sonoco Products Co., North Second St., Hartsville, SC 29550, (800) 377-2692.
  2. Sleek/tubes by Jefferson Smurfit Corp., P.O. Box 66820, St. Louis, MO 63166, (314) 746-1100.
- I. Cold Galvanizing Compound: Single component compound giving 93 percent pure zinc in the dried film, and meeting the requirements of DOD-P-21035A (NAVY).
- J. Tension Wire: 7 gauge coiled spring steel wire.

## 2.05 SAMPLES

- A. Steel Framework:
1. Pipe: Galvanized in accordance with ASTM A 53, 1.8 ounces zinc per square foot.
  2. Square Tubing: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.
  3. Class B Steel Tubing: Exterior; 1.0 ounces zinc per square foot plus chromate conversion coating and clear polyurethane. Interior; zinc rich organic coating.
  4. H-Section: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.
  5. Roll Formed C-Section: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.
  6. Polyvinyl Chloride (PVC): Black plastic finish, fusion bonded to galvanized metal, minimum thickness 10 mils.

- B. Fabric; one of the following:
  1. Galvanized Finish: ASTM A 392 class II zinc coated after weaving, with 2.0 ounces per square foot.
  2. Aluminized Finish: ASTM A 491 aluminum coated with 0.40 ounces per square foot.
  3. Polyvinyl Chloride (PVC) Finish: Black plastic, fusion bonded to galvanized wire, breaking strength, 1290 pounds, minimum thickness 7 mils.
  
- C. Fence and Gate Hardware, Miscellaneous Materials, Accessories:
  1. Wire Ties: Galvanized Finish, ASTM A 90 1.6 ounces zinc per square foot, or aluminized finish, ASTM A 809 0.40 ounces per square foot.
  2. Hardware and Miscellaneous Items: Galvanized Finish, ASTM A 153 (Table 1).
  3. Extension Arms: Hot-dip galvanized after fabrication, ASTM 123, 2.0 ounces zinc per square foot.
  4. Angle Beams, I Beams, and Steel Shapes: Galvanized in accordance with ASTM A 123, 2.0 ounces zinc per square foot.

## **PART 3 EXECUTION**

### **3.01 PREPARATION**

- A. Clear and grub along fence line as required to eliminate growth interfering with alignment. Remove debris from State property.
  
- B. Do not begin installation of fence in areas to be cut until finished grading has been completed.

### **3.02 INSTALLATION**

- A. Space posts equidistant in the fence line with a maximum of 10 feet on center. For fences 16 feet and higher, space posts a maximum of 8 feet on center.
  
- B. Setting Posts in Earth: Drill holes for post footings. If existing grade at the time of installation is below finished grade, provide spiral paper tubes to contain concrete to finish grade elevation. Set posts in center of hole and fill hole with concrete. Plumb and align posts. Vibrate or tamp concrete for consolidation. Finish concrete in a dome shape above finish grade elevation to shed water. Do not attach fabric to posts until concrete has cured a minimum of 7 days.
  
- C. Setting Posts in Rock: Drill holes into solid rock one inch wider than post diameter, 18 inches deep for end, pull, corner, and gate posts, and 12 inches deep for line posts. Set posts into holes and fill annular space with shrink-resistant grout.
  
- D. Locate corner posts at corners and at changes in direction. Use pull posts at all abrupt changes in grade and at intervals no greater than 500 feet. On runs over 500 feet, space pull posts evenly between corner or end posts. On long curves, space pull posts so that the strain of the fence will not bend the line posts.

- E. Install top rail continuously through post tops or extension arms, bending to radius for curved runs. Install expansion couplings as recommended by fencing manufacturers.
- F. Install bottom and intermediate rails in one piece between posts and flush with post on fabric side using special offset fittings where necessary.
- G. Diagonally brace corner posts, pull posts, end posts, and gate posts to adjacent line posts with truss rods and turnbuckles.
- H. Attach fabric to security side of fence. Maintain a 2 inch clearance above finished grade except when indicated otherwise. Thread stretcher bars through fabric using one bar for each gate and end post and 2 for each corner and pull post. Pull fabric tight so that the maximum deflection of fabric is 2 inches when a 30 pound pull is exerted perpendicular to the center of a panel. Maintain tension by securing stretcher bars to posts with metal bands spaced 15 inches oc. Fasten fabric to steel framework with wire ties spaced 12 inches oc for line posts and 24 inches oc for rails and braces. Bend back wire ends to prevent injury. Tighten stretcher bar bands, wire ties, and other fasteners securely.
- I. Position bolts for securing metal bands and hardware so nuts are located opposite the fabric side of fence. Tighten nuts and cut off excess threads so no more than 1/8 inch is exposed. Peen ends to prevent loosening or removal of nuts.
  - 1. Secure post tops and extension arms with tamper-resistant screws.
- J. Install gates plumb and level and adjust for full opening without interference. Install ground-set items in concrete for anchorage, as recommended by fence manufacturer. Adjust hardware for smooth operation and lubricate where necessary.
- K. Wire brush and repair welded and abraded areas of galvanized surfaces with one coat of cold-galvanizing compound.
- L. Restore disturbed ground areas to original condition. Topsoil and seed to match adjacent areas.

**END OF SECTION**

**APPLICABLE CODES**

**BUILDING CODE:**

- 2020 BUILDING CODE OF NEW YORK STATE (BOCNYS)

**FIRE CODE:**

- 2020 FIRE CODE OF NEW YORK STATE (FCNYS)
- NFPA 72-16 - INSTALLATION OF FIRE ALARM SYSTEMS

**PLUMBING CODE:**

- 2020 PLUMBING CODE OF NEW YORK STATE (PCNYS)

**MECHANICAL CODE:**

- 2020 MECHANICAL CODE OF NEW YORK STATE (MCNYS)
- 2020 FUEL GAS CODE OF NEW YORK STATE (FGCNYS)
- 2020 BOCNYS CHAPTER 28

**ELECTRICAL CODE:**

- 2017 NFPA 70
- 2020 BOCNYS CHAPTER 27

**ACCESSIBILITY CODE:**

- 2009 ICC A117.1 ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
- 2020 BOCNYS CHAPTER 11

**ENERGY CODE:**

- 2020 ENERGY CONSERVATION CONSTRUCTION CODE OF NEW YORK STATE (ECCCNYS)

**BUILDING INFORMATION**

**FUNCTION:** ADMINISTRATION OFFICES AND VEHICLE MAINTENANCE GARAGE

**USE GROUPS:** MIX USE SEPARATED: BUSINESS (B) AND STORAGE (S-1)

**SEPARATION:** 3 HOURS

**CONSTRUCTION TYPE:** II-B

**GROSS BUILDING AREA**

ADMIN AREA	3,527 SF
GARAGE (EAST WING)	4,952 SF
GARAGE (WEST WING)	4,952 SF
MECHANICAL (SECOND FLOOR)	2,153 SF
<b>TOTAL</b>	<b>15,584 SF</b>

**OCCUPANT LOAD**

B	STORAGE/MAINTENANCE (RMS 106 THROUGH 109, 118)	11
B	BUSINESS	14
B	ASSEMBLY (RM 104)	25
	<b>SUB TOTAL</b>	<b>50</b>
S-1	MAINTENANCE GARAGE	34
	<b>TOTAL</b>	<b>84</b>

**2020 ENERGY CONSERVATION CONSTRUCTION CODE**

CLIMATE ZONE CLASSIFICATION: ZONE 5 PER FIGURE C301.1

PROPOSED

<b>ROOF ASSEMBLY:</b>	
METAL BUILDINGS:	R-30 CL
<b>WALLS, ABOVE GRADE:</b>	
METAL BUILDING:	R-30 CI
<b>WALL, BELOW GRADE:</b>	
BELOW GRADE WALL:	R-7.5 CI
<b>SLAB-ON-GRADE FLOORS:</b>	
UNHEATED SLABS:	R-10 CI
HEATED SLABS:	R-10 CI
<b>DOORS:</b>	
OPAQUE: SWINGING	U-0.2
OPAQUE: SWINGING (LEAKAGE RATE)	0.20 CFMSF
GARAGE DOORS (<14% GLAZING)	U-0.57
GARAGE DOORS (LEAKAGE RATE)	0.40 CFMSF
ENTRANCE DOORS	U-0.26
ENTRANCE DOORS (LEAKAGE RATE)	1.00 CFMSF
<b>VERTICAL GLAZING:</b>	
PERCENTAGE OF WALL:	TBD
OPERABLE:	0.45
FIXED:	0.38
SHGC:	0.38
LEAKAGE RATE	0.20 CFMSF

**HEIGHT AND AREA**

HEIGHT AND AREA PER TABLE 503

GROUP	AREA LEVEL 1	AREA LEVEL 2	HEIGHT (STORIES)	HEIGHT (FT)
B	3723	0	2	18
S-1	9904	2153	2	29

HEIGHT AND AREA INCREASES PER SECTION 504 AND 506 NOT USED NOT SPRINKLERED

**AREA RATIOS**

LEVEL 1

GROUP	AREA	RATIO
B	3,723 SF	0.15
S-1	12,057 SF	0.69

\*ALLOWABLE AREA INCREASES DUE TO FRONTAGE NOT INCLUDED

**FIRE RESISTANCE**

	HOURS	CODE REFERENCE
PRIMARY STRUCTURAL FRAME	0	TABLE 601
BEARING WALLS EXTERIOR	0	TABLE 601 & 602
BEARING WALLS INTERIOR	0	TABLE 601
NONBEARING WALLS EXTERIOR	0	TABLE 602
NONBEARING WALLS INTERIOR	0	TABLE 601
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	0	TABLE 601
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS	0	TABLE 601
CORRIDORS:	1	1020.1

**FLAME SPREAD REQUIREMENTS - NOT SPRINKLERED (PER TABLE 803.13)**

OCCUPANCY	B	S-1
EXIT ENCLOSURES	CLASS A	CLASS B
CORRIDORS	CLASS B	CLASS B
ROOMS AND ENCLOSED SPACE	CLASS C	CLASS C
FLOOR FINISH IN ALL AREAS (804.4.2)	CLASS II	CLASS II

**EGRESS DISTANCES FOR B USE GROUP**

	DISTANCE	CODE REFERENCE
EXIT ACCESS TRAVEL DISTANCE- MAXIMUM	94'	1017.2
COMMON PATH OF TRAVEL- MAX (MAX OCC LOAD-49)	74'	1006.2.1
DEAD END CORRIDOR - MAXIMUM	0'	1020.4

**EGRESS DISTANCES FOR S-1 USE GROUP**

	DISTANCE	CODE REFERENCE
EXIT ACCESS TRAVEL DISTANCE- MAXIMUM	68'	1017.2
COMMON PATH OF TRAVEL- MAX (MAX OCC LOAD- 49)	NA	1006.2.1
DEAD END CORRIDOR - MAXIMUM	NA	1020.4

**EGRESS REQUIREMENTS**

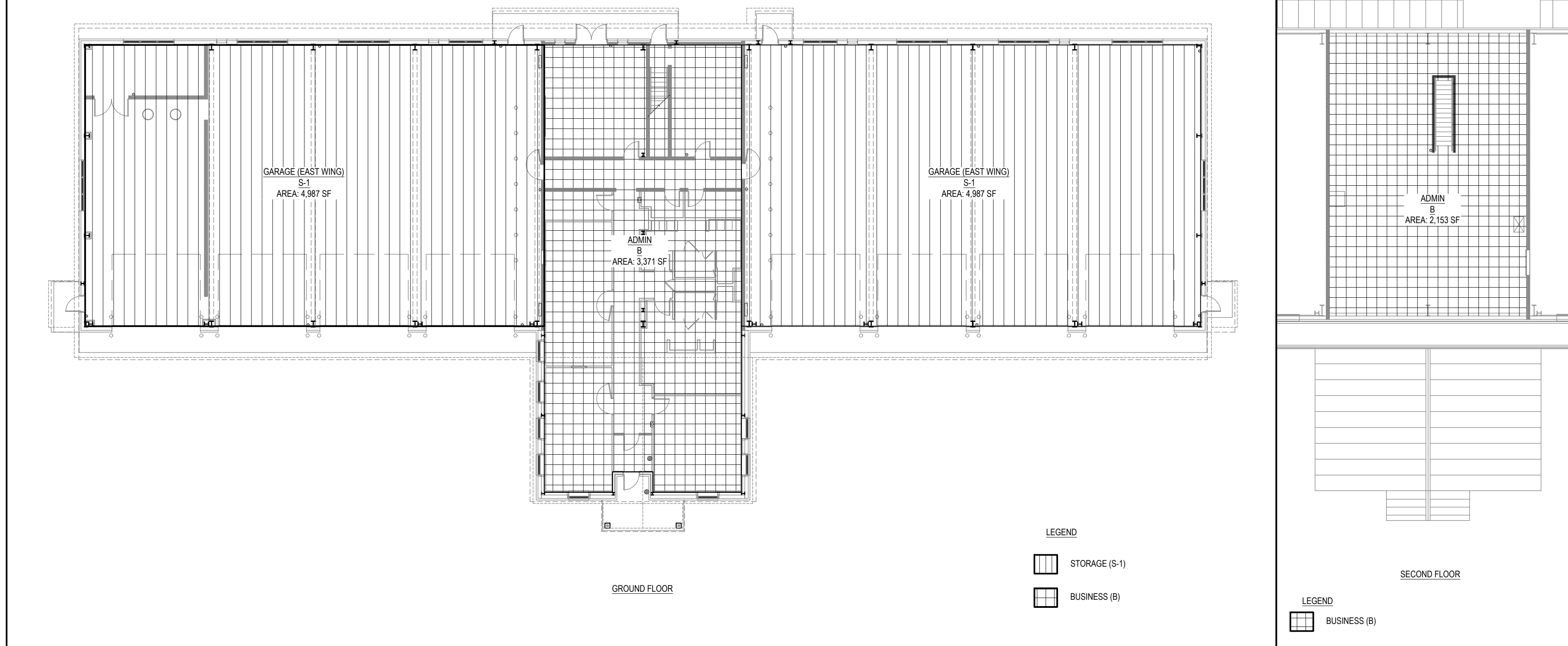
MINIMUM CORRIDOR WIDTH	WIDTH	CODE REFERENCE
	49"	1020.2

**MINIMUM NUMBER OF EXITS PER FLOOR (1006.3.2)**

	OCCUPANT LOAD	No. OF EXITS
LEVEL 1	84	6
LEVEL 1	8	1

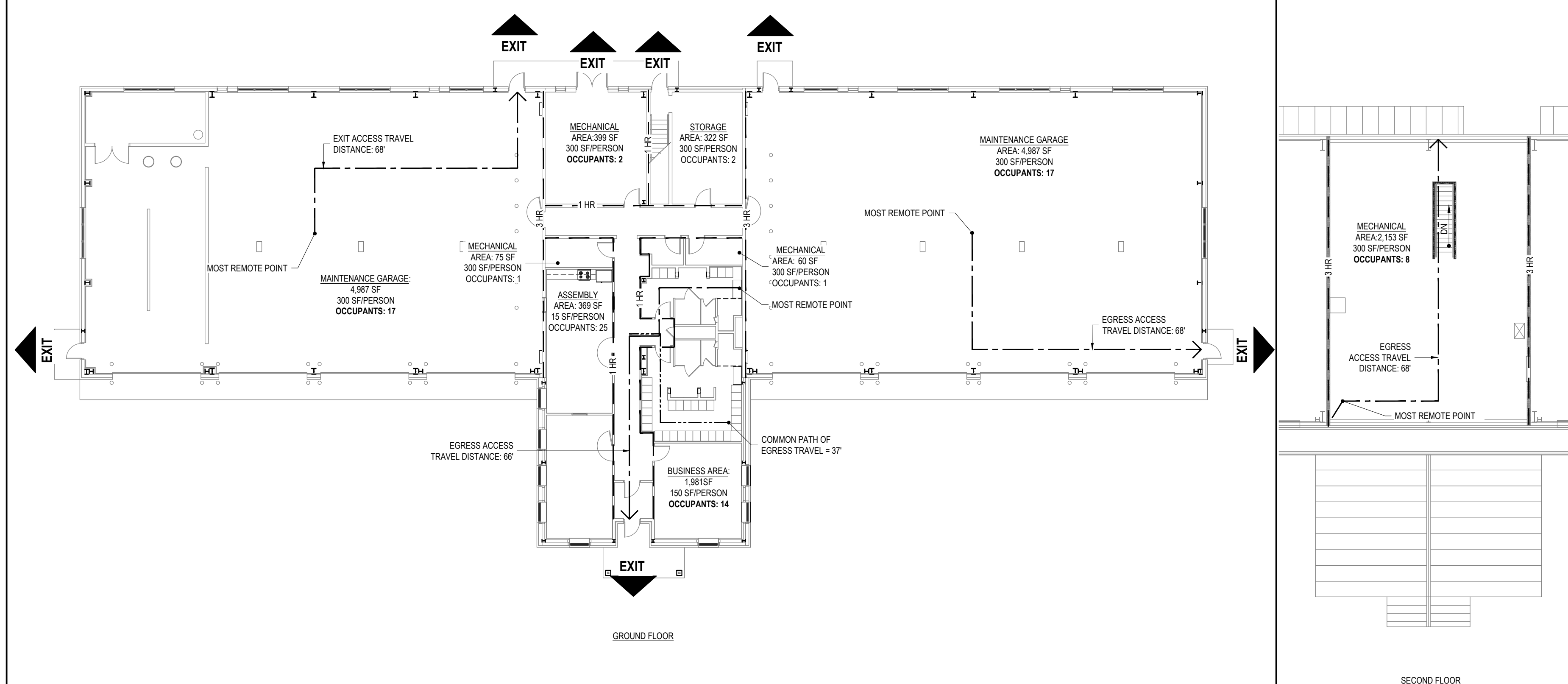
**TOILET FIXTURE REQUIREMENTS (TABLE 2902.01)**

OCCUPANCY	WATERCLOSETS		LAVS		DRINKING FOUNTAINS	SERVICE SINK
	MALE	FEMALE	M	F		
B	1.00	1.00	0.63	0.63	0.50	1
S-1	0.21	0.21	0.21	0.21	0.04	1
<b>TOTAL</b>	<b>1.21</b>	<b>1.21</b>	<b>0.84</b>	<b>0.84</b>	<b>0.54</b>	<b>2</b>
ROUND UP	2	2	1	1	1	2
PROVIDED	2	2	2	2	1	3



**2 FLOOR PLAN - OCCUPANCY USE GROUPS**

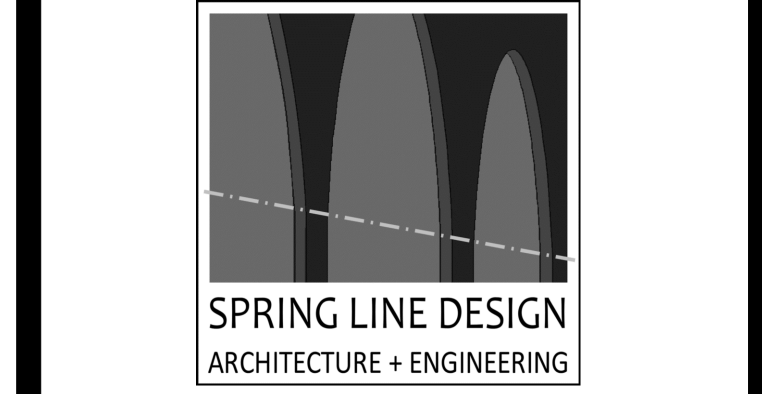
REF: SCALE: 1/16"=1'-0"



**1 FLOOR PLAN - OCCUPANT LOADS AND EGRESS**

REF: SCALE: 1/16"=1'-0"

CONSULTANT  
CERTIFICATE OF AUTHORIZATION No.: 0019551



**ENERGY CODE STATEMENT:**  
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**CONTRACT:** CONSTRUCTION, HVAC, PLUMBING, AND ELECTRICAL

**TITLE:** PROVIDE MAINTENANCE SUB-HEADQUARTERS

**LOCATION:** DOT REGION 8 COLUMBIA COUNTY  
1373 STATE ROUTE 203  
CHATHAM NY

**CLIENT:** DEPARTMENT OF TRANSPORTATION

**REVISED DRAWING 02/28/2025**

MARK	DATE	DESCRIPTION
▲	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT

**PROJECT NUMBER:** 46075 — C,H,P,E

**DESIGNED BY:** KK

**DRAWN BY:** WA

**FIELD CHECK:**

**APPROVED:**

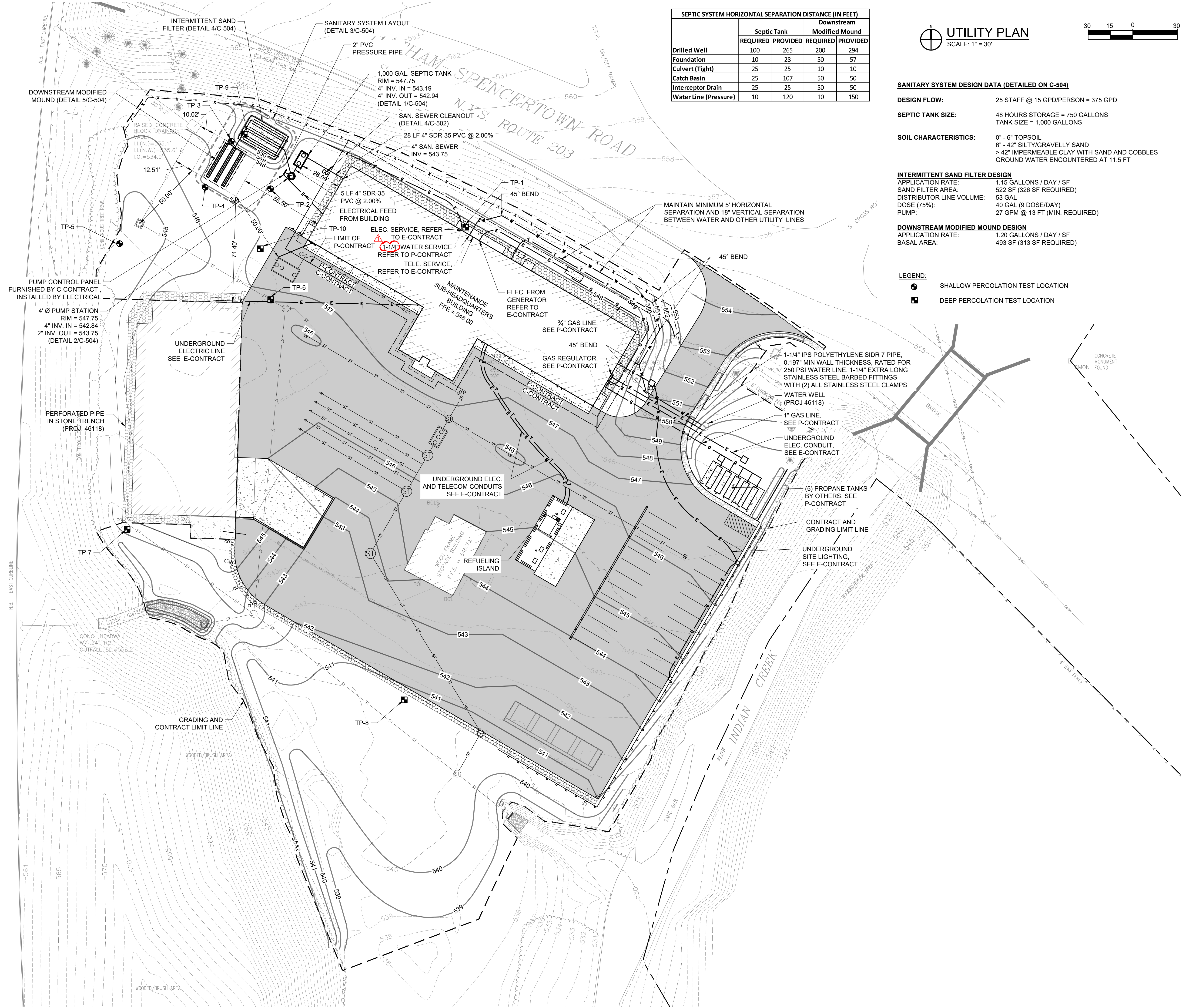
**SHEET TITLE:**

**CODE SUMMARY**

**DRAWING NUMBER:** G-002

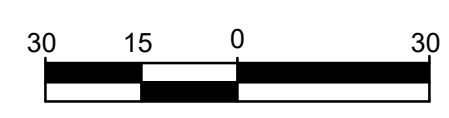
SHEET 2 OF 86

TACONIC STATE PARKWAY



	SEPTIC SYSTEM HORIZONTAL SEPARATION DISTANCE (IN FEET)			
	Septic Tank		Downstream Modified Mound	
	REQUIRED	PROVIDED	REQUIRED	PROVIDED
Drilled Well	100	265	200	294
Foundation	10	28	50	57
Culvert (Tight)	25	25	10	10
Catch Basin	25	107	50	50
Interceptor Drain	25	25	50	50
Water Line (Pressure)	10	120	10	150

**UTILITY PLAN**  
SCALE: 1" = 30'



**SANITARY SYSTEM DESIGN DATA (DETAILED ON C-504)**

**DESIGN FLOW:** 25 STAFF @ 15 GPD/PERSON = 375 GPD

**SEPTIC TANK SIZE:** 48 HOURS STORAGE = 750 GALLONS  
TANK SIZE = 1,000 GALLONS

**SOIL CHARACTERISTICS:** 0" - 6" TOPSOIL  
6" - 42" SILTY/GRAVELLY SAND  
> 42" IMPERMEABLE CLAY WITH SAND AND COBBLES  
GROUND WATER ENCOUNTERED AT 11.5 FT

**INTERMITTENT SAND FILTER DESIGN**

APPLICATION RATE: 1.15 GALLONS / DAY / SF  
SAND FILTER AREA: 522 SF (326 SF REQUIRED)  
DISTRIBUTOR LINE VOLUME: 53 GAL  
DOSE (75%): 40 GAL (9 DOSE/DAY)  
PUMP: 27 GPM @ 13 FT (MIN. REQUIRED)

**DOWNSTREAM MODIFIED MOUND DESIGN**

APPLICATION RATE: 1.20 GALLONS / DAY / SF  
BASAL AREA: 493 SF (313 SF REQUIRED)

**LEGEND:**

- SHALLOW PERCOLATION TEST LOCATION
- DEEP PERCOLATION TEST LOCATION

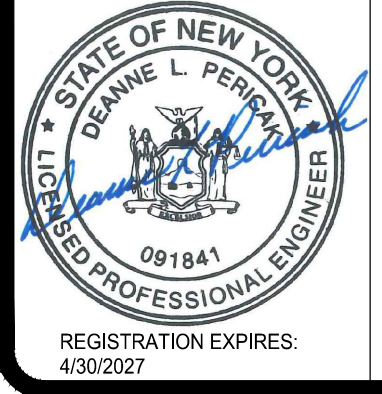
CONSULTANT  
CERTIFICATE OF AUTHORIZATION #: 0018046

**FoittAlbert ASSOCIATES**  
Architecture, Engineering, Surveying, Environmental  
239 Main Street, Suite 200  
Buffalo, NY 14203

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CONTRACT:	<b>CONSTRUCTION</b>
TITLE:	PROVIDE MAINTENANCE SUB-HEADQUARTERS
LOCATION:	DOT REGION 8 COLUMBIA COUNTY 1373 STATE ROUTE 203 CHATHAM, NY
CLIENT:	DEPARTMENT OF TRANSPORTATION

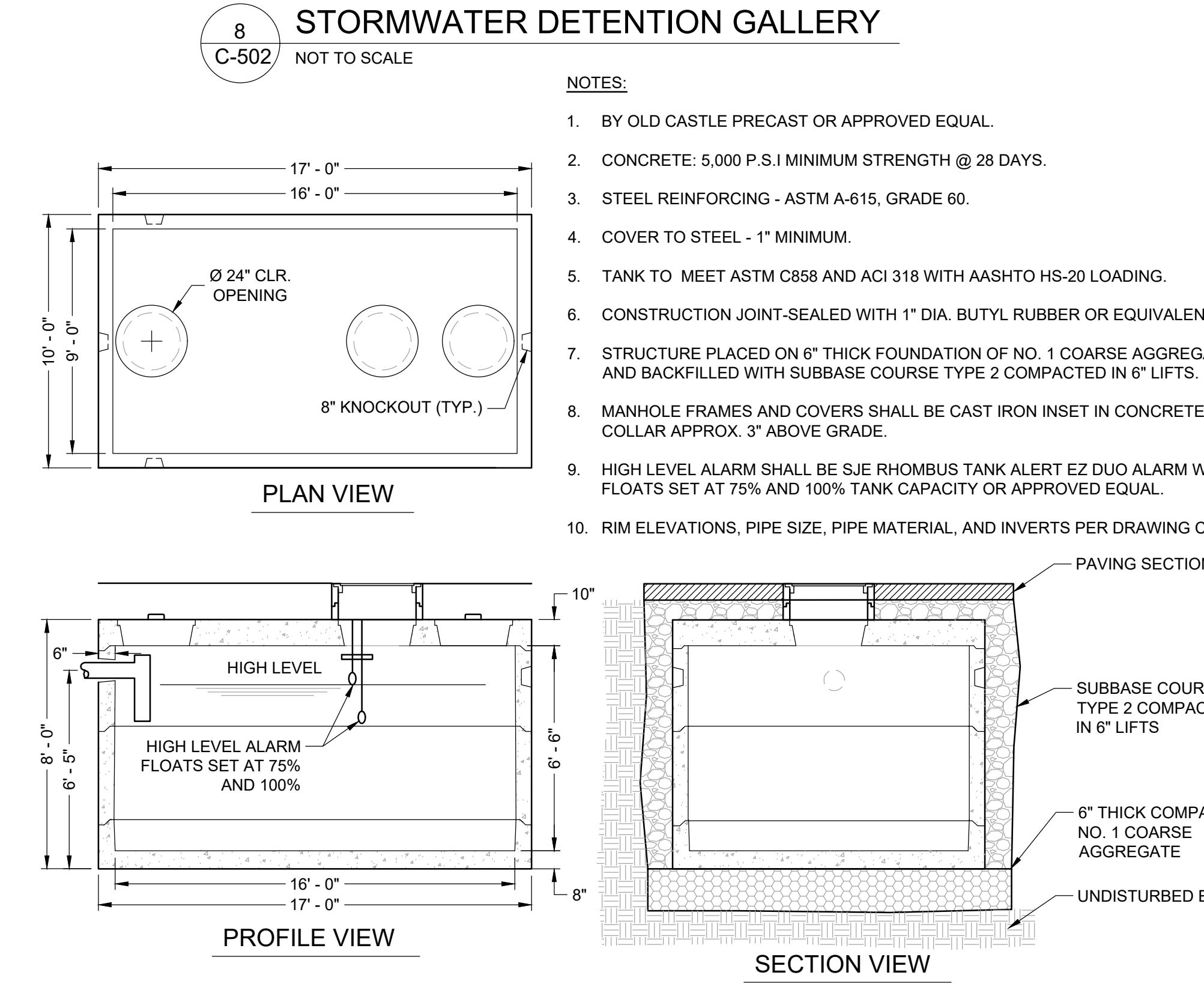
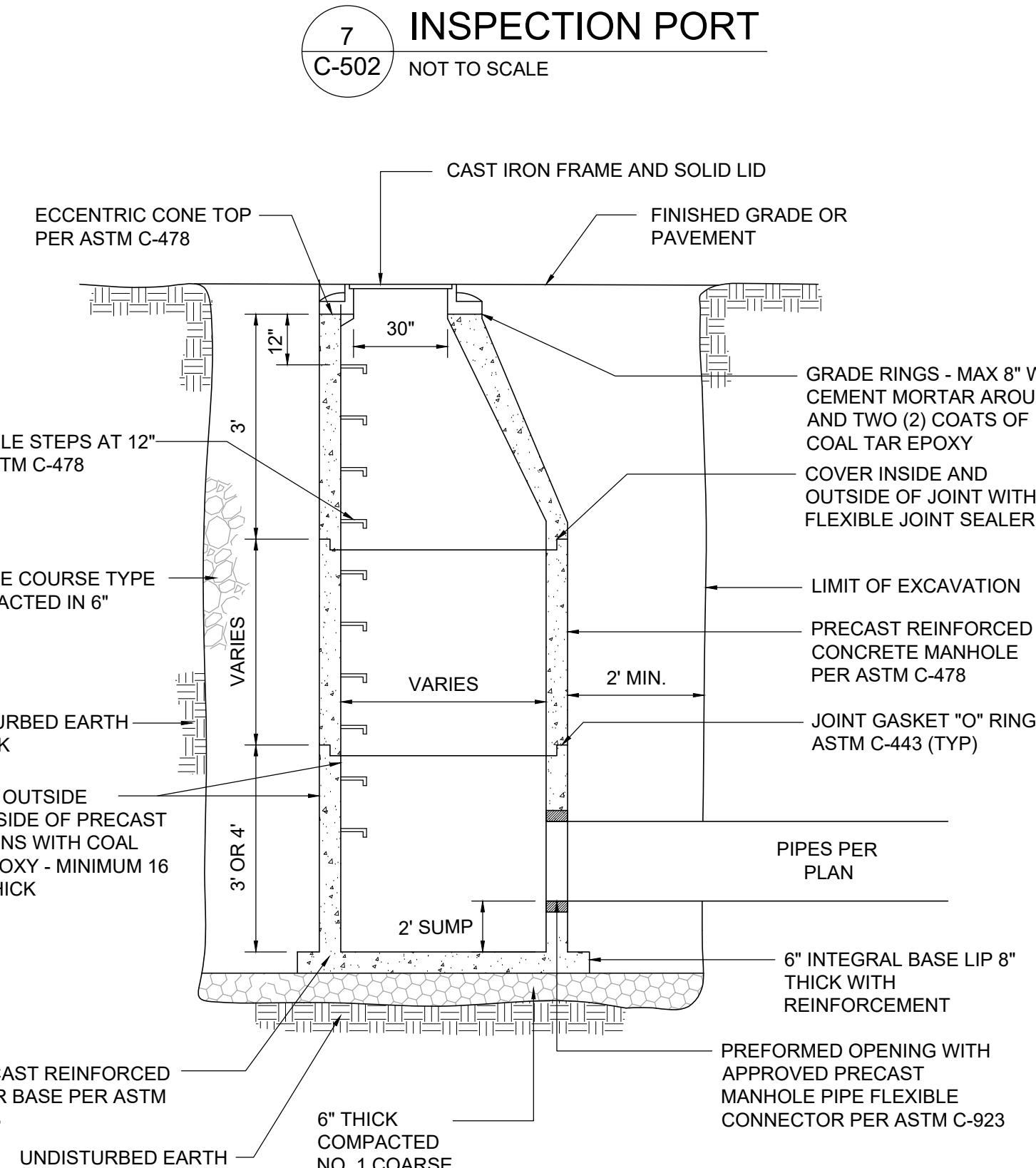
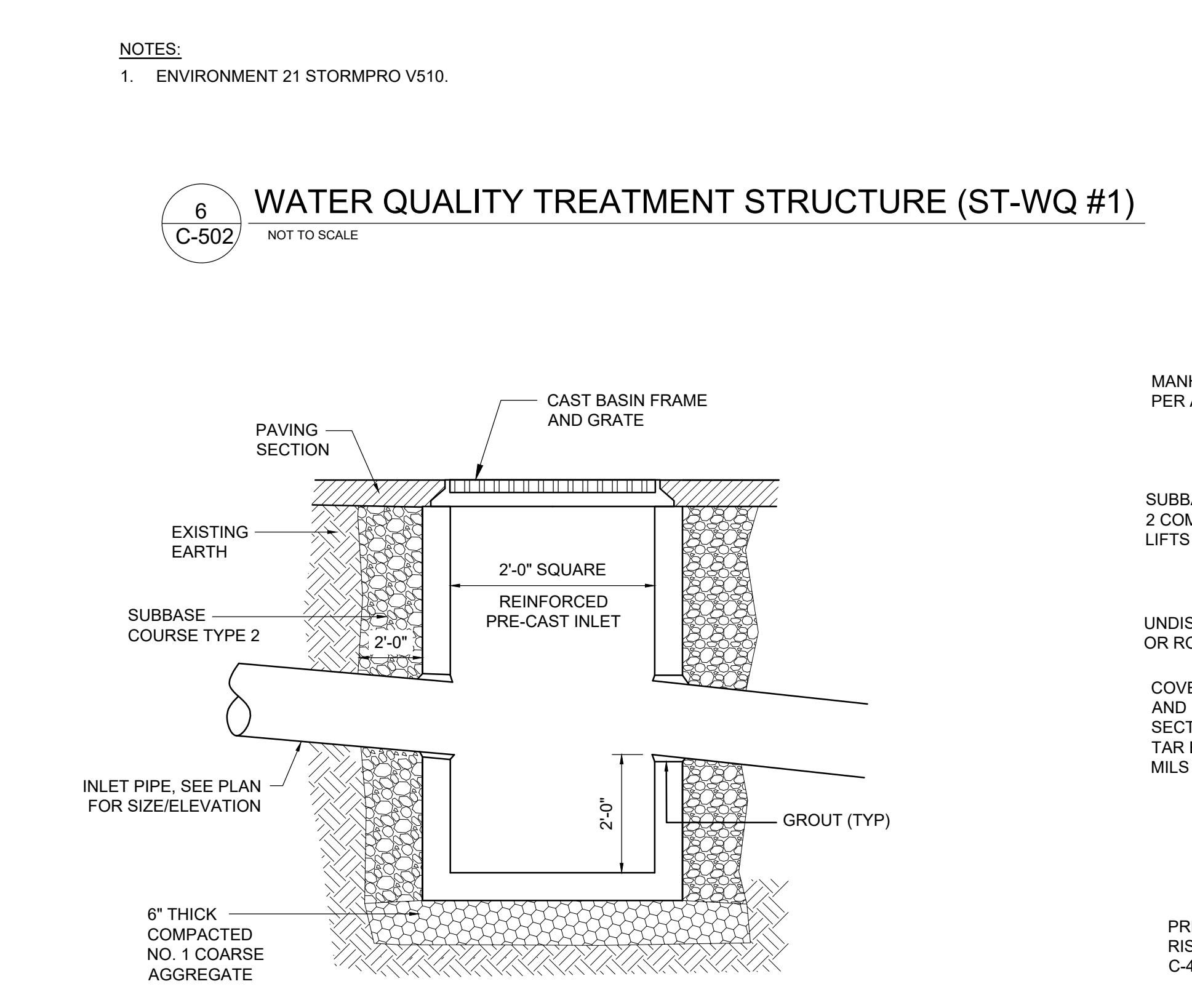
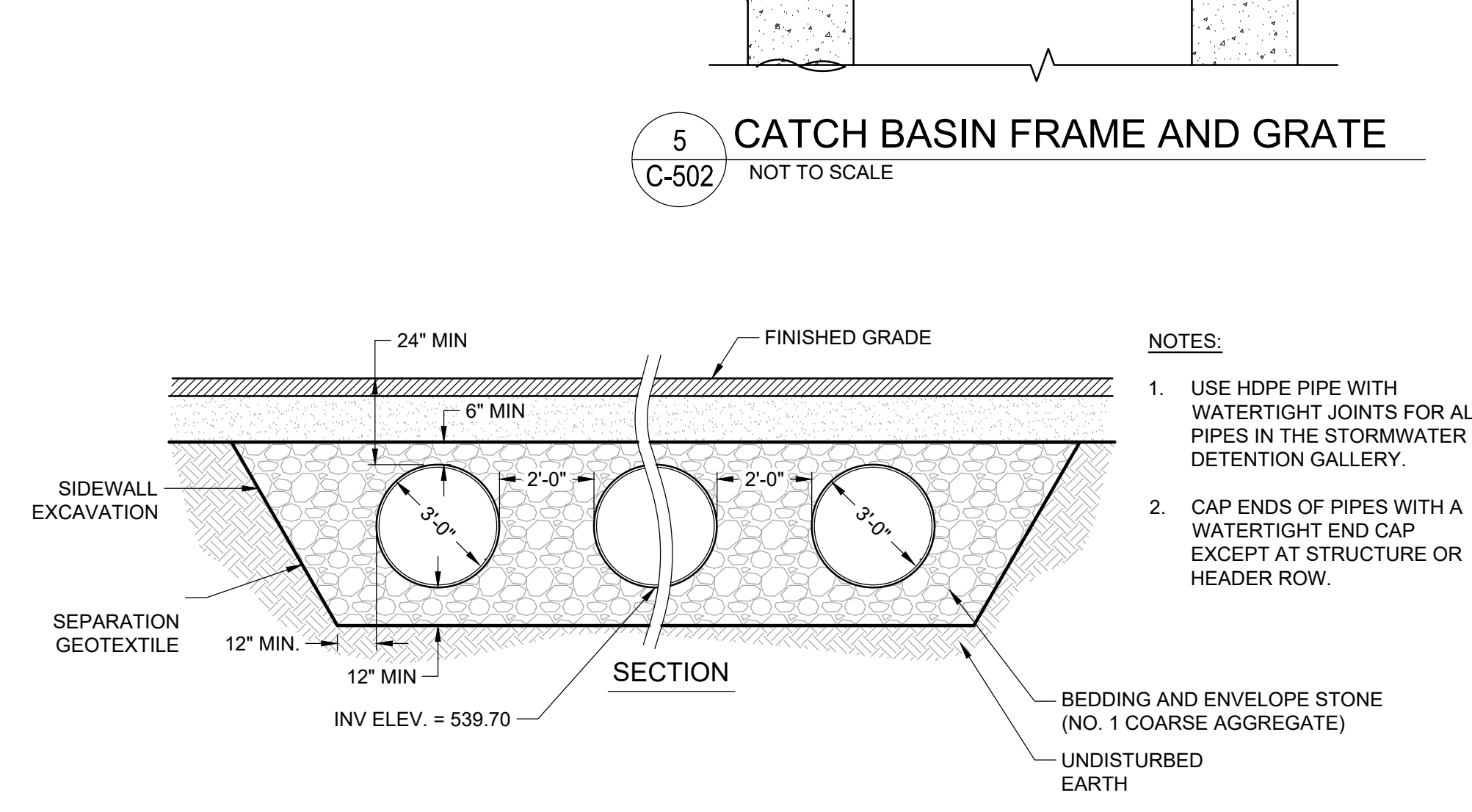
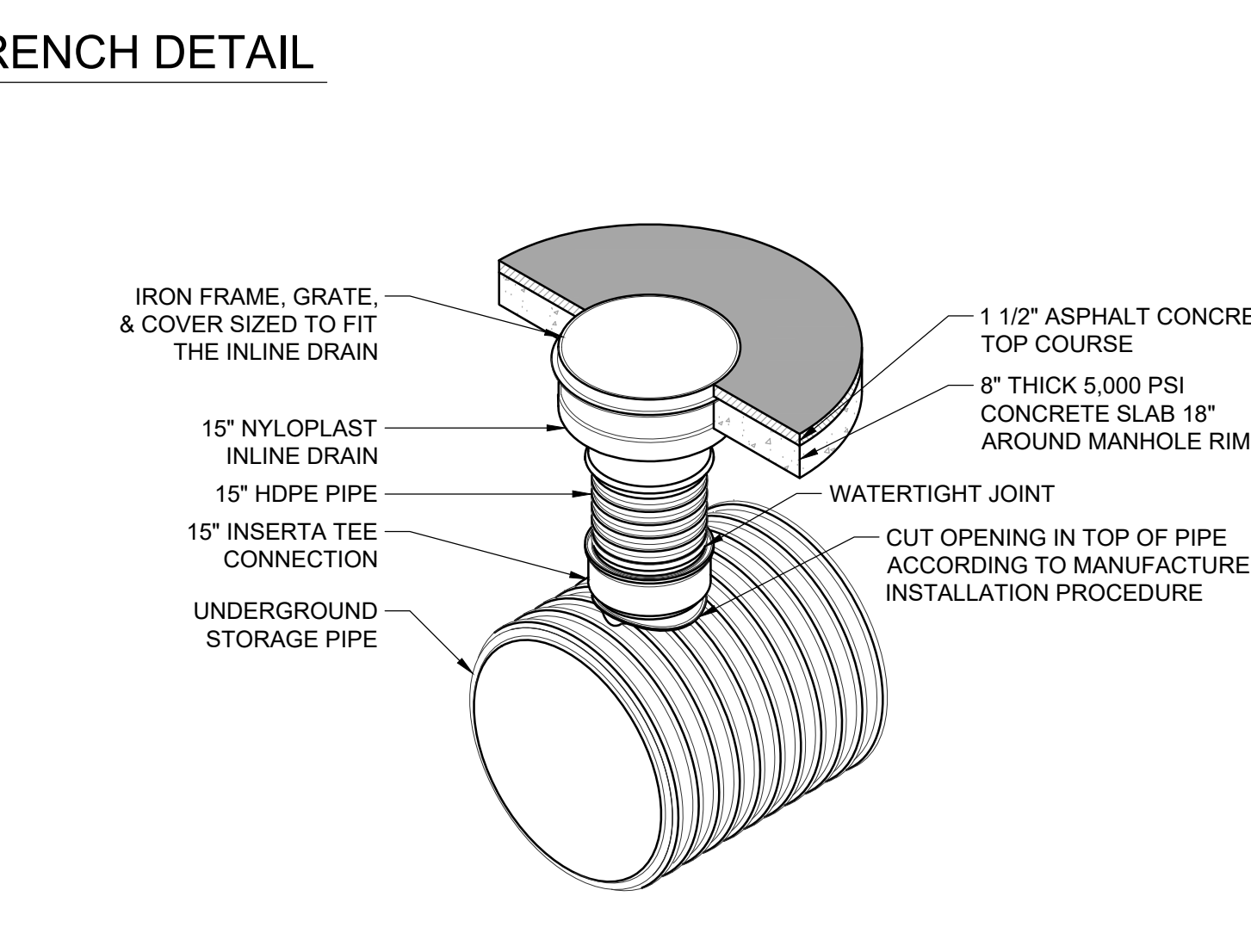
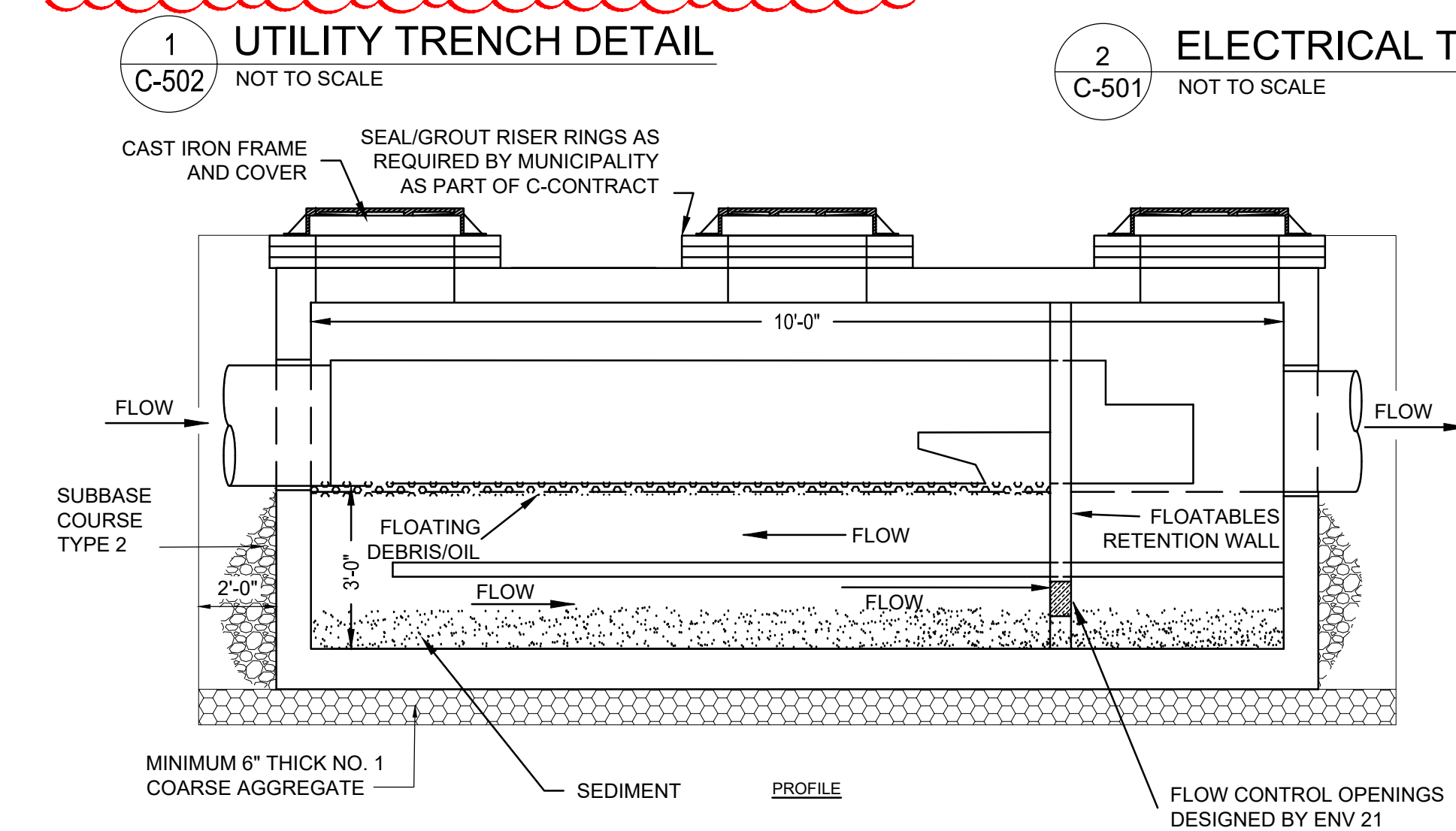
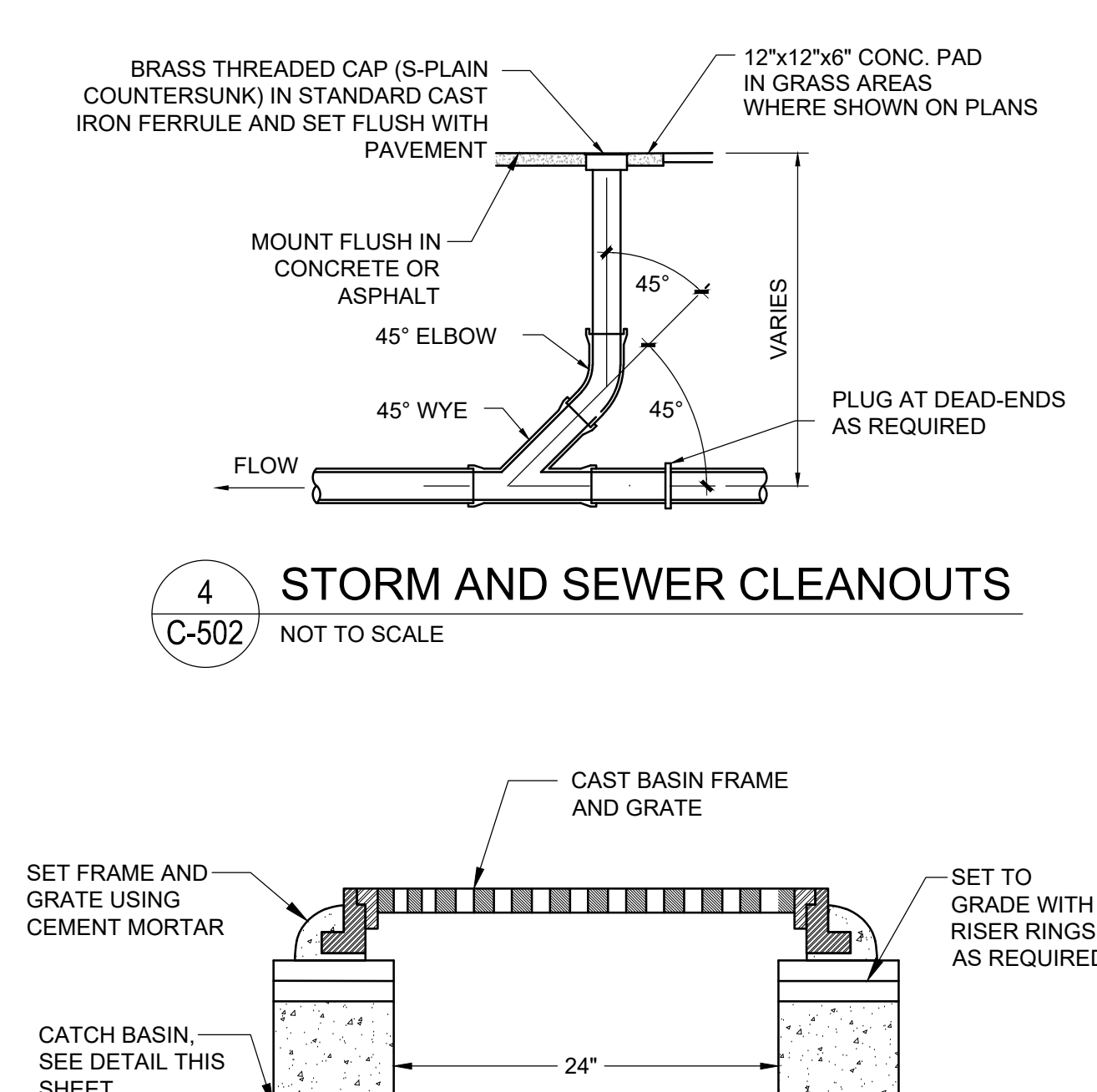
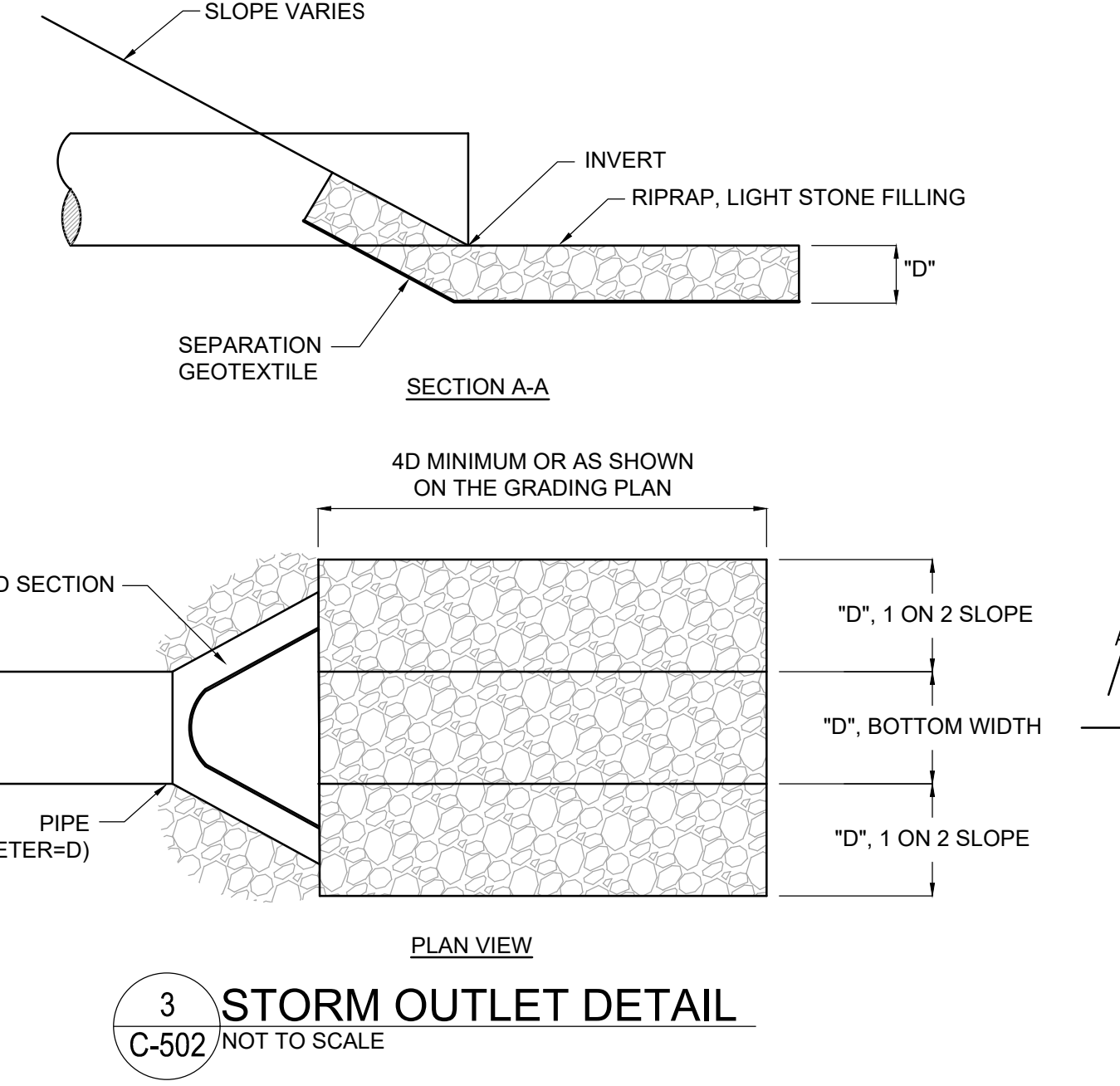
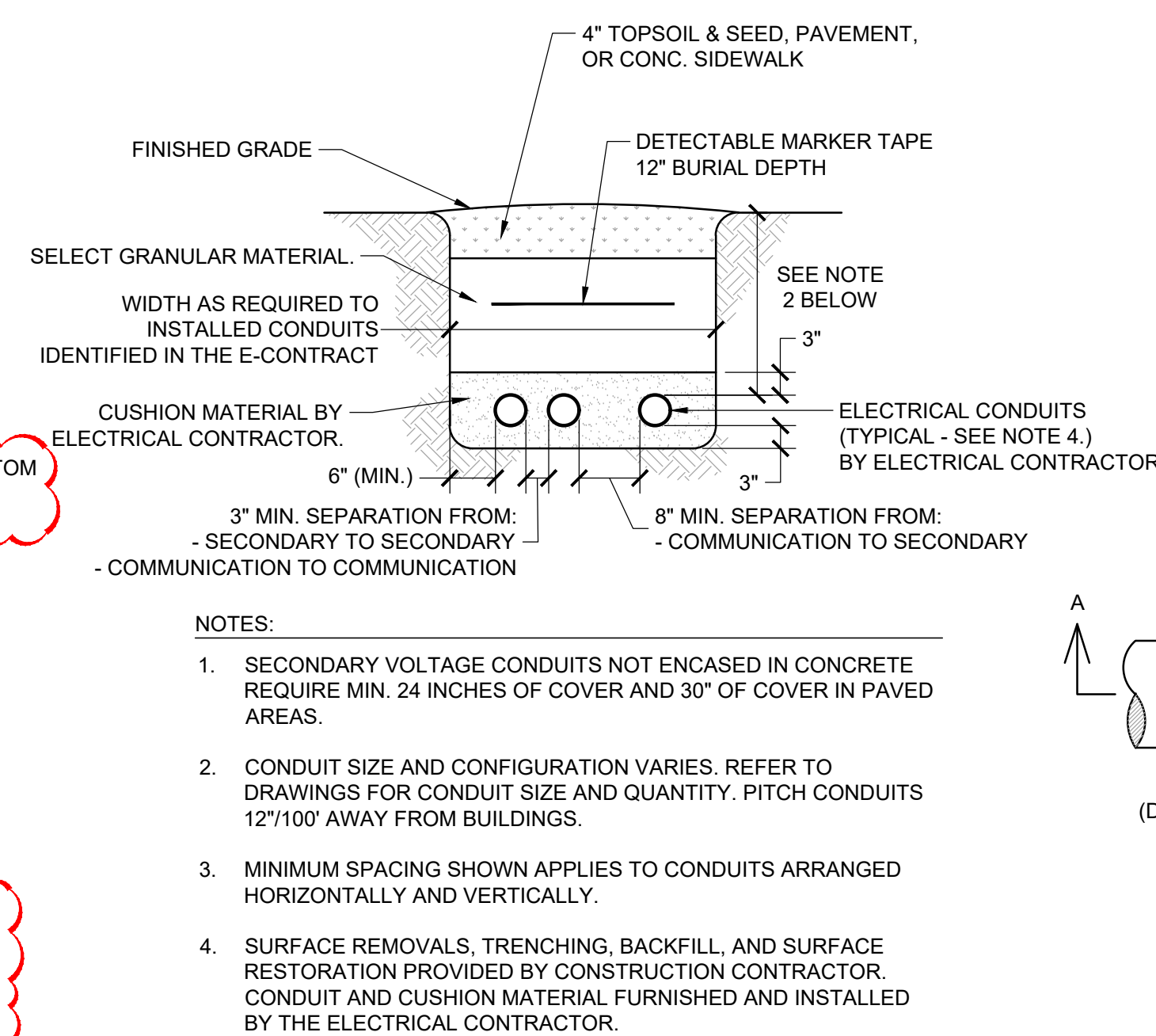
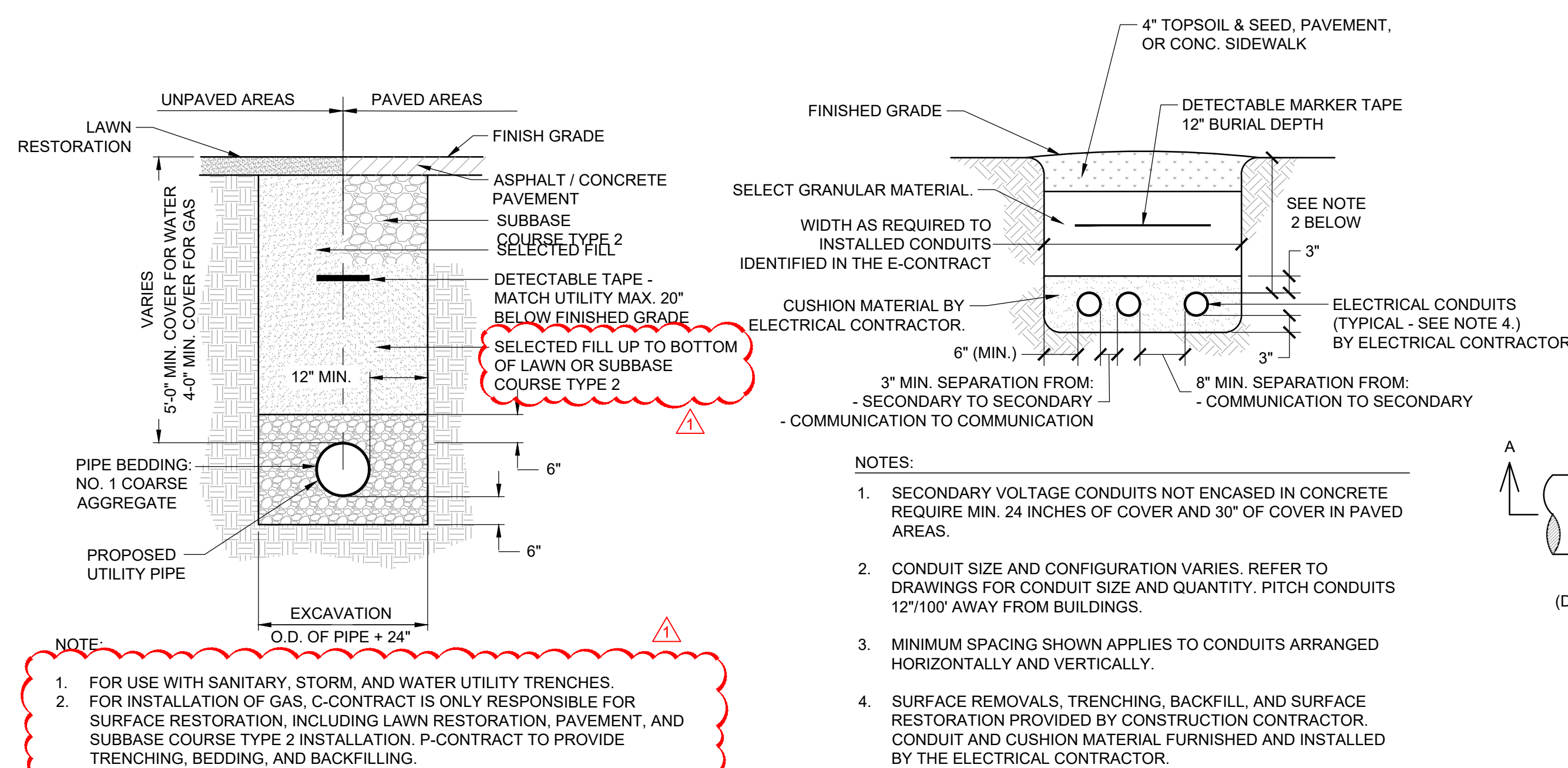
REVISED DRAWING 02/28/2025

MARK	DATE	DESCRIPTION
▲	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT
<b>PROJECT NUMBER: 46075 - C</b>		
DESIGNED BY:	MWB	
DRAWN BY:	MWB	
FIELD CHECK:		
APPROVED:	DLP	
SHEET TITLE:		

**UTILITY PLAN**

DRAWING NUMBER:  
**C-108**

SHEET 12 OF 86



**NEW YORK STATE OFFICE OF GENERAL SERVICES**  
DESIGN & CONSTRUCTION

CONSULTANT  
CERTIFICATE OF AUTHORIZATION #: 0018046

**Foita Albert ASSOCIATES**  
Architecture, Engineering, Surveying, Environmental.  
289 Main Street, Suite 200  
Buffalo, NY 14203

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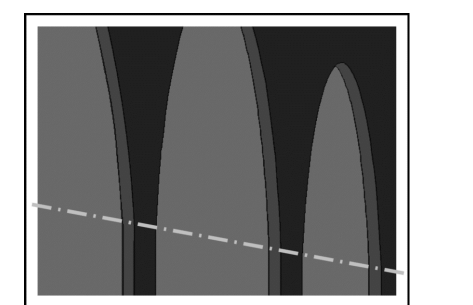
**STATE OF NEW YORK**  
DORIS L. PERDUE  
REGISTERED PROFESSIONAL ENGINEER  
REGISTRATION EXPIRES: 4/30/2027

**CONSTRUCTION**  
TITLE: PROVIDE MAINTENANCE SUB-HEADQUARTERS  
LOCATION: DOT REGION 8 COLUMBIA COUNTY 1373 STATE ROUTE 203 CHATHAM, NY  
CLIENT: DEPARTMENT OF TRANSPORTATION

**REVISED DRAWING 02/28/2025**

MARK	DATE	DESCRIPTION
△	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT

PROJECT NUMBER: 46075 -  
DESIGNED BY: MWC  
DRAWN BY: MWC  
FIELD CHECK: MWC  
APPROVED: DLP  
SHEET TITLE: SITE DETAILS (2)  
DRAWING NUMBER: C-502  
SHEET 15 OF 86



**ENERGY CODE STATEMENT:**

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**CONSTRUCTION**

TITLE: PROVIDE MAINTENANCE SUB-HEADQUARTERS

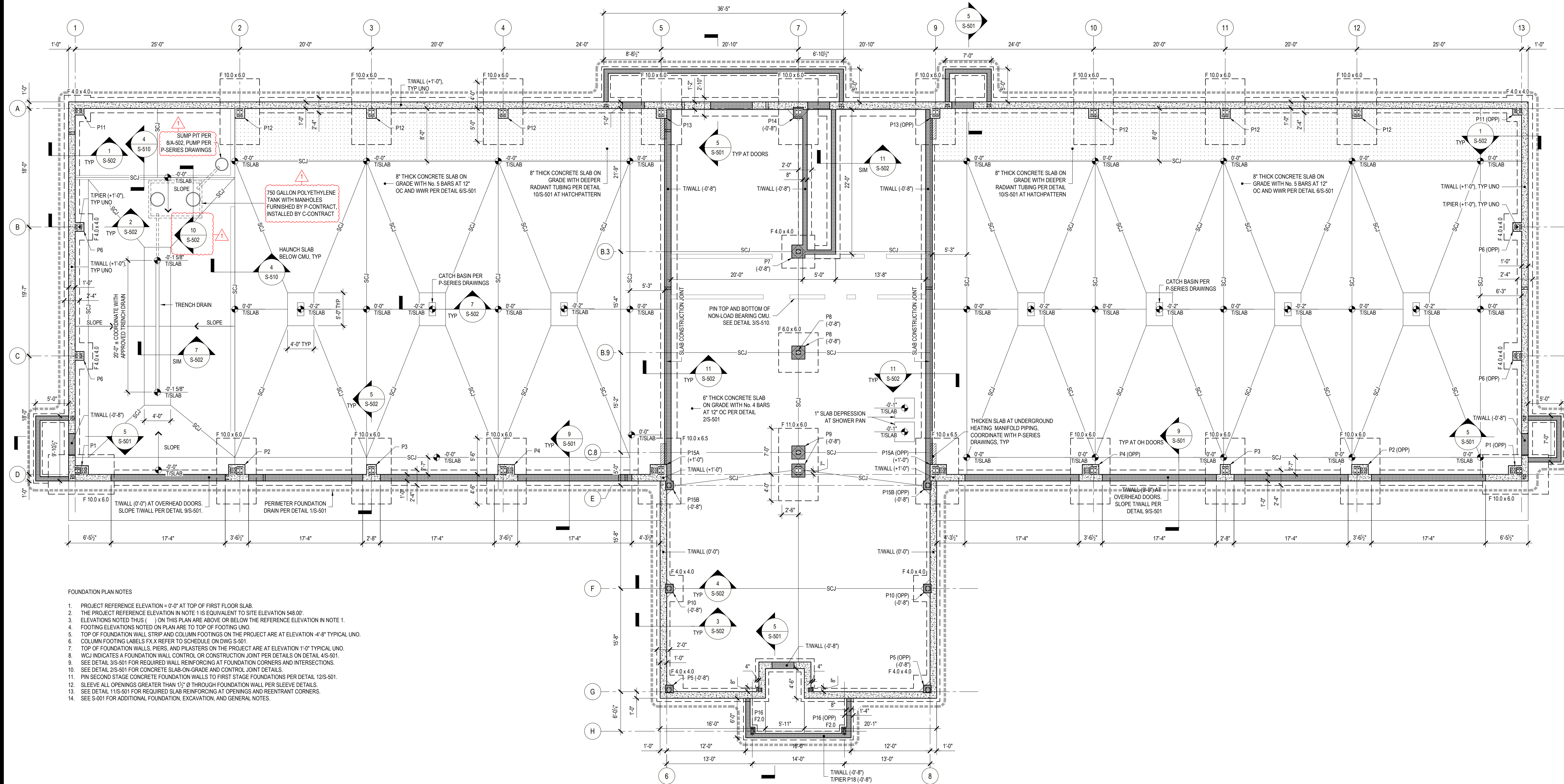
LOCATION: DOT REGION 8 COLUMBIA COUNTY  
1373 STATE ROUTE 203  
CHATHAM NY

CLIENT: DEPARTMENT OF TRANSPORTATION

**REVISED DRAWING 02/28/2025**

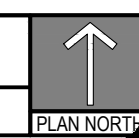
MARK	DATE	DESCRIPTION
▲	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT

PROJECT NUMBER:	46075 - C
DESIGNED BY:	DA
DRAWN BY:	JAB
FIELD CHECK:	
APPROVED:	
SHEET TITLE:	FOUNDATION PLAN
DRAWING NUMBER:	S-101
SHEET	22 OF 86



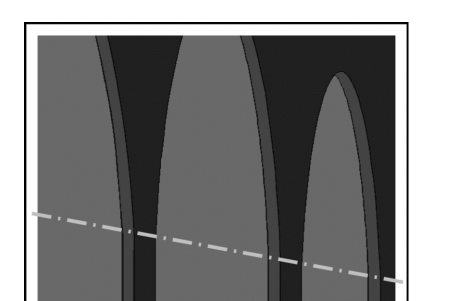
- FOUNDATION PLAN NOTES**
- PROJECT REFERENCE ELEVATION = 0'-0" AT TOP OF FIRST FLOOR SLAB.
  - THE PROJECT REFERENCE ELEVATION IN NOTE 1 IS EQUIVALENT TO SITE ELEVATION 548.00.
  - ELEVATIONS NOTED THUS ( ) ON THIS PLAN ARE ABOVE OR BELOW THE REFERENCE ELEVATION IN NOTE 1.
  - FOOTING ELEVATIONS NOTED ON PLAN ARE TO TOP OF FOOTING UNO.
  - TOP OF FOUNDATION WALL STRIP AND COLUMN FOOTINGS ON THE PROJECT ARE AT ELEVATION -4'-8" TYPICAL UNO.
  - COLUMN FOOTING LABELS FX X REFER TO SCHEDULE ON DWG S-501.
  - TOP OF FOUNDATION WALLS, PIERS, AND PLASTERS ON THE PROJECT ARE AT ELEVATION -1'-0" TYPICAL UNO.
  - WCJ INDICATES A FOUNDATION WALL CONTROL OR CONSTRUCTION JOINT PER DETAILS ON DETAIL 4/S-501.
  - SEE DETAIL 3/S-501 FOR REQUIRED WALL REINFORCING AT FOUNDATION CORNERS AND INTERSECTIONS.
  - SEE DETAIL 2/S-501 FOR CONCRETE SLAB-ON-GRADE AND CONTROL JOINT DETAILS.
  - PIN SECOND STAGE CONCRETE FOUNDATION WALLS TO FIRST STAGE FOUNDATIONS PER DETAIL 12/S-501.
  - SLEEVE ALL OPENINGS GREATER THAN 1/2" Ø THROUGH FOUNDATION WALL PER SLEEVE DETAILS.
  - SEE DETAIL 11/S-501 FOR REQUIRED SLAB REINFORCING AT OPENINGS AND REENTRANT CORNERS.
  - SEE S-501 FOR ADDITIONAL FOUNDATION, EXCAVATION, AND GENERAL NOTES.

36x24 PLOT SHEET





CONSULTANT  
CERTIFICATE OF AUTHORIZATION No.: 0019551



**SPRING LINE DESIGN**  
ARCHITECTURE + ENGINEERING

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REGISTRATION EXPIRES: 12/31/2026

**CONSTRUCTION**

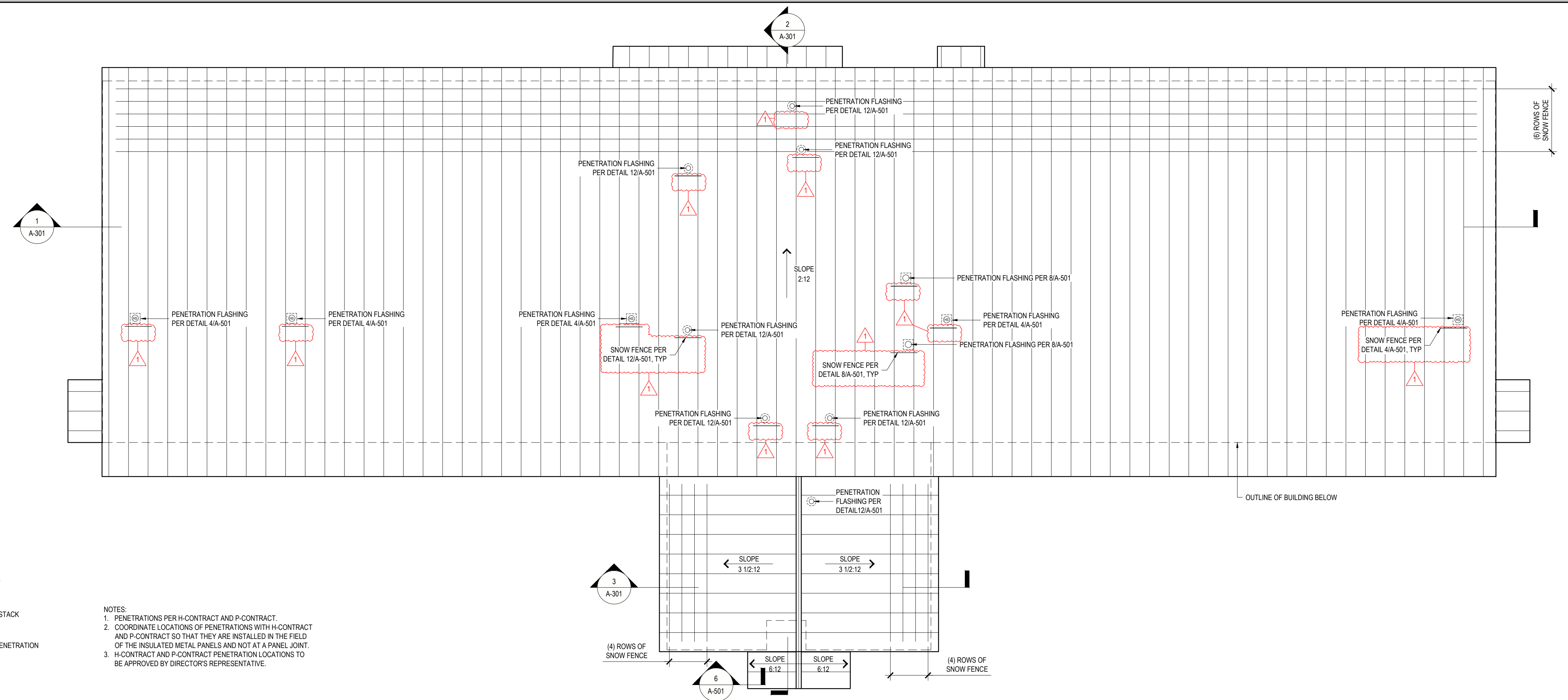
TITLE: PROVIDE MAINTENANCE SUB-HEADQUARTERS  
LOCATION: DOT REGION 8 COLUMBIA COUNTY  
1373 STATE ROUTE 203  
CHATHAM NY  
CLIENT: DEPARTMENT OF TRANSPORTATION

**REVISED DRAWING 02/28/2025**

MARK	DATE	DESCRIPTION
▲	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT

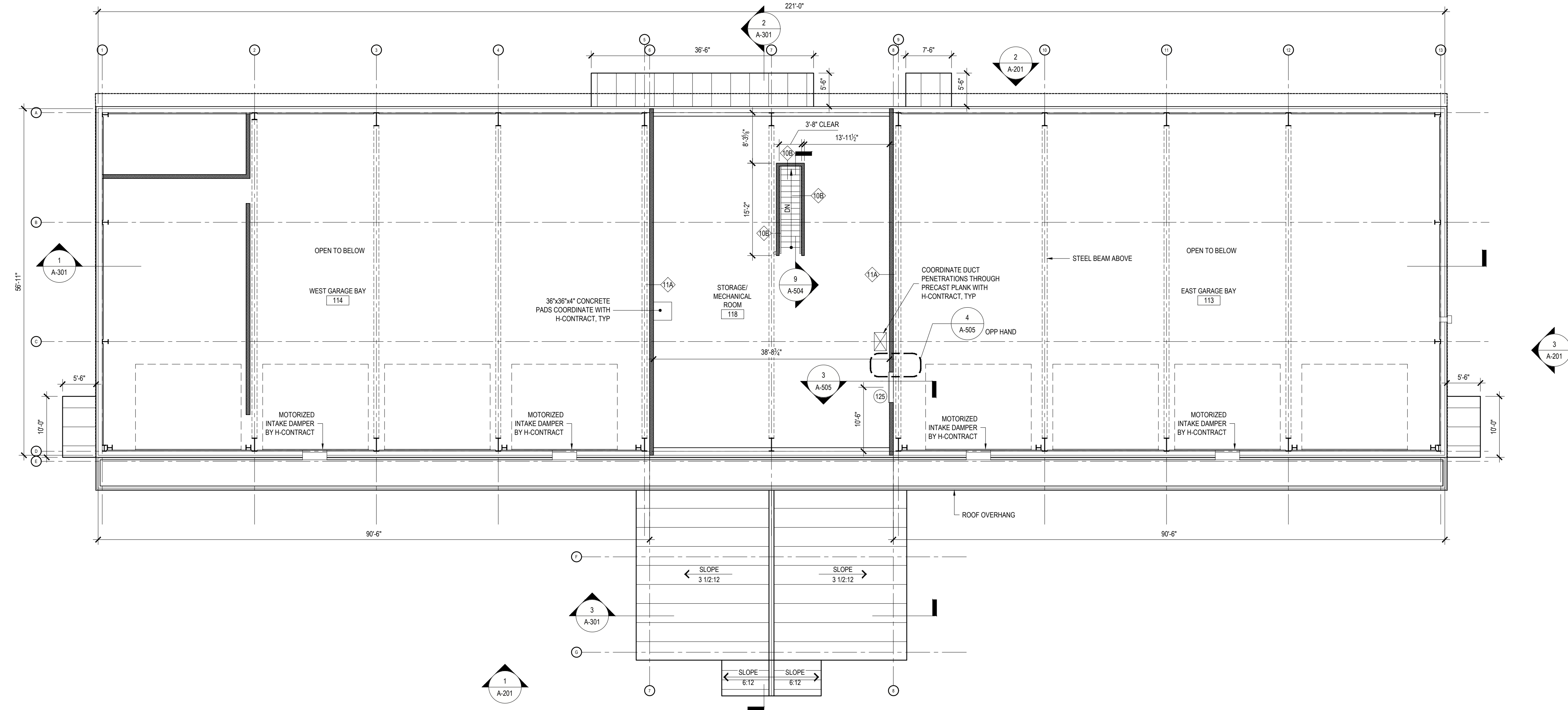
PROJECT NUMBER: **46075 - C**  
DESIGNED BY: KK  
DRAWN BY: SS  
FIELD CHECK:  
APPROVED:

SHEET TITLE:  
**ROOF PLAN AND SECOND FLOOR PLAN**  
DRAWING NUMBER:  
**A-103**  
SHEET 37 OF 86



- ROOF LEGEND:**
- ⊙ 6" OR SMALLER DIAMETER VENT BY P-CONTRACT
  - ⊙ 12" OR LARGER DIAMETER VENT BY H-CONTRACT
  - ⊙ 12" OR LARGER DIAMETER HOT STACK VENT BY H-CONTRACT
  - ▽ SNOW DIVERTER, OMIT WHEN PENETRATION IS LESS THAN 24" FROM RIDGE
- NOTES:**
1. PENETRATIONS PER H-CONTRACT AND P-CONTRACT.
  2. COORDINATE LOCATIONS OF PENETRATIONS WITH H-CONTRACT AND P-CONTRACT SO THAT THEY ARE INSTALLED IN THE FIELD OF THE INSULATED METAL PANELS AND NOT AT A PANEL JOINT.
  3. H-CONTRACT AND P-CONTRACT PENETRATION LOCATIONS TO BE APPROVED BY DIRECTOR'S REPRESENTATIVE.

**2 ROOF PLAN**  
REF: NONE SCALE: 3/32"=1'-0"

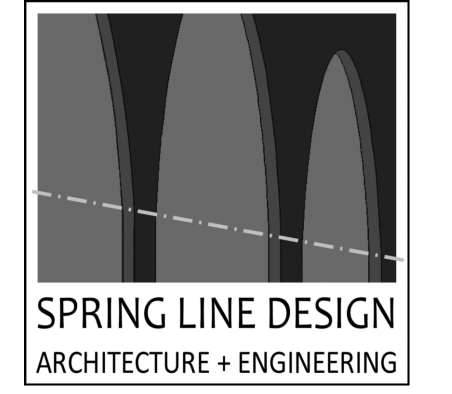


- NOTES:**
1. SEE A-601 FOR DOOR SCHEDULE.
  2. SEE A-601 FOR WINDOW SCHEDULE.
  3. SEE A-601 FOR LOUVER SCHEDULE.
  4. SEE A-602 FOR FINISH SCHEDULE.
  5. SEE A-602 FOR PARTITION TYPE SCHEDULE.

**1 SECOND FLOOR PLAN**  
REF: NONE SCALE: 3/32"=1'-0"

36x24 PLOT SHEET

CONSULTANT  
CERTIFICATE OF AUTHORIZATION No.: 0019551



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CONTRACT:  
**CONSTRUCTION**

TITLE:  
PROVIDE MAINTENANCE SUB-HEADQUARTERS

LOCATION:  
DOT REGION 8 COLUMBIA COUNTY  
1373 STATE ROUTE 203  
CHATHAM NY

CLIENT:  
DEPARTMENT OF TRANSPORTATION

**REVISED DRAWING 02/28/2025**

MARK	DATE	DESCRIPTION
△	02/28/2025	ADDENDUM 1
△	01/10/2025	BID DOCUMENT

PROJECT NUMBER: **46075 - C**

DESIGNED BY: KK

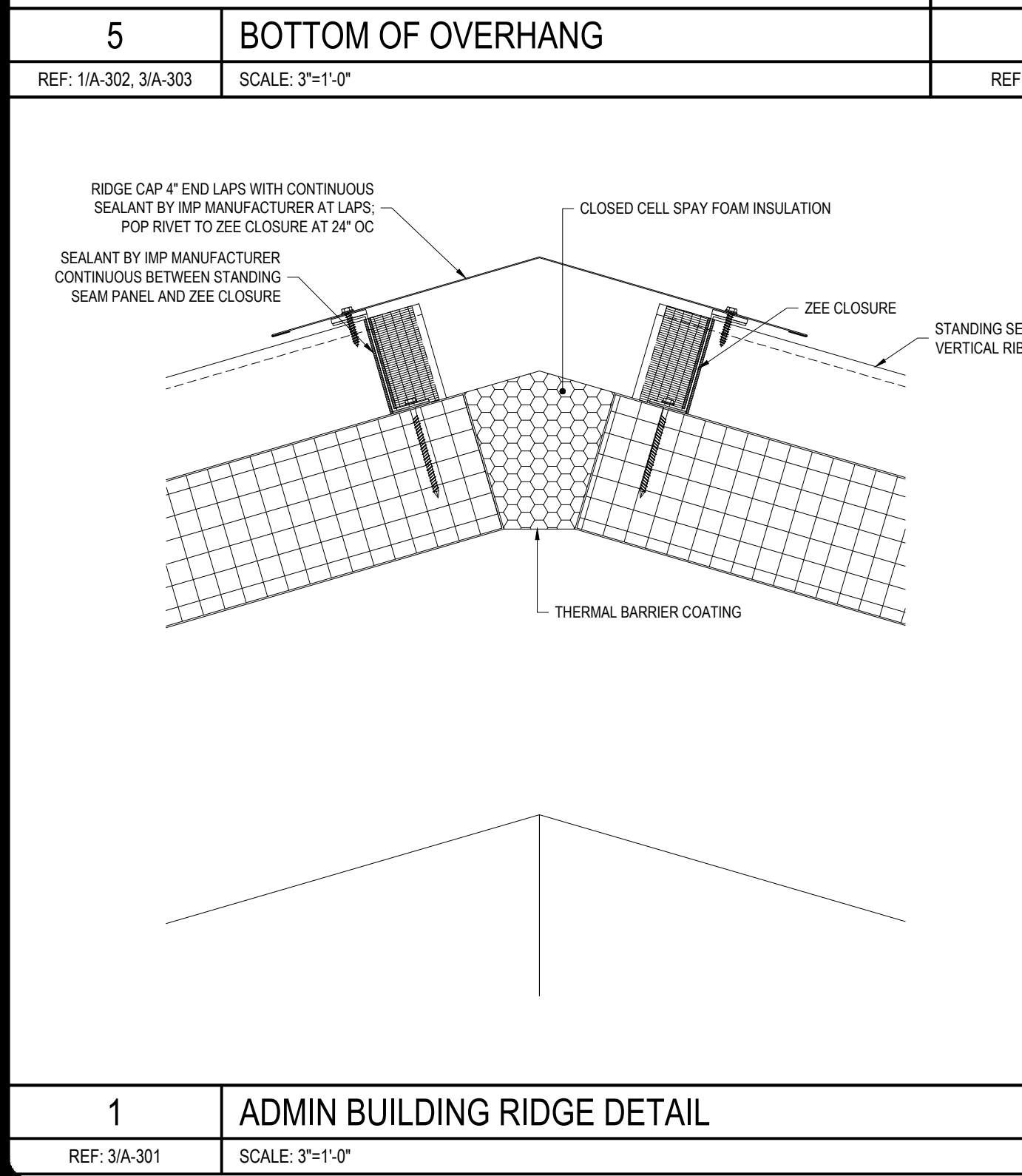
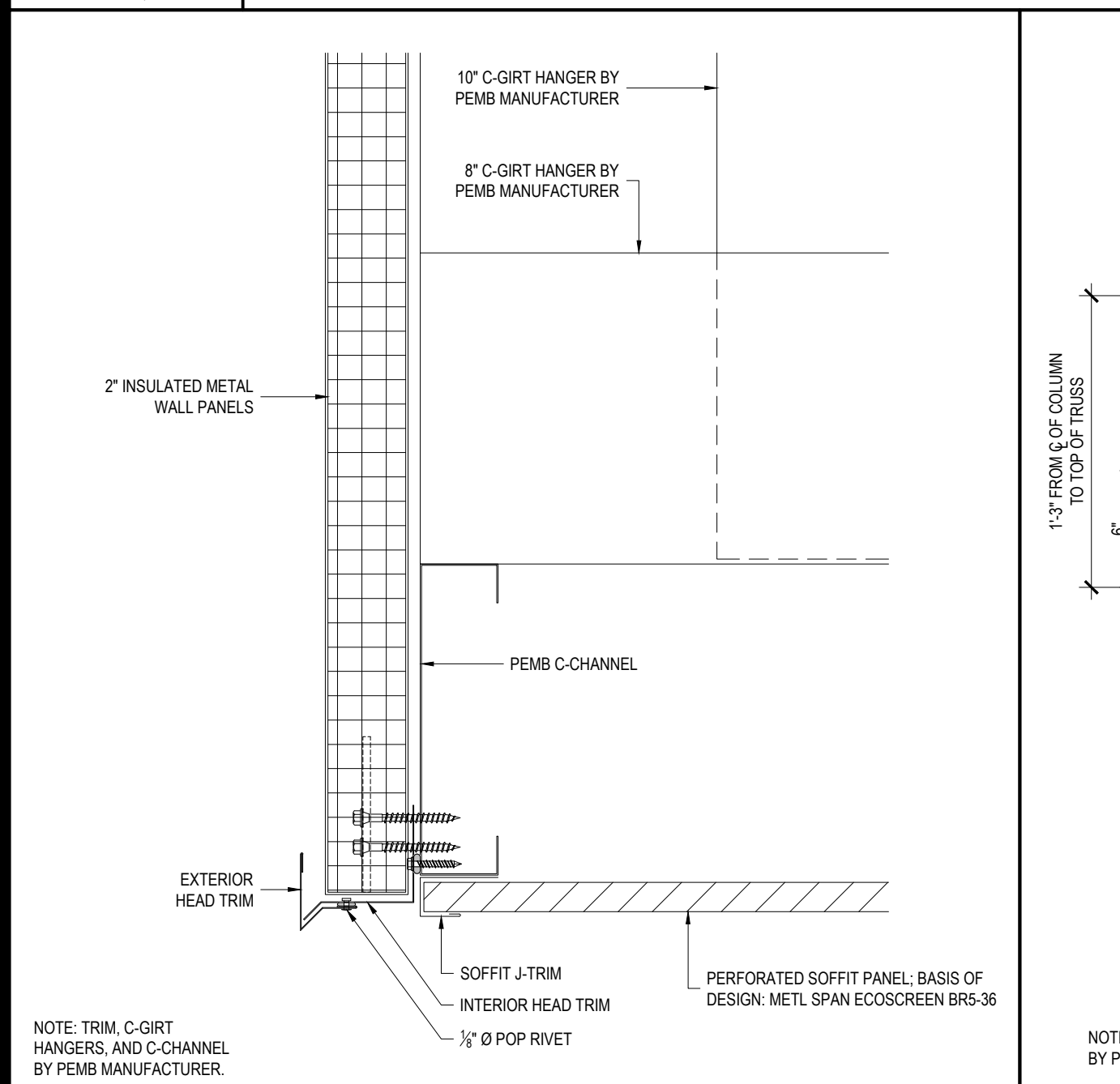
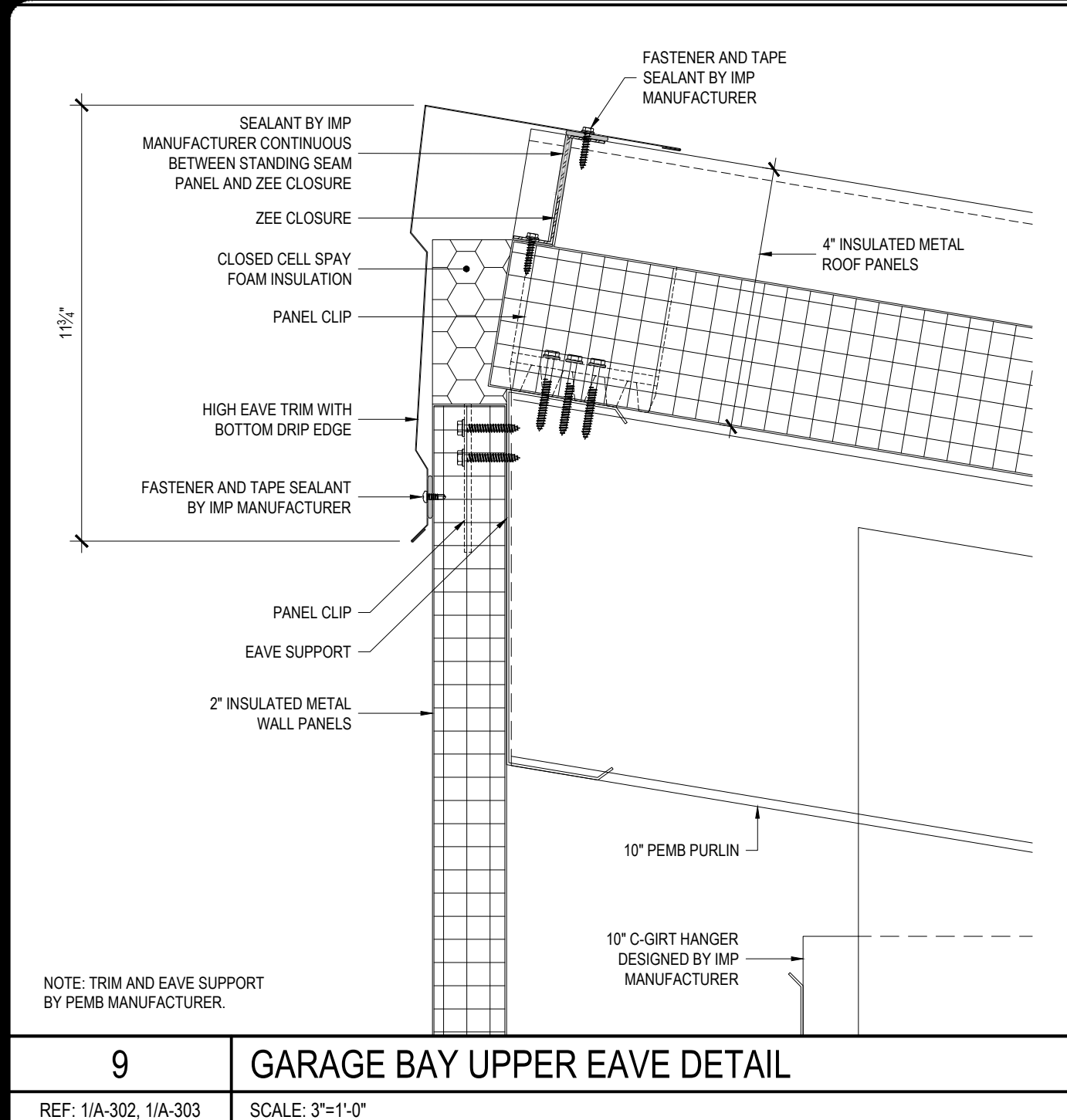
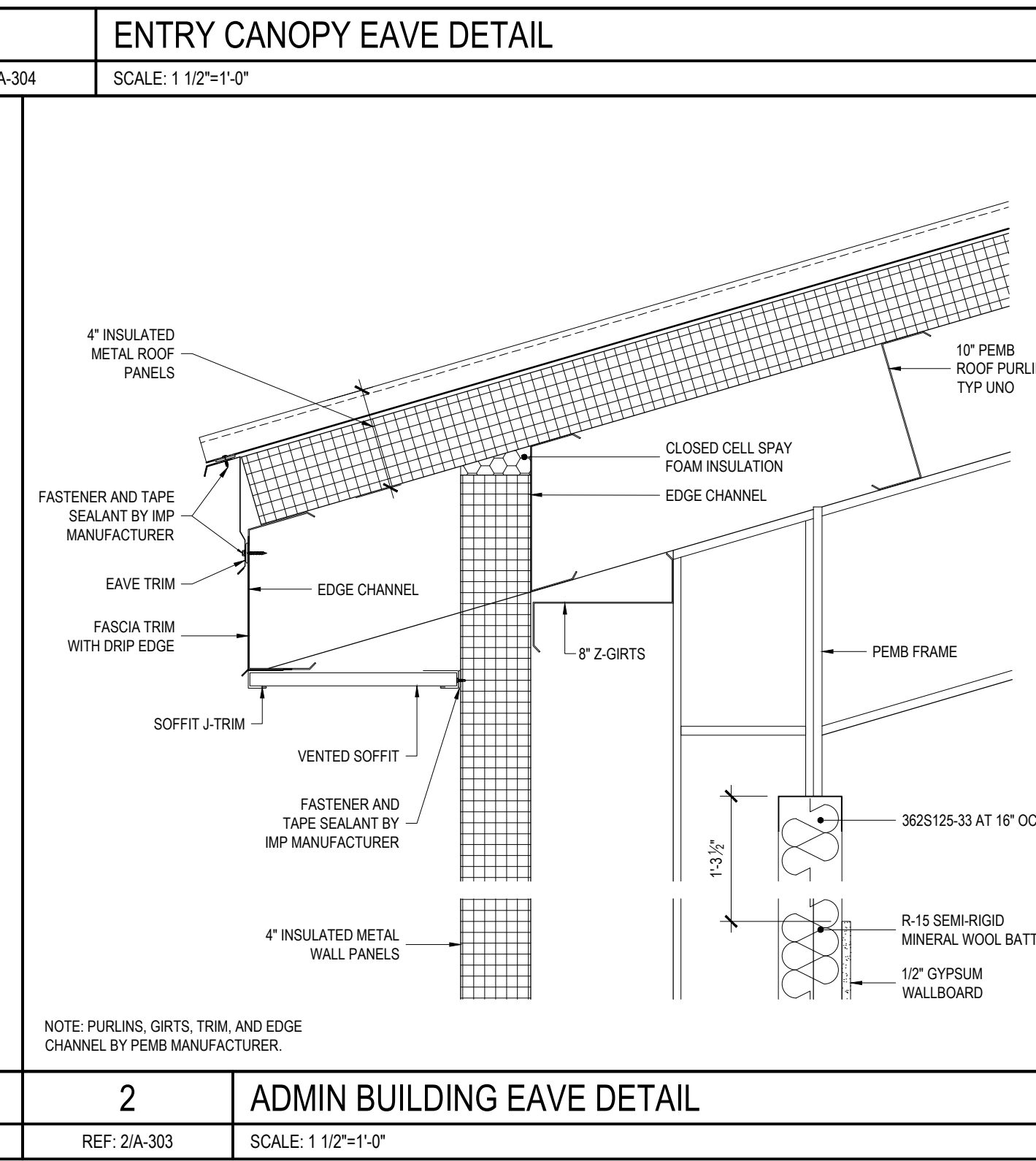
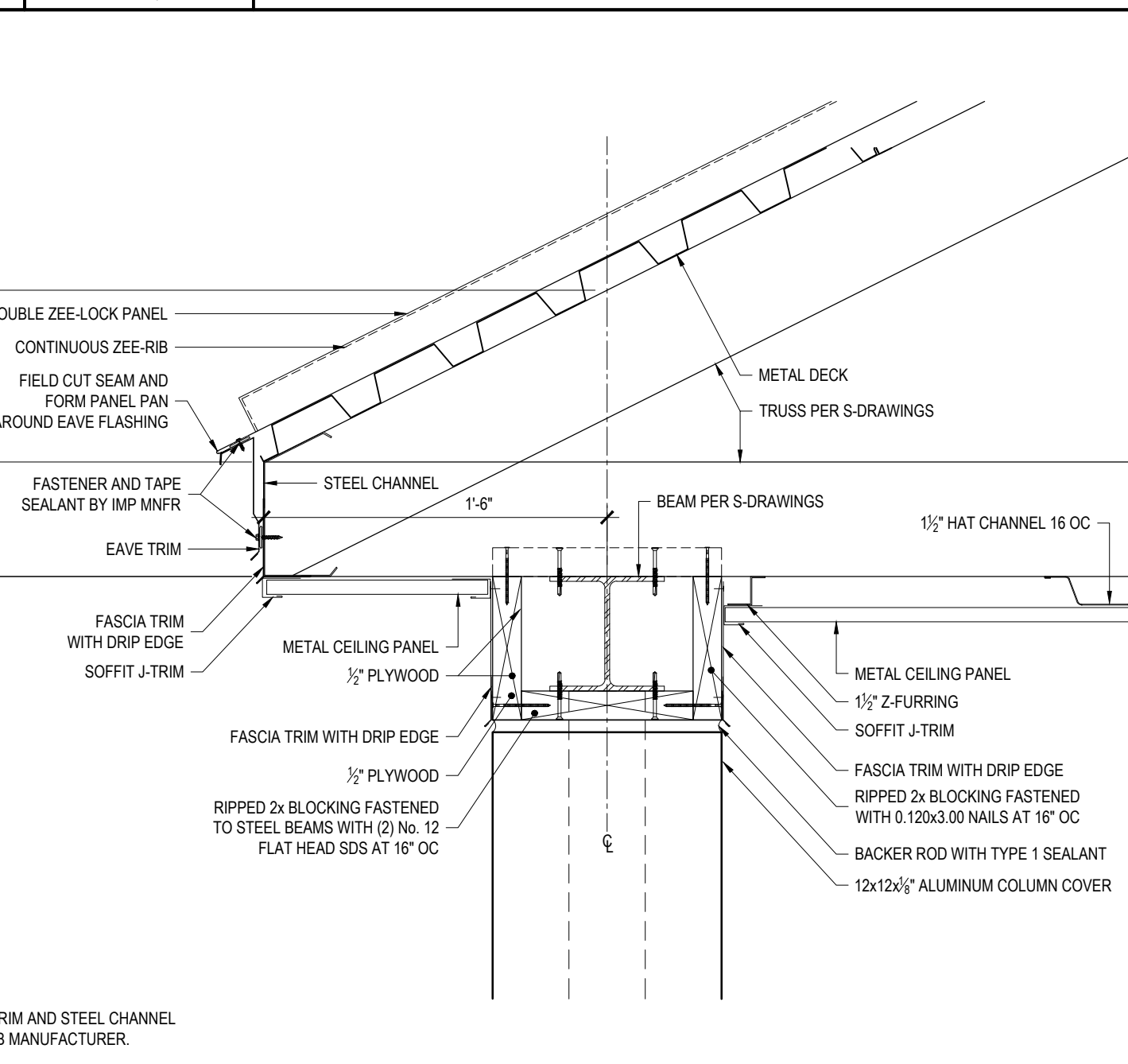
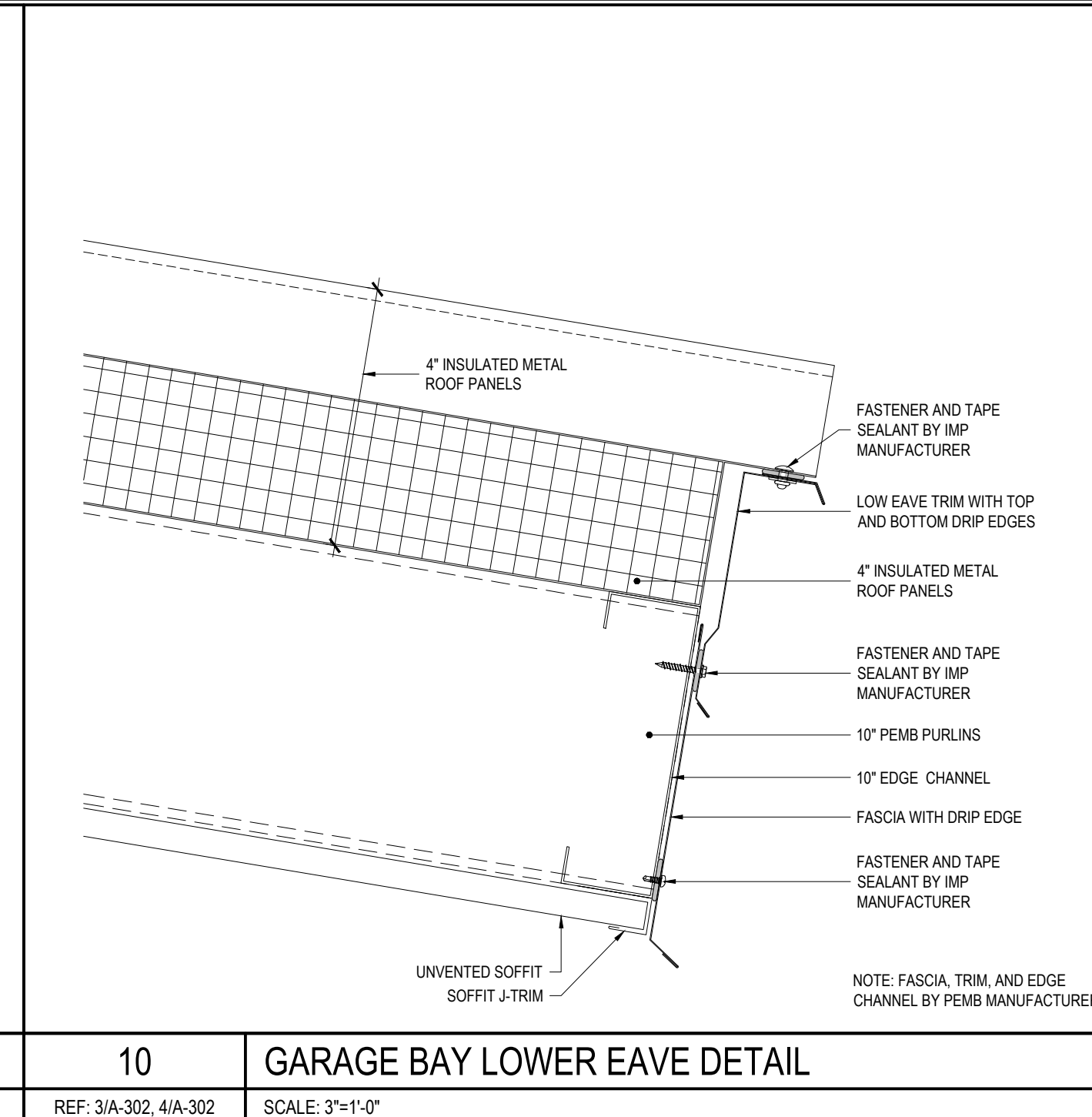
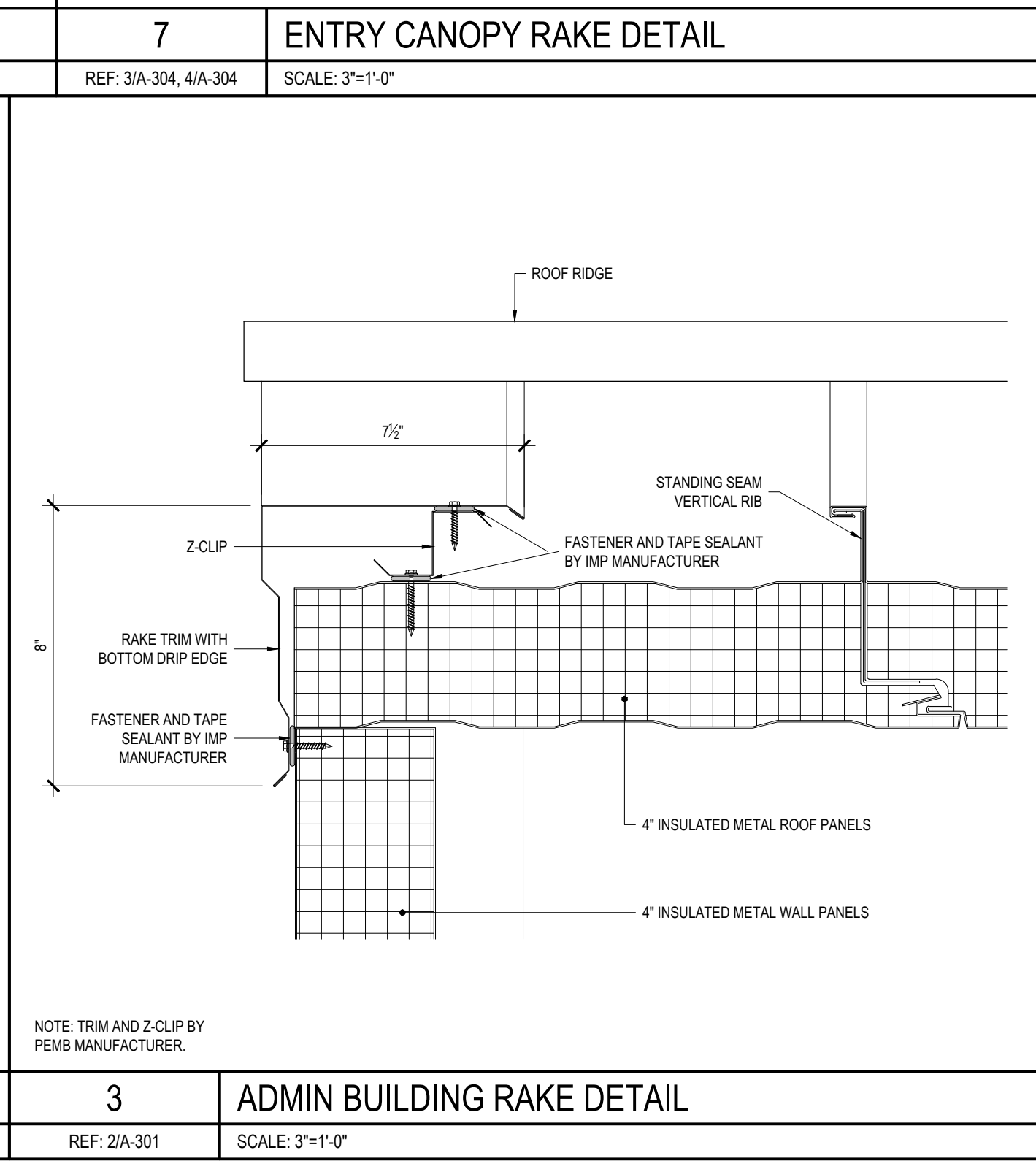
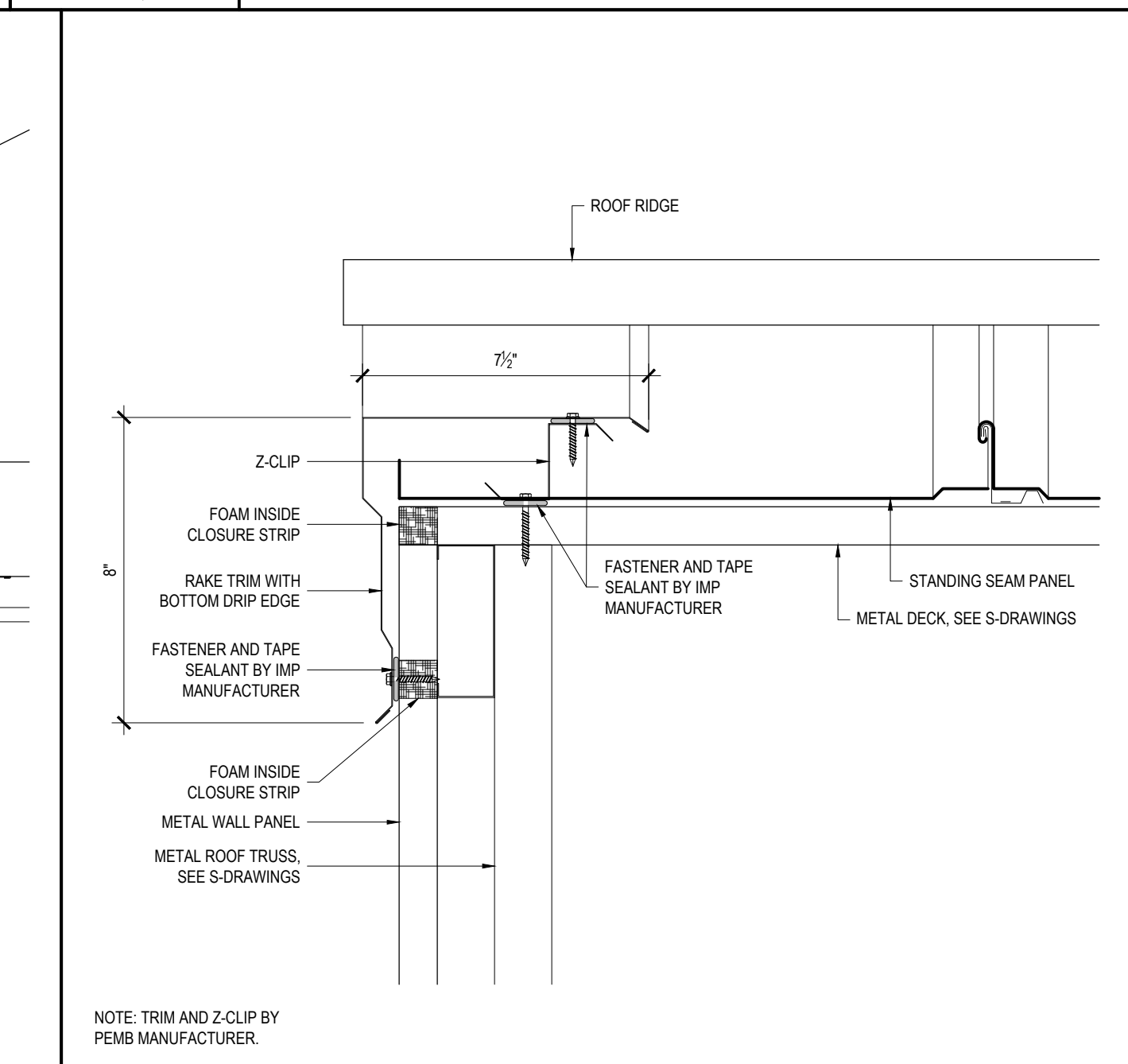
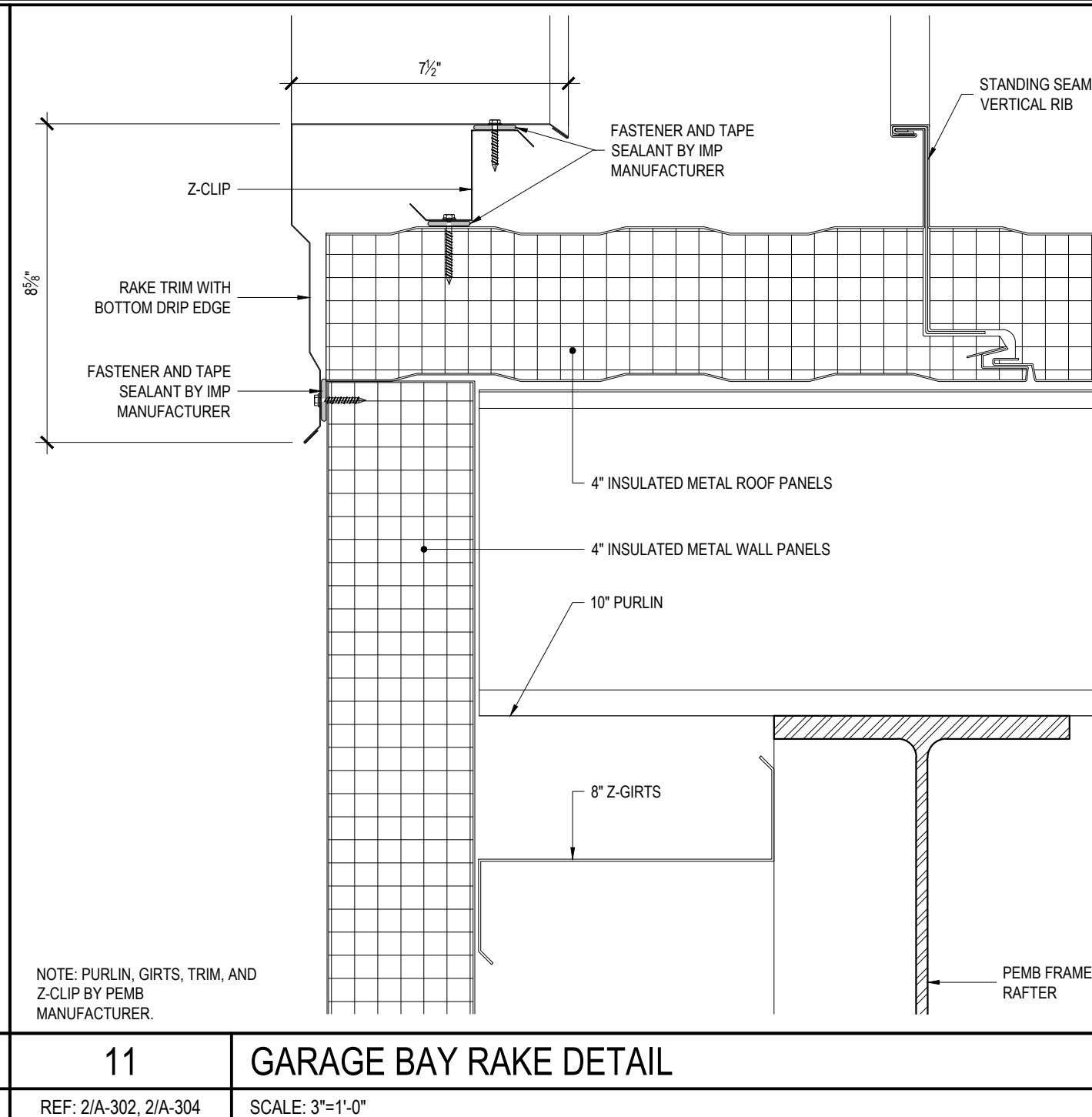
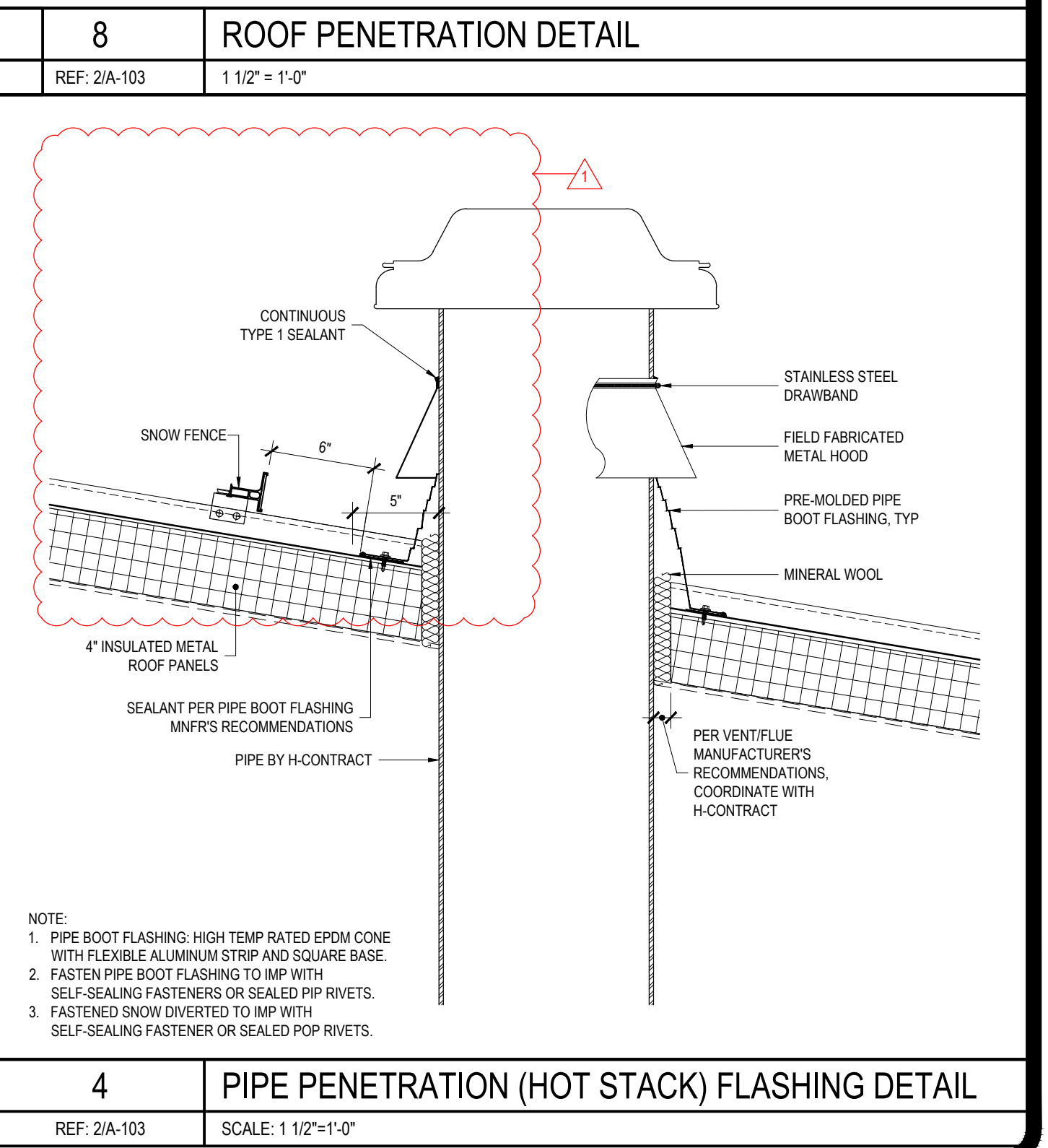
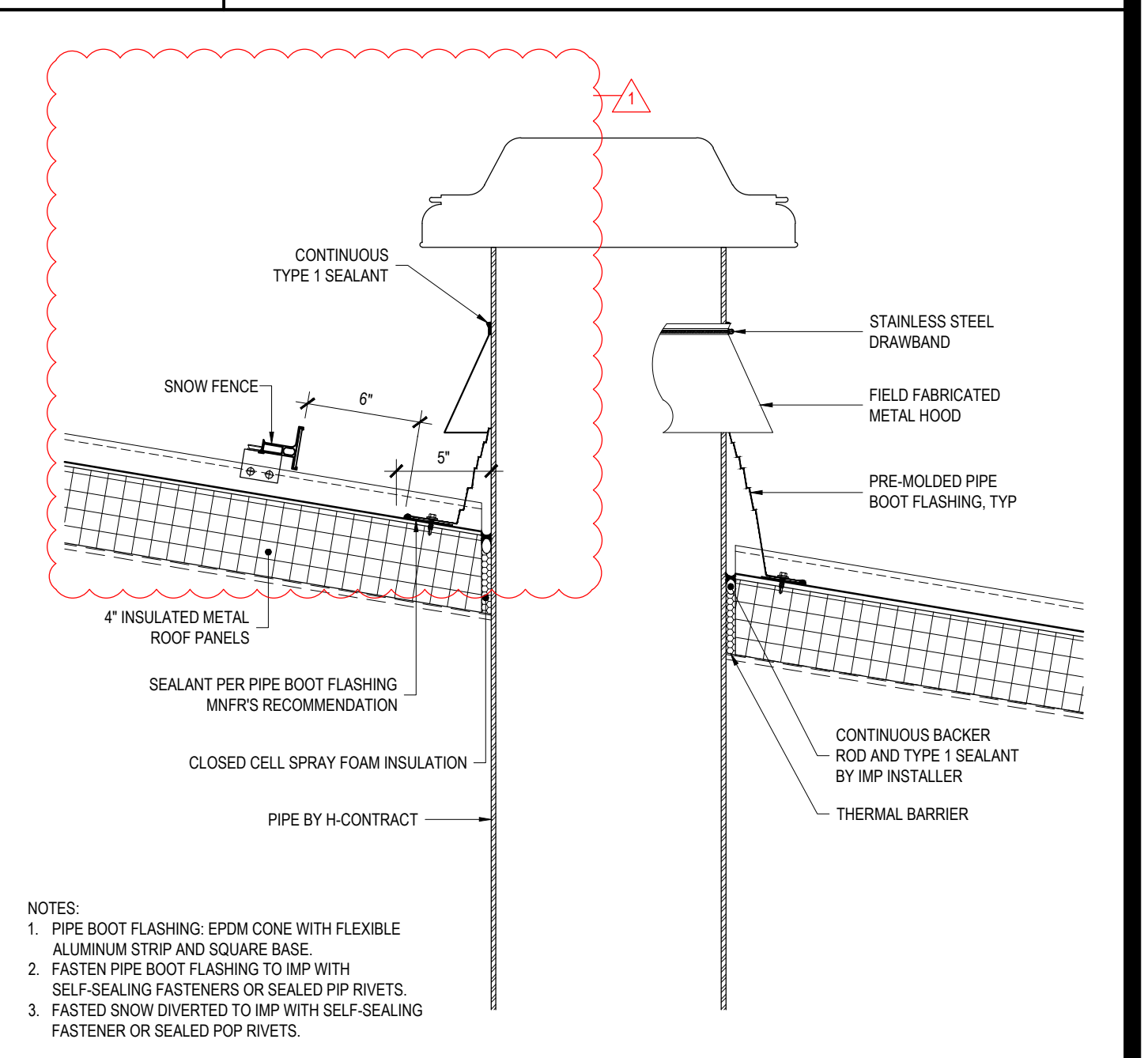
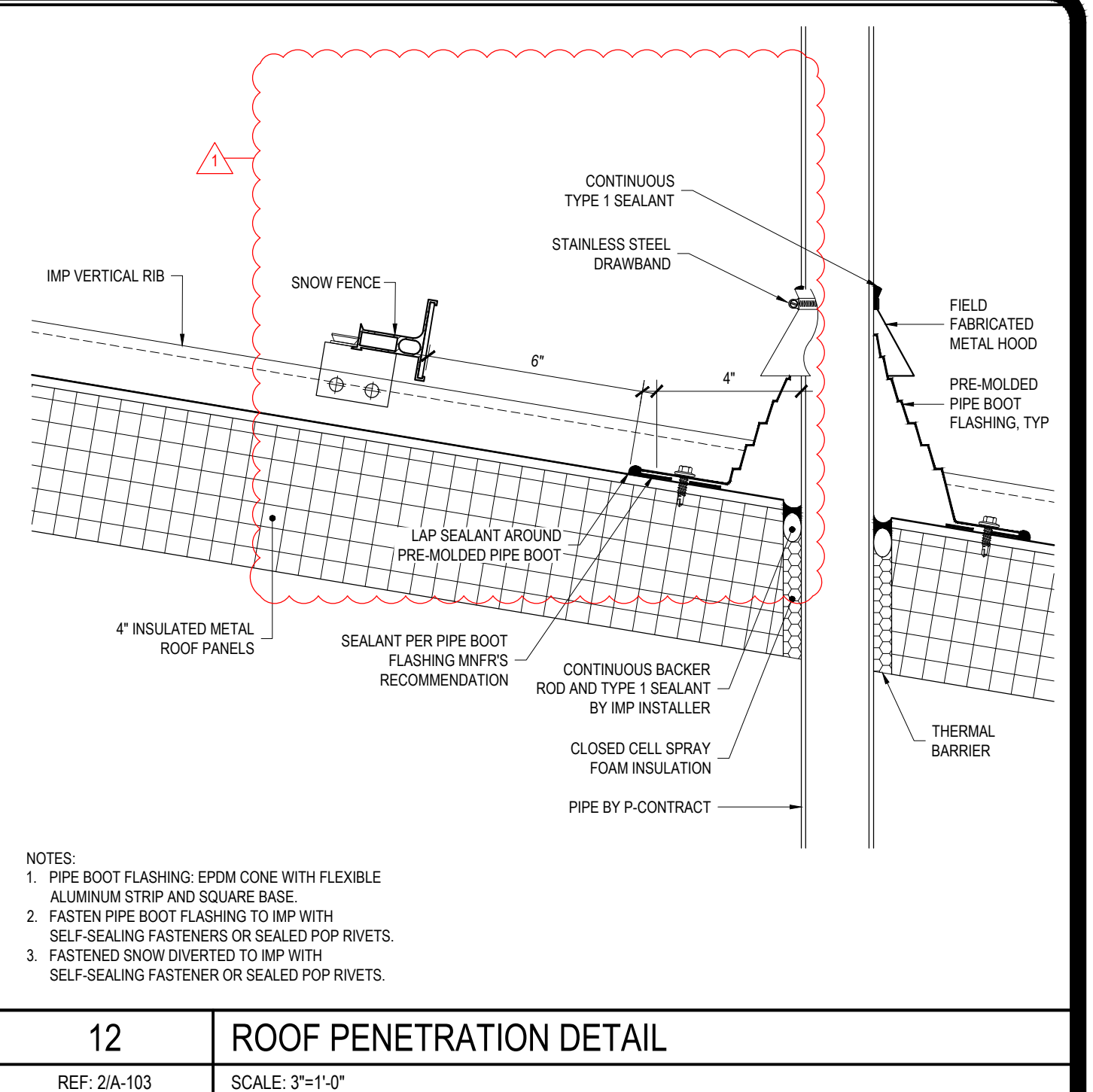
DRAWN BY: SS

FIELD CHECK:

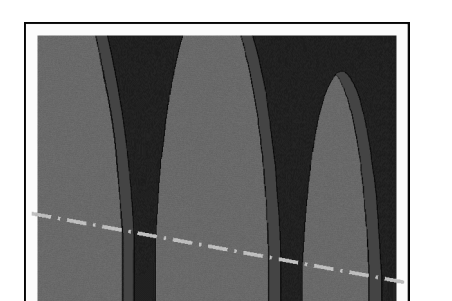
APPROVED:

SHEET TITLE:  
**ROOF DETAILS**

DRAWING NUMBER:  
**A-501**



CONSULTANT  
CERTIFICATE OF AUTHORIZATION No.: 0019551



**SPRING LINE DESIGN**  
ARCHITECTURE + ENGINEERING

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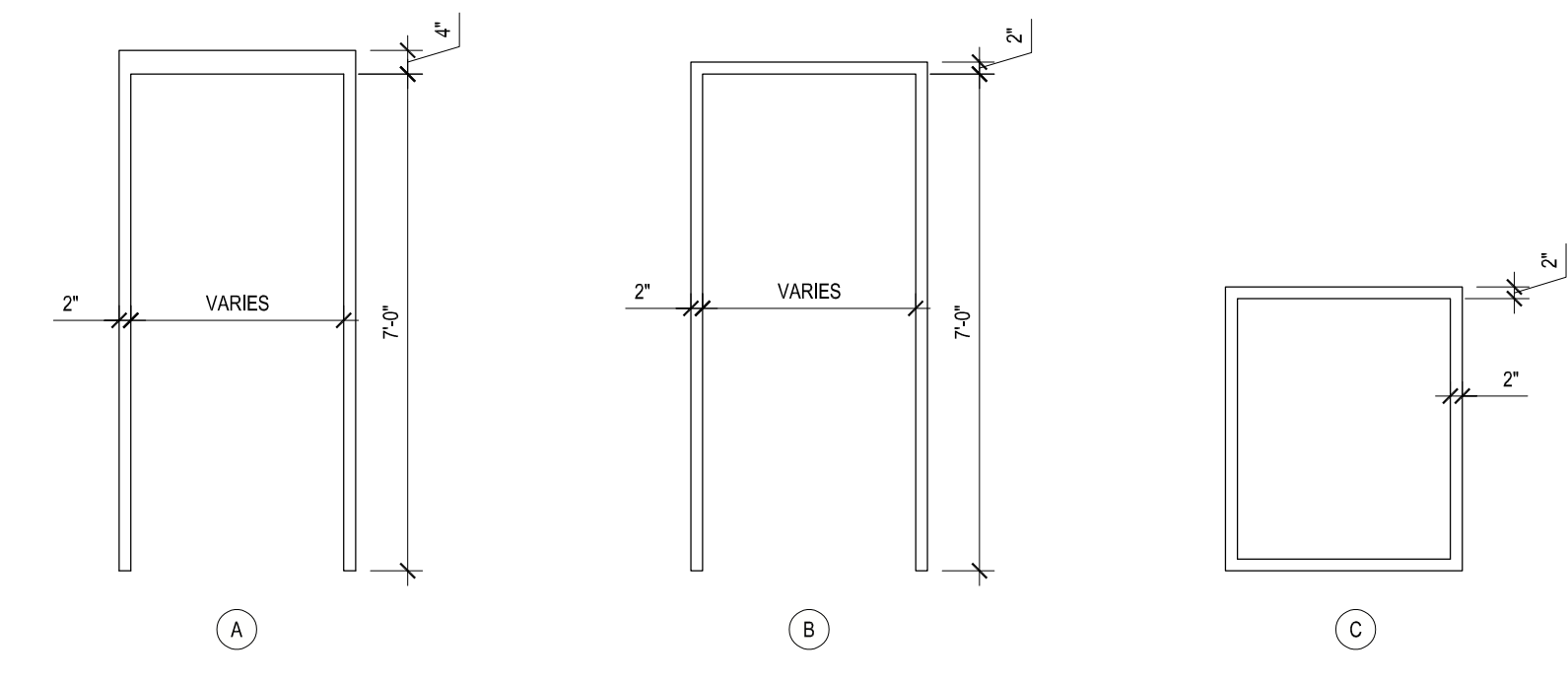
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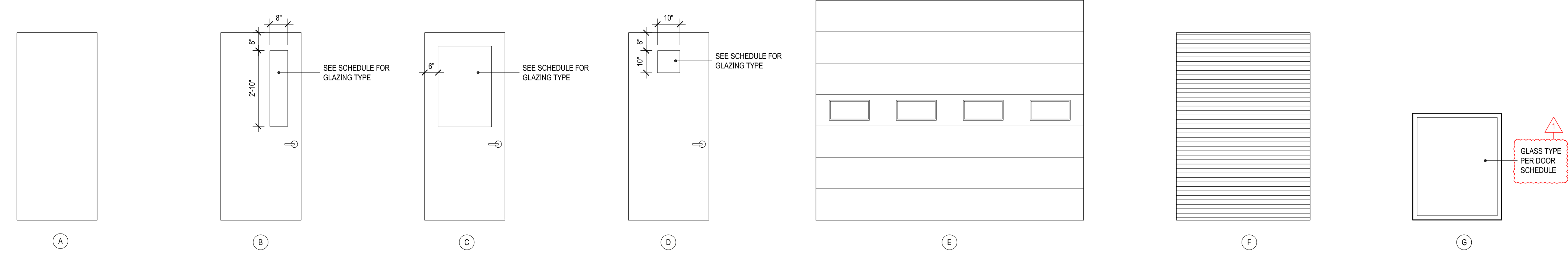
**CONSTRUCTION**  
TITLE: PROVIDE MAINTENANCE SUB-HEADQUARTERS  
LOCATION: DOT REGION 8 COLUMBIA COUNTY 1373 STATE ROUTE 203 CHATHAM NY  
CLIENT: DEPARTMENT OF TRANSPORTATION

**REVISED DRAWING 02/28/2025**

PROJECT NUMBER:	46075 - C
DESIGNED BY:	KK
DRAWN BY:	SS
FIELD CHECK:	
APPROVED:	
SHEET TITLE:	<b>SCHEDULES</b>
DRAWING NUMBER:	<b>A-601</b>
SHEET	52 OF 86



**7 DOOR FRAME TYPES**  
REF: 1/A-601 SCALE: 3/8" = 1'-0"



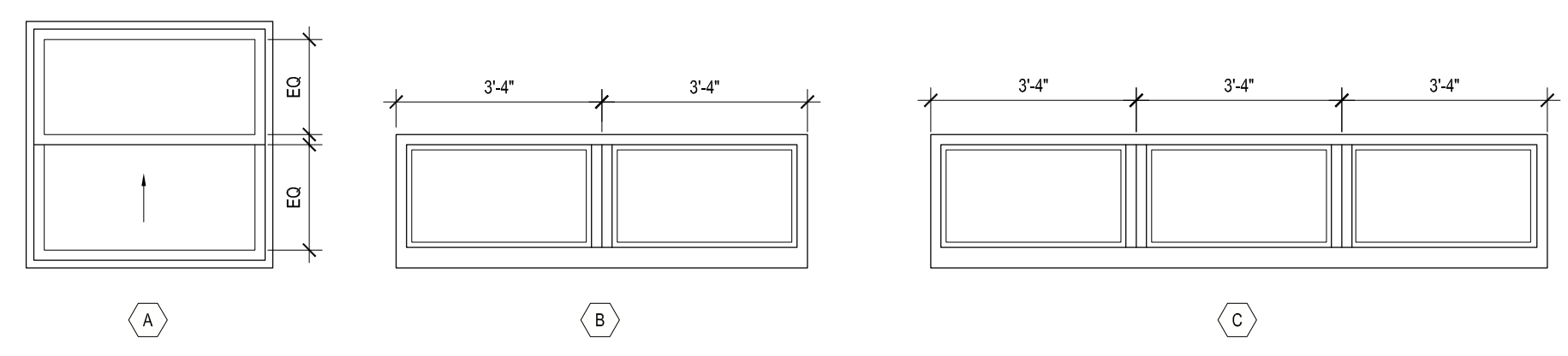
**6 DOOR TYPES**  
REF: 1/A-601 SCALE: 3/8" = 1'-0"

**LOUVER SCHEDULE**

LOUVER NUMBER	LOUVER TYPE	SIZE	FINISH MATERIAL	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	NOTES
L1	A	24"x12"	ALUMINUM	13/A-504	-	13/A-504	-
L2	A	24"x12"	ALUMINUM	13/A-504	-	13/A-504	-
L3	B	24"x24"	ALUMINUM	12/A-504	-	12/A-504	-
L4	B	24"x24"	ALUMINUM	12/A-504	-	12/A-504	-
L5	B	24"x24"	ALUMINUM	12/A-504	-	12/A-504	-
L6	B	24"x24"	ALUMINUM	12/A-504	-	12/A-504	-

**4 LOUVER SCHEDULE**  
REF: NONE SCALE: NTS

**5 LOUVER TYPE**  
REF: 4/A-601 SCALE: NTS



**3 WINDOW TYPES**  
REF: 2/A-601 SCALE: 3/8" = 1'-0"

**WINDOW SCHEDULE**

WINDOW TYPE	QTY	WINDOW SIZE (NOM)	WINDOW FUNCTION	FINISH MATERIAL	GLAZING TYPE	MAXIMUM U-VALUE	MAXIMUM SHGC	MAXIMUM AIR INFILTRATION	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	NOTES
A	8	4'-0" x 4'-0"	DOUBLE HUNG	ALUMINUM	M	0.45	0.38	0.20	9/A-502	5/A-502	1/A-502	-
B	2	2'-2" x 6'-8"	FIXED	ALUMINUM	M	0.45	0.38	0.20	10/A-502	6/A-502	3/A-502	-
C	8	2'-2" x 10'-0"	FIXED	ALUMINUM	M	0.45	0.38	0.20	10/A-502	6/A-502	3/A-502	-

**2 WINDOW SCHEDULE**  
REF: 1/A-101, 1/A-102 SCALE: NTS

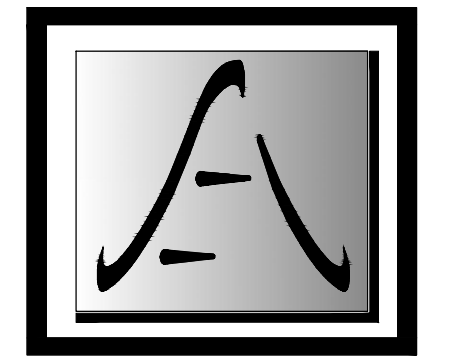
**DOOR SCHEDULE**

DOOR No.	DOOR SIZE	DOOR THICKNESS	DOOR TYPE	DOOR MATERIAL	FRAME MATERIAL	FRAME TYPE	HEAD DETAIL	JAMB DETAIL	THRESHOLD DETAIL	FIRE RATING	HARDWARE SET	GLASS TYPE	NOTES
100	3'-0"x7'-0"	1 1/2"	C	STEEL	STEEL	B	3/A-503	4/A-503	-	30 MIN	5	D	-
101	3'-0"x7'-0"	1 1/2"	C	STEEL	STEEL	B	3/A-503	4/A-503	-	30 MIN	5	D	-
102	3'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	B	3/A-503	4/A-503	-	30 MIN	3	-	-
103	3'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	B	3/A-503	4/A-503	-	30 MIN	3	-	-
104	3'-0"x7'-0"	1 1/2"	C	STEEL	STEEL	B	3/A-503	4/A-503	-	30 MIN	8	D	-
104A	3'-4"x4'-0"	-	G	-	STEEL	C	1/A-507	2/A-507	-	-	-	D	INTERIOR WINDOW
104B	3'-4"x4'-0"	-	G	-	STEEL	C	3/A-507	4/A-507	-	180 MIN	-	G	INTERIOR WINDOW
104C	3'-4"x4'-0"	-	G	-	STEEL	C	1/A-507	2/A-507	-	-	-	D	INTERIOR WINDOW
105	3'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	A	12/A-503	8/A-503	-	30 MIN	6	-	-
106	3'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	A	12/A-503	8/A-503	-	30 MIN	7	-	-
107	2'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	B	3/A-503	4/A-503	-	30 MIN	7	-	-
108	3'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	A	12/A-503	8/A-503	-	45 MIN	7	-	-
109	3'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	A	12/A-503	8/A-503	-	30 MIN	7	-	-
110	3'-0"x7'-0"	1 1/2"	B	FRP	FRP	B	9/A-503	5/A-503	1/A-503	-	1A	-	-
111	3'-0"x7'-0"	1 1/2"	B	STEEL	STEEL	B	3/A-503	4/A-503	-	-	4	-	-
112	3'-0"x7'-0"	1 1/2"	D	STEEL	STEEL	A	12/A-503	8/A-503	-	180 MIN	8	G	-
113A	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
113B	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
113C	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
113D	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
114A	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
114B	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
114C	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
114D	17'-4"x14'-0"	2"	E	COMPOSITE	-	-	11/A-502	7/A-502	-	-	10	-	OVERHEAD DOOR
116	3'-0"x7'-0"	1 1/2"	C	FRP	FRP	B	10/A-503	6/A-503	1/A-503	-	1	M	-
117	(2) 3'-4"x8'-4"	1 1/2"	A	FRP	FRP	A	12/A-503	8/A-503	-	-	11	-	-
118	3'-0"x7'-0"	1 1/2"	C	FRP	FRP	A	10/A-503	6/A-503	1/A-503	-	1	M	-
119	(2) 3'-0"x7'-0"	1 1/2"	A	FRP	FRP	A	11/A-503	7/A-503	1/A-503	-	2	-	-
120	3'-0"x7'-0"	1 1/2"	A	FRP	FRP	B	11/A-503	7/A-503	1/A-503	-	9	-	-
121	3'-0"x7'-0"	1 1/2"	C	FRP	FRP	B	10/A-503	6/A-503	1/A-503	-	1	M	-
122	3'-0"x7'-0"	1 1/2"	D	STEEL	STEEL	A	12/A-503	8/A-502	-	180 MIN	8	G	-
123	3'-0"x7'-0"	1 1/2"	C	FRP	FRP	B	10/A-503	6/A-503	1/A-503	-	1	M	-
124	3'-0"x7'-0"	1 1/2"	A	STEEL	STEEL	B	3/A-503	4/A-503	-	30 MIN	7	-	-
125	5'-0"x7'-0"	-	F	STEEL	-	-	-	-	-	180 MIN	10	-	COILING DOOR

**DOOR NOTES**  
• PROVIDE FACTORY FINISH ON ALL DOORS AND FRAMES

**1 DOOR SCHEDULE AND DOOR TYPES**  
REF: 1/A-101, 1/A-102 SCALE: NTS

36x24 PLOT SHEET



SAGE ENGINEERING ASSOCIATES, LLP

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REGISTRATION EXPIRES: 02/28/2026

CONTRACT: **PLUMBING**  
TITLE: **PROVIDE MAINTENANCE SUB-HEADQUARTERS**  
LOCATION: **DOT REGION 8 COLUMBIA COUNTY  
1373 STATE ROUTE 203  
CHATHAM, NY**  
CLIENT: **DEPARTMENT OF TRANSPORTATION**

REVISED DRAWING 02/28/2025

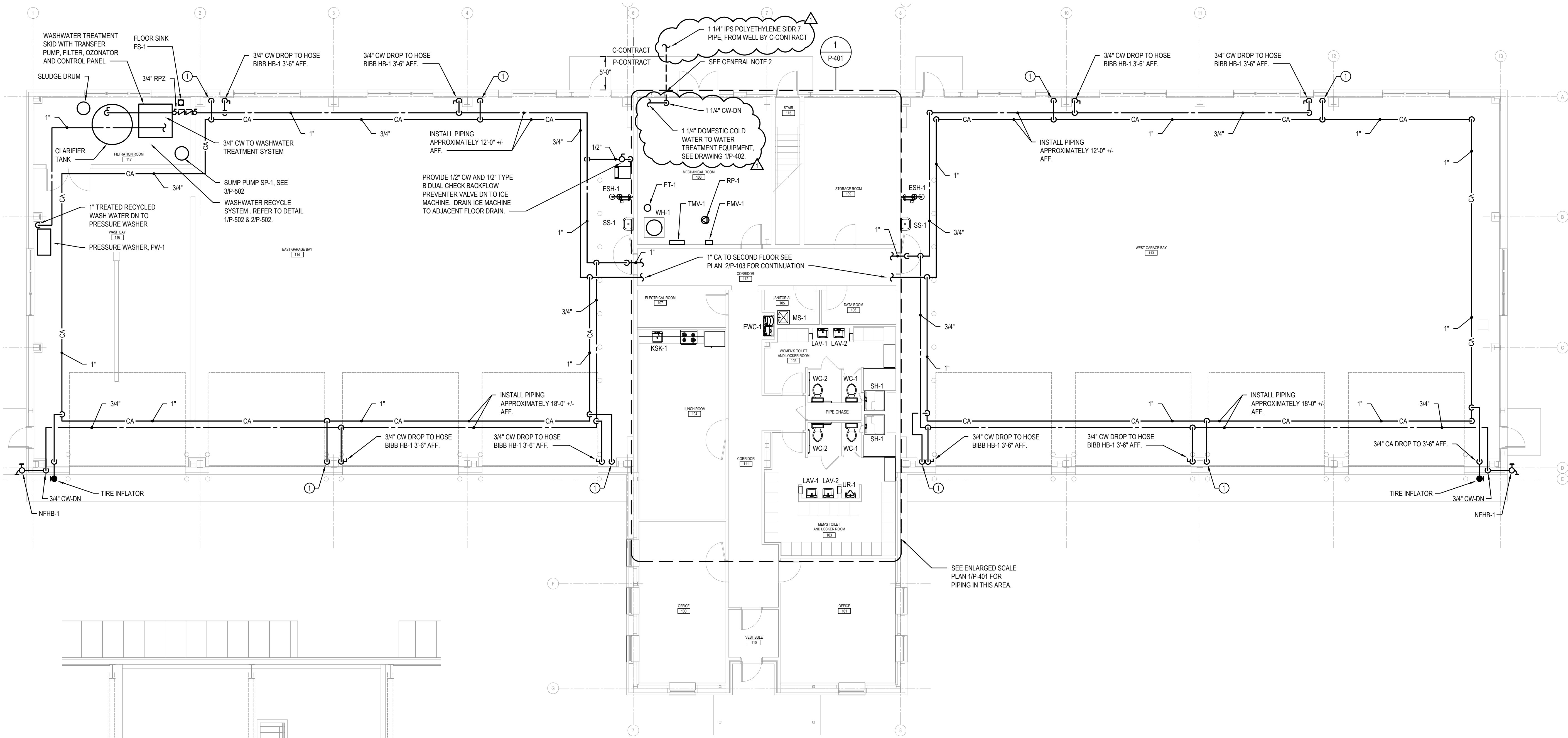
MARK	DATE	DESCRIPTION
△	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT

PROJECT NUMBER: **46075 - P**  
DESIGNED BY: **MWO**  
DRAWN BY: **MWO**  
FIELD CHECK:  
APPROVED: **DPL**

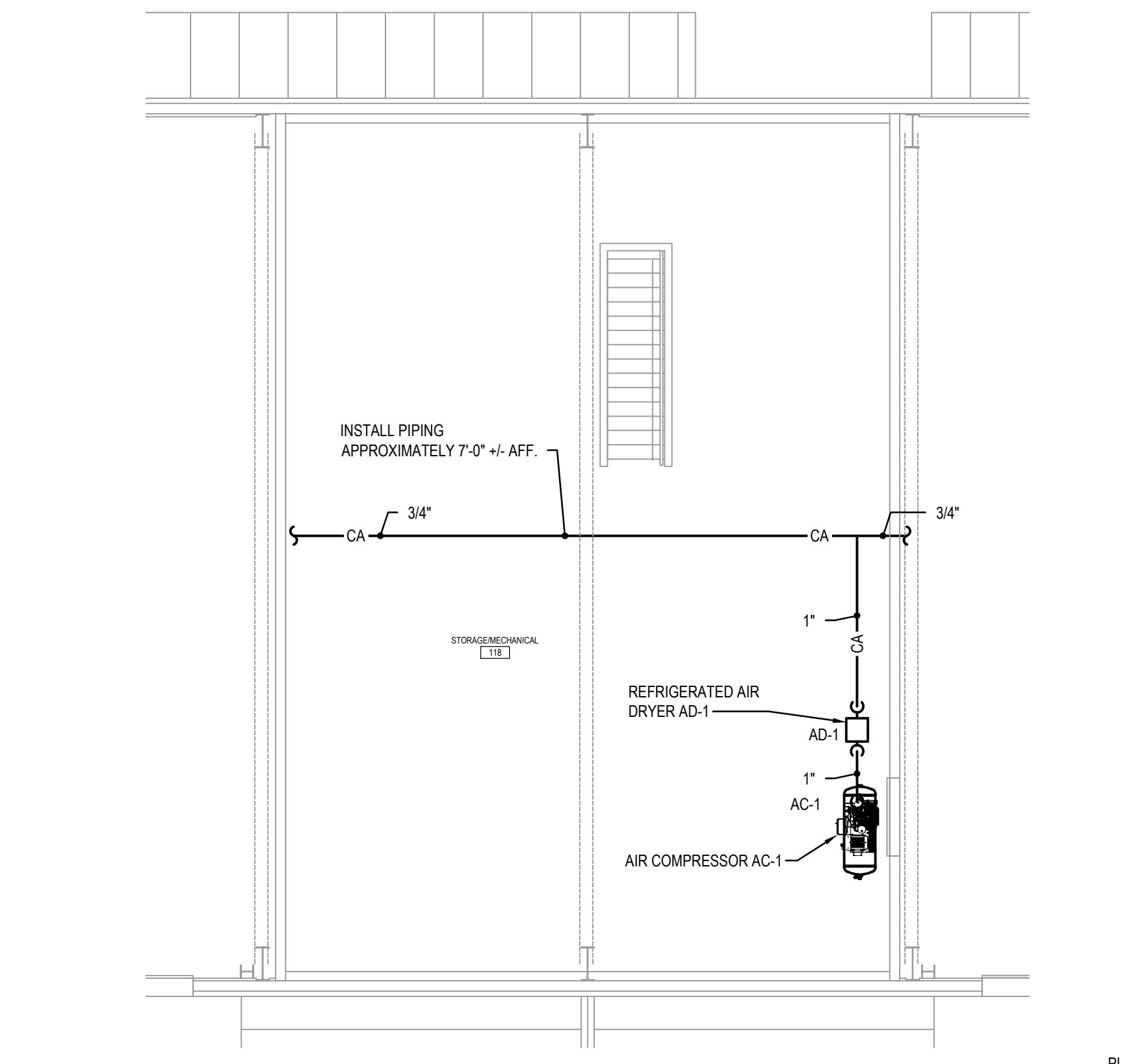
SHEET TITLE:  
**DOMESTIC WATER PLANS**

DRAWING NUMBER:  
**P-103**

SHEET **66** OF **86**



**1 FIRST FLOOR DOMESTIC WATER PLANS**  
SCALE: 1/8" = 1'-0"  
PLAN NORTH



**2 SECOND FLOOR COMPRESSED AIR PLANS**  
SCALE: 1/8" = 1'-0"  
PLAN NORTH

**GENERAL NOTES:**

- REFER TO THE ENLARGED SCALE PLAN P-401 FOR DOMESTIC WATER PIPING.
- FURNISH ALL PIPE SLEEVES FOR FOUNDATION PENETRATIONS AS SPECIFIED IN SECTION 221100 FOR FOUNDATION PENETRATIONS TO THE CONSTRUCTION WORK CONTRACTOR FOR INSTALLATION IN THE FOUNDATION WALL. REFER TO SECTION 011000 FOR COORDINATION REQUIREMENTS FOR OPENINGS IN NEW CONSTRUCTION.

**KEYED NOTES:**

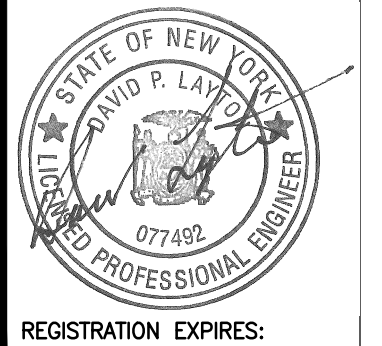
- ① 3/4" COMPRESSED AIR (CA) DROP TO QUICK DISCONNECT, 3'-6" AFF. PROVIDE 3/4" BLEEDER VALVE AT LOW POINT.

CONSULTANT

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LOCATION: **DOT REGION 8 COLUMBIA COUNTY  
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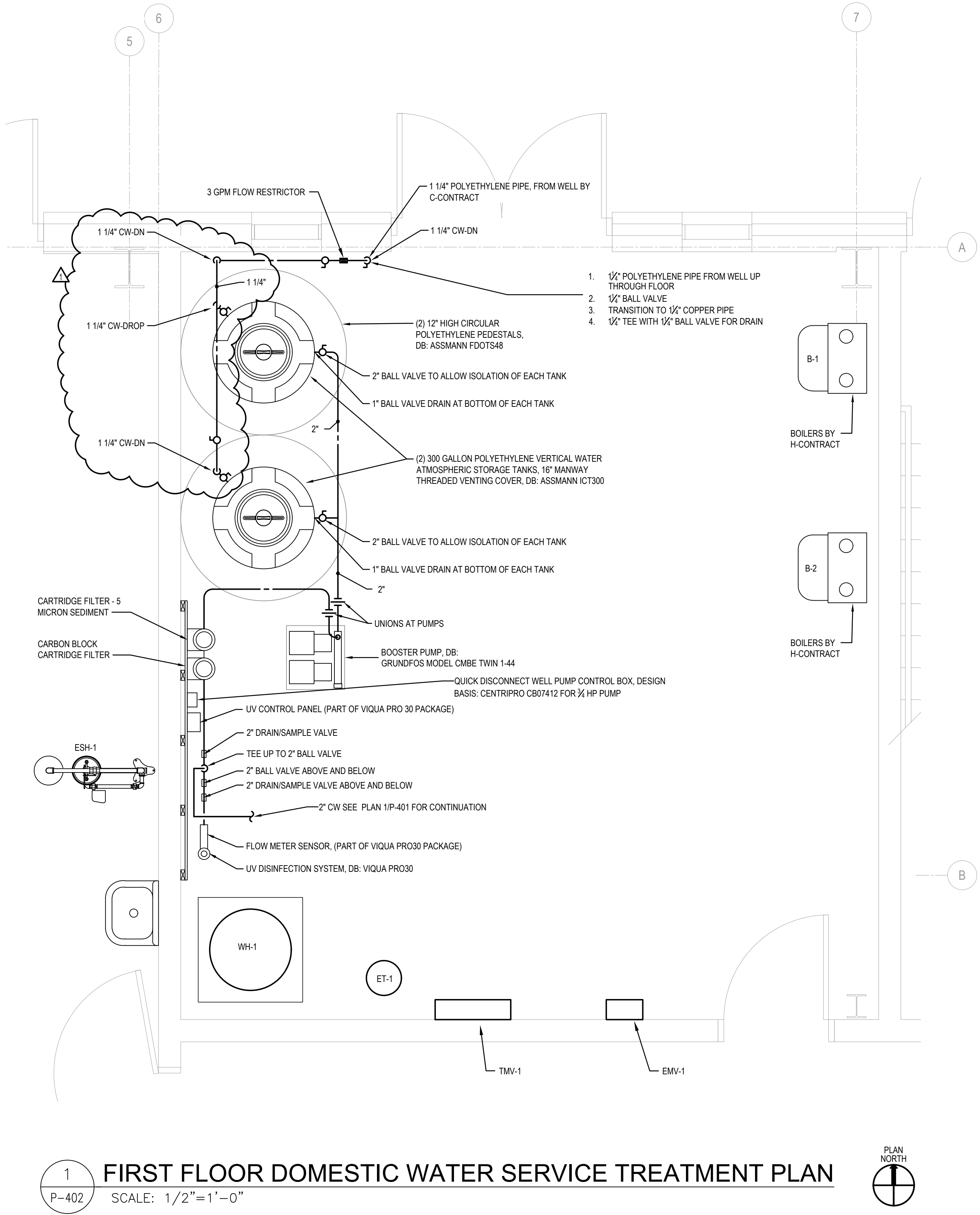
REVISED DRAWING 02/28/2025

MARK	DATE	DESCRIPTION
△	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT
PROJECT NUMBER:	<b>46075 - P</b>	
DESIGNED BY:	<b>MWO</b>	
DRAWN BY:	<b>MWO</b>	
FIELD CHECK:		
APPROVED:	<b>DPL</b>	

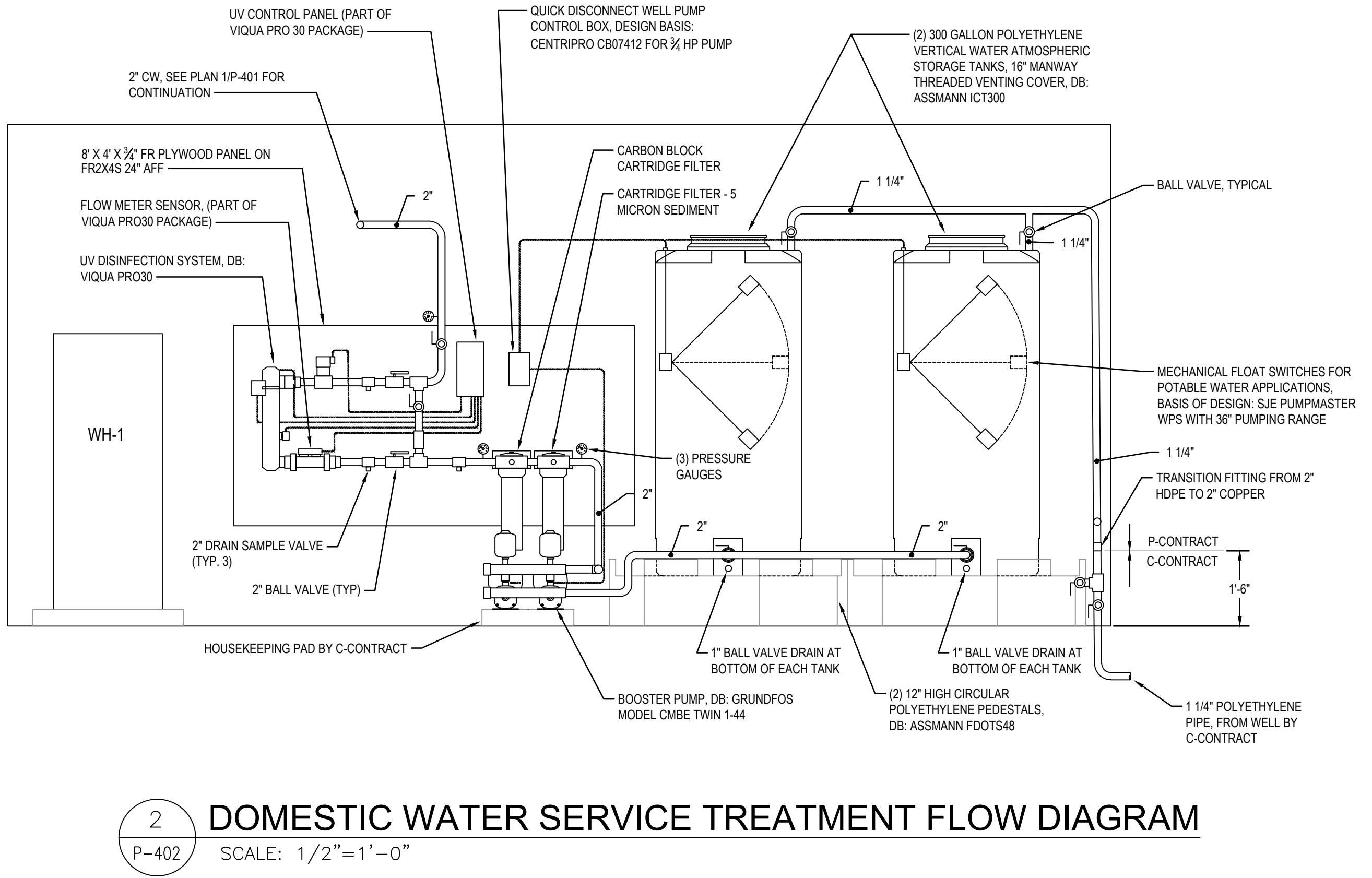
SHEET TITLE:  
**DOMESTIC WATER ENLARGED PLANS**

DRAWING NUMBER:  
**P-402**

SHEET **69** OF **86**

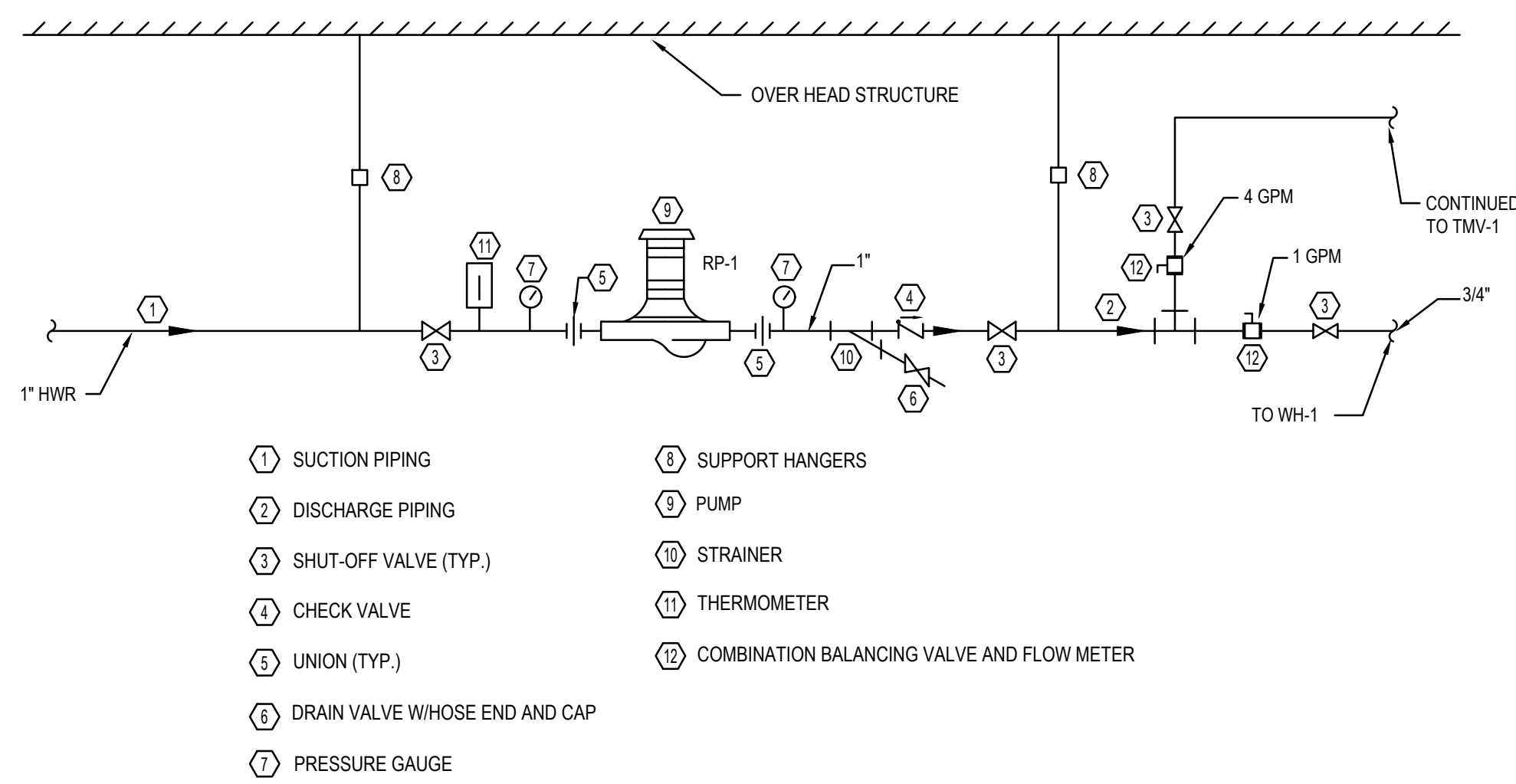


**1 FIRST FLOOR DOMESTIC WATER SERVICE TREATMENT PLAN**  
P-402 SCALE: 1/2"=1'-0"

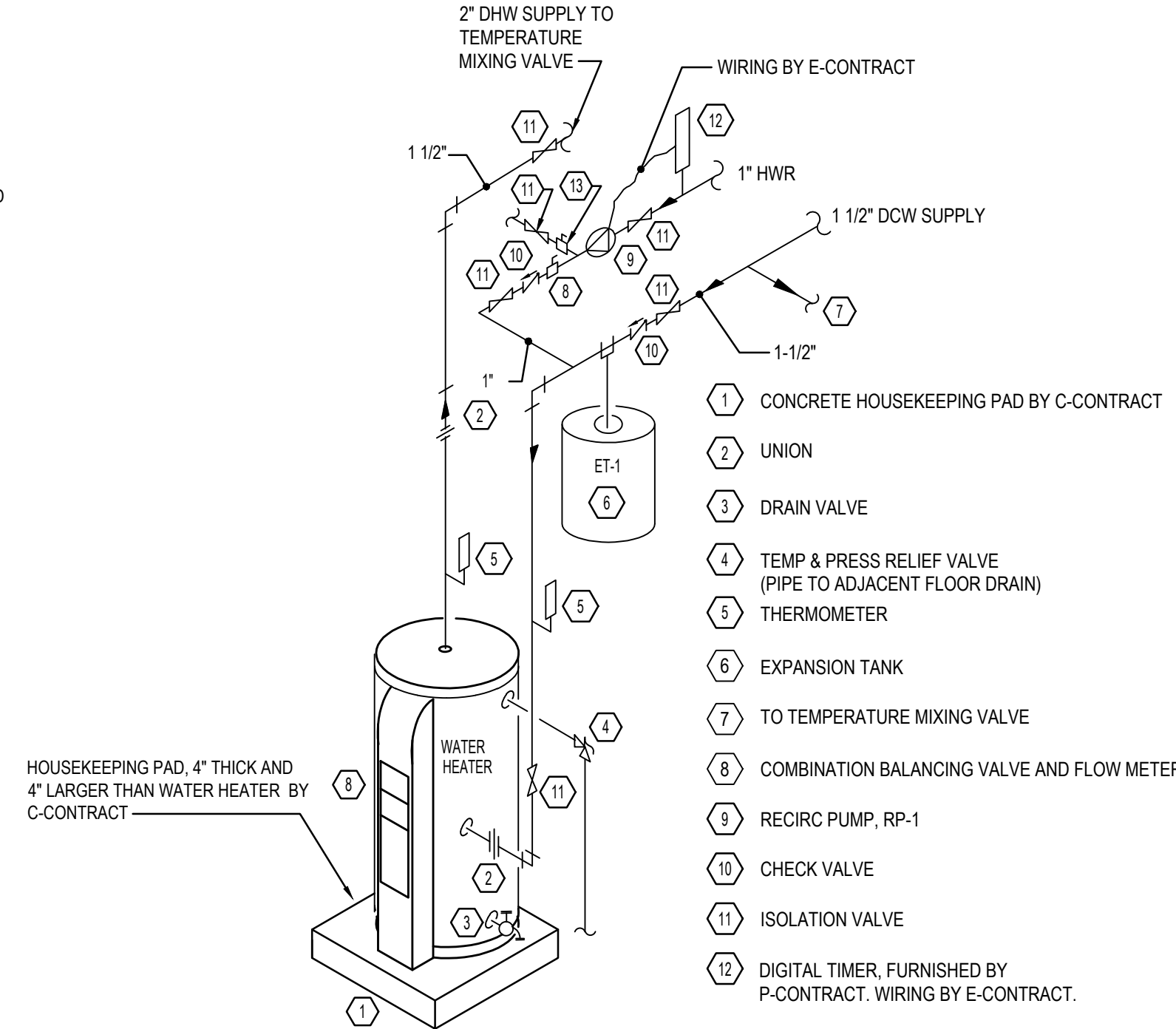


**2 DOMESTIC WATER SERVICE TREATMENT FLOW DIAGRAM**  
P-402 SCALE: 1/2"=1'-0"

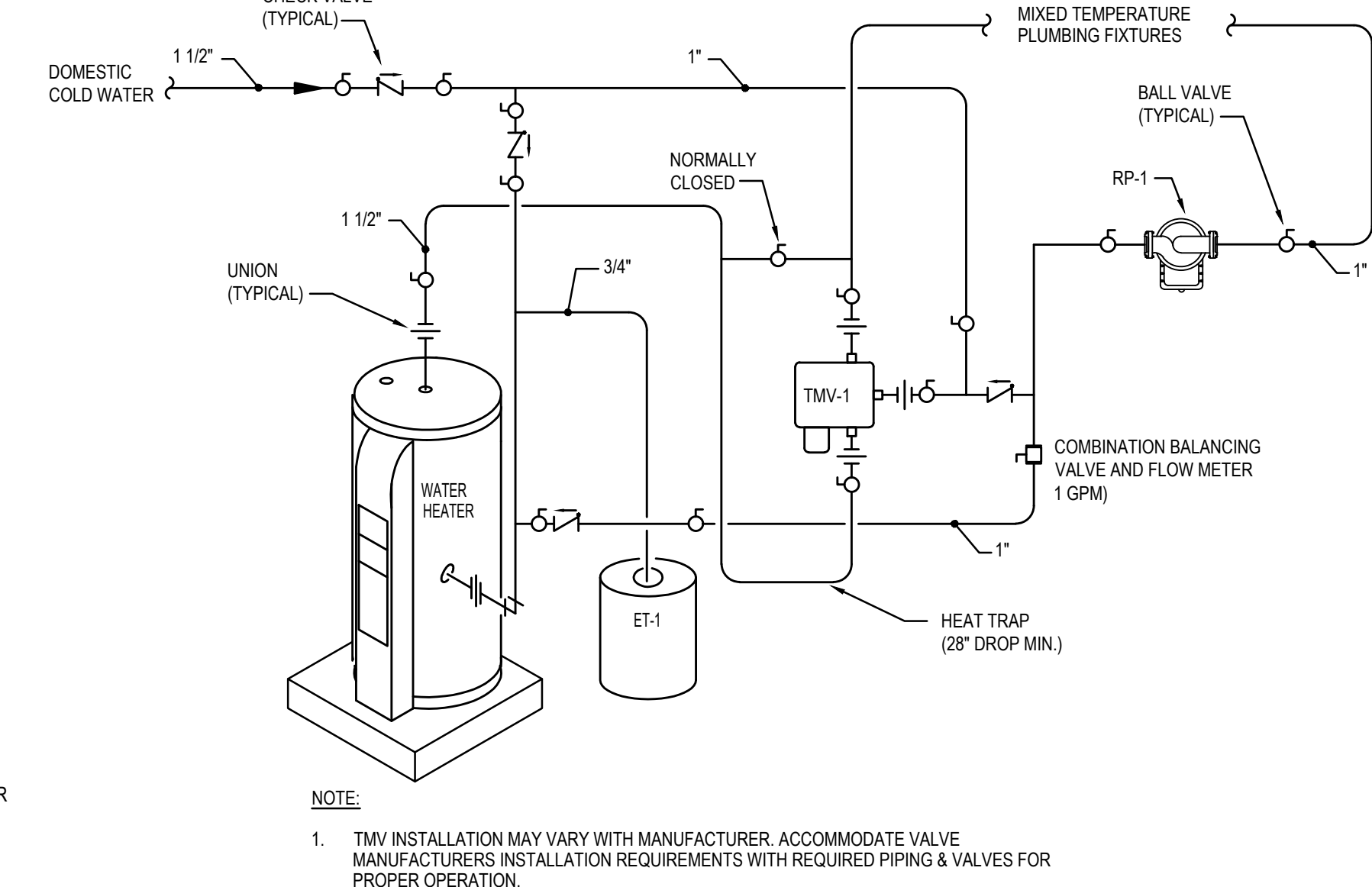
GENERAL NOTES:  
1. PROVIDE SHUTOFF VALVES ON ALL SUPPLY PIPING TO INDIVIDUAL FIXTURES. REFER TO FIXTURE SCHEDULE, AND DETAILS FOR SIZES NOT SHOWN ON PLANS.



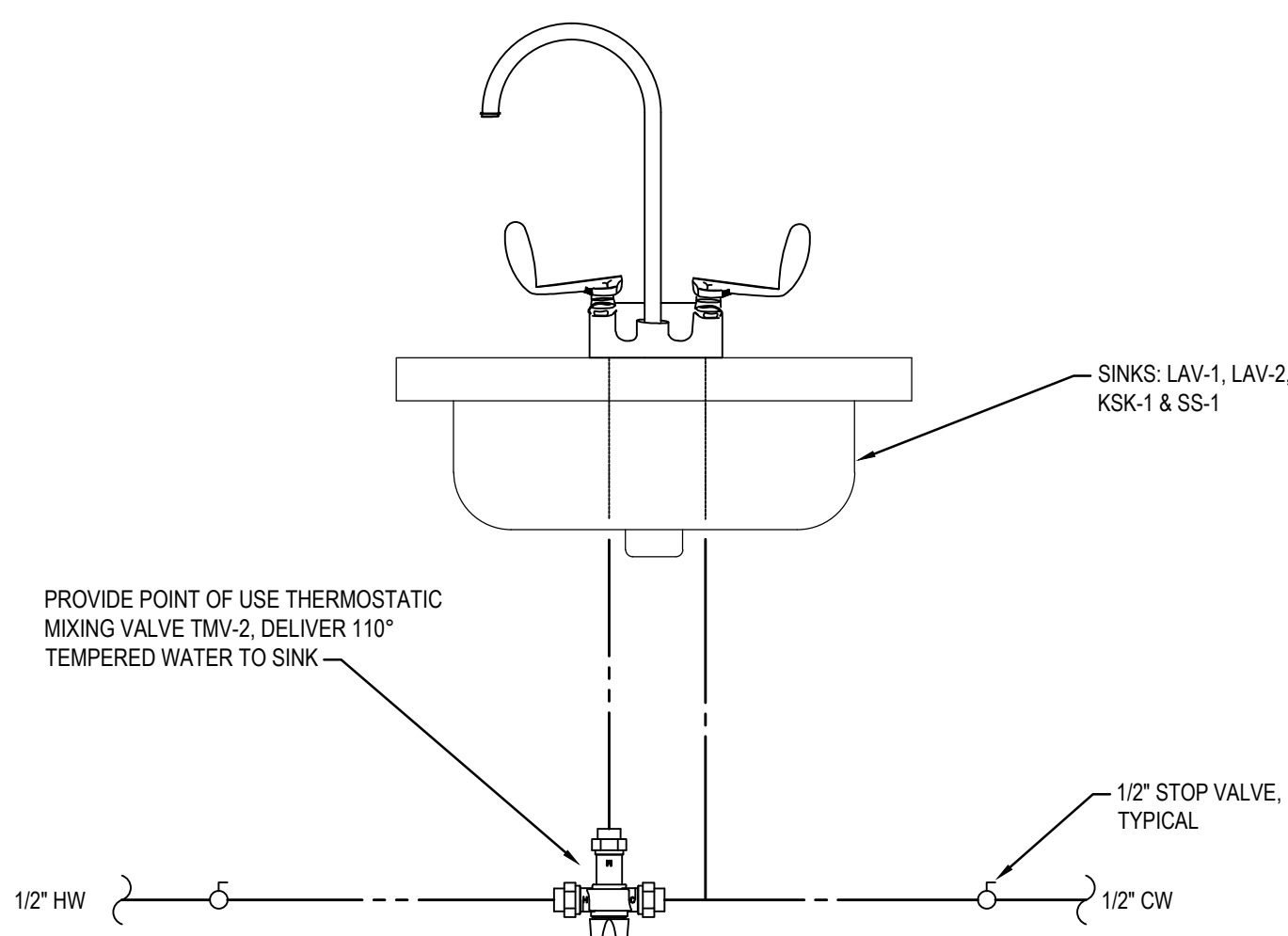
**1 INLINE PUMP DETAIL**  
P-501 SCALE: N.T.S.



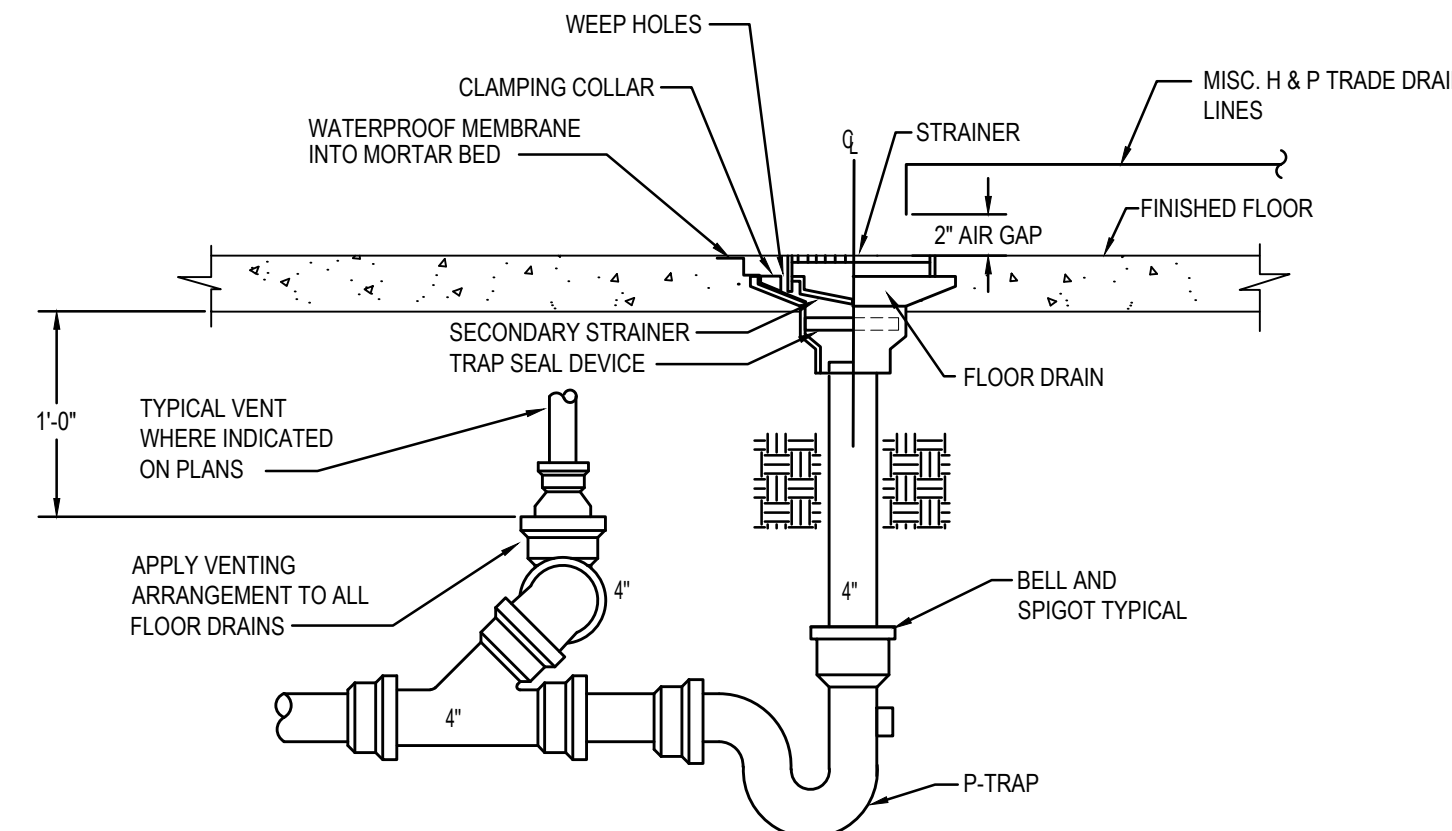
**2 ELECTRIC WATER HEATER DETAIL**  
P-501 SCALE: N.T.S.



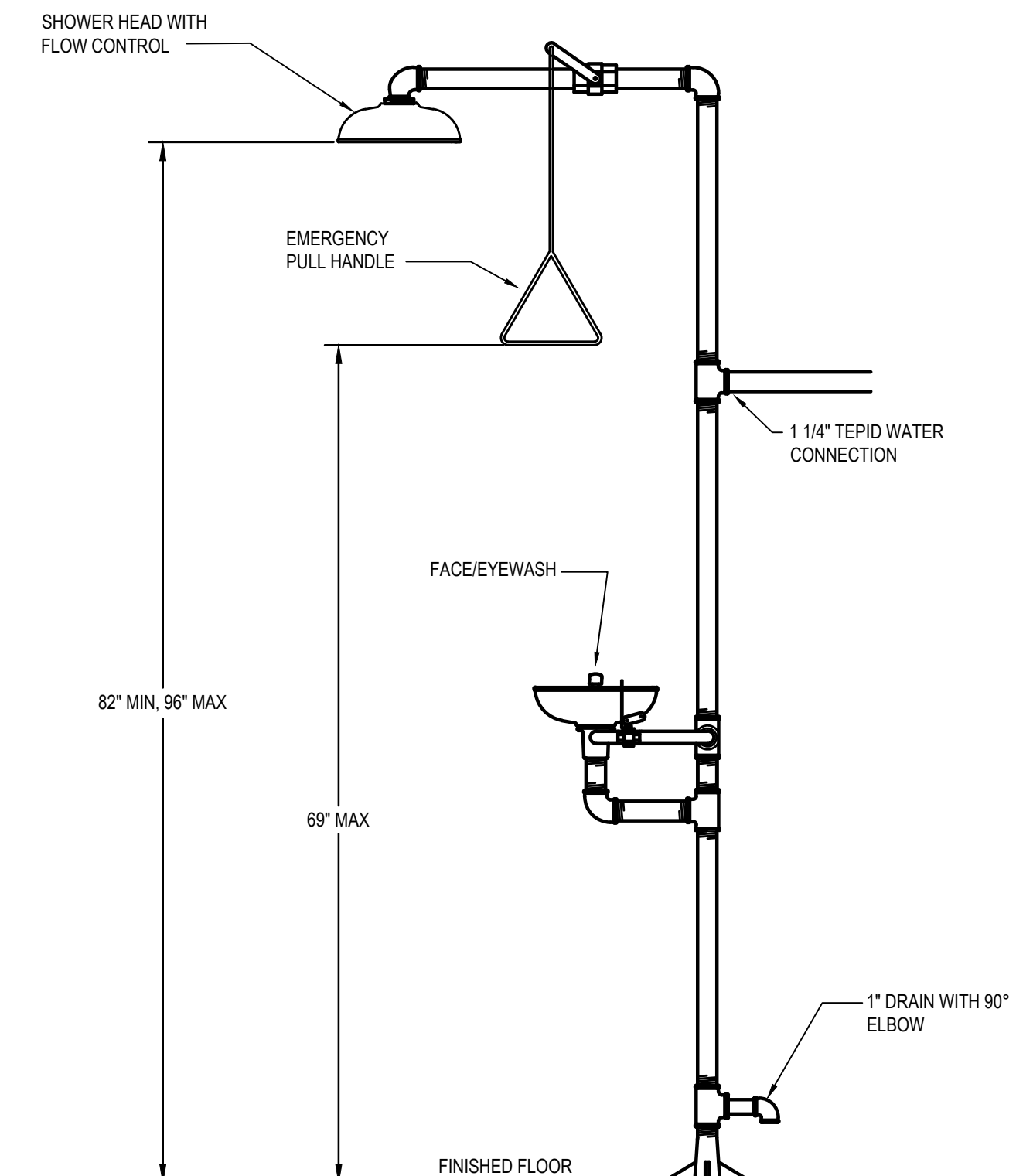
**3 ELECTRONIC MIXING VALVE DETAIL**  
P-501 SCALE: N.T.S.



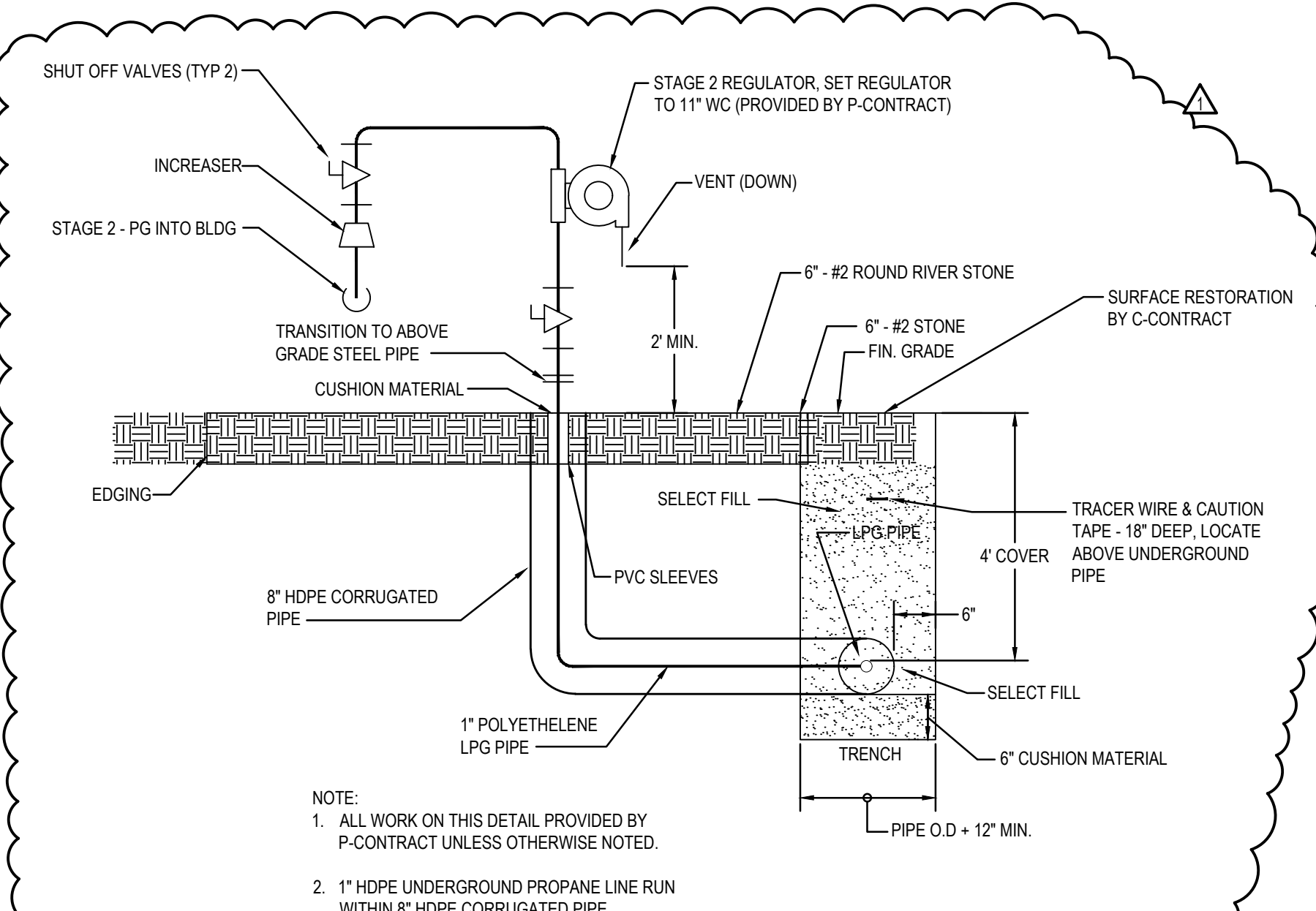
**4 SINK PIPING DETAIL**  
P-501 SCALE: N.T.S.



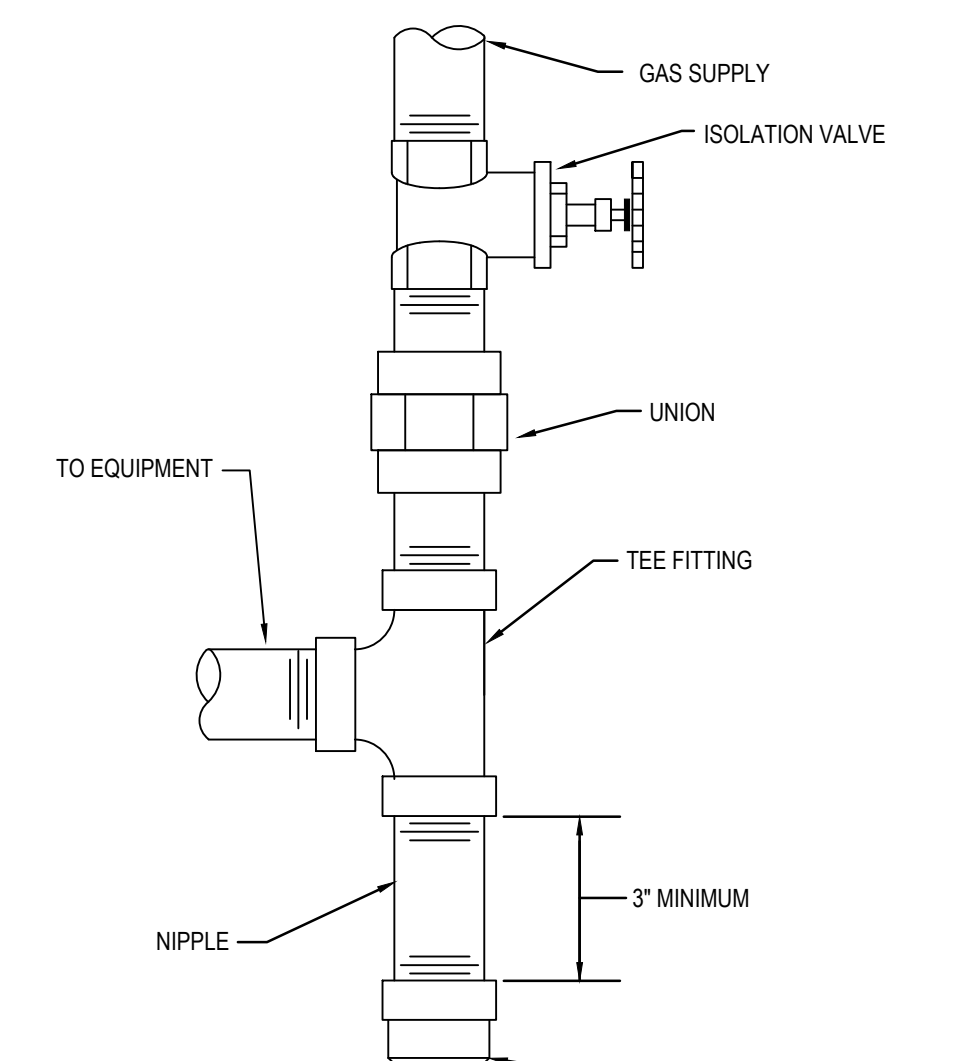
**5 FLOOR DRAIN WITH BURIED PIPING DETAIL**  
P-501 SCALE: N.T.S.



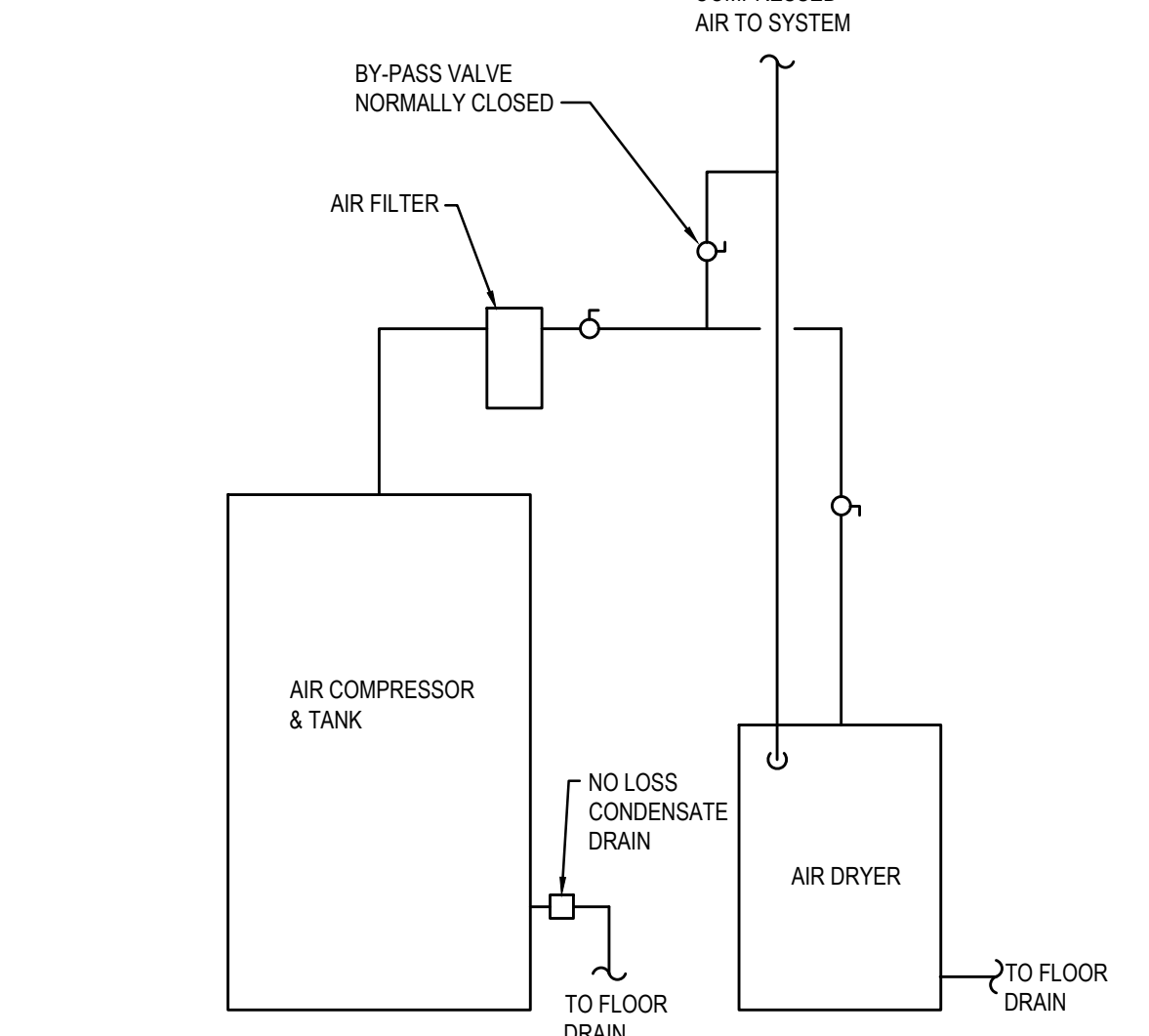
**6 EMERGENCY SHOWER DETAIL**  
P-501 SCALE: N.T.S.



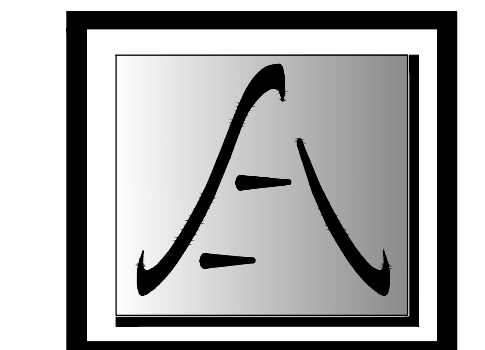
**7 REGULATOR AND TRENCH DETAIL**  
P-501 SCALE: N.T.S.



**8 PROPANE GAS PIPING DETAIL**  
P-501 SCALE: N.T.S.



**9 AIR COMPRESSOR DETAIL**  
P-501 SCALE: N.T.S.



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REVISED DRAWING 02/28/2025

MARK	DATE	DESCRIPTION
△	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT

PROJECT NUMBER: **46075 - P**

DESIGNED BY: **MWO**

DRAWN BY: **MWO**

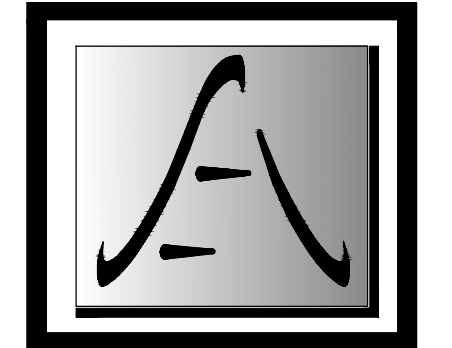
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APPROVED: **DPL**

SHEET TITLE: **DETAILS**

DRAWING NUMBER: **P-501**

SHEET **70** OF **86**

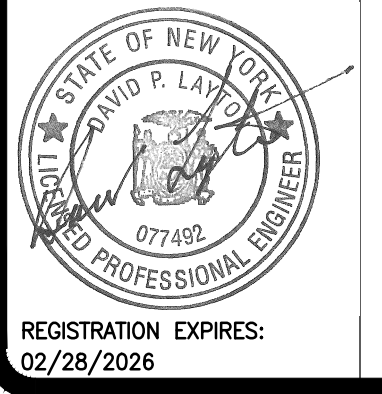


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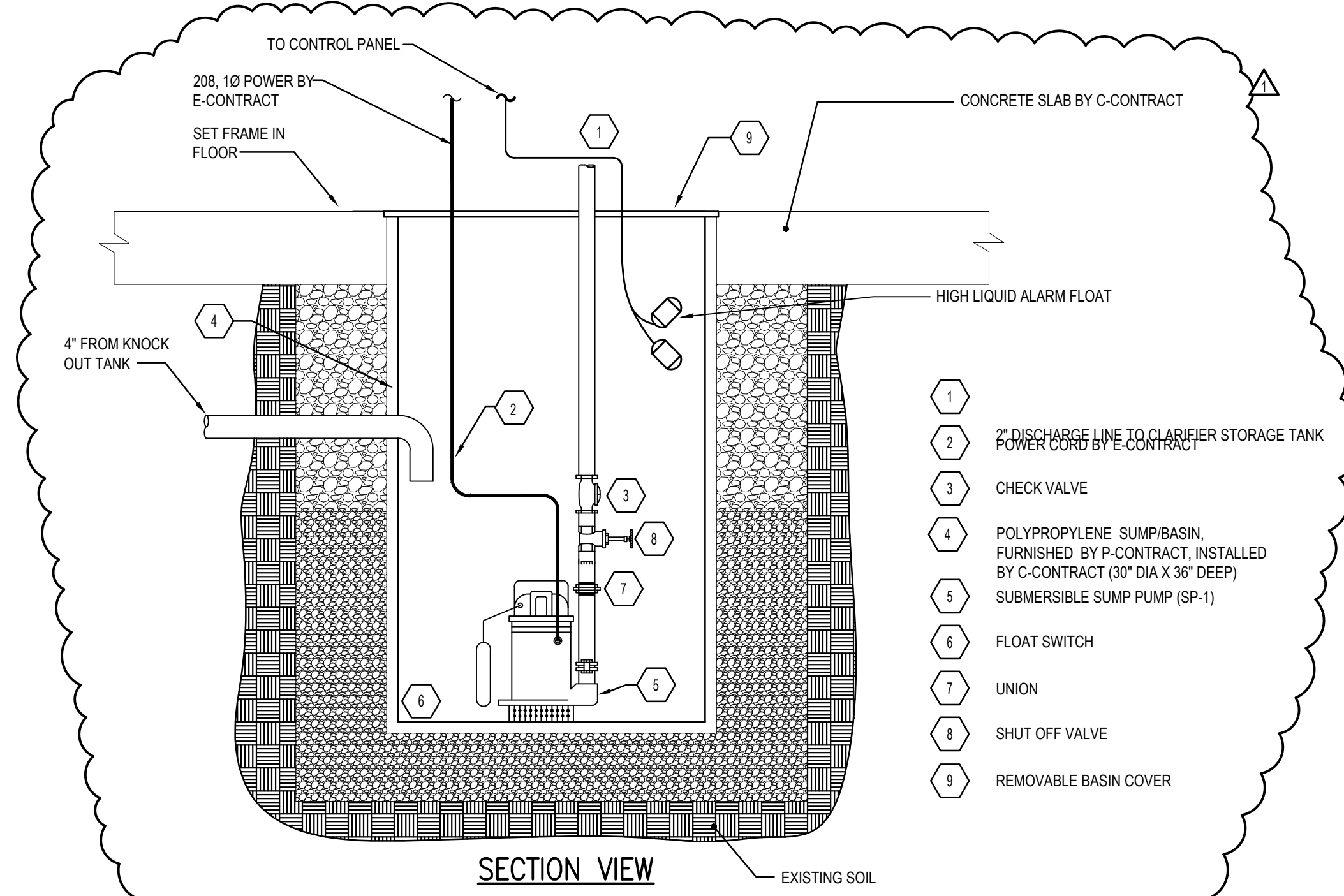
CLIENT: **DEPARTMENT OF TRANSPORTATION**

REVISED DRAWING 02/28/2025

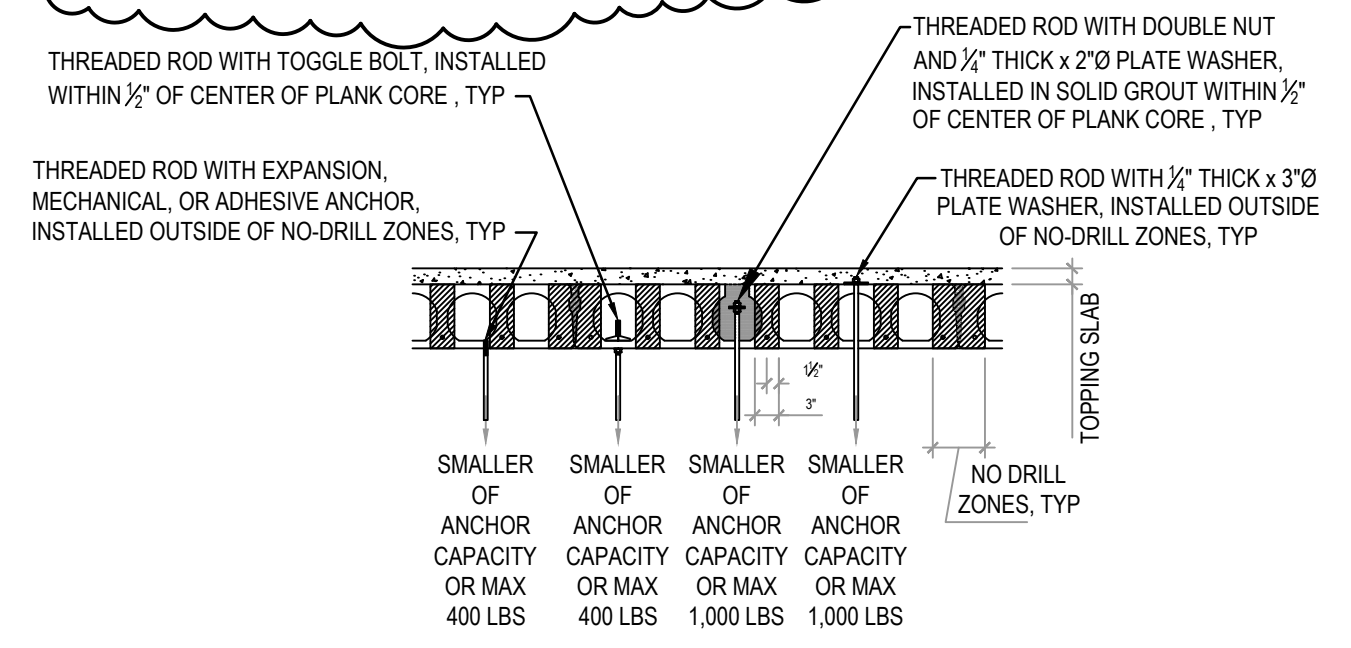
ADDENDUM	02/28/2025	ADDENDUM 1
MARK	01/10/2025	BID DOCUMENT
DATE		DESCRIPTION
PROJECT NUMBER:	<b>46075 - P</b>	
DESIGNED BY:	MWO	
DRAWN BY:	MWO	
FIELD CHECK:	DPL	
APPROVED:	DPL	
SHEET TITLE:		

DETAILS

DRAWING NUMBER: **P-502**

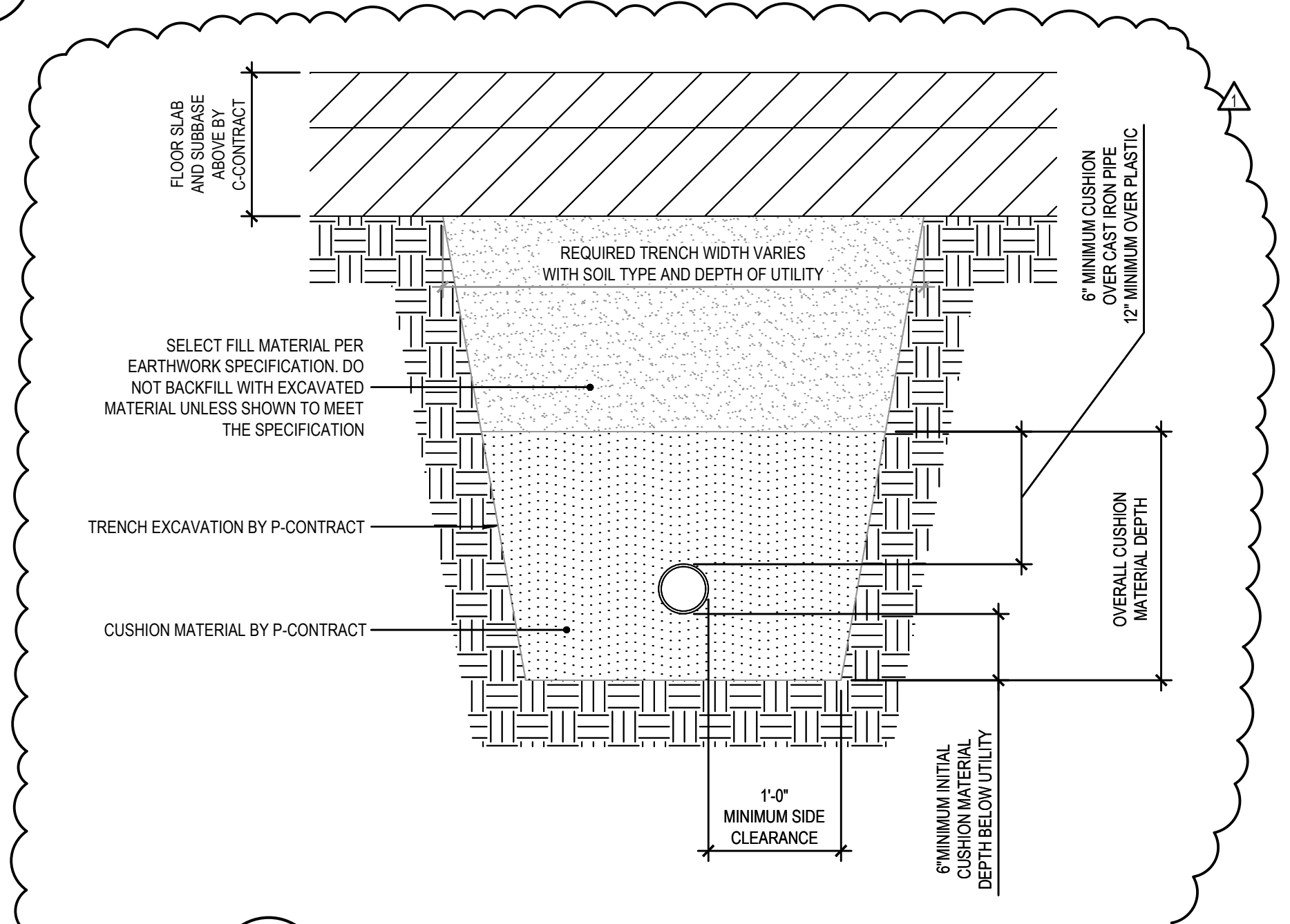


**3 SUMP PUMP DETAIL (SP-1)**  
P-502 SCALE: N.T.S.

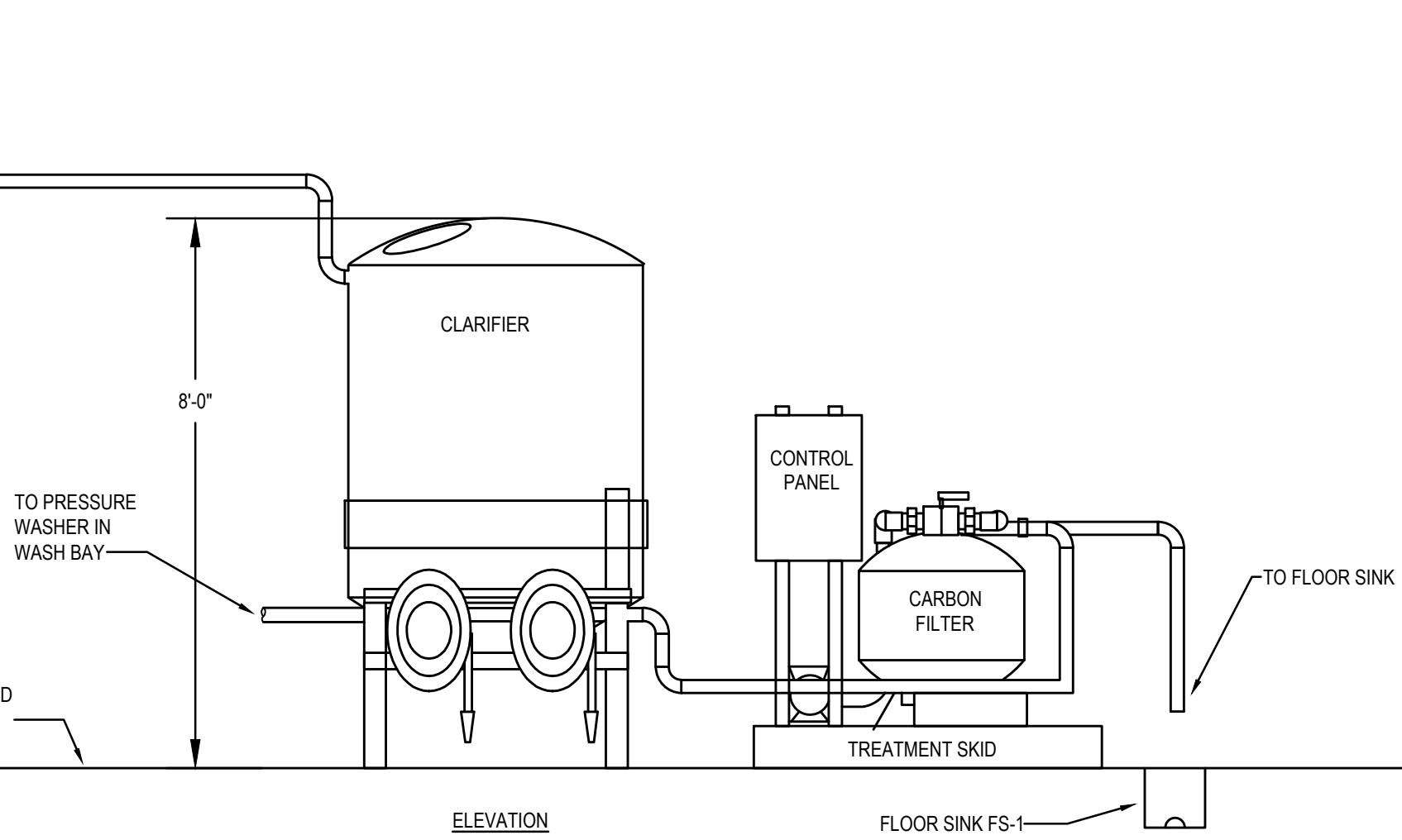
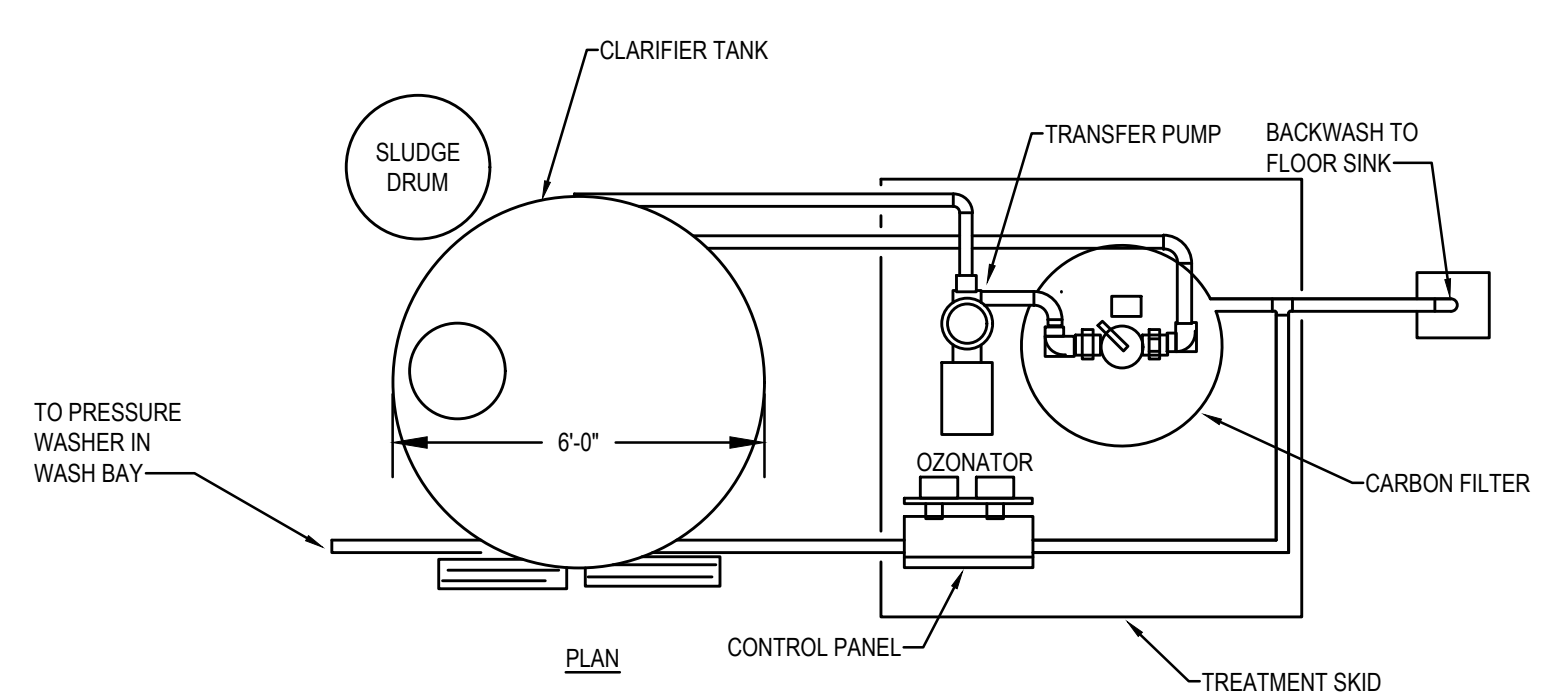


- NOTES:
- MAX (1) HANGER WITHIN ANY 18" SQUARE AREA.
  - FIELD MARK PRE-STRESSING STRANDS BEFORE DRILLING BASED ON APPROVED PLANK SHOP DRAWINGS. DO NOT DRILL WITHIN 1/2" OF CENTER OF STRANDS, TYP.
  - PONT LOADS OVER 400 LBS MUST BE SHOWN ON PLANK SHOP DRAWINGS AND ACCOMMODATED IN THE APPROVED PRECAST PLANK DESIGN.
  - DO NOT CUT OR OTHERWISE MODIFY PRE-STRESSING STRANDS WITHOUT APPROVAL OF THE PLANK MANUFACTURER AND THE DIRECTOR'S REPRESENTATIVE.

**4 CORED CAST CONCRETE DECK ATTACHMENT DETAIL**  
P-502 SCALE: NONE



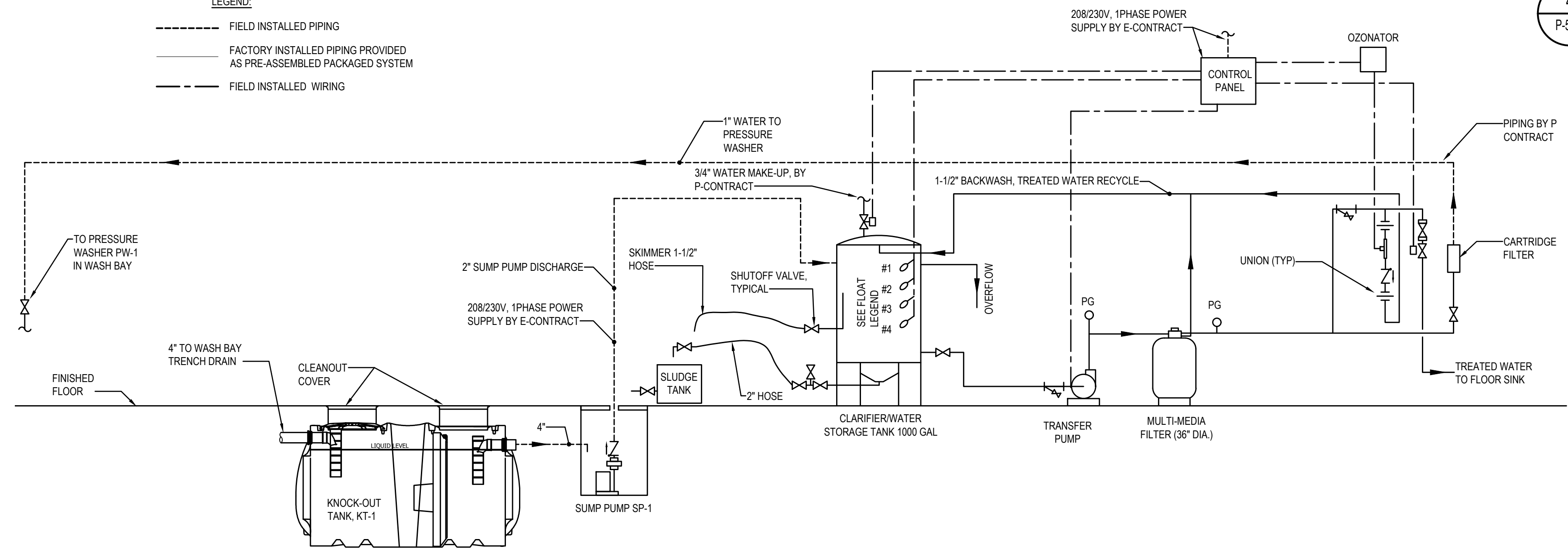
**5 PIPE TRENCH DRAIN DETAIL**  
P-502 SCALE: N.T.S.



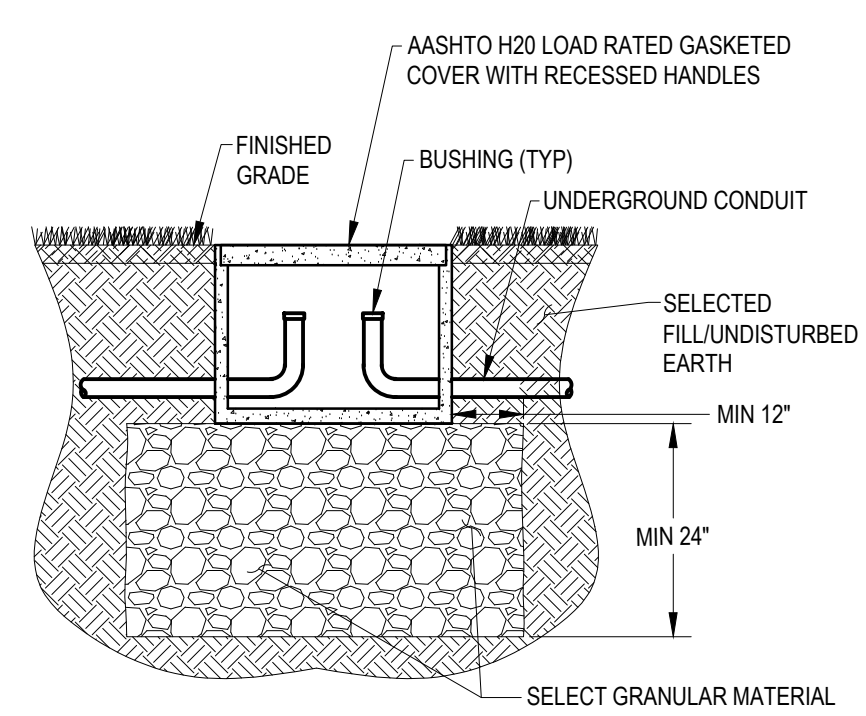
NOTE:  
1. THIS DETAIL REFLECTS THE GENERAL ARRANGEMENT OF THE SYSTEM COMPONENTS. REFER TO DETAIL 2/P-502 FOR INTERCONNECTING PIPING AND PIPE SIZES.

**1 WASH BAY WASHWATER RECYCLE SYSTEM**  
P-502 SCALE: N.T.S.

- LEGEND:
- FIELD INSTALLED PIPING
  - FACTORY INSTALLED PIPING PROVIDED AS PRE-ASSEMBLED PACKAGED SYSTEM
  - FIELD INSTALLED WIRING

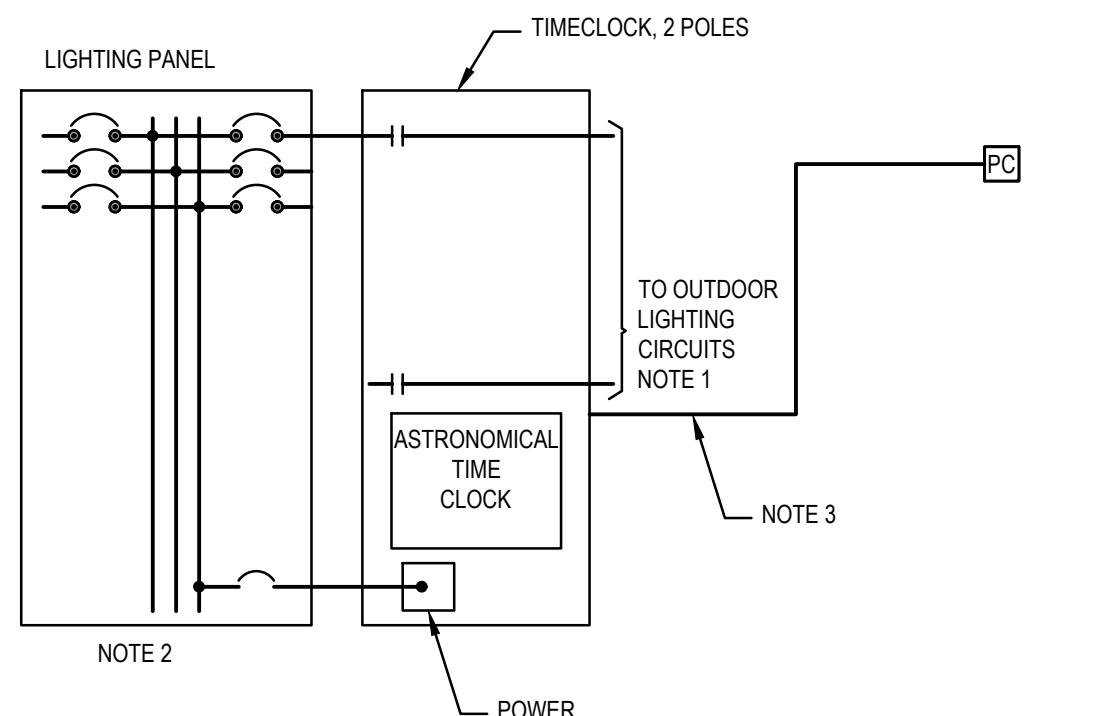


**2 WASH BAY WASHWATER RECYCLE SYSTEM FLOW DIAGRAM**  
P-502 SCALE: N.T.S.



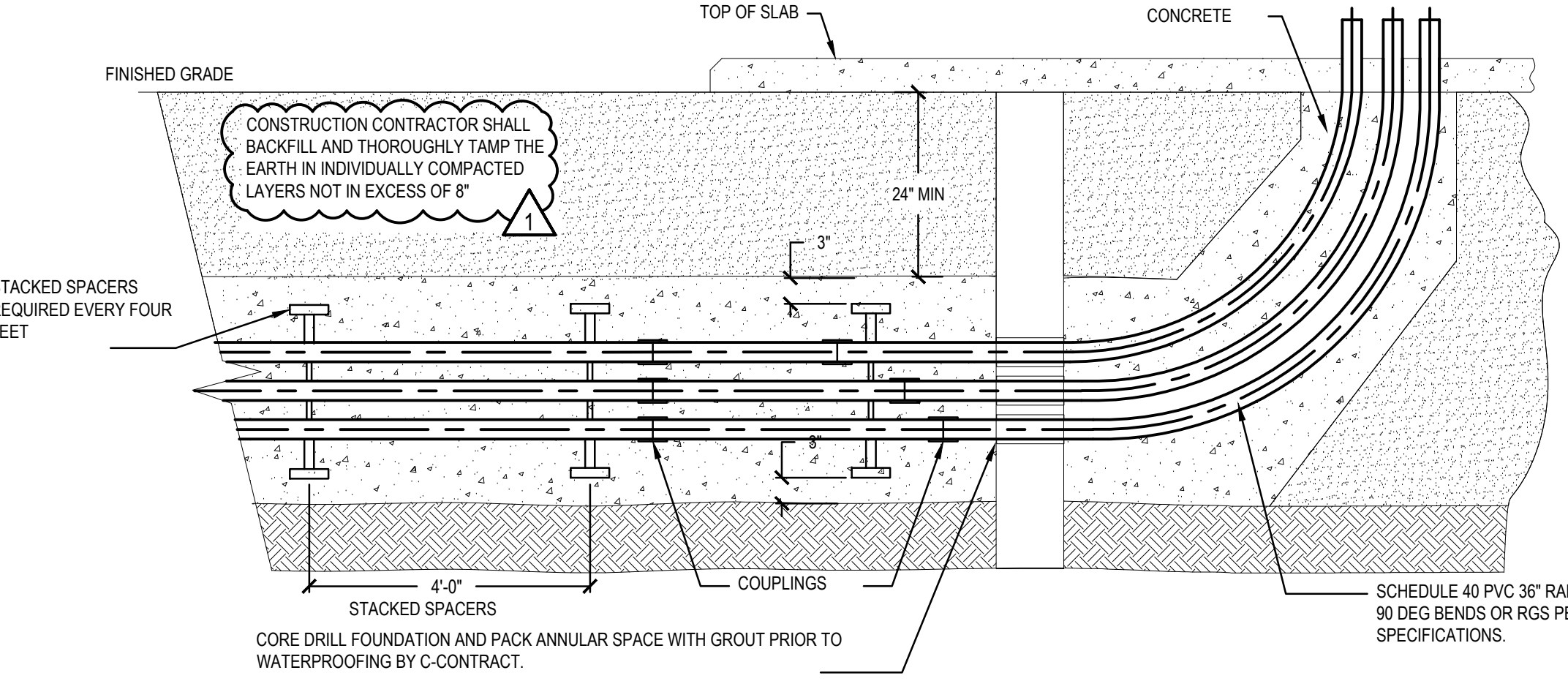
- NOTES:**
1. PROVIDE 24"W X 24"L (INTERIOR DIMENSION) POLYMER CONCRETE HANDHOLE WITH 4" THICK WALLS AND BOTTOM. DEPTH SHALL BE AS REQUIRED TO INTERCEPT EXISTING UNDERGROUND CONDUITS.
  2. PROVIDE WET LOCATION SPLICES FOR ANY SPLICES MADE WITHIN HAND HOLE.
  3. INCLUDE STAINLESS STEEL FASTENERS ONLY.

**1 HANDHOLE DETAIL**  
E-502 SCALE: NTS

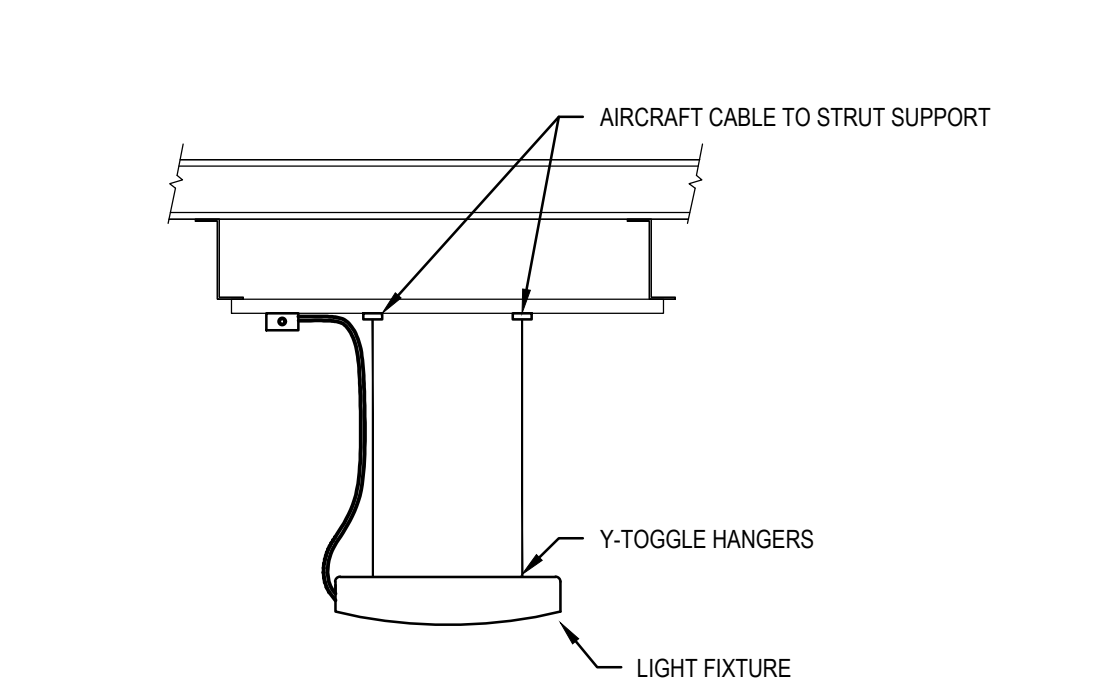
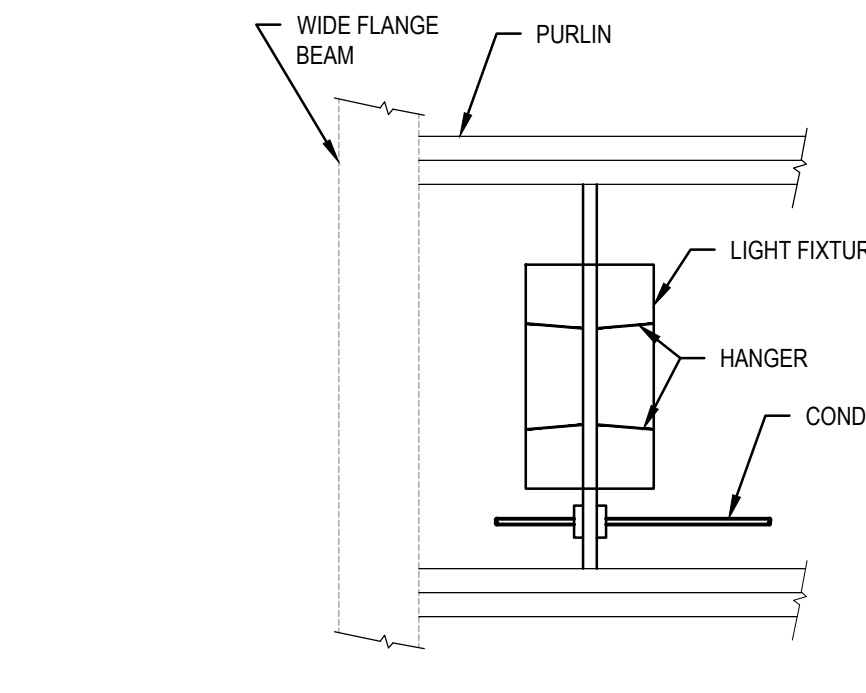
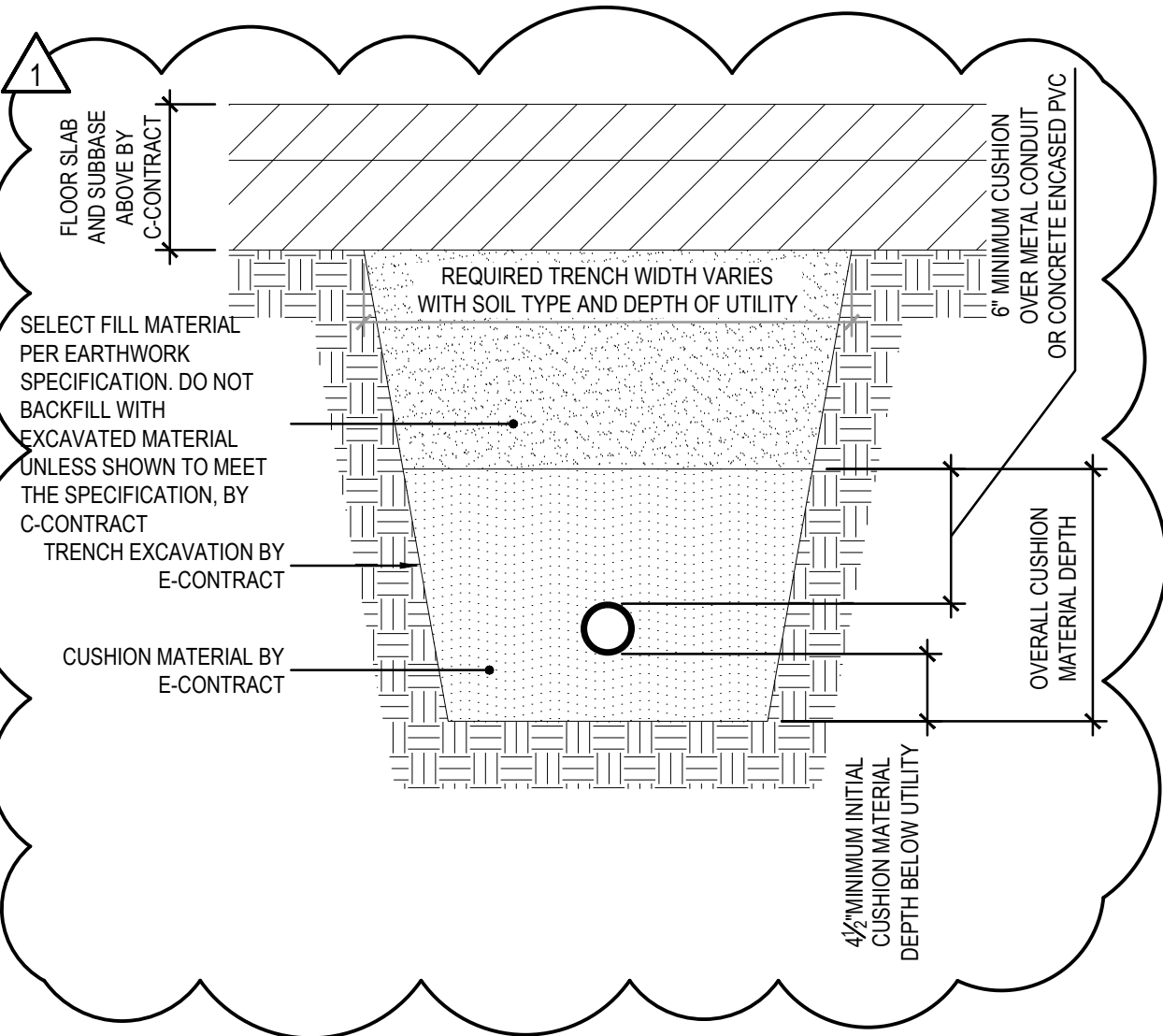


- NOTES:**
1. REFER TO LIGHTING PLANS FOR LOCATION OF OUTDOOR LIGHTING FIXTURES.
  2. REFER TO LIGHTING PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
  3. CONNECT TO TIME CLOCK WITH 2#12 IN 3/4" RGS.

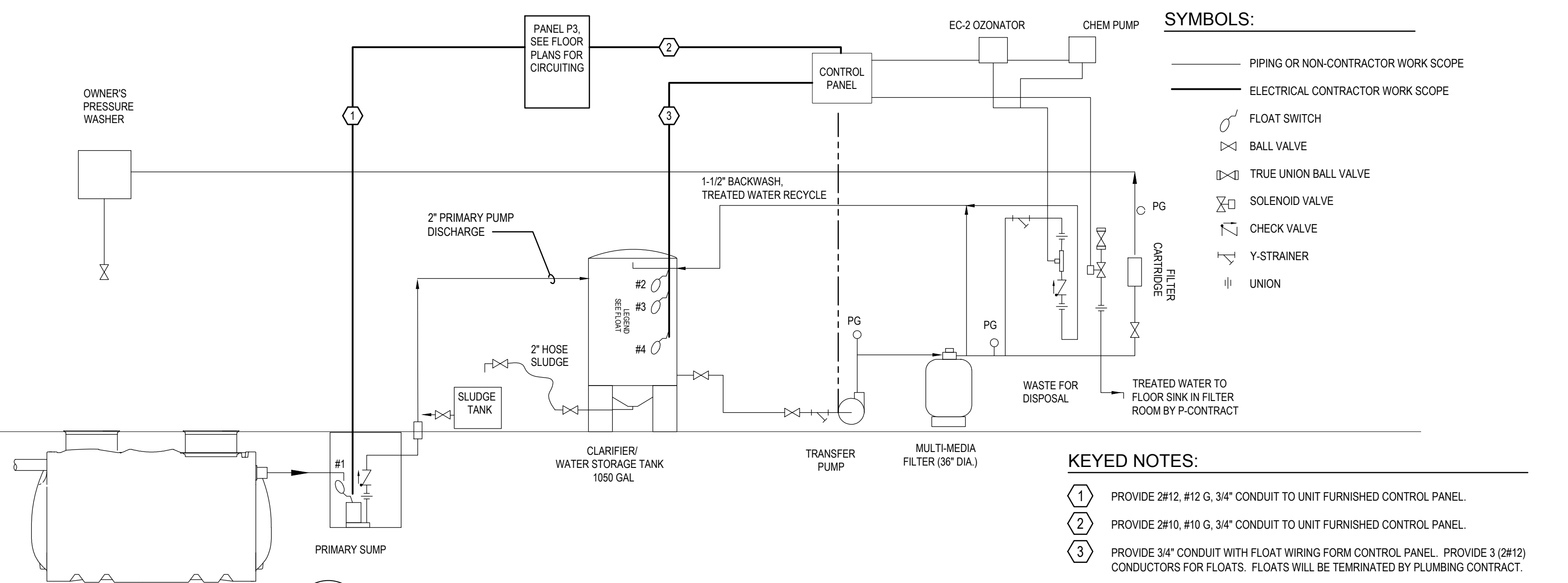
**2 OUTDOOR LIGHTING CONTROL**  
E-502 SCALE: NTS



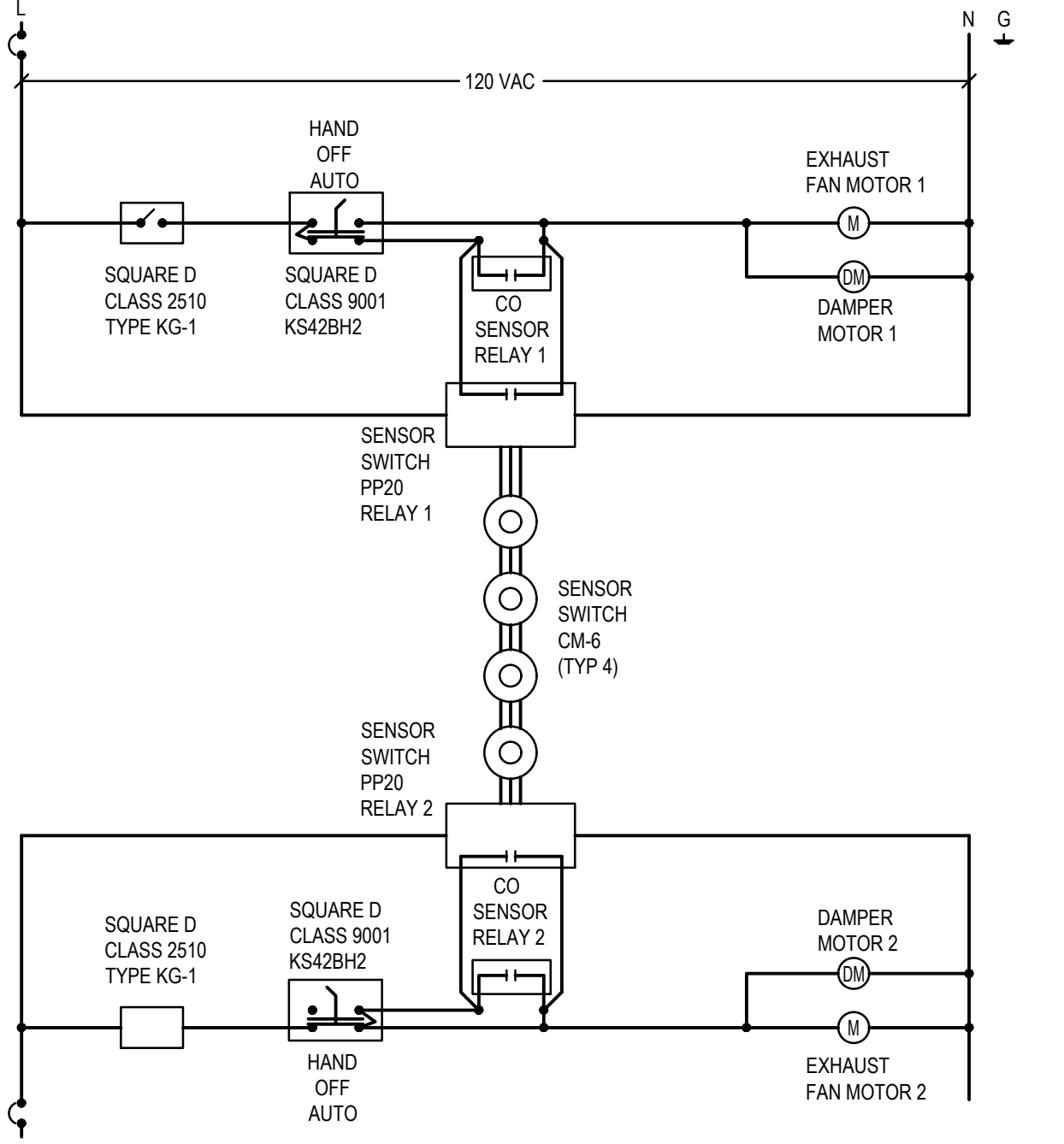
**3 SLAB ON GRADE CONDUIT PENETRATION DETAIL**  
E-502 SCALE: NTS



**4 LIGHT FIXTURE SUPPORT DETAIL**  
E-502 SCALE: NTS

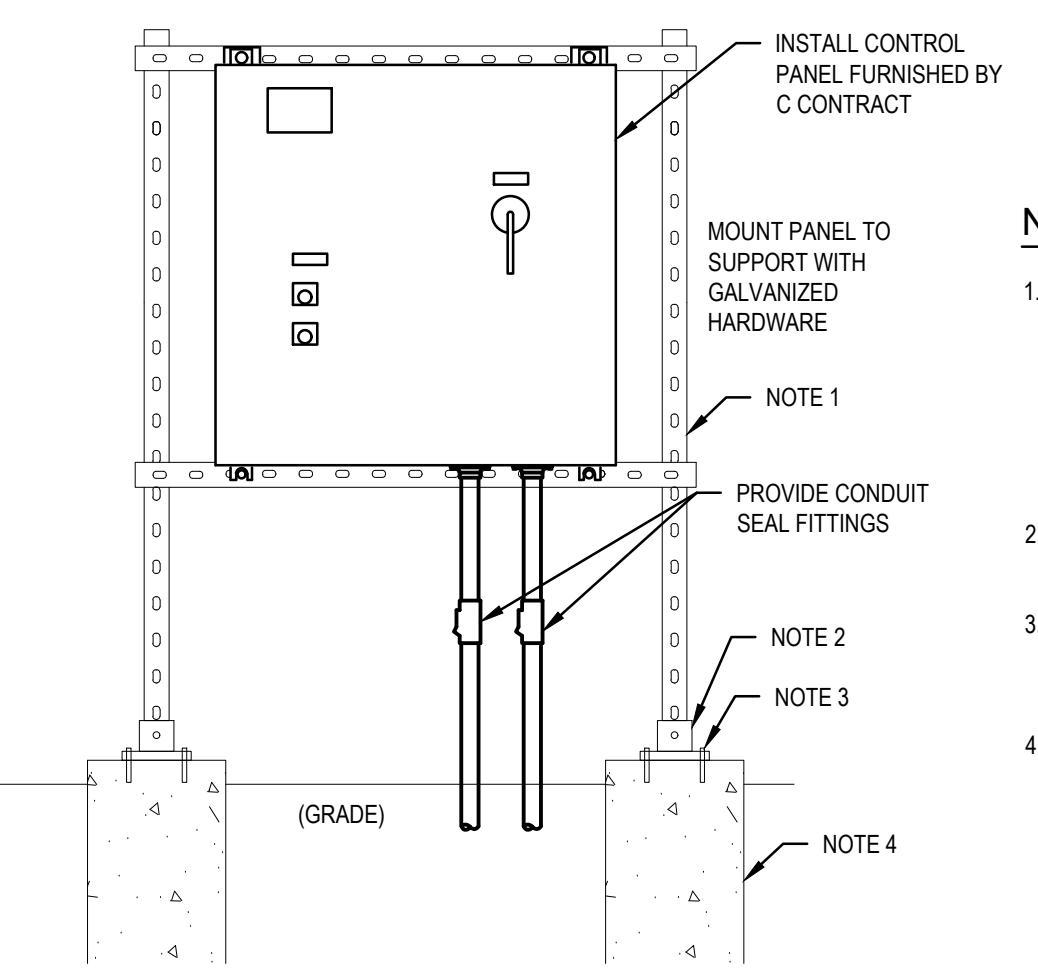


**5 VEHICLE WASH PROCESS FLOW DIAGRAM**  
E-502 SCALE: NTS



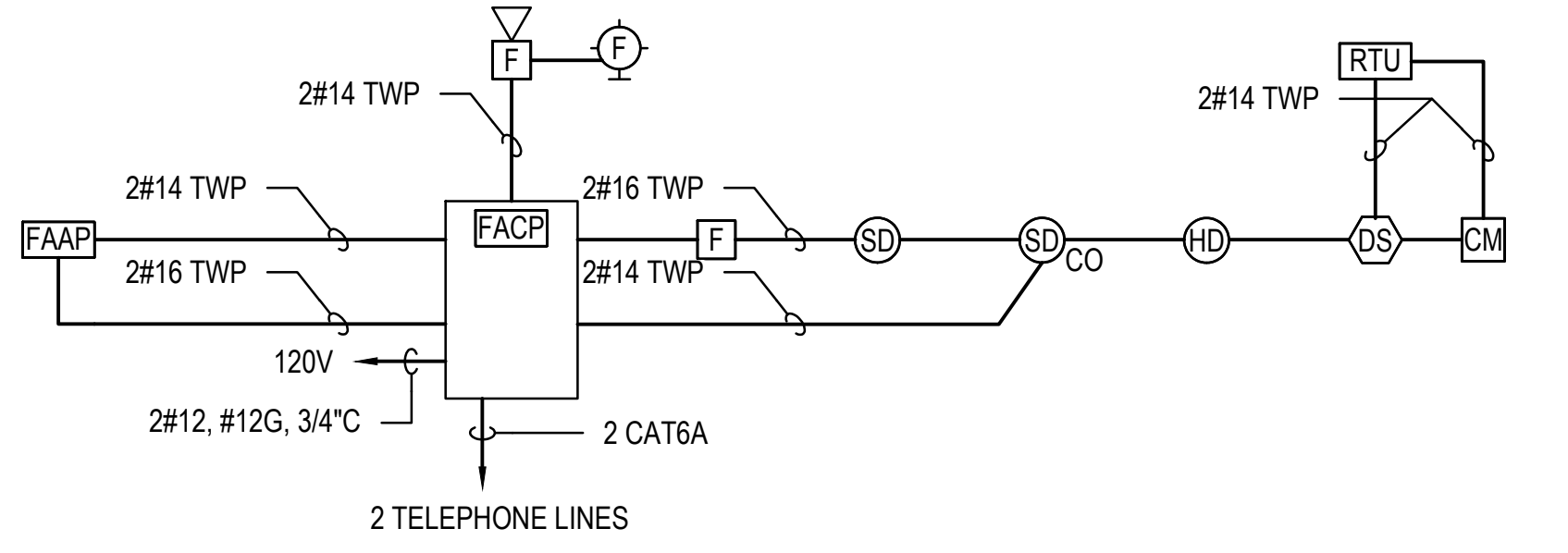
- NOTES:**
1. PROVIDE #12 AWG CONDUCTORS, 3/4" C, FOR ALL 120 VAC CONDUCTORS.
  2. PROVIDE #16 AWG CONDUCTORS, 3/4" C, FOR OCCUPANCY SENSOR LOW VOLTAGE CONDUCTORS

**6 GARAGE BAY VENTILATION CONTROL DIAGRAM**  
E-502 SCALE: NTS



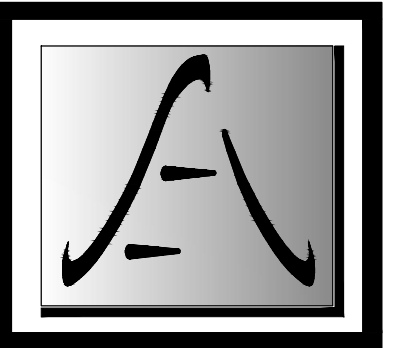
**7 SAND FILTER PUMP CONTROL PANEL DETAIL**  
E-502 SCALE: NTS

- NOTE:**
1. PROVIDE 1-5/8" x 1-5/8" x 12 GAGE, HOT DIP PRE-GALVANIZED, ASTM A653 GR 33 COLD FORMED U-CHANNEL STRUT; UNISTRUT PART NUMBER P1000 OR EQUAL. PROVIDE CHANNEL HARDWARE COMPATIBLE WITH STRUT MANUFACTURER, INCLUDING CHANNEL NUTS, WASHERS, BOLTS, ETC.
  2. PROVIDE BASE PLATE: UNISTRUT PART NUMBER P1887 OR EQUAL.
  3. PROVIDE (4) EXPANSION ANCHORS PER BASE PLATE, HILTI ITEM NUMBER 3457877 OR EQUAL; 1/2" DIA., 5-1/2" LENGTH, 316 STAINLESS STEEL.
  4. PROVIDE 8" DIAMETER CONCRETE FOOTINGS, MINIMUM 3' DEEP.



- NOTE:**
1. REFER TO FLOOR PLAN FOR QUANTITIES AND LOCATIONS OF DEVICES AND EQUIPMENT.
  2. PROVIDE MANUFACTURER'S RECOMMENDED WIRING TYPE AND QUANTITY.
  3. WIRING AS PER MANUFACTURER'S STANDARD PRACTICES.

**8 FIRE ALARM RISER DIAGRAM**  
E-502 SCALE: NTS



**ENERGY CODE STATEMENT:**  
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 ENERGY CODE.

**UNIFORM CODE STATEMENT:**  
TO THE BEST OF THE REGISTERED DESIGN PROFESSIONAL'S KNOWLEDGE, BELIEF AND PROFESSIONAL JUDGEMENT, THESE PLANS AND/OR SPECIFICATIONS ARE IN COMPLIANCE WITH THE 2020 UNIFORM CODE.

**WARNING:**  
THE ALTERATION OF THIS MATERIAL IN ANY WAY, UNLESS DONE UNDER THE DIRECTION OF A COMPARABLE PROFESSIONAL, I.E. ARCHITECT FOR AN ARCHITECT, ENGINEER FOR AN ENGINEER OR LANDSCAPE ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW AND/OR REGULATIONS AND IS A CLASS "A" MISDEMEANOR.



REGISTRATION EXPIRES: 10/31/2026

**CONTRACT:**  
**ELECTRICAL**

**TITLE:**  
PROVIDE MAINTENANCE SUB-HEADQUARTERS

**LOCATION:**  
DOT REGION 8 COLUMBIA COUNTY  
1373 STATE ROUTE 203  
CHATHAM, NY

**CLIENT:**  
DEPARTMENT OF TRANSPORTATION

REVISED DRAWING 02/28/2025

MARK	DATE	DESCRIPTION
△	02/28/2025	ADDENDUM 1
	01/10/2025	BID DOCUMENT

**PROJECT NUMBER:** 46075 - E

**DESIGNED BY:** MOM

**DRAWN BY:**

**FIELD CHECK:**

**APPROVED:** MOM

**SHEET TITLE:** DETAILS AND DIAGRAMS

**DRAWING NUMBER:** E-502

SHEET 84 OF 86