

# ADDENDUM NO. 2

## WTCC Fire and Rescue Training Center

Prepared by:



Date of Issue: May 2nd, 2025

**THE FOLLOWING ITEMS TAKE PRECEDENCE OVER THE REFERENCED PORTION OF THE BIDDING DOCUMENTS FOR THE ABOVE REFERENCED PROJECT AND IN EXECUTING A CONTRACT SHALL BECOME A PART THEREOF.**

**1. Summary of Addenda #2:**

**A.** HH Architecture Design Addenda #2 (See HH Addendum for summary of changes)

**B.** CM Trade Package Manual and CM General Requirements Manual

- Revised CM General Requirements Manual
  - **Revised Bid Due Date: May 22, 2025**
  - Clarified address for East Wake Tech Building C
  - Revised Bid Bond requirement threshold
  - Revised RFI and Substitution Request Dates
  - Revised General Requirements index page

**C.** BID PACKAGE SCOPES OF WORK REVISED OR ADDED:

- Revised Scopes of work
  - BP-04A Masonry
    - Clarification on refract lintels
  - BP-31A Sitework
    - Clarification on ABC stone
  - BP-32C Asphalt Paving and Curb & Gutter
    - Clarification on ABC Stone
- The remaining Scopes of work will be issued in Addenda #3

**D.** Pre-Bid RFI questions and responses through 5/2/2025

**END OF ADDENDUM NO. 2**

HH ARCHITECTURE

## ADDENDUM #2

May 1, 2025

Project Name: **East Wake Site - Fire & Rescue Training Center**

Owner: Wake Technical Community College

NCCS Project #: 2303  
HH Project #: 22-086

From: **HH Architecture**  
James G. Briglia, AIA jbriglia@hh-arch.com

To: Samet Corporation  
Andrew Gotschall agotschall@sametcorp.com

Message: Bidders are hereby informed that the following additions, deletions, changes, and clarifications supersede and supplement the Contract Documents for the above-referenced project. It forms a part of the previously issued Construction Documents dated **March 14, 2025**.

This addendum may include revised pages and drawings, which shall be inserted before the corresponding page or drawings in the previously issued documents.

### REVISIONS TO SPECIFICATIONS

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1. **REPLACE** in their entirety the following section with the revised sections dated **5/1/2025**
  - a. **042000 Unit Masonry**
    - i. Revised section 2.3
  - b. **033000.01 Training Structure Cast in Place Concrete**
  - c. **042000.01 Training Structure Unit Masonry Assemblies**
  - d. **055000.01 Training Structure Metal Fabrications**
  - e. **070001 Training Structure Thermal Linings**
2. **ADD** section **101419-Dimensional Letter Signage**
  - a. Add dimensional numbers for addressing buildings, final locations TBD
3. **ADD** section **282301 Security Systems**, in its entirety to the project manual.

**4. Section 074113 Standing-Seam Metal Roof Panels:**

- a. **REVISE** paragraph 1.9 Warranty paragraph C Special Weathertightness Warranty to read as follows:

*1. Warranty Period: 5 years from the date of Final Completion.*

- b. Revise 2.7 Panel Materials, paragraph A.1 & 2 to read as follows:

*1. Nominal Thickness: 0.028 inch (0.71 mm).*

*2. Surface: Smooth, flat finish.*

**REVISIONS TO DRAWINGS**

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- 5. CIVIL DRAWINGS: REPLACE** the following drawing sheets with the attached **Revision date 5/1/2025**. See BID RFI's for the description of changes to these sheets

- a. **C105 Site Details**
- b. **C201 Wet Pond-1**
- c. **C400 Erosion Control Phase 1**
- d. **C401 Erosion Control Phase 2**

- 6. REPLACE** the following drawing sheets with the attached **Revision date 5/1/2025**

- a. **Sheet E002:**
  - i. Updated keynote 7 to include camera manufacturer and part number.
  - ii. Updated keynote 11 to require structural calculations from a NC PE for light pole support.
- b. **Sheet E501:** Updated fixture schedule notes to require structural calculations from an NC PE for light pole support.
- c. **Sheet E511**
  - i. Added pole-mounted security camera detail to show box and camera mounting to light poles.
  - ii. Added security scope and equipment list.
- d. **Sheet FP112:** Revised FDC from Siamese type to Storz type connection.

- e. **Sheet FP113:** Moved sprinkler branch line south further away from elevator shaft. Added valves at each sprinkler.
  - f. **Sheet FP115:** Revised FDC from Siamese type to Storz type connection.
  - g. **Sheet FP116:** Added valves at each sprinkler.
- 7. BURN BUILDING BB DRAWINGS: REPLACE** the following drawings with the attached drawings with **Revision date 5/1/2025**
- h. **BB201-BB207:** Updated graphic for debris chute on floor plans and updated keyed note for top of wall joint & bracing detail.
  - i. **BB302:** Updated base of debris chute.
  - j. **BB304 – BB305:** Updated height of debris chute and thermal lining rollover tiles as door and window locations.
  - k. **BB306-BB307:** Updated reference to top of non-bearing wall detail.
  - l. **BB401-BB407:** Updated notes and dimensions for clarification.
  - m. **BB501, BB502, BB504, BB505, BB506, BB601, BB602, BB604 – BB610:** Updated dimensions and notes on details for clarification.
- 8. TRAINING TOWER TT DRAWINGS:** Replace the following drawings with the attached drawings dated 4/14/2025
- a. **TT302:** Updated masonry control joint locations.
  - b. **TT501:** Updated control joint in slab-on-grade at interior door opening.
  - c. **TT601:** Updated note on 1/TT601.

## CLARIFICATIONS

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9. No access controls are included in this project.

## ATTACHEMENTS

033000.01 Training Structure Cast In Place Concrete ADD2-2025-0501  
042000 Unit Masonry-ADD2 2025-0501  
042000.01 Training Structure Unit Masonry Assemblies ADD2-2025-0501  
055000.01 Training Structure Metal Fabrications ADD2-2025-0501  
070001 Training Structure Thermal Linings ADD2-2025-0501  
101419 Dimensional Letter Signage- Add2 2025-0501  
282301 Security Systems ADD2-2025-0501  
C-105 -SITE DETAILS -ADD2-2025-0501  
C-201 -WET POND 01 DETAIL -ADD2-2025-0501  
C-400 -EROSION CONTROL PHASE 1 -ADD2-2025-0501



C-401 -EROSION CONTROL PHASE 2 -ADD2-2025-0501  
FP112-PLANS -TRAINING TOWER-ADD2-2025-0501  
FP113-PLANS -TRAINING TOWER-ADD2-2025-0501  
FP115-PLANS -BURN BUILDING-ADD2-2025-0501  
FP116-PLANS -BURN BUILDING-ADD2-2025-0501  
E002-SITE PLAN-ADD2-2025-0501  
E501-LIGHTING FIXTURE SCHEDULE-ADD2-2025-0501  
E511-TELECOMMUNICATI SYSTEMS-ADD2-2025-0501  
BB201-BURN BUILDING -FIRST FLOOR PLAN-ADD2-2025-0501  
BB202-BURN BUILDING -SECOND FLOOR PLAN-ADD2-2025-0501  
BB203-BURN BUILDING -THIRD FLOOR PLAN-ADD2-2025-0501  
BB204-BURN BUILDING -FOURTH FLOOR PLAN-ADD2-2025-0501  
BB205-BURN BUILDING -FIFTH FLOOR PLAN-ADD2-2025-0501  
BB206-BURN BUILDING -SIXTH FLOOR PLAN-ADD2-2025-0501  
BB207-BURN BUILDING -HIGH ROOF & STAIR ROOF PLANS-ADD2-2025-0501  
BB302-BURN BUILDING -WEST & EAST ELEVATIONS-ADD2-2025-0501  
BB304-BURN BUILDING -NW & SW PERSPECTIVES-ADD2-2025-0501  
BB305-BURN BUILDING -NE & SE PERSPECTIVES-ADD2-2025-0501  
BB306-BURN BUILDING -BUILDINGSECTIONS-ADD2-2025-0501  
BB307-BURN BUILDING -BUILDINGSECTIONS-ADD2-2025-0501  
BB401-BURN BUILDING -FOUNDATION PLAN-ADD2-2025-0501  
BB402-BURN BUILDING -SECOND FLOOR FRAMING PLAN-ADD2-2025-0501  
BB403-BURN BUILDING -THIRD FLOOR FRAMING PLAN-ADD2-2025-0501  
BB404-BURN BUILDING -FOURTH FLOOR FRAMING PLAN-ADD2-2025-0501  
BB405-BURN BUILDING -FIFTH FLOOR FRAMING PLAN-ADD2-2025-0501  
BB406-BURN BUILDING -SIXTH FLOOR FRAMING PLAN-ADD2-2025-0501  
BB407-BURN BUILDING -HIGH ROOF & STAIR ROOF FRAMING PLANS-ADD2-2025-0501  
BB501-BURN BUILDING -TYPICAL CONCRETE DETAILS-ADD2-2025-0501  
BB502-BURN BUILDING -FOUNDATION DETAILS-ADD2-2025-0501  
BB504-BURN BUILDING -EXTERIOR STEEL STAIR DETAILS-ADD2-2025-0501  
BB505-BURN BUILDING -EXTERIOR STEEL STAIR DETAILS-ADD2-2025-0501  
BB506-BURN BUILDING -CONCRETE STAIR SECTIONS-ADD2-2025-0501  
BB601-BURN BUILDING -TYPICAL MASONRY DETAILS-ADD2-2025-0501  
BB602-BURN BUILDING -THERMAL LINING AND CMU PARAPET DETAILS-ADD2-2025-0501  
BB604-BURN BUILDING -TYPICAL STEEL PLATE DOOR DETAILS-ADD2-2025-0501  
BB605-BURN BUILDING -DOUBLE STEEL PLATE DOOR DETAILS-ADD2-2025-0501  
BB606-BURN BUILDING -TYPICAL STEEL PLATE SHUTTER DETAILS-ADD2-2025-0501  
BB607-BURN BUILDING -RAILING DETAILS-ADD2-2025-0501  
BB608-BURN BUILDING -GUARDRAIL GATE AT PARAPET-ADD2-2025-0501  
BB609-BURN BUILDING -DEBRIS CHUTE DETAILS-ADD2-2025-0501

BB610-BURN BUILDING -MISCELLANEOUS DETAILS-ADD2-2025-0501  
TT302-TRAINING TOWER -EAST & NORTH ELEVATIONS-ADD2-2025-0501  
TT501-TRAINING TOWER -TYPICAL CONCRETE DETAILS-ADD2-2025-0501  
TT601-TRAINING TOWER -TYPICAL MASONRY DETAILS-ADD2-2025-0501

**END OF ADDENDUM #2**

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**SECTION 03 30 00.01 - CAST-IN-PLACE CONCRETE - BURN BUILDING, TRAINING TOWER,  
AND DRAFTING PIT**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section specifies cast-in place concrete, including formwork, reinforcement, concrete materials, mix designs, placement procedures, and finishes.
- B. Cast-in-place concrete includes the following:
  - 1. Foundations and footings.
  - 2. Slabs-on-grade.
  - 3. Building frame members.

**1.3 SUBMITTALS**

- A. General: Submit the following according to General Conditions of the Contract and Division 01 Specification Sections.
- B. Product data for each type of product, proprietary materials, and items, including reinforcement, forming accessories, admixtures, joint systems, and each type of product indicated, and others if requested by Engineer.
- C. Steel Reinforcement Shop Drawings: Submit placing drawings for reinforcement that detail fabrication, bending, and placement of concrete reinforcement. Comply with ACI 315 "Manual of Standard Practice for Detailing Reinforced Concrete Structures". Include bar sizes, lengths, material, grade, bar schedules, stirrup spacing, bent bar diagrams, splices and laps, mechanical connections, tie spacing, bar arrangement, and supports for concrete reinforcement. Include special reinforcing required for openings through concrete structures.
- D. Formwork Shop Drawings: Signed and sealed by a qualified professional engineer; detailing fabrication, assembly, and support of formwork, including shoring.
  - 1. Shoring and Reshoring: Indicate proposed schedule and sequence of stripping formwork, shoring removal, and reshoring installation and removal.
- E. Design Mixes: For each concrete mixture, submit laboratory test reports for concrete materials and mix design test. Provide all backup data, as required by ACI 301 and 318, for mix designs. Submit alternate design mixes when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments. The concrete mix design, trial batch

testing samples, and trial batch data/test results must use the same type of cement and admixtures that will be used for construction. ***For example, if Type IL cement is to be used for construction***, then the concrete mix design, trial batch testing samples, and trial batch data/test results must also use Type IL cement.

#### 1.4 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified installer who employs on Project personnel qualified as ACI-certified Flatwork Technician and Finisher and a supervisor who is an ACI-certified Concrete Flatwork Technician.
- B. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94 requirements for production facilities and equipment.
- C. Codes and Standards: Comply with provisions of the following codes, specifications, and standards, except where more stringent requirements are shown or specified:
  - 1. American Concrete Institute (ACI) 301, "Specifications for Structural Concrete for Buildings."
  - 2. ACI 318, "Building Code Requirements for Reinforced Concrete."
  - 3. ACI 117, "Specifications for Tolerances for Concrete Construction and Materials."
  - 4. ACI 347R, "Guide to Formwork for Concrete".
  - 5. ACI 347.3R "Guide to Formed Concrete Surfaces".
  - 6. Concrete Reinforcing Steel Institute (CRSI) "Manual of Standard Practice."
- D. Concrete Testing Service: Owner will employ a qualified testing agency to perform material evaluation tests.
- E. Materials and installed work may require testing and retesting at any time during progress of Work. Retesting of rejected materials for installed Work, shall be done at Contractor's expense.
- F. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.
- G. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 01 Section "Project Management and Coordination" and the following:
  - 1. At least 14 days prior to submitting design mixes, conduct a meeting to review detailed requirements for preparing concrete design mixes and to determine procedures for ensuring satisfactory concrete operations and quality of concrete materials. Review requirements for submittals, concrete finishes and finishing, status of coordinating work, and availability of materials. Establish preliminary work progress schedule and procedures for materials inspection, testing, and certifications. Require representatives of each entity directly concerned with cast-in-place concrete to attend conference, including, but not limited to, the following:
    - a. Contractor's superintendent.
    - b. Agency responsible for concrete design mixes.
    - c. Agency responsible for field quality control.

- d. Ready-mix concrete producer.
- e. Concrete subcontractor.
- f. Primary admixture manufacturers.

H. Mockups: Cast concrete formed wall surface panel for each type of wall to demonstrate typical joints, surface finish, texture, tolerances, and standard of workmanship

- 1. Build each formed wall panel approximately 100 sq. ft. surface in a location on site acceptable to Engineer.

## 1.5 DELIVERY, STORAGE, AND HANDLING

A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage.

## 1.6 FIELD CONDITIONS

A. Cold-Weather Placement: Comply with provisions of ACI 306.1 and as follows. Protect concrete work from physical damage or reduced strength that could be caused by frost, freezing actions, or low temperatures.

- 1. When average high and low temperature is expected to fall below 40 deg F for three successive days, maintain delivered concrete mixture temperature within the temperature range required by ACI 301.
- 2. Do not use frozen materials or materials containing ice or snow. Do not place concrete on frozen subgrade or on subgrade containing frozen materials.
- 3. Do not use calcium chloride, salt, or other materials containing antifreeze agents or chemical accelerators unless otherwise specified and approved in mix designs.

B. Hot-Weather Placement: When hot weather conditions exist that would impair quality and strength of concrete, comply with ACI 301 and as follows

- 1. Cool ingredients before mixing to maintain concrete temperature at time of placement to below 90 deg F. Mixing water may be chilled or chopped ice may be used to control temperature, provided water equivalent of ice is calculated to total amount of mixing water. Using liquid nitrogen to cool concrete is Contractor's option.
- 2. Cover reinforcing steel with water-soaked burlap if it becomes too hot, so that steel temperature will not exceed the ambient air temperature immediately before embedding in concrete.
- 3. Fog spray forms, steel reinforcement, and subgrade just before placing concrete. Keep subgrade uniformly moist without standing water, soft spots or dry areas.
- 4. Use water-reducing retarding admixture when required by high temperatures, low humidity, or other adverse placing conditions, as acceptable to Engineer.

## PART 2 - PRODUCTS

### 2.1 FORM-FACING MATERIALS

- A. Smooth-Formed Finished Concrete: Form-facing panels that provide continuous, true, and smooth concrete surfaces required in Part 3 of this specification. Furnish in largest practicable sizes to minimize number of joints and to conform to joint system shown on drawings (if any).
  - 1. Metal panels.
  - 2. Exterior grade plywood panels, suitable for concrete forms, complying with DOC PS 1, and as follows:
    - a. Medium-density overlay, Class 1 or better; mill-release agent treated and edge sealed.
- B. Chamfer Strips: Wood, metal, PVC, or rubber strips, 3/4 by 3/4 inch minimum or as indicated in drawings.
- C. Form-Release Agent: Provide commercially formulated form-release agent with a maximum of 350 g/L volatile organic compounds (VOCs) that does not bond with, stain, or adversely affect concrete surfaces and will not impair subsequent treatments of concrete surfaces.
  - 1. Formulate form-release agent with rust inhibitor for steel form-facing materials.
- D. Form Ties: Factory-fabricated, adjustable-length, removable or snap-off glass-fiber-reinforced plastic or metal form ties designed to resist lateral pressure of fresh concrete on forms and to prevent spalling of concrete upon removal.
  - 1. Provide units that will leave no corrodible metal closer than 1-1/2 inches to the plane of the exposed concrete surface.
  - 2. Provide ties that, when removed, will leave holes not larger than 1 inch in diameter in the concrete surface.

## 2.2 STEEL REINFORCEMENT

- A. Reinforcing Bars: ASTM A 615 Grade 60, deformed (ASTM A 706, deformed, Low-Alloy Steel Reinforcing Bars for any rebar that is welded).
- B. Plain-Steel Wire: ASTM A 1064, as drawn.
- C. Plain Steel Welded-Wire Reinforcement: ASTM A 1064, plain, fabricated from as-drawn steel wire into flat sheets.

## 2.3 REINFORCEMENT ACCESSORIES

- A. Supports for Reinforcement: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:
  - 1. For slabs-on-grade, use supports with sand plates or horizontal runners where base material will not support chair legs.

2. For concrete surfaces exposed to view, where legs of wire bar supports are in contact with forms, provide CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

## 2.4 CONCRETE MATERIALS

- A. Portland Cement: ASTM C 150, Type I.
  1. Use one type, brand and source of cement throughout Project.
- B. Fly Ash: ASTM C 618, Type F.
- C. Slag Cement: ASTM C989.
- D. Blended Hydraulic Cement: ASTM C595, Type IL, Portland-limestone cement.
- E. Normal-Weight Aggregates: ASTM C 33, Class 4S coarse aggregate or better, graded. Provide aggregates from a single source with documented service record data of at least 10 years' satisfactory service in similar applications and service conditions using similar aggregates and cementitious materials.
  1. Maximum coarse aggregate size: 1 inch
  2. For exposed exterior surfaces, do not use fine or coarse aggregates that contain substances that cause spalling.
  3. Provide aggregates free of materials with deleterious reactivity to alkali in cement, to prevent damage due to concrete expansion from alkali silicate and alkali carbonate reactions.
- F. Water: ASTM C 94, potable.
- G. Admixtures, General: Provide admixtures certified by manufacturer to be compatible with other admixtures and that will not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride.
- H. Air-Entraining Admixture: ASTM C 260, certified by manufacturer to be compatible with other required admixtures.
- I. Water-Reducing Admixture: ASTM C 494, Type A.
- J. High-Range Water-Reducing Admixture: ASTM C 494, Type F.
- K. High-Range Water-Reducing and Retarding Admixture: ASTM C 494, Type G
- L. Water-Reducing and Retarding Admixture: ASTM C 494, Type D.
- M. Retarding Admixture: ASTM C 494, Type B.

## 2.5 WATERSTOPS

- A. Self-Expanding Rubber Strip Waterstops: Manufactured rectangular or trapezoidal strip, bentonite-free hydrophilic polymer-modified chloroprene rubber, for adhesive bonding to concrete, 3/8 by 3/4 inch.
  - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
    - a. Adeka Ultra Seal/OCM, Inc.
    - b. CETCO, a Minerals Technologies company.
    - c. Grace Construction Products; W.R. Grace & Co. -- Conn.

## 2.6 VAPOR RETARDERS

- A. Sheet Vapor Retarder: ASTM E 1745, Class A. Include manufacturer's recommended adhesive or pressure-sensitive tape.
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:
    - a. Fortifiber Corporation; Moistop Ultra A.
    - b. Raven Industries Inc.; Vapor Block 15.
    - c. Reef Industries, Inc.; Griffolyn Type-65G.
- B. Granular Fill: Clean mixture of crushed stone or crushed or uncrushed gravel; ASTM D 448, Size 57, with 100 percent passing a 1-1/2-inch sieve and 0 to 5 percent passing a No. 8 sieve.

## 2.7 CURING MATERIALS

- A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
  - 1. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work, include, but are not limited to, the following:
    - a. Axim Italcementi Group, Inc.; CATExOL CimFilm.
    - b. BASF Construction Chemicals - Building Systems; Confilm.
    - c. ChemMasters; SprayFilm.
    - d. Conspec by Dayton Superior; Aquafilm.
    - e. Dayton Superior Corporation; Sure Film (J-74).
    - f. Edoco by Dayton Superior; BurkeFilm.
    - g. Euclid Chemical Company (The), an RPM company; Eucobar.
    - h. Kaufman Products, Inc.; Vapor-Aid.
    - i. Lambert Corporation; LAMBCO Skin.
    - j. L&M Construction Chemicals, Inc.; E-CON.



- k. Meadows, W. R., Inc.; EVAPRE.
- l. Metalcrete Industries; Waterhold.
- m. Nox-Crete Products Group; MONOFILM.
- n. Sika Corporation; SikaFilm.
- o. SpecChem, LLC; Spec Film.
- p. Symons by Dayton Superior; Finishing Aid.
- q. TK Products, Division of Sierra Corporation; TK-2120 TRI-FILM.
- r. Unitex; PRO-FILM.
- s. Vexcon Chemicals, Inc.; Certi-Vex Envio Set.

- B. Absorptive Cover: Burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. when dry, complying with AASHTO M 182, Class 2.
- C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.
- D. Water: Potable.
- E. Clear, Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type 1, Class B, dissipating.

## 2.8 RELATED MATERIALS

- A. Dovetail Anchor Slots: Hot-dip galvanized sheet steel, not less than 0.034 inch thick with bent tab anchors. Fill slot with temporary filler or cover face opening to prevent intrusion of concrete or debris.
- B. Bonding Agent: ASTM C 1059, Type II, nonredispersible, acrylic emulsion or styrene butadiene.
- C. Concrete Sealer:
  - 1. Solvent based, clear, breathable, high-performance, 100 percent silane, penetrating water repellent sealer for protecting concrete surfaces.
  - 2. Sealer shall protect concrete against water, chloride ion and acid penetration and against freeze/thaw cycles.
  - 3. Sealer shall have a minimum average penetration depth of 0.35 inch and shall not change the surface appearance of the concrete after application.
  - 4. Subject to compliance with requirements, products that may be incorporated in the Work include the following:
    - a. MasterProtect H 1000, by Master Builders Solutions by BASF.
    - b. An equivalent approved by the Engineer.

## 2.9 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301. For the trial batch

method, use an independent testing agency acceptable to Engineer for preparing and reporting proposed mix designs.

1. Use a qualified independent testing agency for preparing and reporting proposed mixture designs based on laboratory trial mixtures.
  2. Do not use the same testing agency for field quality control testing.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than Portland cement in concrete as follows:
1. Fly Ash: 25 percent.
  2. Slag Cement: 50 percent.
- C. Submit written reports to Engineer of each proposed design mixture for each class of concrete at least 15 days prior to start of Work. Do not begin concrete production until proposed design mixtures have been approved by Engineer.
- D. Admixtures: Use admixtures according to manufacturer's written instructions.
1. Use water-reducing admixture or high-range water-reducing admixture (superplasticizer) in concrete, as required, for placement and workability.
  2. Use accelerating admixture in concrete slabs placed at ambient temperatures below 50 deg F.
  3. Use high-range water-reducing admixture in pumped concrete or concrete with water-cement ratios below 0.50.
  4. Use air-entraining admixture in all concrete unless otherwise indicated. Add air-entraining admixture at manufacturer's prescribed rate to result in concrete at point of placement having total air content of 6.0 percent plus or minus 1-1/2 percent for all concrete except footings, which shall have a total air content of 3.0 percent plus or minus 1-1/2 percent.
  5. Use admixtures for water reduction and set accelerating or retarding in strict compliance with manufacturer's directions.
- E. Design mixtures to provide normal weight concrete with the following properties as indicated on drawings and schedules:
1. 5,000 psi, 28-day compressive strength; water-cement ratio, 0.40 maximum.
- F. Slump Limits: Proportion and design mixes to result in concrete slump at point of placement as follows:
1. Slabs, and sloping surfaces: Not more than 3 inches.
  2. Reinforced foundation systems: Not less than 1 inch and not more than 3 inches.
  3. Concrete containing high-range water-reducing admixture (superplasticizer): Not more than 8 inches after adding admixture to verified 2 - 3 inch slump concrete.
  4. Other concrete: Not more than 4 inches.
- G. Adjustment to Concrete Mixes: Mix design adjustments may be requested by Contractor when characteristics of materials, job conditions, weather, test results, or other circumstances warrant, as accepted by Engineer. Laboratory test data for revised mix design and strength results must be submitted to and accepted by Engineer before using in Work.

## 2.10 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94, and as specified, and furnish batch ticket information.
  - 1. When air temperature is between 85 deg F and 90 deg F, reduce mixing and delivery time from 1-1/2 hours to 75 minutes, and when air temperature is above 90 deg F, reduce mixing and delivery time to 60 minutes.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Coordinate the installation of joint materials and other related materials with placement of forms and reinforcing steel.
- B. Tolerances: Tolerances for Concrete Construction and Materials shall conform to all requirements of ACI 117, Standard Specifications for Tolerances for Concrete Construction and Materials.

### 3.2 FORMWORK INSTALLATION

- A. General: Design, erect, shore, brace, and maintain formwork, according to ACI 301, to support vertical, lateral, static, and dynamic loads, plus construction loads that might be applied, until concrete structure can support such loads.
- B. Construct formwork so concrete members and structures are of correct size, shape, alignment, elevation, and position indicated, within tolerance limits of ACI 117.
- C. Limit concrete surface irregularities, designated by ACI 347R as abrupt or gradual, as follows:
  - 1. Class A, 1/8 inch for smooth-formed finished concrete surfaces exposed to view.
  - 2. Class B, 1/4 inch for other-formed finished concrete surfaces not exposed to view.
- D. Construct forms to sizes, shapes, lines, and dimensions shown and to obtain accurate alignment, location, grades, level, and plumb work in finished structures. Provide for openings, offsets, sinkages, keyways, recesses, chamfers, blocking, bulkheads, anchorages and inserts, and other features required in the Work. Use selected materials to obtain required finishes.
- E. Construct forms tight enough to prevent loss of concrete mortar.
- F. Construct forms for easy removal without hammering or prying against concrete surfaces. Provide crush plates or wrecking plates where stripping may damage cast-concrete surfaces. Provide top forms for inclined surfaces steeper than 1.5 horizontal to 1 vertical.
  - 1. Install keyways, recesses, and the like for easy removal.

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2. Do not use rust-stained steel form-facing material.

- G. Set edge forms, bulkheads, and intermediate screed strips for slabs to achieve required elevations and slopes in finished concrete surfaces. Provide and secure units to support screed strips; use strike-off templates or compacting-type screeds.
- H. Provide temporary openings for cleanouts and inspection ports where interior area of formwork is inaccessible before and during concrete placement. Close openings with panels tightly fitted to forms and securely braced to prevent loss of concrete mortar. Locate temporary openings in forms at inconspicuous locations.
- I. Chamfer exposed corners and edges of permanently exposed concrete as indicated, using wood, metal, PVC, or rubber chamfer strips fabricated to produce uniform smooth lines and tight edge joints.
- J. Provisions for Other Trades: Provide openings in concrete formwork to accommodate work of other trades. Determine size and location of openings, recesses, and chases from trades providing such items. Accurately place and securely support items built into forms.
- K. Thoroughly clean forms and adjacent surfaces to receive concrete. Remove chips, wood, sawdust, dirt, and other debris just before placing concrete.
- L. Retighten forms and bracing before placing concrete, as required, to prevent mortar leaks and maintain proper alignment.
- M. Coat contact surfaces of forms with form-release agent, according to manufacturer's written instructions, before placing reinforcement.

### 3.3 EMBEDDED ITEM INSTALLATION

- A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
- B. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of AISC 303.
- C. Install dovetail anchor slots in concrete structures as indicated on drawings.

### 3.4 REMOVING AND REUSING FORMS

- A. General: Formwork for sides of beams, walls, columns, and similar parts of the Work that does not support weight of concrete may be removed after cumulatively curing at not less than 50 deg F for 24 hours after placing concrete. Concrete shall be hard enough to not be damaged by form-removal operations, and curing and protection operations shall be maintained.
  - 1. Leave formwork for beam soffits, slabs, and other structural elements that support weight of concrete in place until concrete has achieved at least 75 percent of the 28-day design

- minimum compressive strength. Determine potential compressive strength of in-place concrete by testing field-cured specimens representative of concrete location or members.
2. Remove forms only if shores have been arranged to permit removal of forms without loosening or disturbing shores.

- B. Clean and repair surfaces of forms to be reused in the Work. Split, frayed, delaminated, or otherwise damaged form-facing material are not acceptable for exposed surfaces. Apply new form-release agent.
- C. When forms are reused, clean surfaces, remove fins and laitance, and tighten to close joints. Align and secure joints to avoid offsets. Do not use patched forms for exposed concrete surfaces unless approved by Engineer.

### 3.5 SHORING AND RESHORING INSTALLATION

- A. General: Comply with ACI 318 and ACI 301 for design, installation and removal of shoring and reshoring in multistory construction, and as specified.
- B. In multistory construction, extend shoring or reshoring from ground to roof, unless otherwise permitted by Engineer, to distribute loads in such a manner that no floor or member will be excessively loaded or will induce tensile stress in concrete members without sufficient steel reinforcement.
- C. Plan sequence of removal of shores and reshore to avoid damage to concrete. Locate and provide adequate reshoring to support construction without excessive stress or deflection.
- D. Keep reshores in place a minimum of 15 days after placing upper tier, or longer, if required, until all concrete has attained at least 75 percent of its required 28-day strength and heavy loads due to construction operations have been removed.

### 3.6 VAPOR-RETARDER INSTALLATION

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder according to ASTM E 1643 and manufacturer's written instructions.
  1. Lap joints 6 inches and seal with manufacturer's recommended tape.

### 3.7 STEEL REINFORCEMENT INSTALLATION

- A. General: Comply with CRSI's "Manual of Standard Practice" for fabricating, placing, and supporting reinforcement.
  1. Do not cut or puncture vapor retarder. Repair damage and reseal vapor retarder before placing concrete.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other foreign materials that reduce or destroy bond with concrete.

- C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with metal chairs, runners, bolsters, spacers, and hangers, as approved by the Engineer. Do not tack weld crossing reinforcing bars.
- D. Place reinforcement to maintain minimum coverages as indicated for concrete protection. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement operations. Set wire ties so ends are directed into concrete, not toward exposed concrete surfaces.
- E. Install welded-wire reinforcement in longest practicable lengths on bar supports spaced to minimize sagging. Lap edges and ends of adjoining sheets at least one full mesh spacing. Offset laps of adjoining sheet widths to prevent continuous laps in either direction. Lace overlaps with wire.

### 3.8 JOINTS

- A. General: Construct joints true to line with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Install so strength and appearance of concrete are not impaired, at locations indicated or as approved by Engineer.
- C. Provide keyways at least 1-1/2 inches deep in construction joints between stair slabs and supporting slabs. Bulkheads designed and accepted for this purpose may be used for slabs.
- D. Place construction joints perpendicular to main reinforcement. Continue reinforcement across construction joints except as indicated otherwise. Do not continue reinforcement through sides of strip placements.
- E. Use a bonding agent at locations where fresh concrete is placed against hardened or partially hardened concrete surfaces.
- F. Joint fillers: Prepare surfaces and install joint fillers in accordance with the requirements of the manufacturer. Provide non-staining sealants with 1-year warranty and as follows:
  - 1. Isolation Joint between concrete slabs and concrete *or masonry* faces, where indicated on drawings: Fill joint with standard, ***moisture-cured, polyurethane*** elastomeric sealant that complies with ASTM C 920, ***Type S<sub>2</sub>*** Grade P *or* ***NS<sub>2</sub>*** Class 25 *or* 35, Use ***T1***, with additional movement capability of ***25 or 35*** percent movement in extension and ***25 or 35*** percent movement in compression for a total of ***50 or 70*** percent movement. Subject to compliance with requirements, products that may be incorporated in the Work include the following:
    - a. ***Sikaflex 1A; Sika Corporation***
    - b. ***Sikaflex 1C SL; Sika Corporation***
    - c. ***Tremco Dymonic 100; Tremco Construction Products Group***
    - d. ***Masterseal SL1; BASF***
    - e. ***Masterseal NP1; BASF***

- G. Contraction (Control) Joints in Slabs-on-Grade: Construct contraction joints in slabs-on-grade to form panels of patterns as shown on the Drawings. Provide contraction joints that meet either of the following requirements:
1. Inserts: Form contraction joints by inserting premolded plastic, hardboard, or fiberboard strip into fresh concrete until top surface of strip is flush with slab surface. Inserts shall be 1/4 inch wide by one-fourth of slab depth. Tool slab edges round on each side of insert. After concrete has cured, remove inserts and clean groove of loose debris.
  2. Sawed Joints: Form contraction joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut 1/8 inch joints into the top of the concrete when cutting action will not tear, abrade, or otherwise damage surface and before concrete develops random contraction cracks.

### 3.9 WATERSTOP INSTALLATION

- A. Self-Expanding Strip Waterstops: Install in construction joints and at other locations indicated, according to manufacturer's written instructions, adhesive bonding, mechanically fastening, and firmly pressing into place. Install in longest lengths practicable.

### 3.10 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, and embedded items is complete and that required inspections have been performed. Notify other trades to permit installation of their work.
- B. Do not add water to concrete during delivery, at Project site, or during placement, except as follows. Water withheld at the batch plant may be added at the Project site, provided that the amount withheld is noted on the batch ticket, the water added does not exceed the amount withheld and is documented by the testing agency, and the concrete is properly mixed prior to sampling, testing, and placement.
1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- C. General: Comply with ACI 304, "Guide for Measuring, Mixing, Transporting, and Placing Concrete," and as specified.
- D. Provide monolithic slabs without joints, holes, penetrations, or embedded items that pass through the entire thickness, unless shown on the drawings, to prevent moisture from passing through the slab into the thermal lining system below, which could void the thermal lining warranty and cause safety and durability issues. For floor and roof slabs, do not support anything on the bottom forms other than reinforcing chairs and bolsters. Do not have any item pass through the entire slab thickness, including snap-ties or items used to support screeds or forms at tops of slabs, unless shown on the drawings. Support any items used to support screeds or forms at tops of slabs from the reinforcing mats, not the bottom forms.
- E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete will be placed on concrete that has hardened enough to cause seams or planes of

weakness. If a section cannot be placed continuously, provide construction joints as specified. Deposit concrete to avoid segregation at its final location.

- F. **Placing Concrete in Formwork:** Deposit concrete in formwork in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints. Where placement consists of several layers, place each layer while preceding layer is still plastic to avoid cold joints.
1. Consolidate placed concrete with mechanical vibrating equipment supplemented by hand-spading, rodding, or tamping according to ACI 301.
  2. Do not use vibrators to transport concrete inside forms. Insert and withdraw vibrators vertically at uniformly spaced locations no farther than the visible effectiveness of the machine. Place vibrators to rapidly penetrate placed layer and at least 6 inches into preceding layer. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity. At each insertion, limit duration of vibration to time necessary to consolidate concrete and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- G. **Placing Concrete Slabs:** Deposit and consolidate concrete slabs in a continuous operation, within limits of construction joints, until completing placement of a panel or section.
1. Consolidate concrete during placement operations so that concrete is thoroughly worked around reinforcement and other embedded items and into corners.
  2. Maintain reinforcement in proper position on chairs during concrete placement.
  3. Screed slab surfaces with a straightedge and strike off to correct elevations.
  4. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane free of humps or hollows, before excess bleedwater appears on the surface. Do not further disturb slab surfaces prior to beginning finishing operations.
  5. Slope surfaces uniformly to drainage openings (scuppers and doorways) as indicated on the drawings.
  6. When placing concrete on sloping formwork at concrete stairs, begin placing concrete at lowest elevation of formwork and work up toward the highest elevation.

### 3.11 FINISHING FORMED SURFACES

- A. **Smooth-Formed Finish:** As-cast concrete texture imparted by form-facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Repair and patch tie holes and defective areas. Remove fins and other projections that exceed specified limits on formed-surface irregularities.
1. Provide concrete with formed Concrete Surface Categories (CSCs), as defined by ACI 347.3R "Guide to Formed Concrete Surfaces", as follows:
    - a. CSC 3: Concrete surfaces of all concrete walls, parapets, columns, and exterior beams.
    - b. CSC 2: Concrete surfaces at bottoms of concrete slabs and at bottoms and sides of interior concrete beams.



### 3.12 FINISHING SLABS

- A. General: Comply with ACI 302.1R recommendations for screeding, restraighening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Float Finish: Apply float finish to monolithic slab surfaces to receive broom finish, pavement finish and elsewhere as indicated.
  - 1. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Consolidate surface with power-driven floats or by hand floating if area is small or inaccessible to power-driven floats. Restraighten, cut down high spots, and fill low spots. Repeat float passes and restraighening until surface is left with a uniform, smooth, granular texture.
- B. Nonslip Broom Finish: Apply a nonslip broom finish to concrete roofs, elevated slabs, slab-on-grade, steps, landings, and other locations indicated.
  - 1. Immediately after float finishing, slightly roughen trafficked concrete surface by brooming with fiber-bristle broom perpendicular to main traffic route.

### 3.13 MISCELLANEOUS CONCRETE ITEM INSTALLATION

- A. Filling In: Fill in holes and openings left in concrete structures after work of other trades is in place unless otherwise indicated. Mix, place, and cure concrete, as specified, to blend with in-place construction. Provide other miscellaneous concrete filling indicated or required to complete the Work.
- B. Curbs: Provide monolithic finish to curbs by stripping forms while concrete is still green and by steel-troweling surfaces to a hard, dense finish with corners, intersections, and terminations slightly rounded.

### 3.14 CONCRETE PROTECTING AND CURING

- A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.
- B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.
- C. Formed Surfaces: Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces. If forms remain during curing period, moist cure after loosening forms. If removing forms before end of curing period, continue curing for the remainder of the curing period.
- D. Unformed Surfaces: Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs, concrete floor toppings, and other surfaces.

- E. Curing Methods: Cure concrete according to ACI 308.1, by one or a combination of the following methods:
1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
    - a. Water.
    - b. Continuous water-fog spray.
    - c. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.
  2. Moisture-retaining Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period, using cover material and waterproof tape.
  3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
    - a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

### 3.15 CONCRETE SURFACE REPAIRS

- A. Defective Concrete: Repair and patch defective areas when approved by Engineer. Remove and replace concrete that cannot be repaired and patched to Engineer's approval.
- B. Patching mortar: Mix dry-pack patching mortar, consisting of one part portland cement to 2-1/2 parts fine aggregate passing a No. 16 mesh sieve, using only enough water as required for handling and placing.
- C. Repairing Formed Surfaces: Remove and replace concrete having defective surfaces if defects cannot be repaired to satisfaction of Engineer. Surface defects include color and texture irregularities, cracks, spalls, air bubbles, honeycombs, rock pockets, fins and other projections on the surface, and stains and other discolorations that cannot be removed by cleaning.
1. Immediately after form removal, cut out honeycombs, rock pockets, voids over 1/4 inch in any dimension, and holes left by tie rods and bolts down to solid concrete but in no case to a depth less than 1 inch. Make edges of cuts perpendicular to the concrete surface. Thoroughly clean, dampen with water, and brush-coat the area to be patched with bonding agent. Fill and compact with patching mortar before bonding agent has dried. Fill form-tie holes or voids with patching mortar or precast cement cone plugs secured in place with bonding agent.
  2. Repair defects on surfaces exposed to view by blending white portland cement and standard portland cement so that, when dry, patching mortar matches surrounding color.

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- Patch a test area at inconspicuous locations to verify mixture and color match before proceeding with patching. Compact mortar in place and strike-off slightly higher than surrounding surface.
3. Repair defects on concealed formed surfaces, where possible, that affect the concrete's durability and structural performance as determined by Engineer. If defects cannot be repaired, remove and replace the concrete.
- D. Repairing Unformed Surfaces: Test unformed surfaces, such as monolithic slabs, for finish and verify surface tolerances specified for each surface and finish. Correct low and high areas as specified. Test unformed surfaces sloped to drain for trueness of slope and smoothness by using a template having the required slope.
1. Repair finished unformed surfaces containing defects that affect the concrete's durability. Surface defects include crazing and cracks in excess of 0.01 inch wide or that penetrate to the reinforcement or completely through unreinforced sections regardless of width, spalls, popouts, honeycombs, rock pockets, and other objectionable conditions.
  2. Correct high areas in unformed surfaces by grinding after concrete has cured at least 14 days.
  3. Correct localized low areas in unformed surfaces during or immediately after completing surface finishing operations by cutting out low areas and replacing with patching mortar. Finish repaired areas to blend into adjacent concrete.
  4. Repair defective areas, except random cracks and single holes not exceeding 1 inch in diameter, by cutting out and replacing with fresh concrete. Remove defective areas with clean, square cuts and expose steel reinforcement with at least 3/4 inch clearance all around. Dampen concrete surfaces in contact with patching concrete and apply bonding agent. Mix patching concrete of same materials and mixture as original concrete, except without coarse aggregate. Place, compact, and finish to blend with adjacent finished concrete. Cure in same manner as adjacent concrete.
  5. Unless otherwise directed to epoxy inject, repair random cracks and single holes 1 inch or less in diameter with patching mortar. Groove top of cracks and cut out holes to sound concrete and clean off dust, dirt, and loose particles. Dampen cleaned concrete surfaces and apply bonding agent. Place patching mortar before bonding agent has dried. Compact patching mortar and finish to match adjacent concrete. Keep patched area continuously moist for at least 72 hours.

### 3.16 CONCRETE SEALER

- A. Apply concrete sealer to top surfaces of concrete slabs where indicated in drawings.
- B. After concrete has cured minimum 28 days, clean and prepare concrete surfaces in accordance with the manufacturer's requirements. Remove dust, dirt, oil, grease, chemical films, coatings and other contaminants before application. Do not apply sealer if standing water is visible on surface to be treated.
- C. Apply sealer evenly distributed with flooding action, eliminating ponding.
- D. Protect sealer from damage during construction.

### 3.17 FIELD QUALITY CONTROL AND TESTING DURING CONSTRUCTION

- A. General: The Owner will employ a qualified testing and inspection agency to perform field tests and inspections and to submit test/inspection reports.
- B. Inspections:
  - 1. Steel reinforcement placement: visual inspection of all steel reinforcing, prior to all concrete pours, including, but not limited to, the following:
    - a. Reinforcing sizes.
    - b. Reinforcing spacing.
    - c. Lap and splice lengths.
    - d. Bends and hooks.
    - e. Minimum cover.
    - f. Maximum cover.
    - g. Chairs, bolsters, and other support devices.
    - h. Wire ties at all intersections between bars and between bars and supports.
- C. Sampling and testing for quality control during concrete placement includes the following, as directed by the Engineer.
  - 1. Sampling Fresh Concrete: Testing of composite samples of fresh concrete obtained according to ASTM C 172 shall be performed according to the following requirements:
    - a. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 2 cubic yards, but less than 25 cubic yards, plus one set for each additional 50 cubic yards or fraction thereof.
    - b. Slump: ASTM C 143; one test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture. Perform additional tests when concrete consistency appears to change.
    - c. Air Content: ASTM C 231, pressure method, for normal-weight concrete; one test for each composite sample, but not less than one test for each day's pour of each air-entrained concrete mixture.
    - d. Concrete Temperature: ASTM C 1064; one test hourly when air temperature is 40 deg F and below, when 80 deg F and above, and one test for each composite sample.
    - e. Compression Test Specimens: ASTM C 31; Cast and cure sets of standard cylinders for each composite sample for each compressive-strength test described below, unless otherwise directed.
    - f. Compressive-Strength Tests: ASTM C 39; one set of four standard cylinders for laboratory-cured testing and one set of four standard cylinders for field-cured testing for each composite sample. One laboratory-cured specimen tested at 7 days, two laboratory-cured specimens tested at 28 days, and one laboratory-cured specimen held in reserve for later testing if required. One field-cured specimen tested at 7 days, two field-cured specimens tested at 28 days, and one field-cured specimen tested at a time desired by the Contractor for determining if the concrete has reached sufficient strength to remove formwork and/or shoring.
  - 2. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor shall evaluate current operations and provide corrective procedures for protecting and curing the in-place concrete.

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3. Strength of each concrete mixture will be considered satisfactory if every average of any three consecutive compressive-strength test results equals or exceeds specified compressive strength and no individual compressive-strength test value falls below specified compressive strength by more than 500 psi.
- D. Test and inspection results will be reported in writing to Engineer, ready-mix producer, and Contractor within 24 hours after tests. Reports of compressive strength tests shall contain the Project identification name and number, date of concrete placement, name of concrete testing and inspection agency, location of concrete batch in structure, design compressive strength at 28 days, concrete mixture proportions and materials, compressive breaking strength, and type of break for both 7-day tests and 28-day tests.
- E. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Engineer but shall not be used as the sole basis for approval or rejection of concrete.
- F. Additional Tests: The testing and inspecting agency shall make additional tests of in-place concrete when test results indicate that specified concrete compressive strengths, slump, air-entrainment, and other requirements have not been met in the structure, as directed by Engineer. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C 42, or by other methods as directed by Engineer.
- G. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
- H. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

END OF SECTION 03 30 00.01

## `SECTION 042000 - UNIT MASONRY

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:

- 1. Concrete masonry units.
  - 2. Mortar and grout materials.
  - 3. Steel reinforcing bars.
  - 4. Ties and anchors.
  - 5. Embedded flashing.
  - 6. Accessories.

- B. Products Installed but not Furnished under This Section:

- 1. Steel lintels in unit masonry.
  - 2. Steel shelf angles for supporting unit masonry.

- C. Related Requirements:

- 1. Section 051200 "Structural Steel Framing" for installing anchor sections of adjustable masonry anchors for connecting to structural steel frame.
  - 2. Section 076200 "Sheet Metal Flashing and Trim" for exposed sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.

#### 1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

#### 1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For the following:
  - 1. Masonry Units: Indicate sizes, profiles, coursing, and locations of special shapes.

2. Reinforcing Steel: Indicate bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315R. Indicate elevations of reinforced walls.
  3. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection:
1. Concrete face brick, in the form of small-scale units.
  2. Colored mortar.
  3. Weep/cavity vents.
- D. Samples for Verification: For each type and color of the following:
1. Exposed CMUs.
  2. Special brick shapes.
  3. Pigmented mortar. Make Samples using same sand and mortar ingredients to be used on Project.
  4. Weep/cavity vents.
  5. Accessories embedded in masonry.

#### INFORMATIONAL SUBMITTALS

- E. Material Certificates: For each type of the following:
1. Masonry units.
    - a. Include data on material properties.
  2. Integral water repellent used in CMUs.
  3. Cementitious materials. Include name of manufacturer, brand name, and type.
  4. Mortar admixtures.
  5. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
  6. Grout mixes. Include description of type and proportions of ingredients.
  7. Reinforcing bars.
  8. Joint reinforcement.
  9. Anchors, ties, and metal accessories.
- F. Qualification Statements: For testing agency.
- G. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
1. Include test reports for mortar mixes required to comply with property specification. Test in accordance with ASTM C109/C109M for compressive strength, ASTM C1506 for water retention, and ASTM C91/C91M for air content.
  2. Include test reports, in accordance with ASTM C1019, for grout mixes required to comply with compressive strength requirement.
- H. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined in accordance with TMS 602.

- I. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

## 1.5 QUALITY ASSURANCE

- A. Qualifications:
- B. Testing Agency Qualifications: Qualified in accordance with ASTM C1093 for testing indicated.
- C. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- D. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.
- E. Masonry Standard: Comply with ACI 530.1/ASCE 6/TMS 602 unless modified by requirements in the Contract Documents.
- F. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements in Section 014000 "Quality Requirements" for mockups.
  - 1. Build sample panels for each type of exposed unit masonry construction in sizes approximately 60 inches (1500 mm) long by 48 inches (1200 mm) high by full thickness.
  - 2. Clean one-half of exposed faces of panels with masonry cleaner indicated.
  - 3. Protect approved sample panels from the elements with weather-resistant membrane.
  - 4. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
    - a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless such deviations are specifically approved by Architect in writing.

## 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.



- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

## 1.7 PROJECT CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
  - 1. Extend cover a minimum of 24 inches (610 mm) down both sides of walls, and hold cover securely in place.
  - 2. Where one wythe of multi-wythe masonry walls is completed in advance of other wythes, secure cover a minimum of 24 inches (610 mm) down face next to unconstructed wythe, and hold cover in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
  - 1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
  - 2. Protect sills, ledges, and projections from mortar droppings.
  - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
  - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602.
  - 1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F (4 deg C) and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602.

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## PART 2 - PRODUCTS

### 2.1 SOURCE LIMITATIONS

- A. Obtain exposed masonry units, cementitious mortar components, and mortar aggregate from single manufacturer.
- B. For exposed masonry units and cementitious mortar components, obtain each color and grade from single source with resources to provide materials of consistent quality in appearance and physical properties.

### 2.2 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602, except as modified by requirements in the Contract Documents.
- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work and will be within 20 ft. vertically and horizontally of a walking surface.
- C. Standard Units: Provide standard units of nominal sizes. When selecting special shapes, such as bullnose, bond/lintels, check for availability. If selected bond/lintel not available during construction phase of project, alert Architect immediately. Architect to provide alternate structural detail using available concrete masonry units/grout fill/steel rebars.

### 2.3 CONCRETE MASONRY UNITS

- A. Shapes: Provide shapes indicated and as follows, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
  - 1. Provide special shapes for lintels, corners, jambs, sashes, movement joints, headers, bonding, and other special conditions.
  - 2. Provide square-edged units for outside corners unless otherwise indicated.
- B. Integral Water Repellent: Provide units made with integral water repellent for exposed units.
  - 1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength. Units made with integral water repellent, when tested according to ASTM E 514/E 514M as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive, with test period extended to 24 hours, shall show no visible water or leaks on the back of test specimen.
    - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      - 1) ACM Chemistries.
      - 2) BASF Corporation.
      - 3) Euclid Chemical Company (The); an RPM company.
      - 4) GCP Applied Technologies Inc.

5) Moxie International.

C. CMUs: ASTM C90

1. Density Classification: **NORMAL WEIGHT** unless otherwise indicated.
2. Size (Width): Manufactured to dimensions 3/8 inch less than nominal dimensions.
3. Size (Width): Manufactured to the following dimensions:
  - a. 16 inches by 8 inches by 8 inches deep, nominal
4. Exposed Faces: Provide color and texture matching the range represented by Architect's sample.
5. Corners: Provide cornerblocks or bullnose shapes at exposed CMU corners.

D. Concrete Masonry Units: ASTM **C90**, normal weight.

1. Basis-of-Design Product: Subject to compliance with requirements, provide Echelon; Shot-blasted Mesastone or a comparable product by one of the following:
  - a. CemexUSA
  - b. Nitterhouse Masonry
2. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 3500 psi net area average of 3 units, when tested in accordance with ASTM **C90**.
3. ~~Freeze thaw durability: Meets or exceeds the requirements of ASTM C1262-98 and exhibit a mass loss no greater than 1.5%. Test specimens must not show any fracture completely through the cross section when subjected to 50 consecutive freeze/thaw cycles.~~
4. Integral Water Repellant: Concrete Masonry Units must include a water repellant admixture at the time of production.
5. Maximum absorption range by weight: 10 lbs./cu. Ft. average of 3 units, individual unit maximum absorption 12 lbs/cu ft (based on normal weight).
6. Minimum weight: 125 lbs/cu ft.
7. Size (Nominal Dimensions): **8 inches wide by 4 inches high by 16 inches long.**
8. Texture: Shot-blasted.
9. ~~Type: Shall be tested and rated "not effloresced" and rated for Severe Weathering (SW); Type FBX.~~
10. Colors: As selected by Architect from manufacturer's full range.
  - a. Basis of Design: Echelon; Shot-blasted Mesastone
    - 1) Color: 4106 Charcoal, Group 1

2.4 LINTELS

- A. Concrete Lintels: Precast or formed-in-place concrete lintels complying with requirements in Section 032000 "Concrete Reinforcing," and with reinforcing bars indicated.
- B. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs matching adjacent CMUs in color, texture, and density classification, with reinforcing bars placed as indicated and filled with coarse grout. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.

- C. Offset Angle Supports: Steel plate brackets anchored to structure, allowing continuous insulation behind shelf angle supporting veneer. Component and anchor size and spacing engineered by manufacturer.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. FERO Corporation.
    - b. Halfen USA, Inc.
    - c. Hohmann & Barnard, Inc.
  - 2. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304.
  - 3. Carbon Steel: Galvanized after Fabrication.

## 2.5 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C150/C150M, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
- B. Hydrated Lime: ASTM C207, Type S.
- C. Masonry Cement: ASTM C91/C91M.
- D. Mortar Pigments: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes and complying with ASTM C979/C979M. Use only pigments with a record of satisfactory performance in masonry mortar.
- E. Aggregate for Mortar: ASTM C144.
  - 1. For mortar that is exposed to view, use washed aggregate consisting of natural sand or crushed stone.
  - 2. For joints less than 1/4 inch (6.4 mm) thick, use aggregate graded with 100 percent passing the No. 16 (1.18-mm) sieve.
  - 3. Colored-Mortar Aggregates: Natural sand or crushed stone of color necessary to produce required mortar color.
- F. Aggregate for Grout: ASTM C404.
- G. Water-Repellent Admixture: Liquid water-repellent mortar admixture intended for use with CMUs containing integral water repellent from same manufacturer. Type S with liquid water-repellent mortar admixture intended for use with concrete masonry units containing water-repellent from same manufacturer. Provide colored mortar as selected by Architect.
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. ACM Chemistries.
    - b. Euclid Chemical Company (The); an RPM company.
    - c. GCP Applied Technologies Inc.

d. Master Builders Solutions.

- H. Water: Potable.

2.6 REINFORCEMENT

- A. Uncoated-Steel Reinforcing Bars: ASTM A615/A615M or ASTM A996/A996M, Grade 60.
- B. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from 0.148-inch (3.77-mm) carbon steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated. Lap reinforcement a minimum of 6 inches.
- C. Masonry-Joint Reinforcement, General: ASTM A951/A951M.
1. Interior Walls: Hot-dip galvanized carbon steel.
  2. Exterior Walls: Hot-dip galvanized carbon steel.
  3. Wire Size for Side Rods: 0.187-inch (4.76-mm) diameter.
  4. Wire Size for Cross Rods: 0.187-inch (4.76-mm) diameter.
  5. Wire Size for Veneer Ties: 0.187-inch (4.76-mm) diameter.
  6. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than 16 inches (406 mm) o.c.
  7. Provide in lengths of not less than 10 ft. (3 m), with prefabricated corner and tee units.
- D. Masonry-Joint Reinforcement for Single-Wythe Masonry: Ladder type with single pair of side rods.

2.7 TIES AND ANCHORS

- A. General: Ties and anchors shall extend at least 1-1/2 inches (38 mm) into veneer but with at least a 5/8-inch (16-mm) cover on outside face.
- B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:
1. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A1064/A1064M, with ASTM A153/A153M, Class B-2 coating.
  2. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
- C. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.
1. Anchor Section for Welding to Steel Frame: Crimped 1/4-inch- (6.4-mm-) diameter, hot-dip galvanized steel wire.
  2. Tie Section: Triangular-shaped wire tie made from 0.25-inch- (6.4-mm-) diameter, hot-dip galvanized steel wire.
- D. Adjustable Anchors for Connecting to Concrete: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

- E. Partition Top Anchors: 0.105-inch- (2.66-mm-) thick metal plate with a 3/8-inch- (10-mm-) diameter metal rod 6 inches (152 mm) long welded to plate and with closed-end plastic tube fitted over rod that allows rod to move in and out of tube. Fabricate from steel, hot-dip galvanized after fabrication.

## 2.8 EMBEDDED FLASHING

- A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:

1. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, 0.016 inch (0.40 mm) thick.
2. Fabricate continuous flashings in sections 96 inches (2438 mm) long minimum, but not exceeding 12 ft. (3.7 m). Provide splice plates at joints of formed, smooth metal flashing.
3. Fabricate through-wall flashing with snaplock receiver on exterior face where indicated to receive counterflashing.
4. Fabricate through-wall flashing with drip edge unless otherwise indicated. Fabricate by extending flashing 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees and hemmed.
5. Fabricate metal drip edges from stainless steel. Extend at least 3 inches (76 mm) into wall and 1/2 inch (13 mm) out from wall, with outer edge bent down 30 degrees and hemmed.
6. Fabricate metal expansion-joint strips from stainless steel to shapes indicated.
7. Solder metal items at corners.

- B. Flexible Flashing: Use the following unless otherwise indicated:

1. Self-Adhering, Stainless Steel Fabric Flashing: Composite, flashing product consisting of 2 mil (0.05 mm) of Type 304 stainless steel sheet, bonded to a layer of polymeric fabric with a permanent, clear adhesive, to produce an overall thickness of 10 mil.
  - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - 1) Hohmann & Barnard, Inc.
    - 2) STS Coatings, Inc.
    - 3) York Manufacturing, Inc.
  - b. Applications: Use 10-mil- (0.25-mm-) thick flashing at windows, doors, and small wall penetrations; not at base of walls. Use 40-mil- (1.0-mm-) thick flashing at base of walls.

- C. Solder and Sealants for Sheet Metal Flashings: As specified in Section 076200 "Sheet Metal Flashing and Trim."

1. Solder for Stainless Steel: ASTM B32, Grade Sn96, with acid flux of type recommended by stainless steel sheet manufacturer.
2. Elastomeric Sealant: ASTM C920, chemically curing urethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and remain watertight.

- D. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.
- E. Termination Bars for Flexible Flashing, Flanged: Stainless steel sheet 0.019 inch by 1-1/2 inches (0.48 mm by 38 mm) with a 3/8-inch (10-mm) sealant flange at top.
- F. Single-Wythe CMU Flashing System: System of CMU cell flashing pans and interlocking CMU web covers made from high-density polyethylene incorporating chemical stabilizers that prevent UV degradation. Cell flashing pans have integral weep spouts that are designed to be built into mortar bed joints and weep collected moisture to the exterior of CMU walls and that extend into the cell to prevent clogging with mortar.

## 2.9 ACCESSORIES

- A. Compressible Filler: Pre-molded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene, urethane, or PVC.
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D2000, Designation M2AA-805 or PVC, complying with ASTM D2287, Type PVC-65406 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D226/D226M, Type I (No. 15 asphalt felt).
- D. Weep/Cavity Vents: Use one of the following unless otherwise indicated:
  - 1. Rectangular Plastic Weep/Vent Tubing: Clear butyrate, 3/8 by 1-1/2 by 3-1/2 inches long.
  - 2. Cellular Plastic Weep/Vent: One-piece, flexible extrusion made from UV-resistant polypropylene copolymer, full height and width of head joint and depth 1/8 inch (3.2 mm) less than depth of outer wythe, in color selected from manufacturer's standard.
    - a. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      - 1) Advanced Building Products Inc.
      - 2) Heckmann Building Products, Inc.
      - 3) Hohmann & Barnard, Inc.
      - 4) Wire-Bond.
- E. Proprietary Acidic Masonry Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

## 2.10 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
  - 1. Do not use calcium chloride in mortar or grout.
  - 2. Use portland cement-lime mortar unless otherwise indicated.
  - 3. For exterior masonry, use portland cement-lime mortar.
  - 4. For reinforced masonry, use portland cement-lime mortar.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated.
  - 1. For masonry below grade or in contact with earth, use Type M.
  - 2. For reinforced masonry, use Type S.
  - 3. For mortar parge coats, use Type S or Type N.
  - 4. For exterior, above-grade, load-bearing, non-load-bearing walls, and parapet walls; for interior load-bearing walls; for interior non-load-bearing partitions; and for other applications where another type is not indicated, use Type N.
  - 5. For interior non-load-bearing partitions, Type O may be used instead of Type N.
- D. Colored-Aggregate Mortar: Produce required mortar color by using colored aggregates and natural color or white cement as necessary to produce required mortar color.
  - 1. Mix to match Architect's sample.
  - 2. Application: Use colored-aggregate mortar for exposed mortar joints with the following units: Concrete face brick and any associated special shapes.
- E. Grout for Unit Masonry: Comply with ASTM C476.
  - 1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602 for dimensions of grout spaces and pour height.
  - 2. Proportion grout in accordance with ASTM C476, Table 1 or paragraph 4.2.1.2 for specified 28-day compressive strength indicated, but not less than 2000 psi.
  - 3. Provide grout with a slump of 8 to 11 inches as measured in accordance with ASTM C143/C143M.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.



1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.
  2. Verify that foundations are within tolerances specified.
  3. Verify that reinforcing dowels are properly placed.
  4. Verify that substrates are free of substances that impair mortar bond.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
- B. Build chases and recesses to accommodate items specified in this and other Sections.
- C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
- D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- F. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds 30 g/30 sq. in. per minute when tested in accordance with ASTM C67/C67M. Allow units to absorb water so they are damp but not wet at time of laying.

### 3.3 TOLERANCES

- A. Dimensions and Locations of Elements:
1. For dimensions in cross section or elevation, do not vary by more than plus 1/2 inch or minus 1/4 inch.
  2. For location of elements in plan, do not vary from that indicated by more than plus or minus 1/2 inch.
  3. For location of elements in elevation, do not vary from that indicated by more than plus or minus 1/4 inch in a story height or 1/2 inch total.
- B. Lines and Levels:
1. For bed joints and top surfaces of bearing walls, do not vary from level by more than 1/4 inch in 10 ft., or 1/2-inch maximum.

2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than 1/8 inch in 10 ft., 1/4 inch in 20 ft., or 1/2-inch maximum.
3. For vertical lines and surfaces, do not vary from plumb by more than 1/4 inch in 10 ft., 3/8 inch in 20 ft., or 1/2-inch maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than 1/8 inch in 10 ft., 1/4 inch in 20 ft., or 1/2-inch maximum.
5. For lines and surfaces, do not vary from straight by more than 1/4 inch in 10 ft., 3/8 inch in 20 ft., or 1/2-inch maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than 1/4 inch in 10 ft., or 1/2-inch maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than 1/16 inch except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch.
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than 1/8 inch.
3. For head and collar joints, do not vary from thickness indicated by more than plus 3/8 inch or minus 1/4 inch.
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus 1/8 inch. Do not vary from adjacent bed-joint and head-joint thicknesses by more than 1/8 inch.
5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than 1/16 inch from one masonry unit to the next.

### 3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in running bond; do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than 4 inches. Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal 4-inch horizontal face dimensions at corners or jambs.
- D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.

- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.
- H. Fill cores in hollow CMUs with grout 24 inches under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- I. Build non-load-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.
  - 1. Install compressible filler in joint between top of partition and underside of structure above.
  - 2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors, and push tubes down into grout to provide 1/2-inch clearance between end of anchor rod and end of tube. Space anchors 24 inches o.c. unless otherwise indicated.
  - 3. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 078443 "Joint Firestopping."

### 3.5 MORTAR BEDDING AND JOINTING

- A. Lay CMUs as follows:
  - 1. Bed face shells in mortar and make head joints of depth equal to bed joints.
  - 2. Bed webs in mortar in all courses of piers, columns, and pilasters.
  - 3. Bed webs in mortar in grouted masonry, including starting course on footings.
  - 4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
  - 5. Fully bed units and fill cells with mortar at anchors and ties as needed to fully embed anchors and ties in mortar.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.
- C. Set trim units in full bed of mortar with full vertical joints. Fill dowel, anchor, and similar holes.
  - 1. Clean soiled surfaces with fiber brush and soap powder and rinse thoroughly with clear water.
  - 2. Allow cleaned surfaces to dry before setting.
  - 3. Wet joint surfaces thoroughly before applying mortar.
  - 4. Rake out mortar joints for pointing with sealant.
- D. Tool exposed joints:

1. CMU: Slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
  2. Concrete Face Brick: Tool exposed horizontal joints continuous with struck weathered joint and flush vertical joints to accentuate horizontal lines.
- E. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.
- F. Cut joints flush where indicated to receive waterproofing, cavity wall insulation, and air barriers unless otherwise indicated.

### 3.6 COMPOSITE MASONRY

- A. Bond wythes of composite masonry together using one of the following methods:
1. Individual Metal Ties: Provide ties as indicated installed in horizontal joints, but not less than one metal tie for 2.67 sq. ft. of wall area spaced not to exceed 24 inches o.c. horizontally and 16 inches o.c. vertically. Stagger ties in alternate courses. Provide additional ties within 12 inches of openings and space not more than 36 inches apart around perimeter of openings. At intersecting and abutting walls, provide ties at no more than 24 inches o.c. vertically.
    - a. Where bed joints of wythes do not align, use adjustable-type (two-piece-type) ties.
  2. Masonry-Joint Reinforcement: Installed in horizontal mortar joints.
    - a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes.
    - b. Where bed joints of wythes do not align, use adjustable-type (two-piece-type) reinforcement.
  3. Header Bonding: Provide masonry unit headers extending not less than 3 inches into each wythe. Space headers not more than 8 inches clear horizontally and 16 inches clear vertically.
- B. Bond wythes of composite masonry together using bonding system indicated on Drawings.
- C. Corners: Provide interlocking masonry unit bond in each wythe and course at corners unless otherwise indicated.
1. Provide continuity with masonry-joint reinforcement at corners by using prefabricated L-shaped units as well as masonry bonding.
- D. Intersecting and Abutting Walls: Unless vertical expansion or control joints are indicated at juncture, bond walls together as follows:
1. Provide individual metal ties not more than 16 inches o.c.
  2. Provide continuity with masonry-joint reinforcement by using prefabricated T-shaped units.

3. Provide rigid metal anchors not more than 24 inches o.c. If used with hollow masonry units, embed ends in mortar-filled cores.

### 3.7 MASONRY-JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch on exterior side of walls, 1/2 inch elsewhere. Lap reinforcement a minimum of 6 inches.
  1. Space reinforcement not more than 16 inches o.c.
  2. Space reinforcement not more than 8 inches o.c. in foundation walls and parapet walls.
  3. Provide reinforcement not more than 8 inches above and below wall openings and extending 12 inches beyond openings in addition to continuous reinforcement.
- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.
- E. Cut and bend reinforcing units as directed by manufacturer for continuity at corners, returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

### 3.8 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete, where masonry abuts or faces structural steel or concrete, to comply with the following:
  1. Provide an open space not less than 2 inches wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
  2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
  3. Space anchors as indicated, but not more than 24 inches o.c. vertically and 36 inches o.c. horizontally.

### 3.9 CONTROL AND EXPANSION JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.
- B. Form control joints in concrete masonry as follows:
  1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout, and rake out joints in exposed faces for application of sealant.
  2. Install preformed control-joint gaskets designed to fit standard sash block.
  3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar, or rake out joint for application of sealant.

4. Install temporary foam-plastic filler in head joints, and remove filler when unit masonry is complete for application of sealant.
- C. Provide horizontal, pressure-relieving joints by either leaving an airspace or inserting a compressible filler of width required for installing sealant and backer rod specified in Section 079200 "Joint Sealants," but not less than 3/8 inch.
  1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

### 3.10 LINTELS

- A. Install steel lintels where indicated.
- B. Provide concrete, masonry, or offset angle support lintels where indicated and where openings of more than 12 inches for brick-size units and 24 inches for block-size units are indicated without structural steel or other supporting lintels.
- C. Provide minimum bearing of 8 inches at each jamb unless otherwise indicated.

### 3.11 FLASHING, WEEP HOLES, AND CAVITY VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install cavity vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
- B. Install flashing as follows unless otherwise indicated:
  1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
  2. At masonry-veneer walls, extend flashing through veneer, across airspace behind veneer, and up face of sheathing at least 8 inches; with upper edge tucked under water-resistive barrier, lapping at least 4 inches. Fasten upper edge of flexible flashing to sheathing through termination bar.
  3. At lintels and shelf angles, extend flashing 6 inches minimum at each end. At heads and sills, extend flashing 6 inches minimum and turn ends up not less than 2 inches to form end dams.
  4. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing **1/2 inch (13 mm)** back from outside face of wall, and adhere flexible flashing to top of metal drip edge.
- C. Install single-wythe CMU flashing system in bed joints of CMU walls where indicated to comply with manufacturer's written instructions. Install CMU cell pans with upturned edges located below face shells and webs of CMUs above and with weep spouts aligned with face of

wall. Install CMU web covers so that they cover upturned edges of CMU cell pans at CMU webs and extend from face shell to face shell.

- D. Install reglets and nailers for flashing and other related construction where they are indicated to be built into masonry.
- E. Install weep holes in exterior wythes and veneers in head joints of first course of masonry immediately above embedded flashing.
  - 1. Space weep holes formed from plastic tubing **16 inches (406 mm)** o.c.
- F. Place cavity drainage material in airspace behind veneers to comply with configuration requirements for cavity drainage material in "Accessories" Article.
- G. Install cavity vents in head joints in exterior wythes at spacing indicated. Use specified weep/cavity vent products to form cavity vents.
  - 1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

### 3.12 REINFORCED UNIT MASONRY

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
  - 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
  - 2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and that of other loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in TMS 602.
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
  - 1. Comply with requirements in TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
  - 2. Limit height of vertical grout pours to not more than 60 inches.

### 3.13 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements will be at Contractor's expense.
- B. Inspections: Special inspections in accordance with Level 2 in TMS 402.

1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
  2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
  3. Place grout only after inspectors have verified proportions of site-prepared grout.
- C. Testing Prior to Construction: One set of tests.
- D. Concrete Masonry Unit Test: For each type of unit provided, in accordance with ASTM C140/C140M for compressive strength.
- E. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, in accordance with ASTM C780.
- F. Mortar Test (Property Specification): For each mix provided, in accordance with ASTM C780. Test mortar for mortar air content and compressive strength.
- G. Grout Test (Compressive Strength): For each mix provided, in accordance with ASTM C1019.
- H. Prism Test: For each type of construction provided, in accordance with ASTM C1314 at 7 days and at 28 days.

### 3.14 REPAIRING, POINTING, AND CLEANING

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



5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.
7. Clean masonry with a proprietary acidic masonry cleaner applied according to manufacturer's written instructions.

### 3.15 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
  1. Crush masonry waste to less than 4 inches in each dimension.
  2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 312000 "Earth Moving."
  3. Do not dispose of masonry waste as fill within 18 inches of finished grade.
- C. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.
- D. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 042000

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**SECTION 04 20 00.01 - UNIT MASONRY ASSEMBLIES - BURN BUILDING AND  
TRAINING TOWER**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes the following:

1. Concrete unit masonry.
2. Fire brick.
3. Precast concrete lintels, including refractory concrete lintels.
4. Masonry Lintels
5. Mortar and grout.
6. Steel reinforcing bars.
7. Masonry joint reinforcement.
8. Ties and anchors.
9. Miscellaneous masonry accessories.
10. Masonry Cleaners.
11. Mortar and grout mixes.
12. Integral water repellant for masonry units and mortar.
13. Masonry sealers.
14. Cast-in-place masonry wall caps.

- B. Products furnished but not installed under this Section include the following:

1. Dovetail slots for masonry anchors installed under Division 03 Section "Cast-in-Place Concrete."

**1.3 PERFORMANCE REQUIREMENTS**

- A. Provide unit masonry that develops installed compressive strengths ( $f_m$ ) at 28 days, based on net area, of 2,000 psi.
1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to Tables 1 and 2 in ACI 530.1.

**1.4 SUBMITTALS**

- A. General: Submit each item in this Article according to the General Conditions of the Contract and Division 01 Specification Sections.
- B. Product data and material certifications for each different masonry unit, accessory, and other manufactured product specified.

#### 1.5 QUALITY ASSURANCE

- A. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 01 Section "Project Management and Coordination".
- B. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- C. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.
- D. Sample Panels: Build sample panels to verify selections made under sample submittals and to demonstrate aesthetic effects. Comply with requirements in Division 01 Section "Quality Requirements" for mockups.
  - 1. Build sample panels for typical exterior wall in sizes approximately 144 inches long by 144 inches high by full thickness.
  - 2. Clean exposed faces of panels with masonry cleaner indicated.
  - 3. Protect approved sample panels from the elements with weather-resistant membrane.
  - 4. Approval of sample panels shall be for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
    - a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless such deviations are specifically approved by Architect/Engineer in writing.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location to prevent their deterioration or damage due to moisture, temperature changes, contaminants, corrosion, and other causes. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are in an air-dried condition.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.

- D. Deliver preblended, dry mortar mix in moisture-resistant containers designed for use with dispensing silos. Store preblended, dry mortar mix in delivery containers on elevated platforms, under cover, and in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.
- F. Store masonry cleaners and water repellent coatings in unopened original containers, in a cool, dry location away from possible ignition sources and in accordance with the manufacturer's recommendations.

## 1.7 PROJECT CONDITIONS

- A. Protection of Masonry: During erection, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
- B. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.
  - 1. Protect base of walls from rain-splashed mud and mortar splatter by coverings spread on ground and over wall surface.
  - 2. Protect sills, ledges, and projections from mortar droppings.
  - 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
  - 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt on completed masonry.
- C. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen subgrade or setting beds. Remove and replace unit masonry damaged by frost or freezing conditions. Comply with cold-weather construction requirements contained in ACI 530.1 and as follows:
  - 1. Cold-Weather Construction: When the ambient temperature is within the limits indicated, use the following procedures:
    - a. 40 to 32 deg F: Heat mixing water or sand to produce mortar temperatures between 40 and 120 deg F.
    - b. 32 to 25 deg F: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry.
    - c. 25 to 20 deg F: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry. Heat masonry units to 40 deg F if grouting. Use heat on both sides of walls under construction.

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- d. 20 deg F and Below: Heat mixing water and sand to produce mortar temperatures between 40 and 120 deg F. Heat grout materials to produce grout temperatures between 40 and 120 deg F. Maintain mortar and grout above freezing until used in masonry. Heat masonry units to 40 deg F. Provide enclosures and use heat on both sides of walls under construction to maintain temperatures above 32 deg F within the enclosures.
  - 2. Cold-Weather Protection: When the mean daily temperature is within the limits indicated, provide the following protection:
    - a. 40 to 25 deg F: Cover masonry with a weather-resistant membrane for 48 hours after construction.
    - b. 25 to 20 deg F: Cover masonry with insulating blankets or provide enclosure and heat for 48 hours after construction to prevent freezing. Install wind breaks when wind velocity exceeds 15 mph.
    - c. 20 deg F and Below: Provide enclosure and heat to maintain temperatures above 32 deg F within the enclosure for 48 hours after construction.
  - 3. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is 40 deg F and above and will remain so until masonry has dried out, but not less than 7 days after completion of cleaning.
- D. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in ACI 530.1.

## PART 2 - PRODUCTS

### 2.1 CONCRETE MASONRY UNITS

- A. General: Provide shapes indicated and as follows for each form of concrete masonry unit required, with exposed surfaces matching exposed faces of adjacent units unless otherwise indicated.
  - 1. Provide special shapes for lintels, corners, jambs, control joints, headers, bonding, and other special conditions.
  - 2. Provide bullnose units for outside corners of all interior walls, jambs at openings, and where indicated on the drawings.
  - 3. Provide finished, square-edged units for outside exterior corners, unless otherwise indicated.
- B. Integral Water Repellent: Provide units made with integral water repellent for all masonry.
  - 1. Integral Water Repellent: Liquid polymeric, integral water-repellent admixture that does not reduce flexural bond strength.
  - 2. Units made with integral water repellent, when tested according to ASTM E 514 as a wall assembly made with mortar containing integral water-repellent manufacturer's mortar additive, with test period extended to 72 hours, shall achieve a rating of Excellent (top possible rating) with 0% dampness on the back of test specimen.

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- a. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include the following:
    - 1) ACM Chemistries; RainBloc 80.
    - 2) Cargill, Inc., Acme Shield.
    - 3) Euclid Chemical Company; Eucon Blocktite.
    - 4) Euclid Chemical Company; Eucon Hydrapel 2.0.
    - 5) GCP Applied Technologies, Inc.; Dry-Block Block Admixture.
    - 6) Master Builders; MasterPel 240.
  - 2. Add water repellent admixture to units as recommended by water repellent manufacturer to achieve maximum water repellency in addition to efflorescence control.
- C. Concrete Masonry Units: ASTM C 90 and as follows:
- 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of 2,000 psi.
  - 2. Density Classification: Normal weight, as indicated on the drawings.
  - 3. Aggregates: Complying with ASTM C-33 for normal weight aggregate.
  - 4. Size: Manufactured to the actual dimensions listed below (within tolerances specified in the applicable referenced ASTM specification) for the corresponding nominal sizes indicated on Drawings:
    - a. 4 inch nominal: 3-5/8 inch actual.
    - b. 6 inch nominal: 5-5/8 inch actual.
    - c. 8 inch nominal: 7-5/8 inch actual.
    - d. 12 inch nominal: 11-5/8 inch actual.
    - e. 16 inch nominal: 15-5/8 inch actual.
  - 5. Manufacturer's standard color (gray) and texture (standard smooth face finish), unless otherwise indicated.

## 2.2 FIRE BRICK

- A. General: Provide shapes indicated and as follows. Provide units without cores or frogs and with exposed surfaces finished for ends of thresholds and for similar applications that would otherwise expose unfinished brick surfaces.
- B. ASTM C 27 and as follows:
  - 1. Classification: Medium-duty
  - 2. Size: Manufactured to the actual dimensions 9" x 4-1/2" x 2-1/2".
  - 3. Application: Place tight with no mortar on floors where indicated.

## 2.3 PRECAST CONCRETE LINTELS

- A. Concrete Lintels: Precast concrete lintels complying with requirements in Division 03 Section "Cast-in-Place Concrete" and with reinforcing bars indicated in the Contract Drawings.

- B. Provide precast concrete lintels where shown and where openings of more than 12 inches for brick size units and 24 inches for block size units are shown without other supporting lintels.
- C. Where indicated on the Drawings, provide precast refractory concrete lintels per the following requirements.
  - 1. Provide precast refractory concrete lintels made with refractory concrete, consisting of calcium aluminate cement and fired aggregates, with a minimum ultimate compressive strength of 5,000 psi, reinforced and configured as indicated on the drawings. Cure precast lintels before handling and installing. Lintels shall be warranty items that must not be damaged during the 1-year warranty period by repetitive live fire training, including exposures to temperatures up to 1,800 degrees F and thermal shock due to water application.
  - 2. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include the following:
    - a. Precast refractory lintels as provided by High Temperature Linings, P. O. Box 1240, White Stone, VA 22578; (800) 411-6313; [www.firetrain.com](http://www.firetrain.com).
    - b. Precast lintels using Fondag RS refractory concrete as provided by Kerneos Aluminate Technologies, 1316 Priority Lane, Chesapeake, VA 23324; (757) 284-3200; [www.kerneosinc.com](http://www.kerneosinc.com).
- D. Provide minimum bearing of 8 inches at each jamb, unless otherwise indicated.

#### 2.4 MASONRY LINTELS

- A. Masonry Lintels: Prefabricated or built-in-place masonry lintels made from bond beam CMUs with reinforcing bars placed as indicated and filled with coarse grout. CMU lintels shall match adjacent masonry color and texture. Cure precast lintels before handling and installing. Temporarily support built-in-place lintels until cured.
- B. Provide lintels where shown and where openings of more than 12 inches for brick size units and 24 inches for block size units are shown without other supporting lintels.
- C. Provide minimum bearing of 8 inches at each jamb, unless otherwise indicated.
- D. Match block colors and textures for surrounding wall in which the lintel is placed.

#### 2.5 MORTAR AND GROUT MATERIALS

- A. Portland Cement: ASTM C 150, Type I or II, except Type III may be used for cold-weather construction. Provide natural color or white cement as required to produce mortar color indicated.
- B. Hydrated Lime: ASTM C 207, Type S.
- C. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.

D. Masonry Cement: ASTM C 91.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:
  - a. Lafarge North America Inc.; Magnolia Masonry Cement or Lafarge Masonry Cement.
  - b. Lehigh Cement Company; Lehigh Masonry Cement.
  - c. Holcim (US) Inc.; Mortarmix Masonry Cement.

E. Aggregate for Mortar: ASTM C 144; except for joints less than 1/4 inch, use aggregate graded with 100 percent passing the No. 16 sieve.

F. Aggregate for Grout: ASTM C 404.

G. Cold-Weather Admixture: Nonchloride, noncorrosive, accelerating admixture complying with ASTM C 494/C 494M, Type C, and recommended by manufacturer for use in masonry mortar of composition indicated.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:
  - a. Euclid Chemical Company (The); Accelguard 80.
  - b. Grace Construction Products, W. R. Grace & Co. - Conn.; Morset.
  - c. Sonneborn Products, BASF; Trimix-NCA.

H. Water-Repellent Admixture: Liquid or powder water-repellent mortar admixture intended for mortar used with CMUs containing integral water repellent by same manufacturer.

1. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include, but are not limited to, the following:
  - a. ACM Chemistries; RainBloc for Mortar.
  - b. Cargill, Inc.; Acme Shield Mortar Admixture.
  - c. Euclid Chemical Company; Blocktite Mortar Admixture.
  - d. Euclid Chemical Company; Hydrapel Mortar Admixture.
  - e. GCP Applied Technologies, Inc.; Dry-Block Mortar Admixture.
  - f. Master Builders; MasterPel 240 Mortar Admixture.
2. Add water repellent admixture to mortar as recommended by water repellent manufacturer for specific mortar mix used, to achieve maximum water repellency in addition to efflorescence control.
  - a. Water repellency requirements shall match those of the block that has integral water repellent when tested as a wall assembly according to ASTM E 514.
3. Water repellent admixture in mortar shall be compatible with the CMU, including compatible with the integral water repellent admixture used to manufacture the CMU.

I. Water: Potable.

## 2.6 REINFORCEMENT



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

## 2.7 MASONRY JOINT REINFORCEMENT

- A. General: ASTM A 951
- B. Provide joint reinforcement formed from the following:
  - 1. Hot-dip galvanized carbon-steel wire, coating class as follows:
    - a. ASTM A 153, Class B-2, for both interior and exterior walls.
- C. Description: Welded-wire units prefabricated with deformed continuous side rods and plain cross rods into straight lengths of not less than 10 feet, with prefabricated corner and tee units, and complying with requirements indicated below:
  - 1. Wire Diameter for Side Rods: 0.1483 inch.
  - 2. Wire Diameter for Cross Rods: 0.1483 inch.
- D. For single-wythe masonry, provide type as follows with single pair of side rods:
  - 1. Ladder or truss type spaced not more than 16 inches o.c.
- E. For double-wythe cavity wall masonry, provide type as follows spaced not more than 16 inches o.c:
  - 1. Seismic adjustable (two-piece) ladder type, with one side rod at each face shell of backing wythe, one side rod in facing wythe, and separate ties that extend into facing wythe. Ties shall have two hooks that engage eyes or slots in backing wythe reinforcement and resist movement perpendicular to wall. Ties shall extend at least halfway through facing wythe but with at least 5/8-inch cover on outside face. Ties shall have hooks, indentions, or clips to engage the continuous horizontal wire in the facing wythe.
- F. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and hold reinforcing bars in center of cells. Units are formed from 0.148-inch steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.

## 2.8 TIES AND ANCHORS, GENERAL

- A. General: Provide ties and anchors specified in subsequent articles that comply with requirements for metal and size of this Article, unless otherwise indicated.
- B. Steel Sheet: As follows:
  - 1. Galvanized Steel Sheet: ASTM A 653, G 60 (commercial quality), steel sheet zinc coated by hot-dip process on continuous lines prior to fabrication, for sheet-metal ties and anchors.

- C. Galvanized Steel Sheet Thickness: For steel sheet hot-dip galvanized by continuous process prior to fabrication:

- 1. 0.1084 inch (12 gauge).

- D. Thickness of Steel Sheet Galvanized After Fabrication: Uncoated thickness of steel sheet for hot-dip galvanizing after fabrication:

- 1. 0.1046 inch (12 gauge).

## 2.9 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Pre-molded filler strips complying with ASTM D 1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene.
- B. Bond-Breaker Strips: Asphalt-saturated, organic roofing felt complying with ASTM D 226, Type I (No. 15 asphalt felt).

## 2.10 MASONRY CLEANERS

- A. Manufactured Masonry Detergent: Detergent based solution designed for the cleaning of new masonry structures.
  - 1. Products:
    - a. EaCo Chem NMD 80.
    - b. Approved equal meeting the specifications.
- B. Manufacturer shall provide on-site training for the application and cleaning of the masonry.
- C. Pre-test application on masonry prior to full-scale cleaning.
  - 1. Allow masonry to fully dry prior to evaluation of test for final appearance and results.
  - 2. Test all adjacent construction materials (metals, concrete, and other materials) to confirm the cleaning product does not damage finish.
- D. Protect adjacent materials from cleaning solution.
- E. Comply with all manufacturer's instructions and recommendations for the storage and handling of the product, mixing, testing, application, and rinsing of the masonry.

## 2.11 MORTAR AND GROUT MIXES

- A. General: Other than liquid water-repellent mortar admixture, do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, antifreeze compounds, or other admixtures, unless otherwise indicated.

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1. Do not use calcium chloride in mortar or grout.
  - B. Mortar for Unit Masonry: Comply with ASTM C 270, Proportion Specification, for types of mortar indicated below:
    1. For all masonry, use type S.
  - C. Integral water repellent: Mortar shall include an integral water repellent compatible with the integral water repellent in the concrete masonry units.
  - D. Grout for Unit Masonry: Comply with ASTM C 476. Minimum compressive strength shall be 3,000 psi. Use grout of consistency (fine or coarse) at time of placement that will completely fill spaces intended to receive grout.
    1. Use fine grout in grout spaces less than 2 inches in horizontal dimension, unless otherwise indicated.
    2. Use coarse grout in grout spaces 2 inches or more in least horizontal dimension, unless otherwise indicated.
    3. Provide grout with a slump of 8 to 11 inches as measured according to ASTM C 143.

## 2.12 INTEGRAL WATER REPELLENT FOR MASONRY UNITS AND MORTAR

- A. Concrete masonry units shall be manufactured with an integral water-repelling polymer admixture compatible with the masonry mix, mortar, and grout.
- B. Mortar shall be mixed with water-repelling mortar admixture.

## 2.13 MASONRY SEALER

- A. Modified silane, “breathable”, low volatility, penetrating water repellent providing invisible coating for concrete masonry construction. Water repellent coating shall protect against water and waterborne contaminants.
- B. Water repellent sealer shall be non-solvent based.
- C. Clear, not-glossy finish.
- D. Manufacturer:
  1. Prosoco; Sure Klean SL100 Water Repellent.
  2. Approve equal meeting the specifications.

## 2.14 CAST-IN-PLACE MASONRY WALL CAPS

- A. Provide a cast-in-place masonry wall cap at all masonry parapets, knee walls, or cubicle walls per details in the Construction Documents.
- B. Cast-in-place concrete caps shall be either:

- a. The **5,000** psi, air-entrained, ready-mix concrete from concrete specification 033000.01, for which pumping would be allowed as well as other means & methods as long as concrete and finish meet the requirements of the concrete specification, or
- b. **5,000** psi, air-entrained Quikrete (Quikrete Q-Max Pro), mixed in a mixer on site (not mixed in a wheelbarrow), with the fibers that project from the surface rubbed off after final cure and with finish that meets the requirements of the concrete specification.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of unit masonry. Do not proceed with installation until unsatisfactory conditions have been corrected.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.

#### 3.2 INSTALLATION, GENERAL

- A. Build cavity walls and other masonry construction to full thickness shown. Build single-wythe walls to the actual thickness of the masonry units, using units of thickness indicated.
- B. Build chases and recesses to accommodate items specified in this and other Sections of the Specifications.
- C. Leave openings for equipment to be installed before completion of masonry. After installing equipment, complete masonry to match construction immediately adjacent to the opening.
- D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut masonry units with motor-driven saws to provide clean, sharp, unchipped edges. Allow units cut with water-cooled saws to dry before placing, unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures.
  1. Mix units from several pallets or cubes as they are placed.

#### 3.3 LOOSE LAID FIRE BRICK ON FLOORS

- A. Install loose-laid fire brick on floors where indicated, with joints between bricks tight and no mortar. Place bricks so that 9" x 4-1/2" face is placed on floor.

### 3.4 CONSTRUCTION TOLERANCES

- A. Variation from Plumb: For vertical lines and surfaces of walls, do not exceed 1/4 inch in 10 feet, nor 3/8 inch in 20 feet, nor 1/2 inch in 40 feet or more. For external corners, expansion joints, control joints, and other conspicuous lines, do not exceed 1/4 inch in 20 feet, nor 1/2 inch in 40 feet or more. For vertical alignment of head joints, do not exceed plus or minus 1/4 inch in 10 feet, nor 1/2 inch maximum.
- B. Variation from Level: For bed joints and lines of exposed lintels, sills, and other conspicuous lines, do not exceed 1/4 inch in 20 feet, nor 1/2 inch in 40 feet or more.
- C. Variation in Cross-Sectional Dimensions: From dimensions shown, do not exceed minus 1/4 inch nor plus 1/2 inch.
- D. Variation in Mortar-Joint Thickness: Do not vary from joint thickness indicated by more than plus or minus 1/8 inch, with a maximum thickness limited to 1/2 inch. Do not vary joint thickness from joint thickness of adjacent course by more than 1/8 inch.

### 3.5 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint widths and for accurate location of openings, movement-type joints, returns, and offsets. Avoid the use of less-than-half-size units at corners, jambs, and where possible at other locations.
- B. Lay walls to comply with specified construction tolerances, with courses accurately spaced and coordinated with other construction.
- C. Bullnose Block: At interior walls and partitions, provide bullnose block at all outside corners.
- D. Bond Pattern: Lay masonry in the following bond pattern; bond and interlock each course of each wythe at corners unless interrupted by a thru-wall expansion joint; do not use units with less than nominal 8-inch horizontal face dimensions at corners or jambs.
  - 1. One-half running bond with vertical joint in each course centered on units in courses above and below.
- E. Stopping and Resuming Work: In each course, rack back 1/2-unit length; do not tooth. Clean exposed surfaces of set masonry, wet clay masonry units lightly if required, and remove loose masonry units and mortar prior to laying fresh masonry.
- F. Built-in Work: As construction progresses, build-in items specified under this and other Sections of the Specifications. Fill in solidly with masonry around built-in items.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath in the joint below and rod mortar or grout into core.
- H. Fill cores in hollow concrete masonry units with grout full height as follows:
  - 1. All cores in ***all walls unless otherwise indicated in the drawings.***

- 
- I. Build non-load-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.

### 3.6 MORTAR BEDDING AND JOINTING

- A. Lay hollow concrete masonry units as follows:
  - 1. With completely filled bed and head joints. Butter ends of units with sufficient mortar to completely fill head joints. Provide full bed joints, including face shells and webs.
  - 2. Maintain joint widths indicated, except for minor variations required to maintain bond alignment. If not indicated, lay walls with 3/8-inch joints.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not furrow bed joints or slush head joints.
- C. Tool joints slightly concave when thumbprint hard, using a jointer larger than joint thickness, unless otherwise indicated.

### 3.7 MASONRY JOINT REINFORCEMENT

- A. General: Provide continuous horizontal-joint reinforcement as indicated. Install entire length of longitudinal side rods in mortar with a minimum cover of 5/8 inch. Lap reinforcement a minimum of 6 inches.
  - 1. Space reinforcement not more than 16 inches o.c.
- B. Cut or interrupt joint reinforcement at control and expansion joints, unless otherwise indicated.
- C. Provide continuity at corners and wall intersections by using prefabricated "L" and "T" sections.
- D. Cut and bend reinforcement units as directed by manufacturer for continuity at returns, offsets, pipe enclosures, and other special conditions.

### 3.8 PLACING REINFORCEMENT

- A. General: Comply with requirements in TMS 402-13 / ACI **530-13** / ASCE5-13.
- B. Clean reinforcement of loose rust and mill scale, earth, ice, and other materials that reduce or destroy bond with grout.
- C. Accurately position, support, and secure reinforcement against displacement.

### 3.9 CONTROL AND EXPANSION JOINTS

- A. General: Install control and expansion joints in unit masonry where indicated. Build-in related items as the masonry progresses. Do not form a continuous span through movement joints.

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3.10 LİNTELS

- A. Provide precast concrete lintels where shown and where openings of more than 12 inches (for brick size units) and 24 inches (for block size units) are shown without other supporting lintels.
- B. Provide masonry lintels where shown and where openings of more than 24 inches are shown without other supporting lintels.
- C. Provide minimum bearing shown on drawings.

3.11 GROUTING

- A. Do not place grout until entire height of masonry to be grouted has attained sufficient strength to resist grout pressure.
  - 1. Comply with requirements in ACI 530.1/ASCE 6/TMS 602 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
  - 2. Provide cleanout holes at least 3 inches in least dimension for grout pours over 60 inches in height.

3.12 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or if units do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point-up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears prior to tooling joints. Remove excess mortar from all vertical expansion joints and remove excess mortar and grout from any horizontal expansion joints at tops of all masonry walls.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
  - 1. Beginning from the top of the wall, lightly pre-wet or pre-cool the wall;
  - 2. Begin applying cleaning material from the top to bottom, using even, overlapping passes to ensure full coverage of chemical on the surface;
    - a. Apply cleaning material to the entire drop or section of wall that can be cleaned without allowing the chemical to dry on the surface.
  - 3. After the first application of cleaning material, scrape the large chunks with a long handled scrapper from the first 8 feet of wall;
    - a. Use a scrapper in accordance to masonry manufacturers' requirements.

4. Check smears and tags to see if they crumble easily;
  5. If needed, repeat application to melt remaining residue and extend dwell time;
  6. After re-application, scrapping can be done further down the wall;
  7. Once smears and tags crumble easily, begin rinsing from top down. A thorough rinse is necessary to avoid leaving any cleaning material on the surface or in the masonry unit.
    - a. Use long even strokes that overlap each other.
    - b. Rinse pressure is determined by the masonry manufacturers' requirements. Color sensitive surfaces should always be rinsed with low pressure.
- E. Protection: Provide final protection and maintain conditions that ensure unit masonry is without damage and deterioration at time of Substantial Completion.

### 3.13 WATER REPELLENT SEALER

- A. Provide ***two coats of*** water repellent sealer on exterior face of all exterior CMU walls at the training tower.
- B. After final cleaning and masonry is thoroughly dry, ensure that surfaces are clean and free of dust, surface dirt, oil, grease and other contaminants.
- C. Test application: Provide test application and allow to fully cure prior to evaluation for appearance and performance. Do not proceed until approval of final appearance.
- D. Protect adjacent construction materials from sealer as recommended by the manufacturer.
- E. Ensure there is adequate ventilation and that there are no potential ignition sources prior to application.
- F. Apply the sealer per manufacturer's recommendations.

### 3.14 QUALITY CONTROL DURING CONSTRUCTION

- A. General: The Owner will employ a testing agency to perform tests and inspections and to submit testing and inspection reports. Allow inspectors access to scaffolding and work areas, as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.
- B. Perform visual inspections of at least 75% of masonry placement, checking for reinforcement placement, mortar placement, joint placement, anchorage placement, and grouting.
- C. Testing Frequency: Tests listed in this Article will be performed during construction for each 2,000 sq. ft. of wall area or portion thereof, but no less than three of each test for the Project if there is less than 6,000 square feet of wall surface for the Project.
- D. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C 140 for compressive strength.



- E. Compressive-Strength Tests for Grout: Test grout cylinders or cubes for compressive strength per ASTM C 1019 as follows:
  - 1. Prepare 1 set of laboratory-cured specimens, cylinders or cubes, for testing as follows: one specimen tested at 7 days, two specimens tested at 28 days, and one spare specimen to be held in reserve for later testing if required.
- F. Mortar Aggregate Ratio Test: For each type provided, test mortar for consistency of materials and procedures per ASTM C 780.
- G. Test results shall be reported in writing to Engineer and Contractor within 24 hours after tests. Reports of strength tests shall contain the Project identification name and number, date of masonry placement, name of testing service, masonry type and class, location of masonry in structure, and compressive breaking strength for both 7-day tests and 28-day tests.

END OF SECTION 04 20 00.01

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**SECTION 05 50 00.01 - METAL FABRICATIONS - BURN BUILDING, TRAINING TOWER,  
AND DRAFTING PIT**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes the following metal fabrications:
  - 1. Rough hardware.
  - 2. Steel stairs.
  - 3. Steel pipe handrails attached to steel stairs.
  - 4. Steel pipe handrails attached to walls adjacent to stairs.
  - 5. Steel pipe guardrails.
  - 6. Steel grating.
  - 7. Steel components and hardware for doors and windows.
  - 8. Miscellaneous steel items.

**1.3 SUBMITTALS**

- A. General: Submit each item in this Article according to the General Conditions of the Contract and Division 1 Specification Sections.
- B. Product data for steel shapes and plates, steel grating and treads, paint products, and grout.
- C. Shop drawings detailing fabrication and erection of each metal fabrication indicated. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items. Provide templates for anchors and bolts specified for installation under other Sections.
- D. Welder certificates signed by Contractor certifying that welders comply with requirements specified under the "Quality Assurance" Article.

**1.4 QUALITY ASSURANCE**

- A. Fabricator Qualifications: Firm experienced in producing metal fabrications similar to those indicated for this Project with a record of successful in-service performance, and with sufficient production capacity to produce required units without delaying the Work.
- B. Installer Qualifications: Engage an experienced Installer who has completed steel work similar in material and extent to that indicated for this Project and with a record of successful in-service performance.

- C. Welding Standards: Comply with applicable provisions of AWS D1.1 "Structural Welding Code--Steel," AWS D1.2 "Structural Welding Code--Aluminum," and AWS D1.3 "Structural Welding Code--Sheet Steel."

- 1. Certify that each welder has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone recertification.

- D. Preinstallation Conference: Conduct conference at Project site to comply with requirements of Division 1 Section "Project Management and Coordination".

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver structural steel to Project site in such quantities and at such times to ensure continuity of installation.
- B. Store materials to permit easy access for inspection and identification. Keep steel members off ground by using pallets, platforms, or other supports. Protect steel members and packaged materials from erosion and deterioration.

## PART 2 - PRODUCTS

### 2.1 FERROUS METALS

- A. Metal Surfaces, General: For metal fabrications exposed to view in the completed Work, provide materials selected for their surface flatness, smoothness, and freedom from surface blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.
- B. Steel Wide Flange Shapes: ASTM A 992.
  - 1. Galvanized finish unless otherwise indicated.
- C. Steel Channels: ASTM A 572.
  - 1. Galvanized finish unless otherwise indicated.
- D. Steel Angles, Plates, and Bars: ASTM A 36.
  - 1. Galvanized finish unless otherwise indicated.
- E. Steel Tubing: Cold-Formed Steel Tubing: ASTM A 500, Grade B.
  - 1. Galvanized finish unless otherwise indicated.
- F. Steel Pipe: ASTM A 53, standard weight (schedule 40), unless otherwise indicated, or another weight required by structural loads.
  - 1. Galvanized finish unless otherwise indicated.

- G. Steel Grating: 2" deep, 13 gauge, galvanized 'Perf-O Grip' grating by Cooper B-Line or an approved equivalent, subject to compliance with requirements, by the following manufacturers:
  - 1. Metalex
    - a. Galvanized finish unless otherwise indicated.
- H. Steel Stair Treads: 2" deep, 13 gauge, galvanized 'Perf-O Grip' stair treads by Cooper B-Line or an approved equivalent, subject to compliance with requirements, by the following manufacturers:
  - 1. Metalex
    - a. Galvanized finish unless otherwise indicated.
- I. Stainless Steel: Grade and type designated below for each form required:
  - 1. Tubing: ASTM A 554, Grade MT 316.
  - 2. Pipe: ASTM A 312, Grade TP 316.
  - 3. Castings: ASTM A 743, Grade CF 8M.
  - 4. Plate: ASTM A240, Type 316.
  - 5. Bolts: ASTM F593, Group 2 with ASTM F594 hex nuts and washers, all type 316.
- J. Cor-ten Steel: USS Cor-ten A
  - 1. Plates & Shapes: ASTM A-588
- K. Gray-Iron Castings: ASTM A 48, Class 30.
- L. Malleable-Iron Castings: ASTM A 47, Grade 32510.
- M. Welding Rods and Bare Electrodes: Select according to AWS specifications for the metal alloy to be welded.

## 2.2 PAINT

- A. Shop Primer for Ferrous Metal: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with performance requirements of FS TT-P-664, selected for good resistance to normal atmospheric corrosion, compatibility with finish paint systems indicated, and capability to provide a sound foundation for field-applied topcoats despite prolonged exposure.
- B. Finish Paint: Exterior quality, rust-inhibiting enamel paint. Consult Owner for color.
- C. Galvanizing Repair Paint: High-zinc-dust-content paint for regalvanizing welds in galvanized steel, with dry film containing not less than 94 percent zinc dust by weight, and complying with MIL-P-21035 or SSPC-Paint 20.

## 2.3 FASTENERS

- A. General: Provide plated fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating. Select fasteners for the type, grade, and class required.

- B. Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A, with hex nuts, ASTM A 563, and, where indicated, flat washers.
- C. High-Strength Bolts, Nuts, and Washers: ASTM A 325, Type 1, heavy hex steel structural bolts, heavy hex carbon-steel nuts, and hardened carbon-steel washers.
  - 1. Finish: Hot-dip zinc-coating, ASTM A 153, Class C.
- D. Anchor Bolts: ASTM F 1554, Grade 36.
  - 1. Provide threaded carbon-steel hooked bolts and carbon-steel nuts; and flat hardened-steel washers zinc-coated by hot-dip process according to ASTM A 153, Class C or mechanically deposited according to ASTM B 695, Class 50 where item being fastened is indicated to be galvanized.
- E. Machine Screws: ASME B18.6.3.
- F. Lag Bolts: ASME B18.2.1.
- G. Wood Screws: Flat head, carbon steel, ANSI B18.6.1.
- H. Plain Washers: Round, carbon steel, ANSI B18.21.1.
- I. Lock Washers: Helical, spring type, carbon steel, ANSI B18.21.1.
- J. Expansion Anchors: Stud type with a single piece three section wedge. The anchors shall meet the description in Federal Specification A-A-1923A, Type 4. Anchors shall be Hilti Kwik Bolt 3, manufactured by Hilti Fastening Systems, or an approved equivalent by ITW Ramset/Redhead or Powers Fasteners, Inc.
  - 1. Material: Carbon steel components zinc plated to comply with ASTM B633, service condition SC 1, Type III.
  - 2. Material: Where indicated as stainless steel, Group 1 alloy 304 or Group 2 alloy 316 stainless-steel bolts and nuts complying with ASTM F 593 and ASTM F 594.
- K. Sleeve anchors shall be specifically manufactured for use in hollow CMU, with expansion sleeves, spacer sleeves, and hex nut. Anchors shall be Hilti HLC-HX SS 304, manufactured by Hilti Fastening Systems, or an approved equivalent by ITW Ramset/Redhead or Powers Fasteners, Inc.
  - 1. Material: Where indicated as stainless steel, Group 1 alloy 304 or Group 2 alloy 316 stainless-steel bolts and nuts complying with ASTM F 593 and ASTM F 594.
- L. Adhesive Anchors:
  - 1. Material: Group 1 alloy 304 or Group 2 alloy 316 stainless-steel bolts and nuts complying with ASTM F 593 and ASTM F 594.
  - 2. Where installed in hollow CMU, adhesive anchors shall consist of a threaded anchor rod, nut, and washer, a cylindrical wire mesh screen tube, and an injectable adhesive material specifically designed for fastening into material containing voids and holes such as

hollow block. Adhesive anchors shall be Hilti HIT-HY 270, manufactured by Hilti Fastening Systems, or an approved equivalent by ITW Ramset/Redhead or Powers Fasteners, Inc.

3. Where installed in grouted CMU, adhesive anchors shall consist of a threaded anchor rod and an injectable adhesive material specifically designed for fastening into solid masonry and/or grouted masonry cells. Adhesive anchors shall be Hilti HIT-HY 270, manufactured by Hilti Fastening Systems, or an approved equivalent by ITW Ramset/Redhead or Powers Fasteners, Inc.
4. Where installed in concrete, adhesive anchors shall consist of a threaded anchor rod and an injectable adhesive material specifically designed for fastening into cracked or uncracked concrete. Adhesive anchors shall be Hilti HIT-HY 200, manufactured by Hilti Fastening Systems, or an approved equivalent by ITW Ramset/Redhead or Powers Fasteners, Inc.

## 2.4 GROUT

- A. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for exterior applications.
- B. Available Products: Subject to compliance with requirements, products that may be incorporated in the Work include the following:
  1. Nonshrink, Nonmetallic Grouts:
    - a. Euco N-S Grout; Euclid Chemical Co.
    - b. Five Star Grout; Five Star Products.
    - c. Masterflow 928 and 713; Master Builders Technologies, Inc.

## 2.5 FABRICATION, GENERAL

- A. Form metal fabrications from materials of size, thickness, and shapes indicated but not less than that needed to comply with performance requirements indicated. Work to dimensions indicated or accepted on shop drawings, using proven details of fabrication and support. Use type of materials indicated or specified for various components of each metal fabrication.
- B. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges.
- C. Shear and punch metals cleanly and accurately. Remove burrs.
- D. Ease exposed edges to a radius of approximately 1/32 inch, unless otherwise indicated. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- E. Remove sharp or rough areas on exposed traffic surfaces.
- F. Weld corners and seams continuously to comply with the following:

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1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  2. Obtain fusion without undercut or overlap.
  3. Remove welding flux immediately.
  4. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and contour of welded surface matches those adjacent.
- G. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type indicated or, if not indicated, Phillips flat-head (countersunk) screws or bolts. Locate joints where least conspicuous.
- H. Provide for anchorage of type indicated; coordinate with supporting structure. Fabricate and space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.
- I. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.
- J. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.
- K. Fabricate joints that will be exposed to weather in a manner to exclude water, or provide weep holes where water may accumulate.
- 2.6 FABRICATION OF STEEL PIPE GUARDRAILS, HANDRAILS, AND RAILING SYSTEMS
- A. General: Fabricate pipe guardrails, handrails, and railing systems to comply with requirements indicated for design, dimensions, details, finish, and member sizes, including wall thickness of pipe, post spacings, and anchorage, but not less than that required to support structural loads.
- B. Interconnect railing and guardrail and handrail members by butt-welding or welding with internal connectors, at fabricator's option, unless otherwise indicated.
1. At tee and cross intersections, cope ends of intersecting members to fit contour of pipe to which end is joined, and weld all around.
- C. Form changes in direction of guardrails, handrails, and rails as follows:
1. By welding in prefabricated flush elbow fittings.
  2. By radius bends of radius indicated.
  3. By flush radius bends.
  4. By bending and mitering elbow bends.
  5. By any method indicated above, applicable to change of direction involved.
- D. Form simple and compound curves by bending pipe in jigs to produce uniform curvature for each repetitive configuration required; maintain cylindrical cross section of pipe throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of pipe.

- E. Welded Connections: Fabricate guardrails, handrails, and railing systems for connection of members by welding. For connections made during fabrication, weld corners and seams continuously to comply with the following:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At tee and cross intersections, cope ends of intersecting members to fit contour of pipe or tube to which end is joined, and weld all around.
  - 5. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing and welded surface matches contours of adjoining surfaces.
- F. Provide wall returns at ends of wall-mounted handrails, unless otherwise indicated.
- G. Close exposed ends of pipe by welding steel plate in place.
- H. Brackets, Flanges, and Fittings: Provide manufacturer's heavy duty wall brackets, end closures, flanges, and miscellaneous fittings for interconnections of pipe and attachment of guardrails, handrails, and railing systems to other work..
- I. Connect railing posts to steel stair framing and steel platform framing by direct welding, unless otherwise indicated.
- J. For galvanized guardrails, handrails, and railing systems, provide galvanized fittings, brackets, fasteners, sleeves, and other ferrous components unless otherwise indicated.

## 2.7 STEEL AND IRON FINISHES

- A. Galvanizing: For those items indicated for galvanizing, apply zinc coating by the hot-dip process complying with the following requirements:
  - 1. ASTM A 153 for galvanizing iron and steel hardware.
  - 2. ASTM A 123 for galvanizing both fabricated and unfabricated iron and steel products made of uncoated rolled, pressed, and forged shapes, plates, bars, and strip 0.0299 inch thick or thicker.
- B. Galvanizing Vent Hole Plugs: At galvanizing vent holes in pipes and tubes at railings, steel stairs, rope frames and other noted items, plug all holes after galvanizing and installation are complete in one of the following ways: Hammer in a zinc galvanizing vent hole plug by Bruce Reichelt Enterprises (503) 879-9085, grind it smooth, and touch up with galvanizing repair paint. A second option is to plug weld the vent holes after galvanizing, grind the welds smooth, and touch up with galvanizing repair paint.
- C. Preparation for Shop Priming: Prepare uncoated ferrous metal surfaces to comply with minimum requirements for SSPC-SP6, "Commercial Blast Cleaning" for surface preparation specifications and environmental exposure conditions of installed metal fabrications.



- D. Apply shop primer to uncoated surfaces of metal fabrications indicated to be painted. Comply with requirements of SSPC-PA 1 "Paint Application Specification No. 1" for shop painting.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Coordinate and furnish anchorages, setting drawings, diagrams, templates, instructions, and directions for installing anchorages, including concrete inserts, sleeves, anchor bolts, and miscellaneous items having integral anchors that are to be embedded in concrete or masonry construction. Coordinate delivery of such items to Project site.

#### 3.2 INSTALLATION, GENERAL

- A. Fastening to In-Place Construction: Provide anchorage devices and fasteners where necessary for securing miscellaneous metal fabrications to in-place construction. Include expansion anchors, sleeve anchors, adhesive anchors, through-bolts, and other connectors as required.
- B. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing miscellaneous metal fabrications. Set metal fabrication accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.
- C. Provide temporary bracing or anchors in formwork for items that are to be built into concrete masonry or similar construction.
- D. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop-welded because of shipping size limitations. Do not weld, cut, or abrade the surfaces of exterior units that have been hot-dip galvanized after fabrication and are intended for bolted or screwed field connections.
- E. Field Welding: Comply with the following requirements:
  - 1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
  - 2. Obtain fusion without undercut or overlap.
  - 3. Remove welding flux immediately.
  - 4. At exposed connections, finish exposed welds and surfaces smooth and blended so that no roughness shows after finishing, and contour of welded surface matches those adjacent.
- F. Secure stair treads to steel stringers with bolts.

#### 3.3 INSTALLATION OF STEEL PIPE GUARDRAILS, HANDRAILS, AND RAILINGS

- A. Fit exposed connections accurately together to form tight, hairline joints.
- B. Adjust guardrails, handrails, and railing systems prior to anchoring to ensure matching alignment at abutting joints. Space posts at spacing indicated. Plumb posts in each direction.

1. Set posts plumb within a tolerance of 1/4 inch in 12 feet.
  2. Align rails so that variations from level for horizontal members and from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet.
- C. Use fully welded joints for permanently connecting railing components by welding. Cope or butt components to provide 100 percent contact, or use fittings designed for this purpose.
- D. Secure handrails to wall with wall brackets and end fittings. Provide bracket with indicated clearance from inside face of handrail and finished wall surface. Locate brackets at spacing required to support structural loads, but at no greater spacing than that indicated. Secure wall brackets and wall return fittings to building construction using type of bracket with predrilled hole for exposed bolt anchorage.
- E. Anchor handrails to masonry walls with through bolts, as shown on the drawings.
- F. Anchor railing posts to concrete slabs and handrails to concrete walls with expansion anchors, as shown on the drawings.
- G. Connect railing posts to steel stair framing and steel platform framing by direct welding, unless otherwise indicated.

### 3.4 SETTING BASE PLATES

- A. Clean concrete bearing surfaces of bond-reducing materials, and roughen to improve bond to surfaces. Clean bottom surface of base plates.
- B. Set base plates on wedges or other adjustable devices. After the bearing members have been positioned and plumbed, tighten the anchor bolts. Do not remove wedges or shims, but if protruding, cut off flush with the edge of the base plate before packing with grout.
1. Use nonshrink, nonmetallic grout, unless otherwise indicated.
  2. Pack grout solidly between bearing surfaces and plates to ensure that no voids remain.

### 3.5 PLUGGING GALVANIZING VENT HOLES AFTER INSTALLATION

- A. After installation, plug galvanizing vent holes in pipes and tubes at railings, steel stairs, rope frames and other noted items as indicated in Part 2 of this specification section.

### 3.6 FIELD QUALITY CONTROL

- A. Owner will engage an independent testing and inspecting agency to perform field inspections and tests and to prepare test reports.
1. Testing agency will conduct and interpret tests and state in each report whether tested Work complies with or deviates from requirements.
- B. Correct deficiencies in or remove and replace structural steel that inspections and test reports indicate do not comply with specified requirements.
- C. Additional testing, at Contractor's expense, will be performed to determine compliance of corrected Work with specified requirements.

- D. Field-bolted connections will be tested and inspected according to RCSC's "Specification for Structural Joints Using ASTM A 325 or A 490 Bolts."
- E. All welds shall be visually inspected. If required as a result of visual inspection, welded connections shall be inspected and tested according to AWS D1.1 and the inspection procedures listed below, at testing agency's option.
  - 1. Liquid Penetrant Inspection: ASTM E 165.
  - 2. Magnetic Particle Inspection: ASTM E 709; performed on root pass and on finished weld. Cracks or zones of incomplete fusion or penetration will not be accepted.
  - 3. Radiographic Inspection: ASTM E 94 and ASTM E 142; minimum quality level "2-2T."
  - 4. Ultrasonic Inspection: ASTM E 164.
- F. Testing and inspections of rope tie-off points:
  - 1. Test each rope anchor assembly and rope frame assembly with a 5,000-pound pull test, as follows:
    - a. Surface-mounted rope anchor assembly: pull test on hoist ring perpendicular to the slab or wall surface on which assembly is attached.
    - 2. Embedded (through-slab) rope anchor assembly: pull test on round bar perpendicular to the slab surface.
    - 3. Rope frame assembly: pull test at top of frame at each corner of frame perpendicular to slab surface, testing one corner at a time.
  - 2. Inspect gantry assembly as follows:
    - a. Visually inspect all bolted connections, including bolts into/through slab.
    - b. Visually inspect all welds.
    - c. Visually inspect all hoist ring connections to steel framing.

### 3.7 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop and finish paint, and paint exposed areas with one coat of same material as used for shop painting to comply and two coats of finish paint.
- B. For galvanized surfaces, clean welds, bolted connections, and abraded areas, and apply galvanizing repair paint to comply with ASTM A 780.

END OF SECTION 05 50 00.01

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**SECTION 07 00 01 - THERMAL LINING SYSTEM - BURN BUILDING**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes requirements for the thermal lining system.

**1.3 COMPONENT REQUIREMENTS FOR THERMAL LINING SYSTEM**

- A. Provide thermal lining system that includes the following minimum components:
  - 1. A 1-inch thick layer of calcium silicate insulation with a maximum density of 18 pounds per cubic foot and a continuous service temperature rating of a minimum of 1,800° F. Provide material with a minimum compressive strength of 450 psi and minimum flexural strength of 260 psi. Provide material with maximum shrinkage of 1% in length and width when subjected to continuous temperature of minimum 1,700° F for 24 hours. Provide material with maximum “k” value of 0.73 at 800° F. Provide materials that are free of asbestos or any other toxic substances.
  - 2. Fully cover the insulation with thermo-ceramic refractory concrete fire castings. Provide castings that each measure 12" x 12" x 1-3/4" thick.
  - 3. Provide castings that interlock with one another in a fashion that ensures shedding of water from fire hose streams and preventing water from reaching the insulation barrier. Design castings to allow the installed system to immediately expand and contract with extreme fluctuations in temperatures associated with live fire training conducted in accordance with the latest edition of NFPA 1403, and as a result of the thermal shock generated by fire suppression using fire hose streams. Provide special shapes of castings to adapt the thermal lining system to different conditions, such as corner conditions at beams, columns, and wall openings. Provide bullnose corner castings or cast-in-place refractory material creating a chamfer, where the corners are subject to abuse from equipment, as indicated in the Contract Documents. Provide a completed system in which every casting interlocks with adjacent castings, providing an impenetrable, floating barrier of thermo-ceramic refractory concrete that fully covers and protects the insulation barrier, including ceiling panels, wall panels, and corners. Provide special castings to accommodate temperature monitoring devices, conduit, and wiring as indicated in the Contract Documents. Provide casting material with a density of 140 to 150 pounds per cubic foot and cold crushing strength of 10,000 psi after exposure to 2,000° F. Provide casting material that expels any absorbed water without cracking or spalling when exposed to temperatures up to 2,000° F.
  - 4. Anchor each casting to the structure with a minimum of one Grade 304 stainless steel anchor.

- a. For concrete substrates, provide expansion anchors that are a minimum 3/8" diameter, with 2" minimum embedment into concrete (or per the anchor manufacturer's recommendations, whichever is greater). Provide anchors that have a minimum pullout (tension) rating of 2,240 pounds in 4,000 psi concrete.
  - b. For concrete unit masonry substrates, provide anchors that are a minimum 3/8" diameter, with minimum 1-1/4" embedment into masonry (or per the anchor manufacturer's recommendations, whichever is greater). Provide anchors with a minimum pullout (tension) rating of 1,160 pounds in hollow core concrete masonry units.
5. Provide a base course of mortared-in-place fire brick for all wall locations that receive the thermal lining system down to floor level. Provide fire brick that is a minimum of 4-1/2" x 9" x 2-1/2" thick medium duty fire brick per ASTM C-27, set in type N Portland cement mortar.
6. Provide stainless steel and aluminum flashings as indicated in the Contract Documents. For stainless steel flashings, provide Grade 304 stainless steel with a minimum thickness of .018". For aluminum flashings, provide a minimum thickness of .032".
7. Provide refractory packings as indicated in the Contract Documents. Provide a general purpose castable packing mix for use to temperatures to 2,000°F. Provide packing mix that has good resistance to abrasion, a low iron content, no more than 0.5% shrinkage when exposed to 2,000° F, and minimum cold crushing strength of 1,400 psi after exposure to 2,000° F.

#### 1.4 PERFORMANCE REQUIREMENTS FOR THERMAL LINING SYSTEM

- A. Provide thermal lining system that is specifically designed for use within live fire training structures (burn buildings) exposed to frequent training with Class A fuels. Provide a thermal lining system that is designed to withstand repetitive live fire training for 20 years without significant panel/tile replacement and without degradation of the thermal protection.
- B. Thermal lining shall provide thermal protection for the structural components from temperatures attained during fire training.
  1. Provide a thermal lining system that withstands temperatures at the exposed face of thermal lining during a live fire training evolution of up to 2,000° F.
  2. Provide a thermal lining system that keeps temperature behind the system during live fire training, at the face of the protected structure, below 350° F when the room temperature at the exposed face of the thermal lining system is 2,000°F.
  3. During a live fire training day, multiple live fire training evolutions may occur. After each evolution, the fire may be left smoldering, but not completely extinguished. At the beginning of the next evolution, the fire is reignited. This cycle typically repeats all day during a training day. As a result, significant residual heat builds up in the training structure by the last training evolution. Provide thermal lining system that withstands, without damage, residual heat buildup created by a minimum of 20 consecutive live fire training evolutions.
- C. Provide a thermal lining system that withstands, without damage, repetitive thermal shock created by rapid cooling of heated surfaces with cool water from water mains. Provide a thermal lining system that allows for expansion and contraction caused by rapid heating and cooling.

- D. Provide a thermal lining system that withstands, without damage, impact loads and other associated stresses induced by pressurized water sprayed from hoses (300 gallons per minute, 100 pounds per square inch of pressure) and thermally pressurized steam.
  - 1. Provide a thermal lining system that prevents water and steam penetration to the protected structure.
  - 2. Provide a thermal lining system that allows for the fact that almost all cementitious materials will absorb water through direct water application or through condensation caused by large fluctuations in temperature, such as those commonly experienced during winter months. Once this absorbed water is abruptly heated during a fire, it will convert to pressurized steam which could act to degrade the lining material. Provide a thermal lining system that expels water and vapor that could penetrate the system. Provide a thermal lining system that is functional in all seasons of the year.
  - 3. For multi-component thermal lining systems consisting of an insulation layer protected by another layer of durable materials, provide an insulation layer that does not sag or move behind the protective layer.
- E. Provide a thermal lining system that withstands, without damage, routine physical abuse during typical live fire training evolutions, including, but not limited to:
  - 1. impact of fire fighters' protective clothing, self-contained breathing apparatuses, or hand tools.
  - 2. impact of wood pallets or other Class A fuel materials "tossed" onto the fire and impacting the thermal lining system.
- F. Provide a thermal lining system that is functional year-round, withstanding the effects of seasonal weather considerations, including seasonal temperature changes, freeze/thaw cycles, humidity, and precipitation.
- G. Provide a thermal lining system that withstands, without damage, the effects of oxygen deficient atmosphere.
- H. Provide a thermal lining system that allows for the use of surface and subsurface mounted thermocouples that penetrate the lining.
- I. Provide a thermal lining system that is free from asbestos or other harmful ingredients, and shall not produce toxic byproducts during live fire training.
- J. Provide a thermal lining system that has properties that do not degrade under repeated use.
- K. Provide a thermal lining system that is capable of bracing tops of walls against lateral, out-of-plane movement, as shown on the drawings; or the thermal lining system manufacturer shall propose an acceptable (to be approved by the Engineer), alternate method for bracing tops of walls against lateral, out-of-plane movement while maintaining continuous thermal protection for the protected structural elements. Out of plane wind loads are stated on the drawings.

## 1.5 QUALIFICATION PROCEDURE

- 
- A. For any prospective thermal lining system manufacturer/supplier/product that is not listed under Part 2, submit a written request for qualification to the Engineer. For all requests for qualification, include the information defined in the following sections and deliver to the Engineer 14 calendar days before the stated date of bid opening as identified in the solicitation documents. Lack of adequate information is sufficient cause for rejection. References to catalogs or other descriptive documents not included with the application for qualification to the Engineer are not acceptable.
- B. Manufacturer's Qualifications: Provide the following information:
1. Corporate qualifications and capabilities that fully describe the ability to manufacture and provide the required thermal lining system and support to the Owner.
  2. A history of corporate experience manufacturing thermal lining systems for live fire training props ("burn buildings").
  3. A list of ten (10) completed projects in excess of 1,000 square feet, at least five (5) of which shall be more than ten (10) years old, illustrating thermal lining system performance equal or greater to the performance criteria listed in this specification. Include the award date, the completion date, the contract value, and the name and telephone number of a person employed by the Owner who has personal knowledge of the thermal lining system supplier's contractual and technical performance. Provide descriptions of any testing that has been performed on the product to indicate that it will have performance equal or greater to the performance criteria listed in this specification
- C. Installer's Qualifications: Provide the following information:
1. Qualifications and capabilities that fully describe the ability to install the required thermal lining system.
  2. A history of experience installing thermal lining systems in live fire training props ("burn buildings").
  3. A list of ten (10) completed projects in excess of 1,000 square feet, at least five (5) of which shall be more than five (5) years old. Include the award date, the completion date, the contract value, and the name and telephone number of a person employed by the Owner who has personal knowledge of the thermal lining system's performance.

#### 1.6 SUBMITTALS

- A. General: Submit each item in this Article according to the General Conditions of the Contract and Division 01 Specification Sections.
- B. Evidence of installer qualifications, including certification by the thermal lining system manufacturer.
- C. Certificate of Conformance: Manufacturer's certification that materials and equipment are physically and chemically compatible with each other, that materials are in compliance with performance requirements of this specification, and that each material and/or equipment is suitable for the intended purpose. Materials and equipment not listed in the certificate will not be permitted in the work area. Submit Material Safety Data Sheets (MSDS) for the thermal lining system.

- D. Materials Certification: Letter from the manufacturer certifying that materials shipped meet manufacturer's specification data.
- E. Samples of materials to be used, including thermal tile, insulation, flashing, anchoring system, and fire clay.
- F. Shop drawings detailing fabrication and erection of thermal lining system. Include plans, elevations, sections, and details of the thermal lining system and connections to substrates. Show anchorage and accessory items.
- G. Operations and Maintenance manual describing all required maintenance and operational requirements.

#### 1.7 QUALITY ASSURANCE

- A. All thermal lining systems shall be provided by one manufacturer.
- B. Installer Qualifications: Install the thermal lining system by manufacturer or by a contractor approved by the manufacturer and under the supervision of the manufacturer.
- C. Warranties:
  - 1. The manufacturer shall furnish a five year warranty for the thermal lining system, starting from the date of Owner's acceptance of the Work, to cover replacement of all defective materials found within the warranty period.
  - 2. The installer shall furnish a one year warranty for the thermal lining system, starting from the date of Owner's acceptance of the Work, to cover replacement of all materials found to be defective due to workmanship found within the warranty period.
  - 3. Warranties can be limited to replacement of defective materials, including labor, due to thermal lining system components or performance. Warranties can exclude repairs, replacement, and corrective work to the substrate, structure, and/or property. Warranties can exclude mechanical damage due to abuse or neglect, structural failure, or forces of nature greater than normal weather conditions.
  - 4. Substrate shall be monolithic, without joints, holes, penetrations, or embedded items that pass through the entire thickness that could cause moisture to pass through the substrate into the thermal lining system, except for joints and items shown on the drawings. Warranty can exclude damage to the lining system and substrate caused by moisture penetration through the joints, holes, penetrations, and embedded items in the substrate that are not shown on the drawings.

#### 1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver thermal lining system materials in manufacturer's original unopened containers or wrapped with labels intact and legible.
- B. Store and protect materials from damage and weather in accordance with the manufacturer's instructions. Keep materials clean and dry at all times.
- C. Handle materials in accordance with the manufacturer's recommendations.



## PART 2 - PRODUCTS

### 2.1 THERMAL LINING SYSTEM

- A. At noted locations in plans, provide HTL System 203, by High Temperature Linings, P.O. Box 1240, White Stone, Virginia 22578, Phone (800) 411-6313, [www.firetrain.com](http://www.firetrain.com), including all components and anchoring devices, or an approved equal.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Clean all surfaces to receive the thermal lining system of oils, dust, and other deleterious matter. Install the thermal lining system over dry surfaces.

### 3.2 INSTALLATION

- A. Install the thermal lining system and all accessories in accordance with the manufacturer's requirements.

### 3.3 CLEAN UP

- A. Remove all debris, scraps, containers, and any other trash resulting from the installation of the thermal lining system.

END OF SECTION 07 00 01

## SECTION 101419 - DIMENSIONAL LETTER SIGNAGE

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. Section Includes:
  - 1. Cast dimensional characters.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For signs.
  - 1. Include fabrication and installation details and attachments to other work.
  - 2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
  - 3. Show message list, typestyles, graphic elements, and layout for each sign at least half size.
- C. Samples for Initial Selection: For each type of sign assembly, exposed component, and exposed finish.
  - 1. Include representative Samples of available typestyles and graphic symbols.
- D. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), in manufacturer's standard size unless otherwise indicated and as follows:
  - 1. Dimensional Characters: Half-size Sample of dimensional character.
  - 2. Exposed Accessories: Full-size Sample of each accessory type.
- E. Product Schedule: For dimensional letter signs. Use same designations indicated on Drawings or specified.
- F. Delegated-Design Submittal: For signs indicated in "Performance Requirements" Article.
  - 1. Include structural analysis calculations for signs indicated to comply with design loads; signed and sealed by the qualified professional engineer responsible for their preparation.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer and manufacturer.
- B. Sample Warranty: For special warranty.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For signs to include in maintenance manuals.

#### 1.6 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

#### 1.7 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Deterioration of finishes beyond normal weathering.
    - b. Separation or delamination of sheet materials and components.
  - 2. Warranty Period: Five years from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design sign structure and anchorage of dimensional character sign type(s) according to structural performance requirements.
- B. Structural Performance: Signs and supporting elements shall withstand the effects of gravity and other loads within limits and under conditions indicated.
  - 1. Uniform Wind Load: As indicated on Drawings.
  - 2. Concentrated Horizontal Load: As indicated on Drawings.
  - 3. Other Design Load: As indicated on Drawings
  - 4. Uniform and concentrated loads need not be assumed to act concurrently.

## 2.2 DIMENSIONAL CHARACTERS

- A. Cast Characters: Characters with uniform faces, sharp corners, and precisely formed lines and profiles, and as follows:
  - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. APCO
    - b. A.R.K. Ramos.
    - c. ASI Sign Systems, Inc.
    - d. Gemini Incorporated.
  - 2. Character Material: Cast aluminum.
  - 3. Character Height: 6-inches.
  - 4. Thickness: Manufacturer's standard for size of character.
  - 5. Finishes:
    - a. Integral Aluminum Finish: Clear anodized.
  - 6. Mounting: Wall mounted on masonry or roof fascia; per Manufacturer's standard.
  - 7. Typeface: Verify with Architect (not script).

## 2.3 DIMENSIONAL CHARACTER MATERIALS

- A. Aluminum Castings: ASTM B26/B26M, alloy and temper recommended by sign manufacturer for casting process used and for type of use and finish indicated.
- B. Aluminum Sheet and Plate: **ASTM B209** (**ASTM B209M**), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
- C. Aluminum Extrusions: **ASTM B221** (**ASTM B221M**), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.

## 2.4 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following:
  - 1. Use concealed fasteners and anchors unless indicated to be exposed.
  - 2. For exterior exposure, furnish stainless-steel or hot-dip galvanized devices unless otherwise indicated.
  - 3. Sign Mounting Fasteners:
    - a. Concealed Studs: Concealed (blind), threaded studs welded or brazed to back of sign material, screwed into back of sign assembly, or screwed into tapped lugs cast integrally into back of cast sign material, unless otherwise indicated.

- b. Projecting Studs: Threaded studs with sleeve spacer, welded or brazed to back of sign material, screwed into back of sign assembly, or screwed into tapped lugs cast integrally into back of cast sign material, unless otherwise indicated.
- c. Through Fasteners: Exposed metal fasteners matching sign finish, with type of head indicated, installed in predrilled holes.

## 2.5 FABRICATION

- A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.
  - 1. Preassemble signs and assemblies in the shop to greatest extent possible. Disassemble signs and assemblies only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation; apply markings in locations concealed from view after final assembly.
  - 2. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
  - 3. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed connections of flux, and dress exposed and contact surfaces.
  - 4. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
  - 5. Internally brace dimensional characters for stability, to meet structural performance loading without oil-canning or other surface deformation, and for securing fasteners.
  - 6. Provide rabbets, lugs, and tabs necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.
  - 7. Castings: Fabricate castings free of warp, cracks, blowholes, pits, scale, sand holes, and other defects that impair appearance or strength. Grind, wire brush, sandblast, and buff castings to remove seams, gate marks, casting flash, and other casting marks before finishing.
- B. Brackets: Fabricate brackets, fittings, and hardware for bracket-mounted signs to suit sign construction and mounting conditions indicated. Modify manufacturer's standard brackets as required.
  - 1. Aluminum Brackets: Factory finish brackets with baked-enamel or powder-coat finish to match sign-background color unless otherwise indicated.

## 2.6 GENERAL FINISH REQUIREMENTS

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

- C. Directional Finishes: Run grain with long dimension of each piece and perpendicular to long dimension of finished trim or border surface unless otherwise indicated.
- D. Organic, Anodic, and Chemically Produced Finishes: Apply to formed metal after fabrication but before applying contrasting polished finishes on raised features unless otherwise indicated.

## 2.7 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, Class I, 0.018 mm or thicker.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
  - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
  - 2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
  - 3. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- B. Mounting Methods:
  - 1. Concealed Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
    - a. Thin or Hollow Surfaces: Place sign in position and flush to surface, install washers and nuts on studs projecting through opposite side of surface, and tighten.
  - 2. Projecting Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.

- a. Thin or Hollow Surfaces: Place spacers on studs, place sign in position with spacers pinched between sign and substrate, and install washers and nuts on stud ends projecting through opposite side of surface, and tighten.
3. Through Fasteners: Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.
4. Back Bar and Brackets: Remove loose debris from substrate surface and install backbar or bracket supports in position, so that signage is correctly located and aligned.

### 3.3 ADJUSTING AND CLEANING

- A. Remove and replace damaged or deformed characters and signs that do not comply with specified requirements. Replace characters with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.
- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

### 3.4 SIGNAGE SCHEDULE

- A. Provide the following street address numbers for attachment to the building facades in a location to be determined:
  1. 1341
  2. 1352
  3. 1320
  4. 1309
  5. 1302

END OF SECTION 101419

**SECTION 282301 – SECURITY SYSTEMS**

**PART 1 - GENERAL**

**RELATED DOCUMENTS**

Drawings and general provisions of Contract, including General and supplementary Conditions and Division-1 specification sections, apply to work of this section.

Reference construction documents for additional security and access control requirements.

**QUALITY ASSURANCE**

Manufacturers: Firms regularly engaged in manufacture of security systems, of types and ratings required in this Section, whose products are Listed and Labeled for the purpose intended. Refer to the drawings for equipment schedules.

Manufacturer's Qualifications: Firms regularly engaged in manufacture of security systems and systems components of types and sizes required, whose products are Listed and Labeled. Manufacturers of Security Systems shall have not less than five (5) years' experience in the design and fabrication of the type of security equipment commensurate in size and similar in construction to this project.

Installer's Qualifications: The installer shall have been actively engaged in the design and installation of security systems and equipment similar in size, complexity and operation to the scope of work contained herein, and shall have a fully staffed, operational office. Be licensed by the State of NC for security system installation, holding a valid NC alarm systems license. Installer shall provide all security and control systems per the specifications contained herein and be responsible for the termination of all security control system cable, field devices and control components specified. Installer shall be responsible for systems start-up, acceptance testing, training and complete and total integration of all systems. Installer shall specialize in the installation of the products specified with a minimum of five years documented experience and three projects of similar size and scope within the past 24 months.

Servicing: Authorized factory-trained fulltime staffed service department with a minimum of five years of documented experience specializing in the servicing of the products specified with service facilities within 50 miles of the project.

Certified Dealers: The prime contractor must be certified by the manufacturer to furnish, install, and service all specified products.

**Codes and Standards:**

NEMA Compliance: Comply with applicable requirements of NEMA Standards Publications pertaining to security systems.

Testing Laboratory Compliance and Labeling: Comply with applicable requirements of UL safety standards pertaining to security systems. Provide products and components that have been Listed and Labeled.

NEC Compliance: Comply with applicable requirements of the latest edition of the NEC pertaining to construction and installation of security systems.

The college has adopted universal standards for Access Control and Video Surveillance Systems. This new campus, starting with the central plant building will institute these standard products. All security proposals must include SoftwareHouse access control system and Salient video surveillance software with Axis, Hanwha or equal cameras. The security systems will be an expansion of the existing enterprise system and shall be integrated with the existing platforms for access and administration. The building requires a stand-alone video recording server and the card readers shall be enrolled into the CCure 9000 server.

**SUBMITTALS:**

Submittals shall be made in strict accordance with the requirements of Section 019913. Specific submittal requirements are defined in each section of this Division.



Shop Drawings submittals for Security equipment and connections shall be submitted as an entire section. The submittal package shall consist of the following:

A materials list for each system with the names of manufacturers, model numbers, and technical information on all equipment proposed.

Product technical information sheets for each principal component in the proposed system to include wire/cable specifications for each component.

Operating sequences: Provide a complete written description of the sequence of operation of the system and its relationship to each other integrated system. Basic block diagrams of all systems shall be included.

Test procedure: A written document detailing the test procedure of the system shall be supplied. This procedure shall include all tests required by the equipment manufacturer and by this specification.

Wiring Diagrams: Provide complete "point to point" wiring diagrams for all systems and subsystems. Show all components and model numbers in the communications path from the central control through all intervening system components, including terminal boards to the individual end devices. The intent of this requirement is to provide a document that will permit end to end tracing of the system wire and cabling. Where conductors are grouped into a cable for long site runs, a single line properly identified shall be shown. Where these cables fan out for termination, individual wire terminations and markings shall be shown.

Equipment locations: Provide drawings that show the building elevations indicating the exact locations of all equipment in the system.

Storage Array Capacity: Capacity shall be based on 30 days retention, 40% continuous recording time at 15 fps per camera, plus 20% additional capacity for future growth. Provide manufacturer's calculations for required storage system capacity, based on proposed cameras, in drive increments specified. Identify total storage capacity in submittal documentation.

POE Patch Panels: POE power requirements for panels shall be defined by actual load requirements of cameras served. Supporting calculation shall be developed and power requirements identified as part of the submittal literature.

Shop detail drawings: These drawings shall indicate the accurate locations of all equipment associated with each system in respect to architectural and structural conditions. Size drawings of components, equipment layouts and other small size areas to the common scale of 1/8", 1/2" or 1" per foot. Size drawings of larger areas to the common scale of 1/4" or 1/8" per foot. Drawings shall include explicit notes on the termination of all conductors and shields for each location.

Markings: Submit for approval wire marking, panel label, zone label, terminal strip numbering & terminal strip identification styles and typical text as outlined.

Configuration/mounting drawings: Security Equipment Closet Rack, Head-End components.

## **PART 2 - PRODUCTS**

### **MATERIALS**

General: Under the Base Bid the Contractor may submit materials as produced by any manufacturer whose products meet the performance requirements of the Specifications. Refer to the drawings for equipment schedules.

### **MANUFACTURERS**

Software: Salient System (software version shall be compatible with version Owner currently uses).

Security cameras: Axis or Hanwha.

### **DIGITAL VIDEO MANAGEMENT SYSTEM:**

IP Network Video System:

Cameras to plug into owner furnished network.

Server Specifications:

Refer to drawings for required Salient server

Video system equipment shall be of one (1) manufacturer, modular and with all necessary rack mounted units to accomplish the video scheme indicated on the drawings and described in this section. Installation shall be by manufacturer trained and approved installers.

Surveillance Cameras: Surveillance cameras shall be compact network type; UL listed and shall be the standard product of one manufacturer. Provide license for each camera specified on Drawings as part of quotation.

Install each camera complete, including appropriate lens having automatic iris, mounting bracket and camera enclosure (fully compatible with the camera provided).

All cameras shall have provisions for adjustable image size, quality and bit rate. Camera shall provide time stamp and text caption overlay capability.

Cameras shall be configurable for brightness, contrast, saturation, sharpness, white balance and exposure.

All cameras shall contain with Micro SD/SDHC/SDXC card slot for on-board storage.

Power supplies shall be internally protected.

Cameras shall support 10/100 Mbps Ethernet network communications using RJ-45 jack/terminations.

Camera Enclosures and Supports:

Field verify all camera/housing mounting heights and necessary/unique installation detailing due to existing building finish materials and configurations. The Shop Drawing submittal shall depict the exact installation detailing for review and approval. Notify the Engineer of problems or concerns.

Camera enclosures and support brackets shall be compatible with the camera scheduled.

Cameras shall be provided with a weatherproof or tamperproof enclosure, as indicated in the camera schedule.

Camera installations shall be securely attached to the mounting surface, at the height and location as indicated in the camera schedule, with security fasteners (Torx-head) of the appropriate type. Anchoring devices shall be rated to support not less than five times the total equipment weight. Video management software shall be provided and installed on the server described in this section by the Contractor. Training for the use of the software system shall be included as part of the software purchase.

Removable access cover shall be secured with security Torx-head type screws.

Fabricate interior tamperproof enclosures from 18-gauge sheet steel.

Enclosure locks shall be keyed alike for similar camera enclosures. All surfaces shall be finished with rust inhibiting primer and baked vinyl finish. All joints of enclosure shall be welded.

Access shall be through locked, continuously hinged panel.

Weather proof compression seals shall be provided for entry of wiring/cabling.

**CABLE**

Provide Category 6A cables for digital video management system meeting the following requirements:

Frequency MHz	Attenuation dB/100m	Next dB/100m	ACR dB/100m	PS-NEXT dB/100m	PS-ACR dB/100m	Return Loss dB/100m	ELFEXT dB/100m	PS- ELFEXT dB/100m
1	2.0	74.3	72.3	72.3	70.3	20.0	67.8	64.8
4	3.8	65.3	61.5	63.3	59.5	23.0	55.8	52.8
10	6.0	59.3	53.3	57.3	51.3	25.0	47.8	44.8
16	7.6	56.2	48.6	54.2	46.6	25.0	43.7	40.7
20	8.5	54.8	46.3	52.8	44.3	25.0	41.8	38.8
25	9.5	53.3	43.8	51.3	41.8	24.3	39.8	36.8
31.25	10.7	51.9	41.2	49.9	39.2	23.6	37.9	34.9
62.5	15.4	47.4	32.0	45.4	30.0	21.5	31.9	28.9
100	19.8	44.3	24.5	42.3	22.5	20.1	27.8	24.8
200	29.0	39.8	10.8	37.8	8.8	18.0	21.8	18.8
250	32.8	38.3	5.5	36.3	3.5	17.3	19.8	16.8

Cable lengths shall not exceed 250 feet in length, for cameras served as part of the system. Cameras shall be served with a dedicated cable from a POE patch panel in the telecom rooms identified on the riser. Cables shall be terminated with straight RJ45 connectors.

POE Patch Panels: Provide patch panels that comply with IEEE 802.3af and to provide power to compliant devices, while supporting 1 GbE data throughput for higher bandwidth connections at all ports continuously. Power requirements for panels shall be defined by actual load requirements of cameras served and shall be identified as part of the submittal literature. The panel shall provide 24 RJ45 ports to accommodate incoming data connectivity. A status LED above each port shall designate when the port is actively supplying power. An additional front panel LED shall indicate overall panel status. Labeling sections above ports shall accommodate TIA-606-A compliant labeling. Rear 110 punchdown connections shall accommodate TIA 568A and TIA 568B wiremap and 48 VDC power output on pairs (1, 2) and (3, 6) and data on all pairs. Two RJ45 ports in the rear shall allow for network connectivity and management.

Coordination for Active Equipment: Installer shall coordinate with Owner to develop requirements for Owner provided active equipment required for system operation. Bandwidth requirements for all connected cameras in system shall be identified at specified frame rates to avoid dropped frames, partial loss of images and loss of responsiveness in image transfer.

### **PART 3 - EXECUTION**

#### **INSTALLATION/APPLICATION OF ALL SECURITY PRODUCTS**

##### **Security Installer:**

Provide all control and power wiring/conduit needed for a complete operating system. The digital video management system in building shall be extended from a separate security IT network. This contractor shall mount all cameras, extend CAT 6 cable back to Telecom Rooms and terminate on a dedicated POE patch panel. Contractor shall place patch panel on a rack in Telecom Room, as indicated on the Drawings.

Installer shall be responsible for installing equipment and providing required communications interface to view project cameras over the security network prior to the completion of construction. Provide commissioning and training services for complete system in quotation.

Perform work in accordance with the applicable federal, state, and local codes or standards current at the commencement of installation. Where more than one code or regulation is applicable, the more stringent shall apply. All Security Contractor Licensing requirements of subcontractors shall be enforced as per applicable codes and statutes.

Perform cable installation, identification and termination in accordance with the Manufacturer's technical installation guidance, in addition to the applicable codes. In the absence of the Manufacturer's recommendations on conductor applications, the installer shall ensure that the cables selected meets all technical requirements of the equipment to be installed.

Provide all fixtures, materials, assemblies, and equipment as specified herein and as indicated on the drawings in strict accordance with manufacturer's recommendations and instructions.

Install, coordinate and provide final adjustment of cameras, based on coordinated effort with Owner to identify view region preferences. Link each camera into software at server and verify proper view.

Create software generated camera view groups for the various areas of the building at the NVR work station, based on Owner's preference in groupings. Provide description of view area associated with each camera, as identified in the drawings.

Operate intercom equipment, components, and identify/eliminate audible noise, clocks, pops, or hum when system is in standby or operation.

Install, secure and provide final adjustment of free-standing metal detector.

Install pushbuttons and field wiring, back to head end security panel for duress system. Set up panel of automatic call out in response to activation at any pushbutton station. Program system to uniquely identify location of the initiated duress signal at the receiving station.

#### **Electrical Contractor:**

Coordinate electrical requirements with the Section 282301 installer.

Provide all security conduit, fittings, and junction boxes as indicated on the Section 282301 installer's "Approved" wiring and conduit layout Shop Drawings. Provide power for all head-end equipment and accessories required for the security systems.

Provide "main building grounds" (insulated and isolated) for each transient voltage surge suppresser installed.

#### **SECURITY CONTROL SYSTEM TRAINING**

The installer shall supply personnel to train a group of key Owner employees in the operation and maintenance of the installed Security Systems. The training program shall be designed to provide a comprehensive understanding and basic level of competence with the entire security system. This training shall be provided after the installation and commissioning of the video management software package.

Training under this section shall consist of 16 hours, broken into two 8 hour sessions. The first session shall cover products specified in this section. The second session shall coincide with the Owner's training of the video management software and include the use of the Head End Equipment and shall be sufficiently detailed to allow Owner personnel to operate the system independent of any outside assistance. Coordinate specific Training Schedules at the convenience of the Owner.

#### **INSTRUCTION PERIOD**

Provide four (4) copies each of a bound and illustrated security control console **operator's manual** and **service manual**.

The operator's manual shall be written in layman's language and printed so as to become a permanent reference document for the operators.

The service manual shall be written in layman's language and printed so as to become a permanent reference document for maintenance personnel. It shall describe how to run internal self-diagnostic software programs, troubleshoot head-end hardware and field devices with a complete scenario simulation of all possible system malfunctions and the appropriate corrective measures.

Both manuals shall be prepared and submitted to the owner/user prior to the training sessions.

#### **PROJECT RECORD DRAWINGS**

Project Record Drawings include all bid drawings and all submissions.

Drawings shall include the routing of signal wire and cables, including the designations assigned to each wire/cable and field terminations schedules.

Accurate location of all equipment installed under the specifications.

A complete equipment list for each functional area.

Upon completion of this project, the information shown on these drawings shall be transferred to a complete (Record) set of full size, reproducible drawings at no additional cost to the OWNER.

#### **PROGRAMMING & MAINTENANCE**

All programming shall be provided by Contractor, based on preferences established by NCDOA. This shall include the arrangement of camera views for the various floors in the building at the NVR workstation.

Security installer shall provide maintenance services for the system within the warranty period. At the end of the one-year warranty period, system shall be maintained by NCDOA.

#### **WARRANTY PERIOD**

Warranty period shall be one year, beginning upon acceptance of the installation by the Owner. Include up to three site visits within the first year, upon request by the Owner, to make program changes and adjust controls to suit actual conditions.

#### **GUARANTEE**

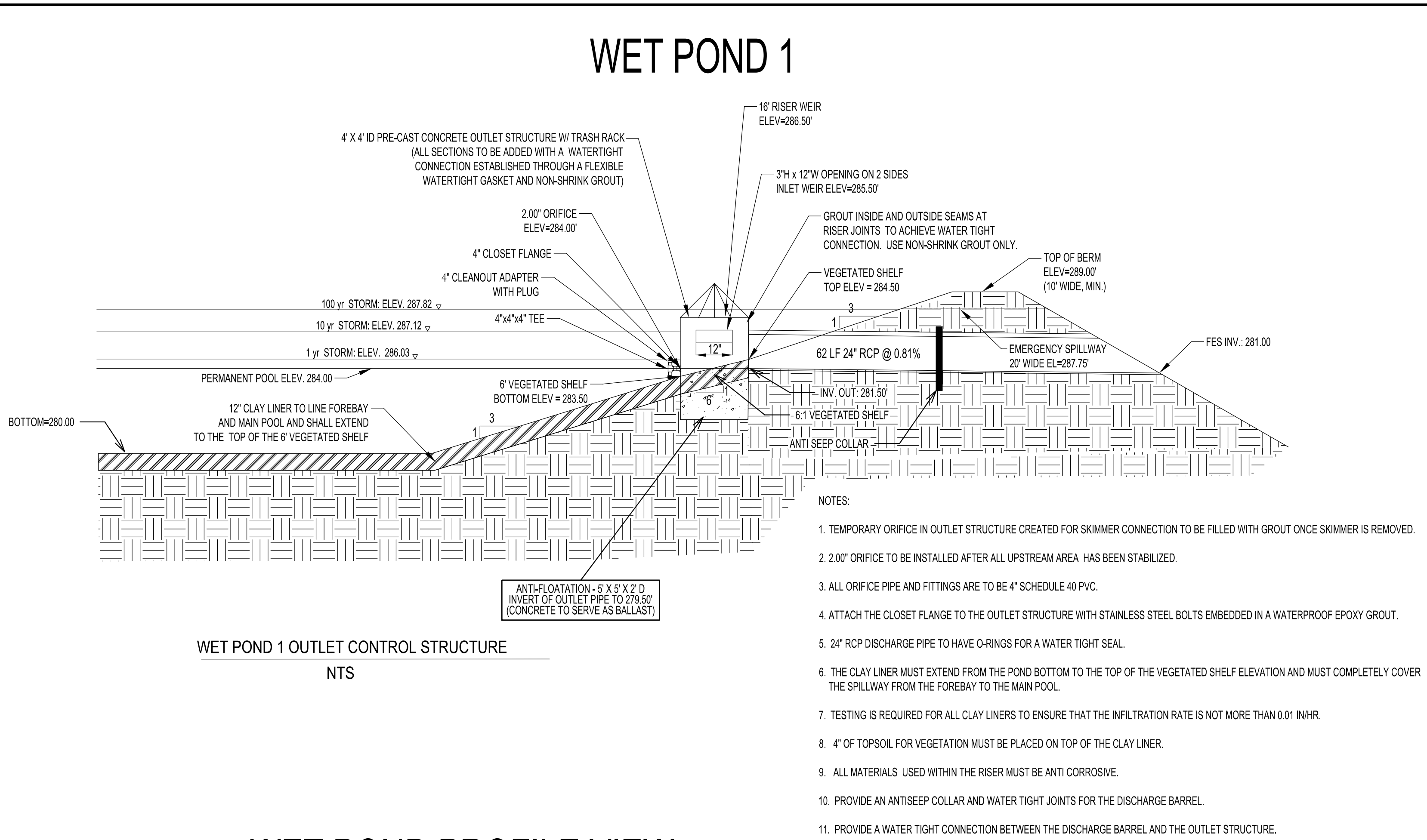
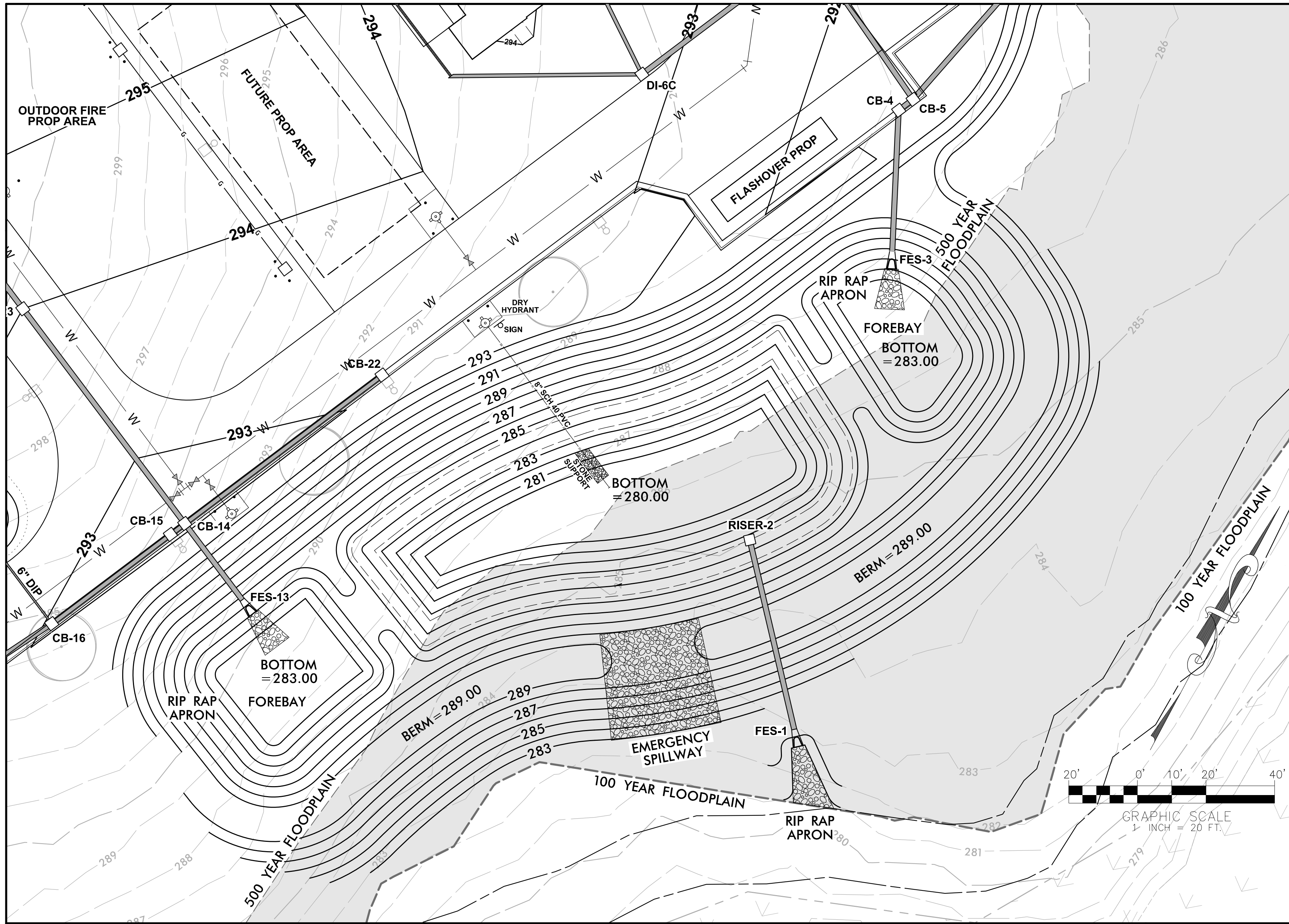
The installer shall guarantee all equipment & systems for a period of one (1) year commencing with Final Acceptance. The guarantee shall cover all costs for WARRANTY SERVICES, including parts, labor, prompt field service, pick-up and transportation. **Note: The installer shall provide, to the owner, a complete listing of all equipment manufacturer's individual guarantees and/or warranties stating their exact terms, limitations and specifics for being held enforceable.**

**END OF SECTION 282301**

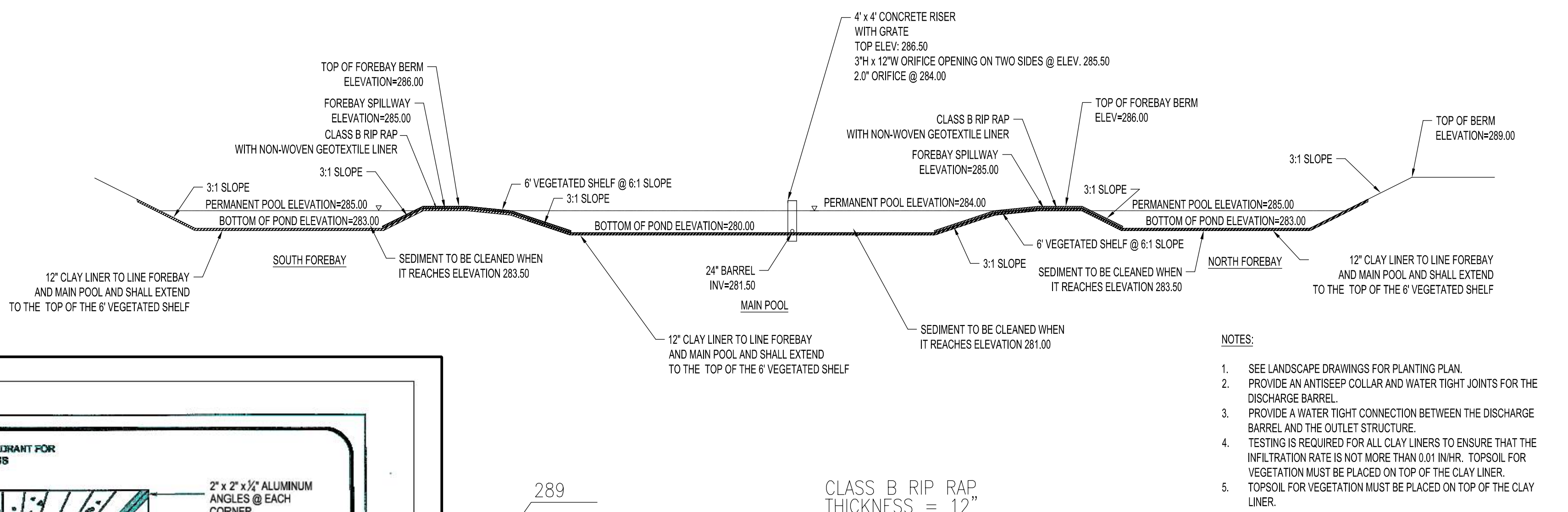








## WET POND PROFILE VIEW

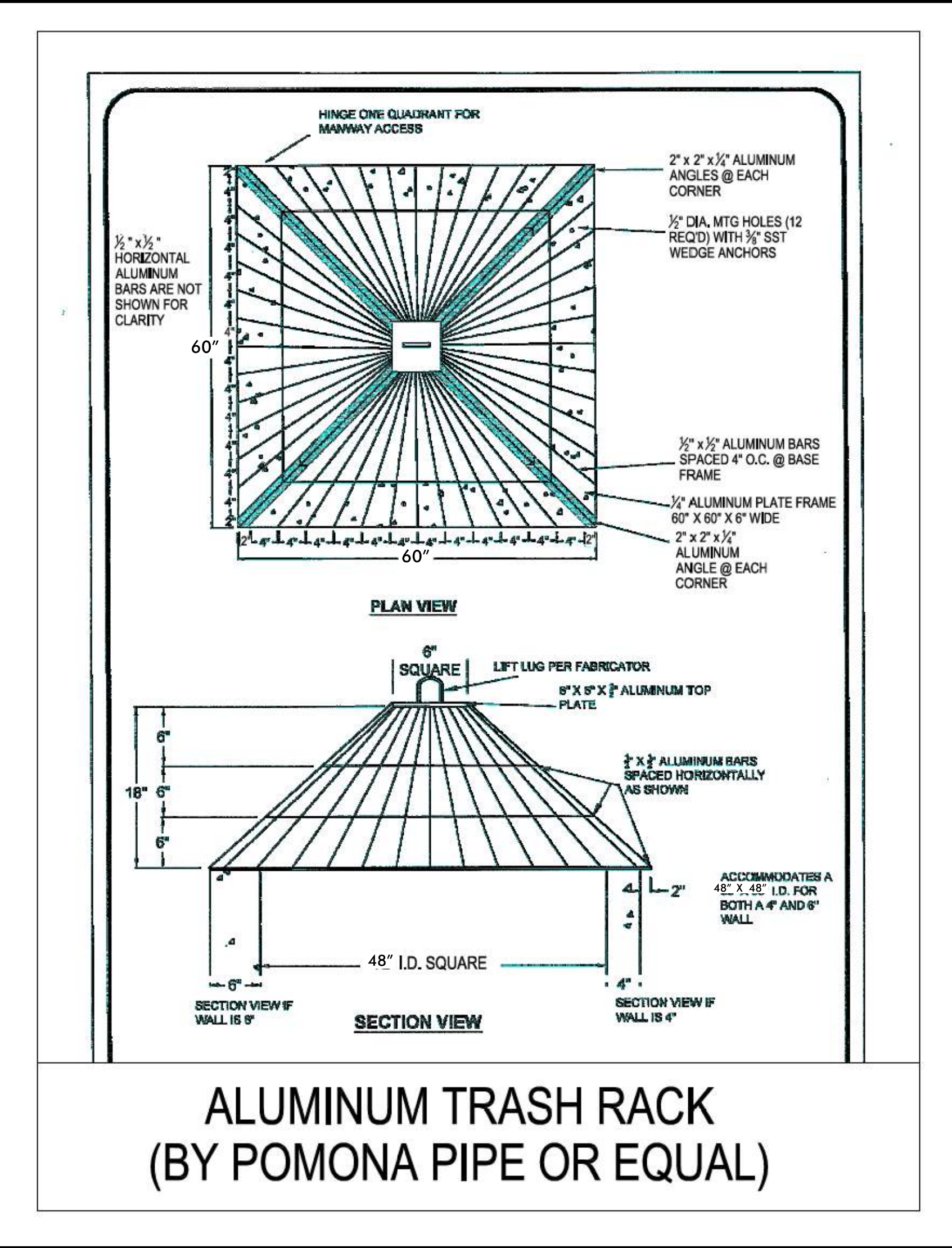


## DRAINAGE TABLE

ALL DROP INLETS LOCATED WITHIN PAVEMENT OR CONCRETE SHALL BE TRAFFIC RATED.

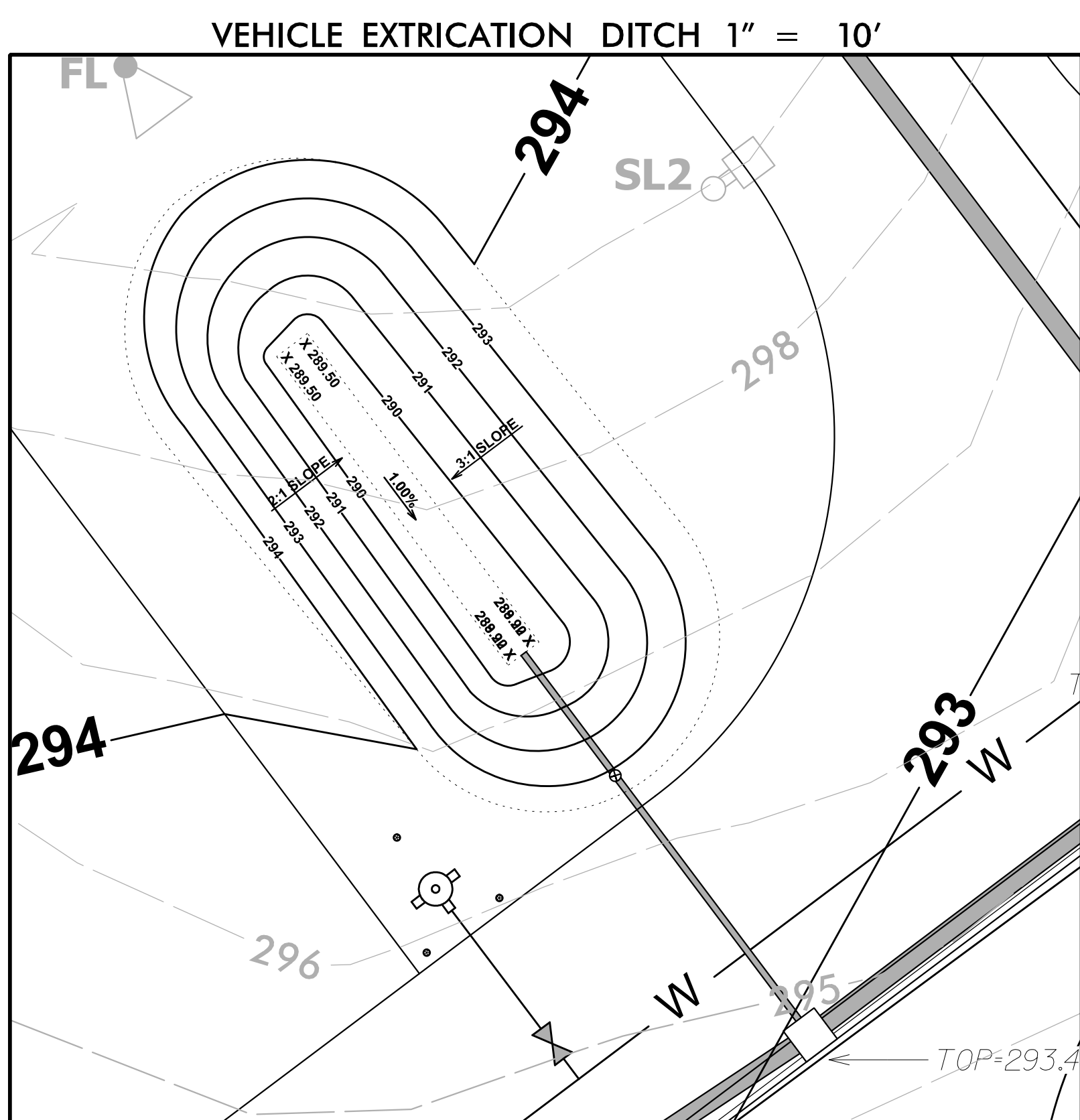
STORM STRUCTURE TABLE - STORM NETWORK 1				
NAME	RIM (TOC FOR CB)	INVERT(S) IN	INVERT OUT	NEXT STRUCTURE
TRENCH-2	293.00		292.40	DI-6C
TRENCH-1	293.72		292.22	DI-6C
CB-40	296.00		291.67	CB-39
CB-35	295.50		291.50	CB-34
CB-28	296.50		291.65	DI-27
CB-37	296.00		291.40	CB-36
DI-29	296.40		291.15	DI-27
CB-34	296.00	291.25 (15\" RCP, CB-35)	291.05	CB-33
DI-21	296.50		291.05	CB-30
CB-39	295.70	291.05 (15\" RCP, CB-40)	290.85	CB-38
CB-33	296.00	290.55 (15\" RCP, CB-34)	290.35	DI-32
DI-27	296.50	290.40 (15\" RCP, DI-29) 290.50 (15\" RCP, CB-28)	290.20	DI-26
CB-38	296.15	290.34 (15\" RCP, CB-39)	290.14	CB-36
DI-12	294.45		290.00	DI-11
DI-32	294.00	289.81 (15\" RCP, CB-33)	289.71	DI-31
CB-36	296.00	289.50 (15\" RCP, CB-38) 290.00 (15\" RCP, CB-37)	289.60	DI-31
DI-11	294.00	289.30 (15\" RCP, DI-12)	289.30	CB-9
OPEN DRAIN-17	290.10		289.20	CB-16
DI-26	295.50	289.70 (15\" RCP, DI-27)	289.20	DI-25
DI-31	296.00	289.05 (15\" RCP, DI-32) 289.05 (15\" RCP, CB-36)	288.80	DI-30
DI-6C	293.25	291.40 (8\" RCP, TRENCH-2) 291.40 (8\" RCP, TRENCH-1)	288.75	DI-6B
DI-25	295.50	288.80 (15\" RCP, DI-26)	288.60	DI-24
CB-30	296.00	290.65 (15\" RCP, DI-21)	288.55	CB-19
DI-30	296.50	288.35 (18\" RCP, DI-31)	288.35	DI-24
CB-10	292.25		288.20	CB-9
CB-9	292.25	288.20 (15\" RCP, DI-11) 288.10 (15\" RCP, CB-10)	288.00	CB-8
CB-19	293.00	287.85 (15\" RCP, CB-30)	287.85	CB-18
DI-24	296.00	287.65 (18\" RCP, DI-30) 288.00 (15\" RCP, DI-25)	287.55	DI-23
CB-22	293.70		287.50	CB-14
CB-8	293.20	287.65 (15\" RCP, CB-9)	287.47	CB-7
CB-18	295.10	287.40 (15\" RCP, CB-19)	287.20	CB-16
CB-7	293.60	286.95 (15\" RCP, CB-8)	286.85	DI-6B
DI-23	294.00	286.80 (18\" RCP, DI-24)	286.70	CB-14
CB-6A	290.90		286.60	CB-5
CB-16	293.45	286.70 (15\" RCP, CB-18) 288.70 (8\" RCP, OPEN DRAIN-17)	286.50	CB-15
DI-6B	292.32	286.55 (15\" RCP, CB-7) 288.00 (15\" RCP, DI-6C)	286.45	CB-5
CB-15	293.05	286.15 (15\" RCP, CB-16)	286.05	CB-14
CB-14	293.05	286.00 (18\" RCP, DI-23) 285.95 (15\" RCP, CB-15) 287.00 (15\" RCP, CB-32)	285.70	FES-13
CB-5	291.65	286.00 (15\" RCP, DI-6B) 285.87 (15\" RCP, CB-6A)	285.65	CB-4
CB-4	291.65	285.52 (18\" RCP, CB-5)	285.32	FES-3
4\" x 4\" Rise-2	286.50		281.50	FES-1
FES-13	N/A	285.00 (18\" RCP, CB-14)		
FES-1	N/A	281.00 (24\" RCP, 4\" x 4\" Rise-2)		
FES-3	N/A	285.00 (18\" RCP, CB-4)		

PIPE TABLE - STORM NETWORK 1						
PIPE NAME	DIAMETER	LENGTH	START INVERT	END INVERT	SLOPE	PIPE MATERIAL
TRENCH-2 TO DI-6C	8	31	292.40	291.40	3.18%	DIP
TRENCH-1 TO DI-6C	8	53	292.22	291.40	1.54%	DIP
CB-40 TO CB-39	15	109	291.67	291.05	0.57%	Reinforced Concrete Pipe
CB-35 TO CB-34	15	39	291.50	291.25	0.64%	Reinforced Concrete Pipe
CB-28 TO DI-27	15	28	291.45	290.50	3.37%	Reinforced Concrete Pipe
CB-37 TO CB-36	15	91	291.40	290.80	0.66%	Reinforced Concrete Pipe
DI-29 TO DI-27	15	43	291.15	290.40	1.73%	Reinforced Concrete Pipe
DI-21 TO CB-20	15	38	291.05	290.65	1.09%	Reinforced Concrete Pipe
CB-34 TO CB-33	15	79	291.05	290.55	0.63%	Reinforced Concrete Pipe
CB-39 TO CB-38	15	98	290.85	290.34	0.52%	Reinforced Concrete Pipe
CB-33 TO DI-32	15	104	290.35	289.81	0.52%	Reinforced Concrete Pipe
DI-27 TO DI-26	15	57	290.20	289.70	0.88%	Reinforced Concrete Pipe
CB-38 TO CB-36	15	35	290.14	289.50	0.68%	Reinforced Concrete Pipe
DI-12 TO DI-11	15	50	290.00	289.50	1.01%	Reinforced Concrete Pipe
DI-32 TO DI-31	15	107	289.71	289.05	0.62%	Reinforced Concrete Pipe
CB-36 TO DI-31	15	92	289.60	289.05	0.60%	Reinforced Concrete Pipe
DI-11 TO CB-9	15	105	289.30	288.20	1.00%	Reinforced Concrete Pipe
DI-26 TO DI-25	15	39	289.20	288.80	1.02%	Reinforced Concrete Pipe
OPEN DRAIN-17 TO CB-16	6	35	289.20	288.70	1.41%	DIP
DI-31 TO DI-30	18	64	288.80	288.35	0.70%	Reinforced Concrete Pipe
DI-6C TO DI-6B	15	58	288.75	288.00	1.30%	Reinforced Concrete Pipe
DI-25 TO DI-24	15	39	288.60	288.00	1.54%	Reinforced Concrete Pipe
CB-20 TO CB-19	15	98	288.55	287.85	0.72%	Reinforced Concrete Pipe
DI-30 TO DI-24	18	136	288.35	287.65	0.51%	Reinforced Concrete Pipe
CB-10 TO CB-9	15	2	288.20	288.10	4.85%	Reinforced Concrete Pipe
CB-9 TO CB-8	15	49	288.00	287.67	0.67%	Reinforced Concrete Pipe
CB-19 TO CB-18	15	61	287.85	287.40	0.74%	Reinforced Concrete Pipe
DI-24 TO DI-23	18	92	287.55	286.80	0.82%	Reinforced Concrete Pipe
CB-22 TO CB-14	15	68	287.50	287.00	0.74%	Reinforced Concrete Pipe
CB-8 TO CB-7	15	89	287.47	286.95	0.58%	Reinforced Concrete Pipe
CB-18 TO CB-16	15	79	287.20	286.70	0.63%	Reinforced Concrete Pipe
CB-7 TO DI-6B	15	39	286.85	286.55	0.77%	Reinforced Concrete Pipe
DI-23 TO CB-14	18	77	286.70	286.00	0.91%	Reinforced Concrete Pipe
CB-6A TO CB-5	15	72	286.60	285.87	1.01%	Reinforced Concrete Pipe
CB-16 TO CB-15	15	39	286.50	286.15	0.90%	Reinforced Concrete Pipe
DI-6B TO CB-5	15	51	286.45	286.07	0.75%	Reinforced Concrete Pipe
CB-15 TO CB-14	15	2	286.05	285.95	5.71%	Reinforced Concrete Pipe
CB-14 TO FES-13	18	29	285.70	285.00	2.40%	Reinforced Concrete Pipe
CB-5 TO CB-4	18	2	285.62	285.52	5.07%	Reinforced Concrete Pipe
CB-4 TO FES-3	18	43	285.32	285.00	0.75%	Reinforced Concrete Pipe
4\" x 4\" Rise-2 TO FES-1	24	60	281.50	281.00	0.85%	Reinforced Concrete Pipe



STORM STRUCTURE TABLE - STORM NETWORK - STREAM CROSSING				
NAME	RIM (TOC FOR CB)	INVERT(S) IN	INVERT OUT	NEXT STRUCTURE
CB-43	294.07		290.32	CB-42
CB-42	294.07	290.00 (15\" RCP, CB-43)	289.30	FES-41
FES-41		288.77 (15\" RCP, CB-42)		

PIPE TABLE - STORM NETWORK - STREAM CROSSING						
PIPE NAME	DIAMETER	LENGTH	START INVERT	END INVERT	SLOPE	PIPE MATERIAL
CB-43 TO CB-42	15	23	290.32	290.00	1.39%	Reinforced Concrete Pipe
CB-42 TO FES-41	15	29	289.30	288.77	1.83%	Reinforced Concrete Pipe



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MICHAEL D. ALLEN  
1/1/25

22514

WTCC EWS - FIRE & RESCUE TRAINING CENTER

WAKE TECHNICAL COMMUNITY COLLEGE

5401 ROLESVILLE ROAD WENDELL, NC 27591

NCCCS NO. 2303

NO.	REVISION	DATE
2	ADDENDUM #2	05-01-2025

JOB NUMBER  
22-086

DATE ISSUED  
03/14/2025

PROJECT STATUS  
ISSUE FOR CONSTRUCTION

SHEET  
WET POND 01  
DETAIL

C-201

File: 03-14-2025 3:11:02:25 AM These drawings are the property of HH Architects, P.A. They may not be used for any purpose without written permission. Copyright 2023 by HH Architects, P.A. All rights reserved.



PHASE I CONSTRUCTION SEQUENCE

1. EROSION AND SEDIMENT CONTROL (E&S) PERMIT AND CERTIFICATE OF COVERAGE (COC) MUST BE OBTAINED BEFORE ANY LAND DISTURBING ACTIVITIES (INCLUDING TIMBERING AND DEMOLITION) OCCUR. THE COC CAN BE OBTAINED BY FILING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT [HTTPS://WWW.DEQ.NC.GOV/NCNOI](https://www.deq.nc.gov/ncnoi). PLEASE NOTE: THE E-NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS ARE APPROVED. A COPY OF THE E&S PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTIONS.
2. CONTACT NCDEMLR RALEIGH REGIONAL OFFICE AT LEAST 48 HOURS PRIOR TO COMMENCING THE LAND-DISTURBING ACTIVITY. THE CONTACT NUMBER IS (919) 791-4200 (15A NCAC 04B .106(D)).
3. ADD GRAVEL CONSTRUCTION ENTRANCE.
4. IF CULVERTS ARE NOT INSTALLED AND ACCESS IS NEEDED ON-SITE, INSTALL TEMPORARY STREAM CROSSINGS PER DETAIL ON SHEET D-102. ALL TIMBER MAT CROSSINGS SHOULD HAVE SOLID DECKS WITH NO GAPS OR SPACES THAT INCLUDE SIDE BOARDS WHICH ARE AT LEAST 4 INCHES TALL. INSTALL WASHED STONE APPROACHES THAT EXTEND A MINIMUM OF 30' ON EACH SIDE OF THE CROSSING WITH BERM TO DIRECT RUN-OFF TO SILT FENCE OUTLETS.
5. INSTALL SILT FENCE, AND SILT FENCE OUTLETS CLEARING ONLY AS NECESSARY TO INSTALL THESE DEVICES.
6. INSTALL SKIMMER SEDIMENT BASIN(S) ACCORDING TO PLAN, SEED, MULCH AND ANCHOR BERM AND SOILS AROUND AND BELOW BASIN UPON CONSTRUCTION. USE REOF FOR STABILIZATION OF ALL 2:1 SLOPES. PLACE SILT FENCE ON DOWNHILL SIDE OF SOIL STOCKPILES.
7. CONTACT NCDEMLR AT (919) 791-4200 FOR INSPECTION OF THESE MEASURES. UPON APPROVAL, INSTALL TEMPORARY DIVERSION DITCHES AND THE REMAINING EROSION CONTROL MEASURES AS SHOWN ON THE PLAN.
8. LIMIT DISTURBANCES TO THE LENGTH THAT CAN STABILIZED AT THE END OF THE WORKDAY (15A NCAC 04B .0106(4)).

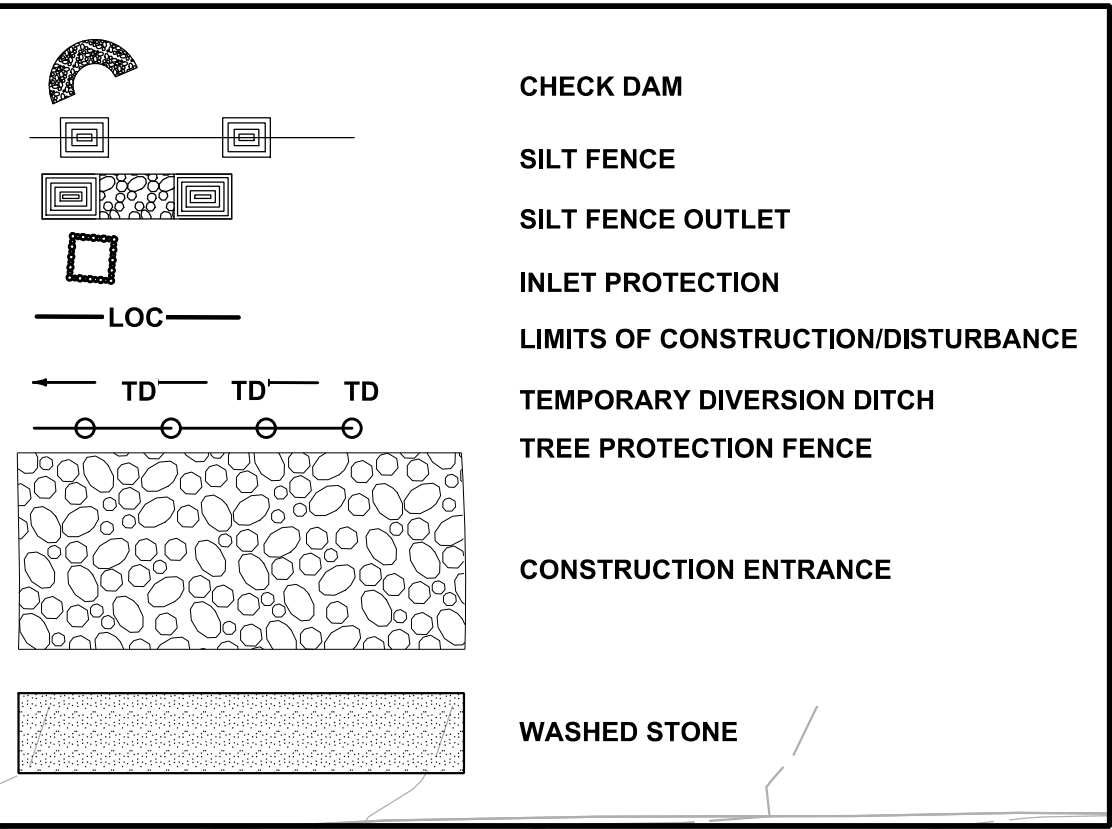
- RIPARIAN BUFFER RULES**
1. DUE TO THE LOCATION OF THIS PROJECT, IT SHOULD BE NOTED THAT A RULE TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES (INCLUDING TIMBERING AND DEMOLITION) OCCUR. THE COC CAN BE OBTAINED BY FILING OUT THE ELECTRONIC NOTICE OF INTENT (E-NOI) FORM AT [HTTPS://WWW.DEQ.NC.GOV/NCNOI](https://www.deq.nc.gov/ncnoi). PLEASE NOTE: THE E-NOI FORM MAY ONLY BE FILLED OUT ONCE THE PLANS ARE APPROVED. A COPY OF THE E&S PERMIT, THE COC, AND A HARD COPY OF THE PLAN MUST BE KEPT ON SITE, PREFERABLY IN A PERMITS BOX, AND ACCESSIBLE DURING INSPECTIONS.

TOTAL DISTURBED AREA = 403,349 SF / 9.260 ACRES

SKIMMER SEDIMENT BASIN SCHEDULE

BASIN #	DRAINAGE AREA	LENGTH	WIDTH	BOTTOM	TOP OF BERM	WEIR LENGTH	WEIR ELEVATION	SKIMMER SIZE	ORIFICE SIZE	SKIMMER
	(ACRES)	(FT)	(FT)	ELEVATION	ELEVATION	(FT)		(IN)	(IN)	INVERT
#1	5.21	NA	NA	284	289	20	287.75	2.0	1.75	285.00

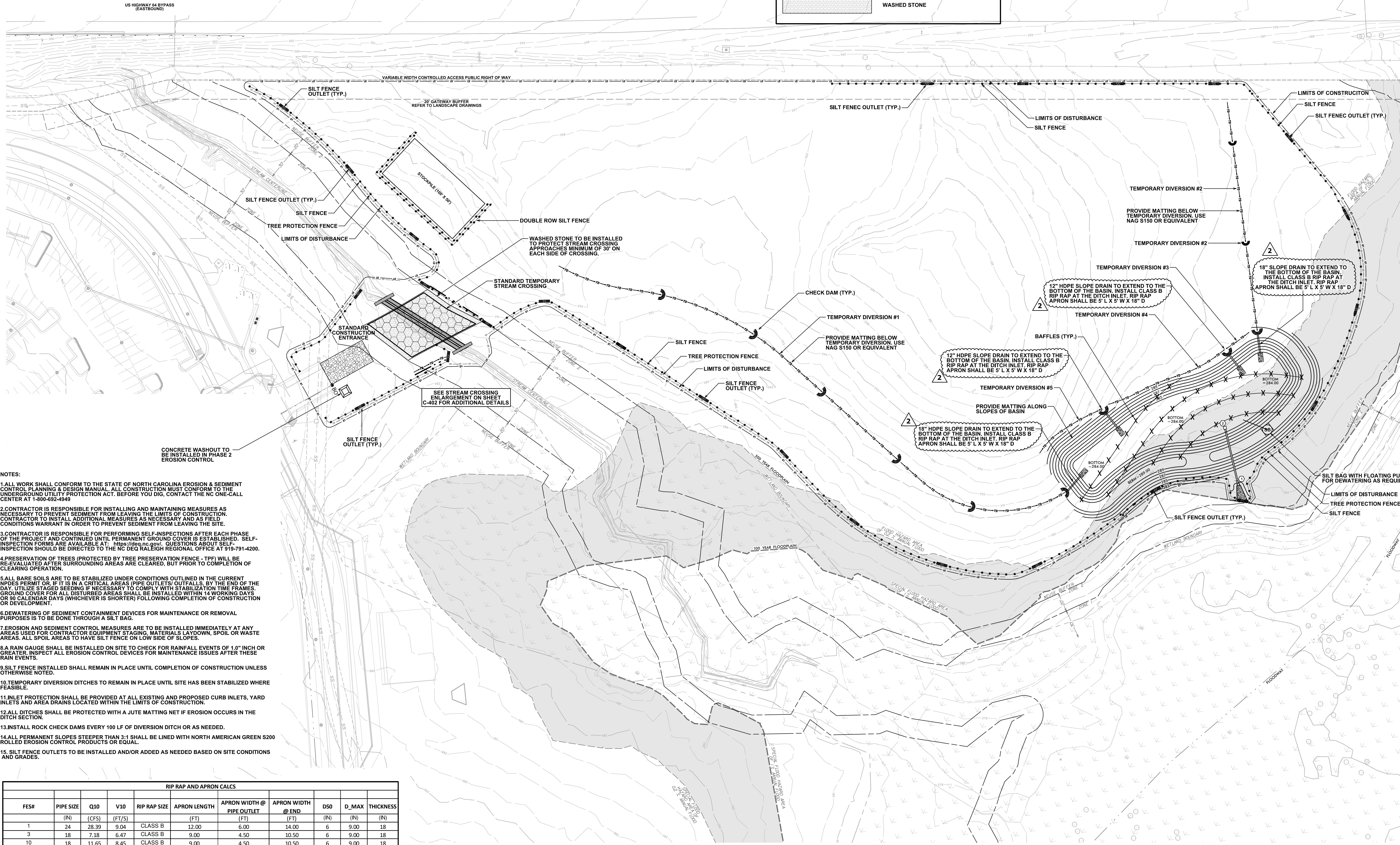
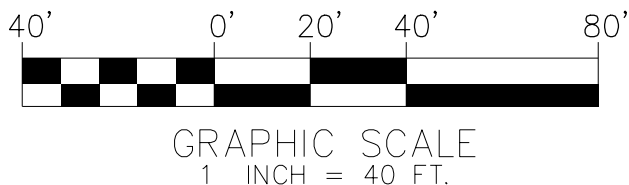
TOTAL DISTURBED AREA = 9.260 ACRES



TEMPORARY DIVERSION SPECIFICATIONS

DITCH #	LINER TYPE	BOTTOM WIDTH	SIDE SLOPE	DEPTH
1	NAG-S150	0 FT	2:1	2 FEET
2	NAG-S150	0 FT	2:1	2 FEET
3	NAG-S150	0 FT	2:1	2 FEET
4	NAG-S150	0 FT	2:1	2 FEET
5	NAG-S150	0 FT	2:1	2 FEET

TEMPORARY DIVERSION DITCHES SHALL BE INSPECTED ONCE A WEEK AND AFTER EVERY RAINFALL EVENT IN EXCESS OF 1" IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.



NOTES:

1. ALL WORK SHALL CONFORM TO THE STATE OF NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG, CONTACT THE NC ONE-CALL CENTER AT 1-800-692-4949.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING MEASURES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NECESSARY AND AS FIELD CONDITIONS WARRANT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-INSPECTIONS AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SELF-INSPECTION FORMS ARE AVAILABLE AT: <https://deq.nc.gov/>. QUESTIONS ABOUT SELF-INSPECTION SHOULD BE DIRECTED TO THE NC DEQ RALEIGH REGIONAL OFFICE AT 919-791-4200.
4. PRESERVATION OF TREES (PROTECTED BY TREE PRESERVATION FENCE - TPF) WILL BE RE-EVALUATED AFTER SURROUNDING AREAS ARE CLEARED, BUT PRIOR TO COMPLETION OF CLEARING OPERATION.
5. ALL BARE SOILS ARE TO BE STABILIZED UNDER CONDITIONS OUTLINED IN THE CURRENT NPDES PERMIT OR IF IT IS IN A CRITICAL AREAS (PIPE OUTLETS) OUTFALLS, BY THE END OF THE DAY. UTILIZE STAGED SEEDING IF NECESSARY TO COMPLY WITH STABILIZATION TIME FRAMES. GROUND COVER FOR ALL DISTURBED AREAS SHALL BE INSTALLED WITHIN 14 WORKING DAYS OR 90 CALENDAR DAYS (WHICHEVER IS SHORTER) FOLLOWING COMPLETION OF CONSTRUCTION OR DEVELOPMENT.
6. DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE OR REMOVAL PURPOSES IS TO BE DONE THROUGH A SILT BAG.
7. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IMMEDIATELY AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREAS. ALL SPOIL AREAS TO HAVE SILT FENCE ON LOW SIDE OF SLOPES.
8. A RAIN GAUGE SHALL BE INSTALLED ON SITE TO CHECK FOR RAINFALL EVENTS OF 1.0" INCH OR GREATER. INSPECT ALL EROSION CONTROL DEVICES FOR MAINTENANCE ISSUES AFTER THESE RAIN EVENTS.
9. SILT FENCE INSTALLED SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
10. TEMPORARY DIVERSION DITCHES TO REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED WHERE FEASIBLE.
11. INLET PROTECTION SHALL BE PROVIDED AT ALL EXISTING AND PROPOSED CURB INLETS, YARD INLETS AND AREA DRAINS LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
12. ALL DITCHES SHALL BE PROTECTED WITH A JUTE MATTING NET IF EROSION OCCURS IN THE DITCH SECTION.
13. INSTALL ROCK CHECK DAMS EVERY 100 LF OF DIVERSION DITCH OR AS NEEDED.
14. ALL PERMANENT SLOPES STEEPER THAN 3:1 SHALL BE LINED WITH NORTH AMERICAN GREEN S200 ROLLED EROSION CONTROL PRODUCTS OR EQUAL.
15. SILT FENCE OUTLETS TO BE INSTALLED AND/OR ADDED AS NEEDED BASED ON SITE CONDITIONS AND GRADES.

RIP RAP AND APRON CALCS

FES#	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
1	24	28.39	9.04	CLASS B	12.00	6.00	14.00	6	9.00	18
3	18	7.18	6.47	CLASS B	9.00	4.50	10.50	6	9.00	18
10	18	11.65	8.45	CLASS B	9.00	4.50	10.50	6	9.00	18

NO. 10. REVISION 2. ADDENDUM #2. DATE 05-01-2025. JOB NUMBER 22-086. DATE ISSUED 03/14/2025. PROJECT STATUS ISSUE FOR CONSTRUCTION. SHEET EROSION CONTROL PHASE 1. C-400



# PHASE II CONSTRUCTION SEQUENCE

1. COMPLETE PHASE I CONSTRUCTION SEQUENCE.
2. PERFORM GRADING OPERATIONS. AS SITE IS BROUGHT TO GRADE, CONTRACTOR TO ENSURE POSITIVE DRAINAGE AND TO ENSURE THAT ALL SEDIMENT LADEN WATER IS DIRECTED INTO THE SKIMMER BASIN.
3. INSTALL EXCAVATED INLET PROTECTION DEVICES AS SOON AS INLETS ARE INSTALLED. ALL STORM DRAINAGE SHALL BE ROUTED INTO SKIMMER BASINS VIA TEMPORARY PIPES SHOWN ON PLANS.
4. CLEAN SEDIMENT BASIN AND EXCAVATED INLET PROTECTION DEVICES WHEN THEY ARE HALF-FULL AND MONITOR FOR MAINTENANCE OF ALL EROSION CONTROL DEVICES WEEKLY OR AFTER EVERY 1" OF RAIN.
5. SOIL STOCKPILES SHALL BE STABILIZED IF INACTIVE FOR MORE THAN 7 DAYS.
6. ANY OFF-SITE BORROW AND WASTE REQUIRED FOR THIS PROJECT MUST COME FROM A SITE WITH AN APPROVED EROSION CONTROL PLAN. A SITE REGULATED UNDER THE MINING ACT OF 1971, OR A LANDFILL REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT. TRASH/DEBRIS FROM DEMOLITION ACTIVITIES OR GENERATED BY ANY ACTIVITIES ON SITE MUST BE DISPOSED OF AT A FACILITY REGULATED BY THE DIVISION OF SOLID WASTE MANAGEMENT OR PER DIVISION OF SOLID WASTE MANAGEMENT OR DIVISION OF WATER RESOURCES RULES AND REGULATIONS.
7. MAINTAIN EROSION CONTROL MEASURES UNTIL ALL UPSTREAM AREA HAS BEEN STABILIZED AND PERMANENT GROUND COVER IS ESTABLISHED PER LANDSCAPE PLANS.
8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE. SEDIMENT BASINS MAY NOT BE REMOVED OR CONVERTED TO PERMANENT SCMS UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. NCDEQ SHOULD BE NOTIFIED 10-DAYS PRIOR TO THE REMOVAL OF A BASIN. (GS 113A-57(3), 15A NCAC 04B .0113).

# PHASE II CONSTRUCTION SEQUENCE CONTINUED.

8. PERIMETER MEASURES MUST BE LEFT IN PLACE UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. AFTER SITE IS PERMANENTLY STABILIZED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES AND PROVIDE PERMANENT SEEDING WHERE TEMPORARY MEASURES HAVE BEEN REMOVED AND GROUND COVER IS NOT ADEQUATE. SEDIMENT BASINS MAY NOT BE REMOVED OR CONVERTED TO PERMANENT SCMS UNTIL ALL UPLAND AREAS ARE PERMANENTLY STABILIZED. NCDEQ SHOULD BE NOTIFIED 10-DAYS PRIOR TO THE REMOVAL OF A BASIN. (GS 113A-57(3), 15A NCAC 04B .0113).
9. ONCE APPROVAL IS GIVEN FOR REMOVAL OR CONVERSION OF THE SKIMMER BASINS: THE TEMPORARY DIVERSION DITCHES AND INLET PROTECTION SHALL BE REMOVED PER THE FOLLOWING:
  - A. REMOVE SEDIMENT FROM DITCHES.
  - B. REMOVE CHECK DAMS FROM DITCHES.
  - C. BRING DITCHES TO FINAL GRADE AND PERMANENTLY STABILIZE PER THE GRADING PLAN.
  - D. REMOVE SEDIMENT FROM TEMPORARY INLET PROTECTION AND REMOVE TEMPORARY INLET PROTECTIONS.
  - E. BRING AREAS AROUND DRAINAGE STRUCTURES TO PERMANENT GRADE AND STABILIZE PER GRADING PLANS.
  - F. REMOVE SLOPE DRAINS FROM SKIMMER BASINS.
10. THE SKIMMER BASINS SHALL BE DEWATERED THROUGH A SILT BAG. ONCE THE SKIMMER BASINS HAVE BEEN CLEANED OF SEDIMENT AND DRAINED, THEY SHALL BE BROUGHT TO FINAL GRADE, PERMANENTLY STABILIZED AND PLANTED IN ACCORDANCE WITH THE GRADING AND STORM PLAN.
11. WHEN THE PROJECT IS COMPLETE, AND PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION HAS BEEN ESTABLISHED, THE PERMITTEE SHALL CONTACT NCDEMILR TO CLOSE OUT THE EASC PLAN. AFTER NCDEMILR INFORMS THE PERMITTEE OF THE PROJECT CLOSE OUT, VIA INSPECTION REPORT, THE PERMITTEE SHALL VISIT [HTTPS://WWW.DEQ.NC.GOV/NCGCI](https://www.deq.nc.gov/ncgci) TO SUBMIT AN ELECTRONIC NOTICE OF TERMINATION (E-NOT). A \$120 ANNUAL GENERAL PERMIT FEE WILL BE CHARGED UNTIL THE E-NOT HAS BEEN FILLED OUT.

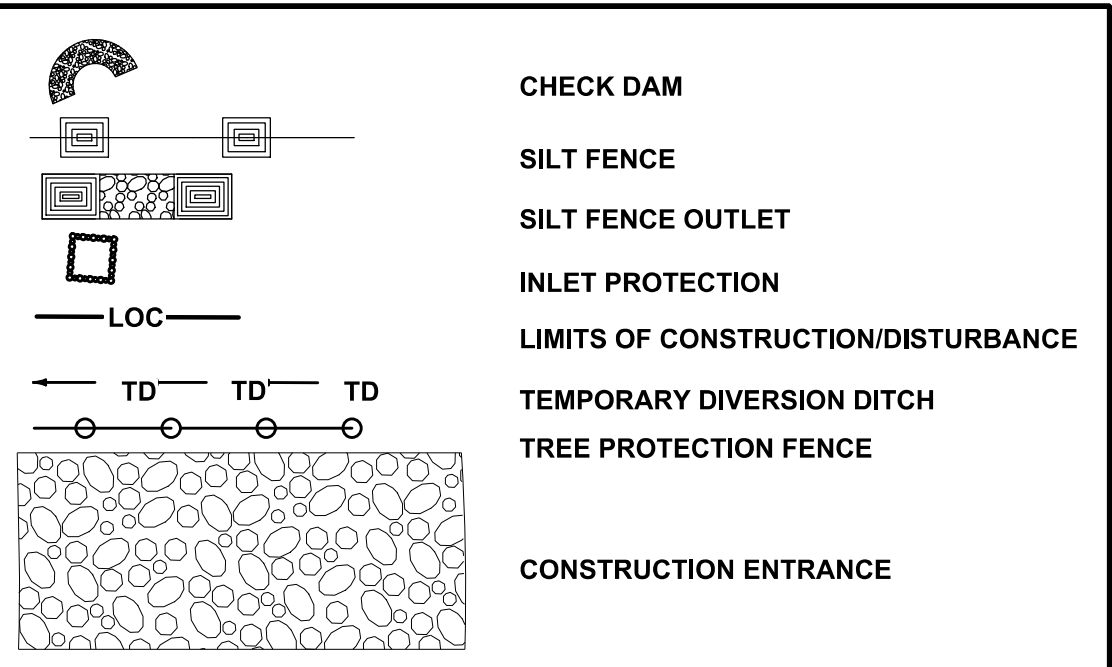
- RIPARIAN BUFFER RULES**
1. DUE TO THE LOCATION OF THIS PROJECT, IT SHOULD BE NOTED THAT A RULE TO PROTECT AND MAINTAIN EXISTING BUFFERS ALONG WATERCOURSES IN THE NEUSE RIVER BASIN BECAME EFFECTIVE ON JULY 22, 1987. THE NEUSE RIVER RIPARIAN AREA PROTECTION AND MAINTENANCE RULE (15A NCAC 2B.023) APPLIES TO ALL PERENNIAL AND INTERMITTENT STREAMS, LAKES, PONDS AND ESTUARIES IN THE NEUSE RIVER BASIN WITH FOREST VEGETATION ON THE ADJACENT LAND OR "RIPARIAN AREA".

TOTAL DISTURBED AREA = 403,349 SF / 9.260 ACRES

## SKIMMER SEDIMENT BASIN SCHEDULE

BASIN #	DRAINAGE AREA (ACRES)	LENGTH (FT)	WIDTH (FT)	BOTTOM ELEVATION	TOP OF BERM ELEVATION	WEIR LENGTH (FT)	WEIR ELEVATION	SKIMMER SIZE (IN)	ORIFICE SIZE (IN)	SKIMMER INVERT
#1	5.21	NA	NA	284	289	20	287.75	2.0	1.75	285.00

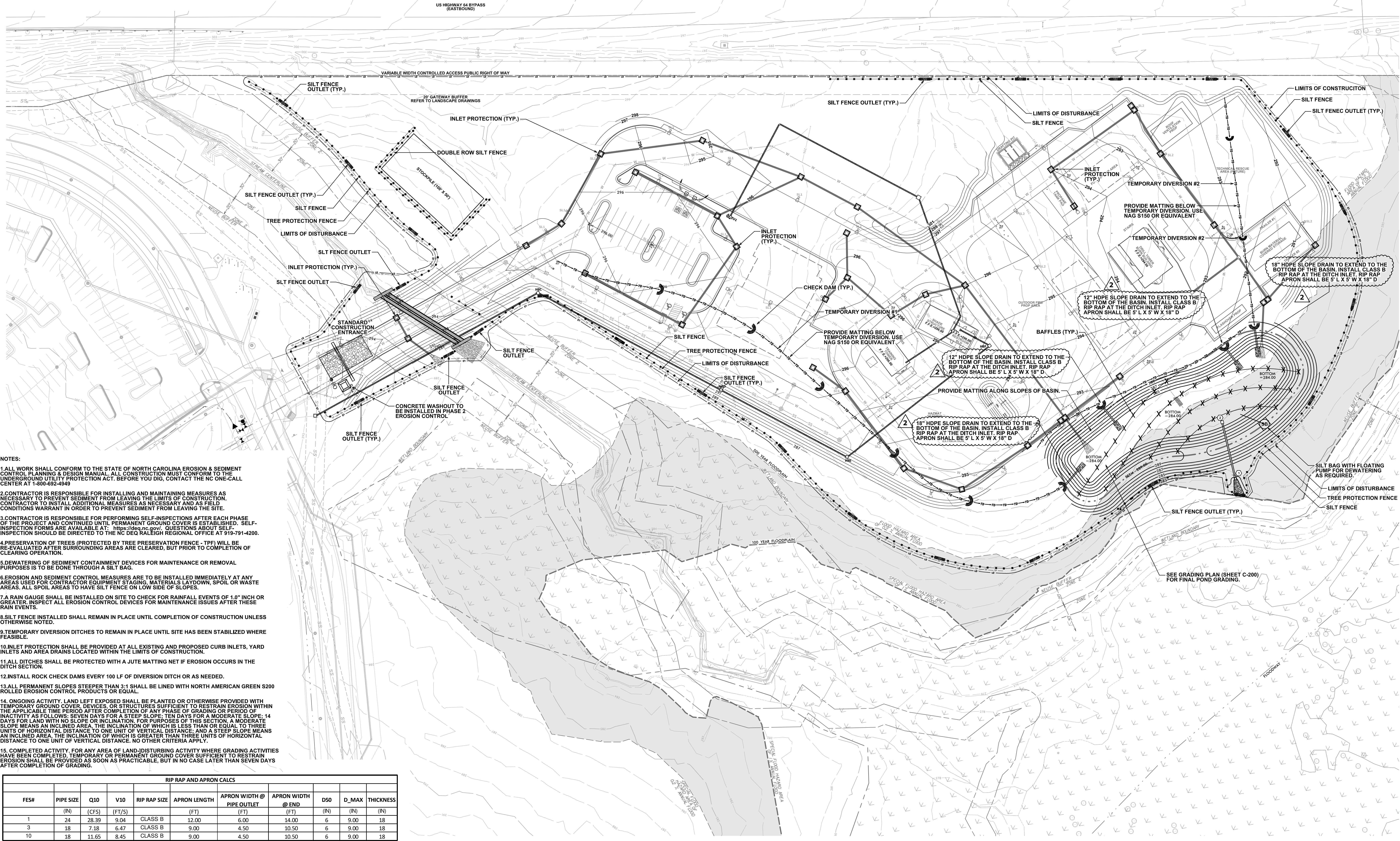
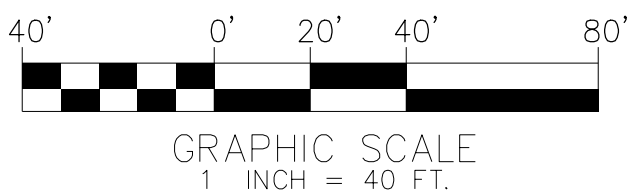
TOTAL DISTURBED AREA = 9.260 ACRES



## TEMPORARY DIVERSION SPECIFICATIONS

DITCH #	LINER TYPE	BOTTOM WIDTH	SIDE SLOPE	DEPTH
1	NAG-S150	0 FT	2:1	2 FEET
2	NAG-S150	0 FT	2:1	2 FEET
3	NAG-S150	0 FT	2:1	2 FEET
4	NAG-S150	0 FT	2:1	2 FEET
5	NAG-S150	0 FT	2:1	2 FEET

TEMPORARY DIVERSION DITCHES SHALL BE INSPECTED ONCE A WEEK AND AFTER EVERY RAINFALL EVENT IN EXCESS OF 1". IMMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION RIDGE. CAREFULLY CHECK OUTLETS AND MAKE TIMELY REPAIRS AS NEEDED.



## NOTES:

1. ALL WORK SHALL CONFORM TO THE STATE OF NORTH CAROLINA EROSION & SEDIMENT CONTROL PLANNING & DESIGN MANUAL. ALL CONSTRUCTION MUST CONFORM TO THE UNDERGROUND UTILITY PROTECTION ACT. BEFORE YOU DIG, CONTACT THE NC ONE-CALL CENTER AT 1-800-692-4549.
2. CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING MEASURES AS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE LIMITS OF CONSTRUCTION. CONTRACTOR TO INSTALL ADDITIONAL MEASURES AS NECESSARY AND AS FIELD CONDITIONS WARRANT IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE.
3. CONTRACTOR IS RESPONSIBLE FOR PERFORMING SELF-INSPECTIONS AFTER EACH PHASE OF THE PROJECT AND CONTINUED UNTIL PERMANENT GROUND COVER IS ESTABLISHED. SELF-INSPECTION FORMS ARE AVAILABLE AT: <https://deq.nc.gov/>. QUESTIONS ABOUT SELF-INSPECTION SHOULD BE DIRECTED TO THE NC DEQ RALEIGH REGIONAL OFFICE AT 919-791-4200.
4. PRESERVATION OF TREES (PROTECTED BY TREE PRESERVATION FENCE - TPF) WILL BE RE-EVALUATED AFTER SURROUNDING AREAS ARE CLEARED, BUT PRIOR TO COMPLETION OF CLEARING OPERATION.
5. DEWATERING OF SEDIMENT CONTAINMENT DEVICES FOR MAINTENANCE OR REMOVAL PURPOSES IS TO BE DONE THROUGH A SILT BAG.
6. EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IMMEDIATELY AT ANY AREAS USED FOR CONTRACTOR EQUIPMENT STAGING, MATERIALS LAYDOWN, SPOIL OR WASTE AREAS. ALL SPOIL AREAS TO HAVE SILT FENCE ON LOW SIDE OF SLOPES.
7. A RAIN GAUGE SHALL BE INSTALLED ON SITE TO CHECK FOR RAINFALL EVENTS OF 1.0" INCH OR GREATER. INSPECT ALL EROSION CONTROL DEVICES FOR MAINTENANCE ISSUES AFTER THESE RAIN EVENTS.
8. SILT FENCE INSTALLED SHALL REMAIN IN PLACE UNTIL COMPLETION OF CONSTRUCTION UNLESS OTHERWISE NOTED.
9. TEMPORARY DIVERSION DITCHES TO REMAIN IN PLACE UNTIL SITE HAS BEEN STABILIZED WHERE FEASIBLE.
10. INLET PROTECTION SHALL BE PROVIDED AT ALL EXISTING AND PROPOSED CURB INLETS, YARD INLETS AND AREA DRAINS LOCATED WITHIN THE LIMITS OF CONSTRUCTION.
11. ALL DITCHES SHALL BE PROTECTED WITH A JUTE MATTING NET IF EROSION OCCURS IN THE DITCH SECTION.
12. INSTALL ROCK CHECK DAMS EVERY 100 LF OF DIVERSION DITCH OR AS NEEDED.
13. ALL PERMANENT SLOPES STEEPER THAN 3:1 SHALL BE LINED WITH NORTH AMERICAN GREEN S200 ROLLED EROSION CONTROL PRODUCTS OR EQUAL.
14. ONGOING ACTIVITY: LAND LEFT EXPOSED SHALL BE PLANTED OR OTHERWISE PROVIDED WITH TEMPORARY GROUND COVER, DEVICES, OR STRUCTURES SUFFICIENT TO RESTRAIN EROSION WITHIN THE APPLICABLE TIME PERIOD AFTER COMPLETION OF ANY PHASE OF GRADING OR PERIOD OF INACTIVITY AS FOLLOWS: SEVEN DAYS FOR A STEEP SLOPE; TEN DAYS FOR A MODERATE SLOPE; 14 DAYS FOR LAND WITH NO SLOPE OR INCLINATION. FOR PURPOSES OF THIS SECTION, A MODERATE SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS LESS THAN OR EQUAL TO THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE; AND A STEEP SLOPE MEANS AN INCLINED AREA, THE INCLINATION OF WHICH IS GREATER THAN THREE UNITS OF HORIZONTAL DISTANCE TO ONE UNIT OF VERTICAL DISTANCE. NO OTHER CRITERIA APPLY.
15. COMPLETED ACTIVITY: FOR ANY AREA OF LAND-DISTURBING ACTIVITY WHERE GRADING ACTIVITIES HAVE BEEN COMPLETED, TEMPORARY OR PERMANENT GROUND COVER SUFFICIENT TO RESTRAIN EROSION SHALL BE PROVIDED AS SOON AS PRACTICABLE, BUT IN NO CASE LATER THAN SEVEN DAYS AFTER COMPLETION OF GRADING.

RIP RAP AND APRON CALCS										
FESH	PIPE SIZE	Q10	V10	RIP RAP SIZE	APRON LENGTH	APRON WIDTH @ PIPE OUTLET	APRON WIDTH @ END	D50	D_MAX	THICKNESS
	(IN)	(CFS)	(FT/S)		(FT)	(FT)	(FT)	(IN)	(IN)	(IN)
1	24	28.39	9.04	CLASS B	12.00	6.00	14.00	6	9.00	18
3	18	7.18	6.47	CLASS B	9.00	4.50	10.50	6	9.00	18
10	18	11.65	8.45	CLASS B	9.00	4.50	10.50	6	9.00	18

NO.	REVISION	DATE
2	ADDENDUM #2	05-01-2025





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**WTCC EWS - FIRE & RESCUE TRAINING CENTER**

WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



NO.	REVISION	DATE
1	ADDENDUM 02	05/01/25

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**PLANS - TRAINING TOWER**

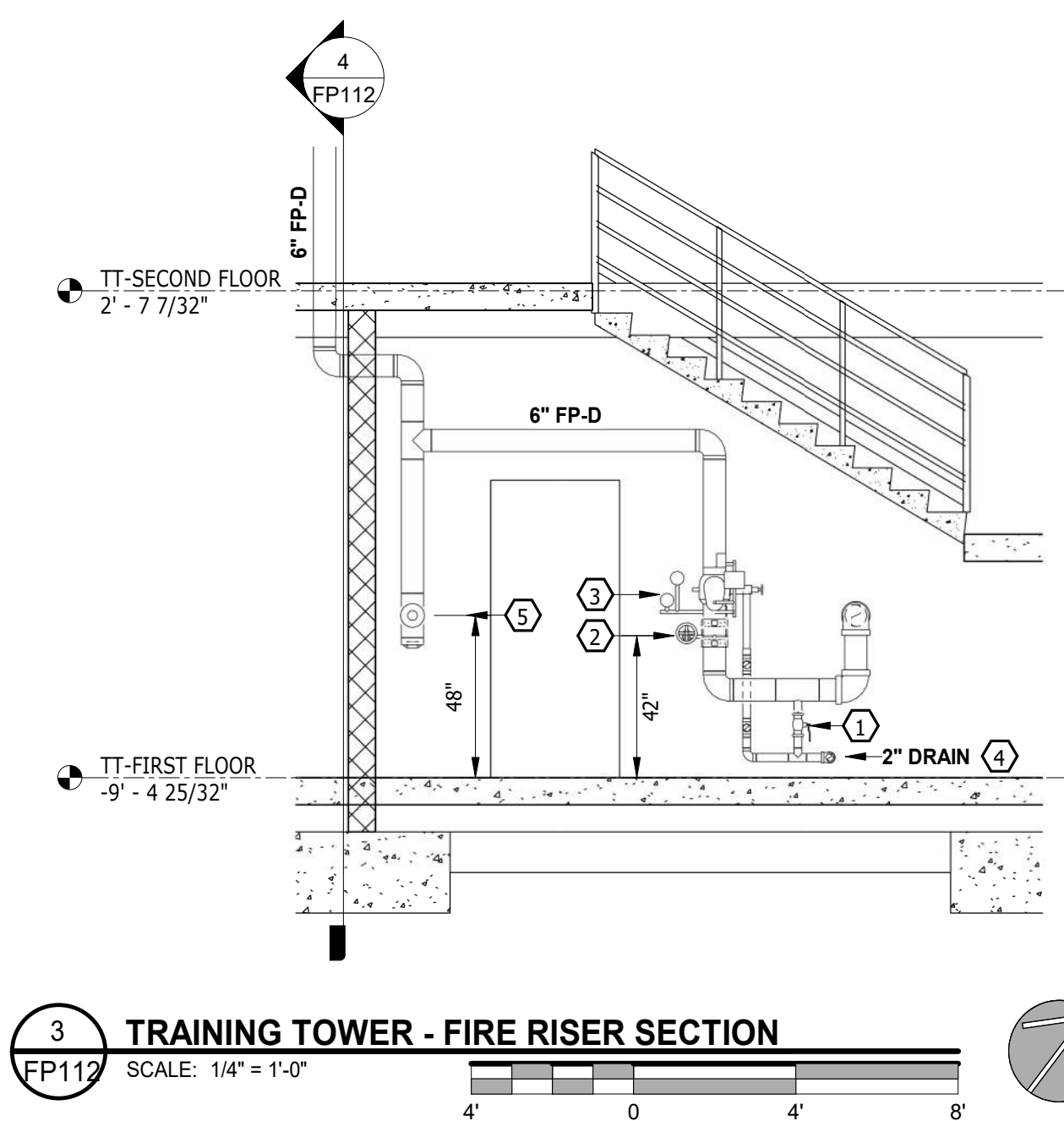
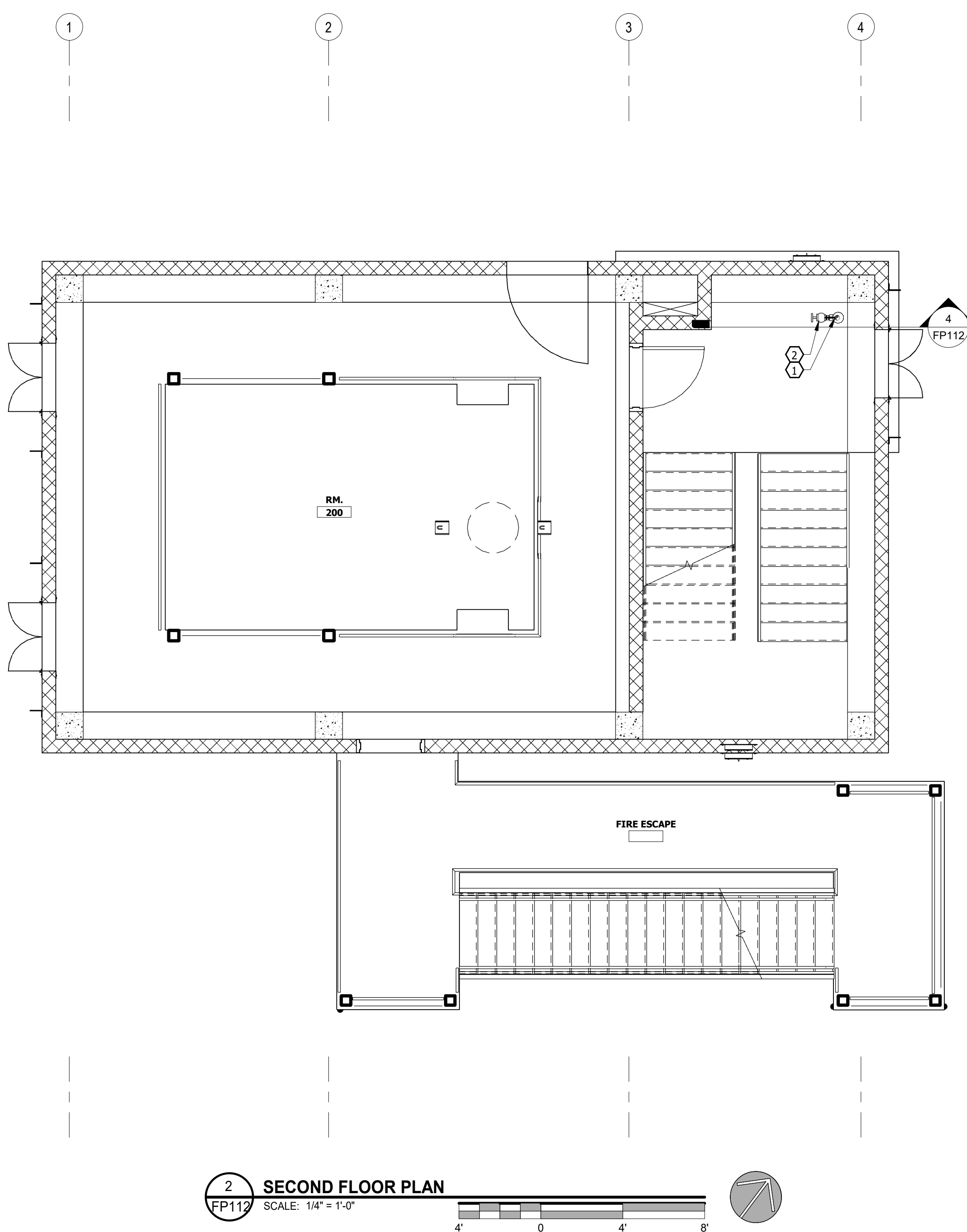
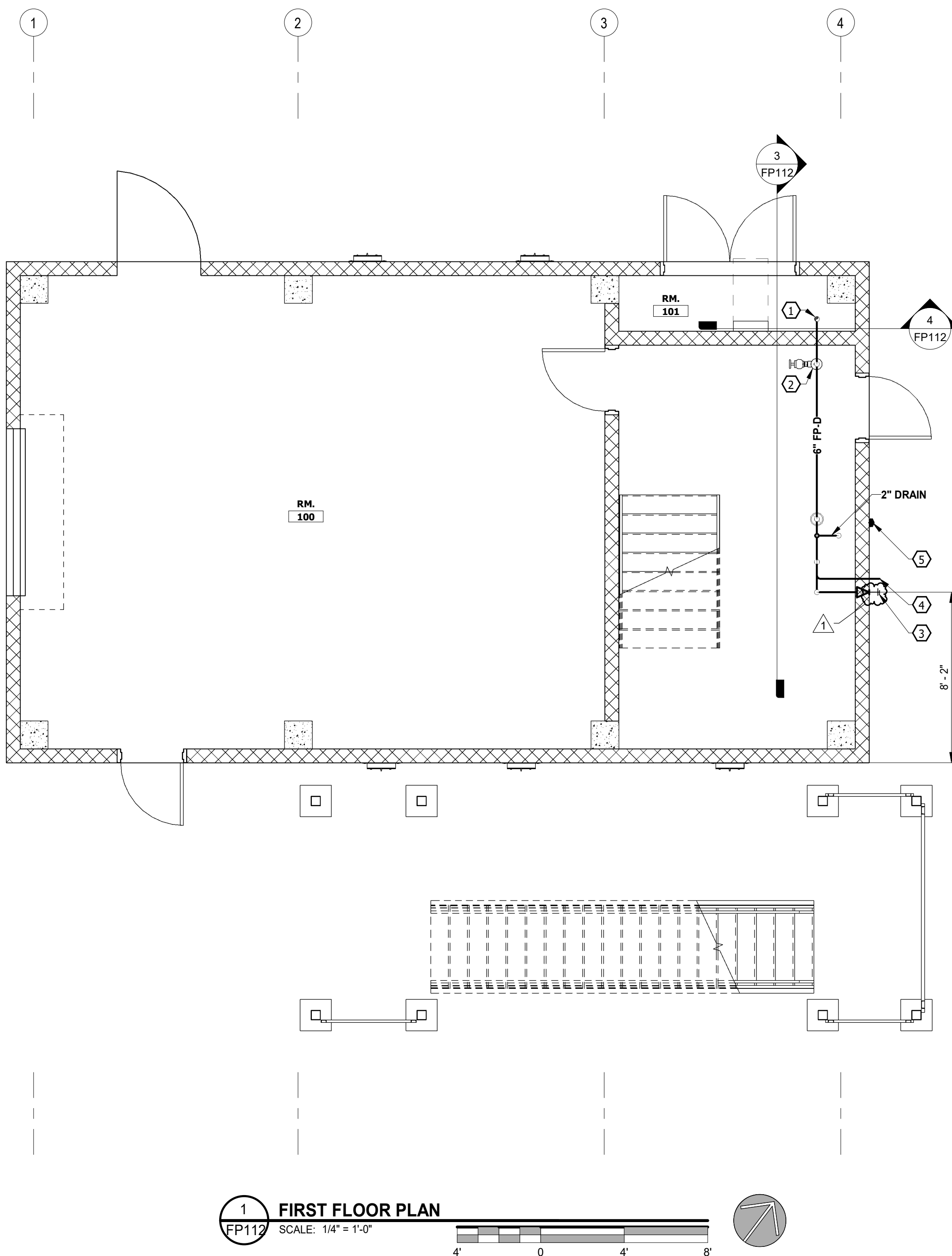
FP112

# GENERAL NOTES TO FP112

- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 4. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDC PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
- 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.

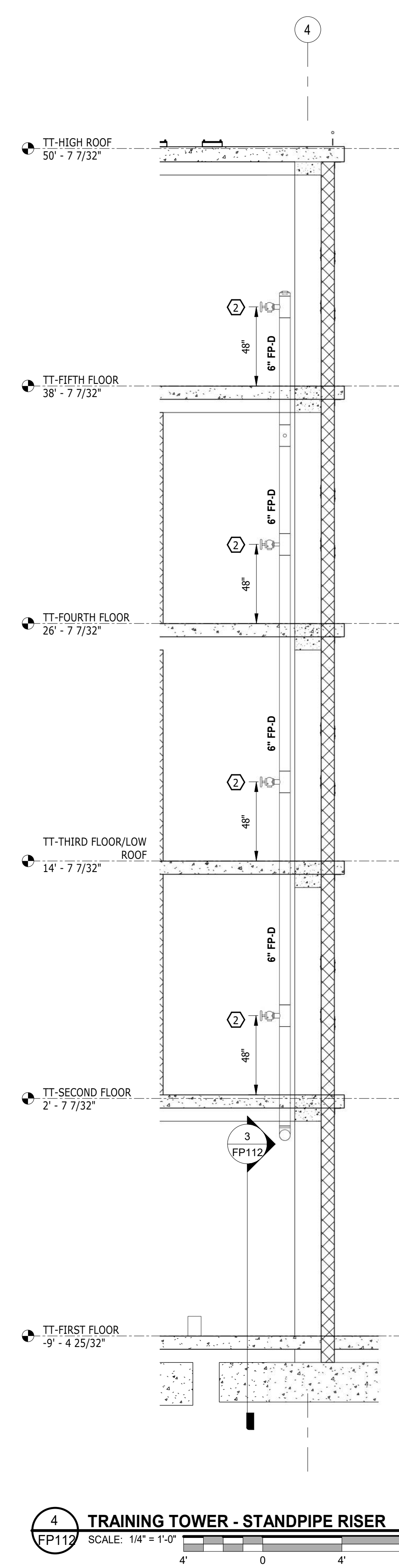
KEY NOTES TO 1,2,&4/FP112

- 1 6" DRY TRAINING STANDPIPE.
- 2 2-1/2" HOSE VALVE 48" AFF.
- 3 5"x6" STORZ FDC CONNECTION
- 4 2" MAIN DRAIN TO EXTERIOR.
- 5 WATER MOTOR ALARM.



- KEY NOTES TO 3/FP112
- 1 BALL VALVE FOR LOW POINT DRAIN.
  - 2 CONTROL VALVE.
  - 3 6" ALARM CHECK VALVE.
  - 4 2" MAIN DRAIN TO EXTERIOR.
  - 5 2-1/2" HOSE VALVE 48" AFF.

**ALL FIRE PROTECTION SYSTEMS FOR THE TRAINING TOWER ARE PROVIDED FOR TRAINING PURPOSES ONLY.**







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NO.	REVISION	DATE
1	ADDENDUM 02	05/01/25

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**PLANS - TRAINING TOWER**

**FP113**

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SO Project No: 2025-00520  
PLOT Date: 5/1/2025 2:15:08 PM

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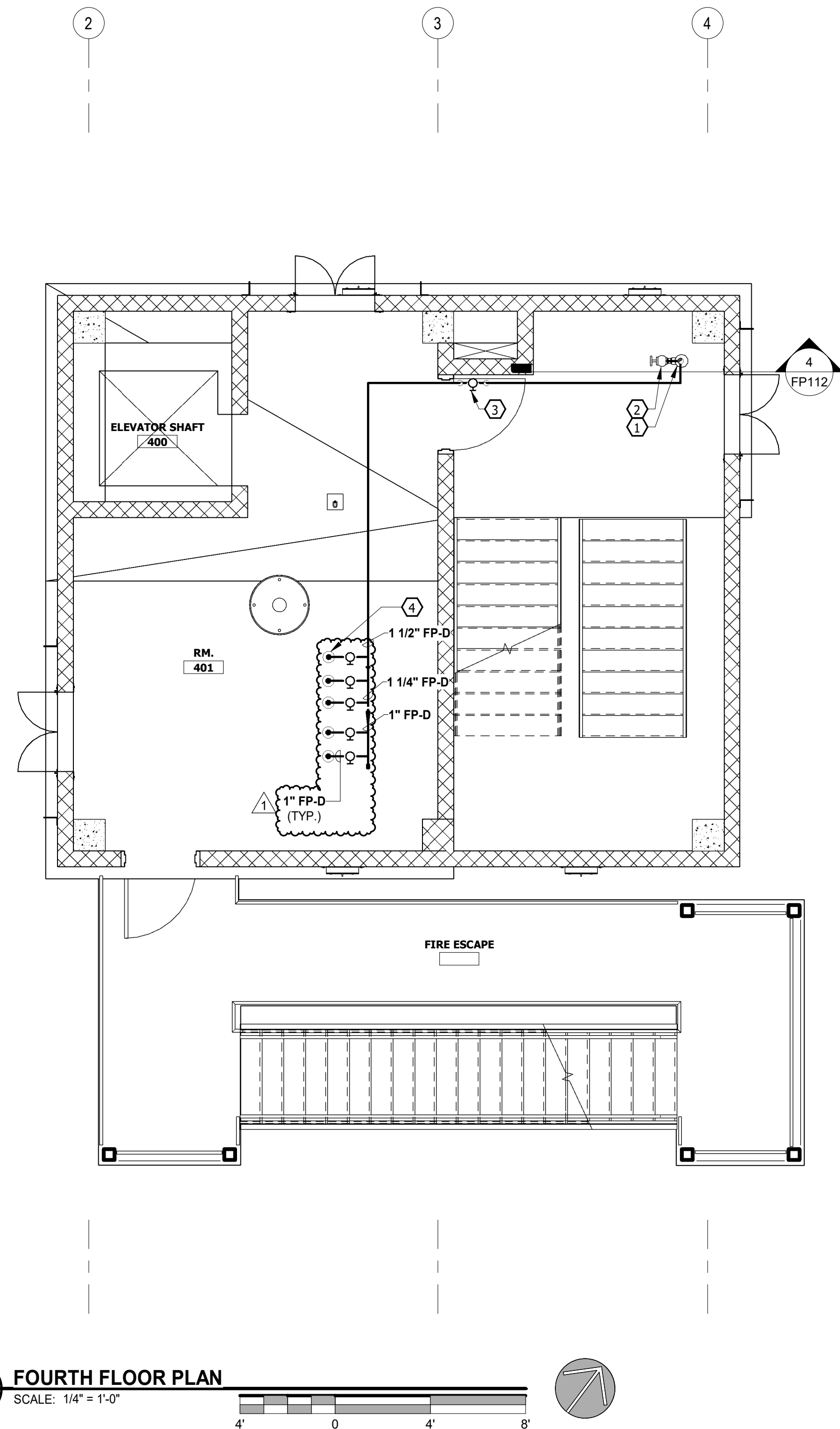
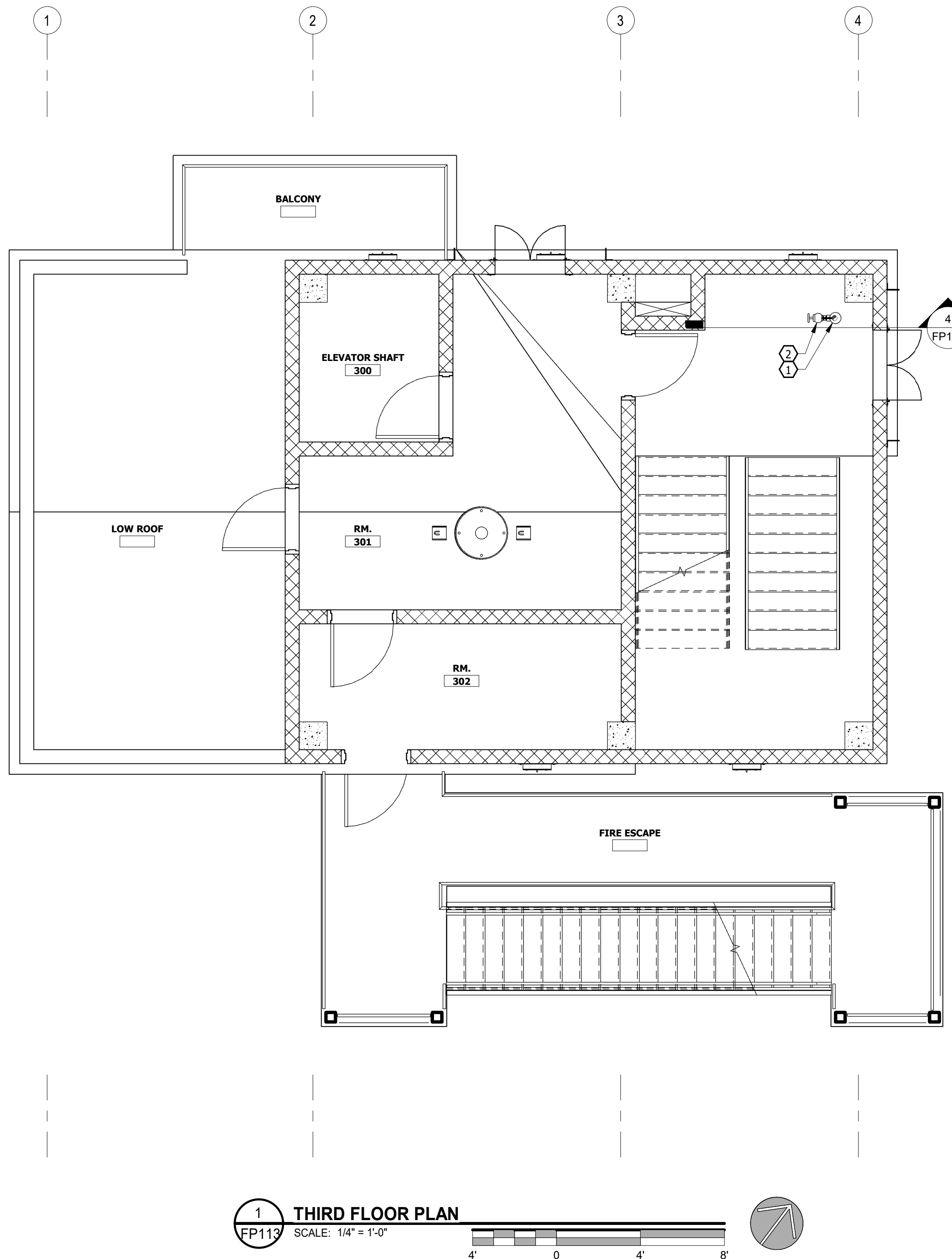
# GENERAL NOTES TO FP113

- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 4. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDC PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
- 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.



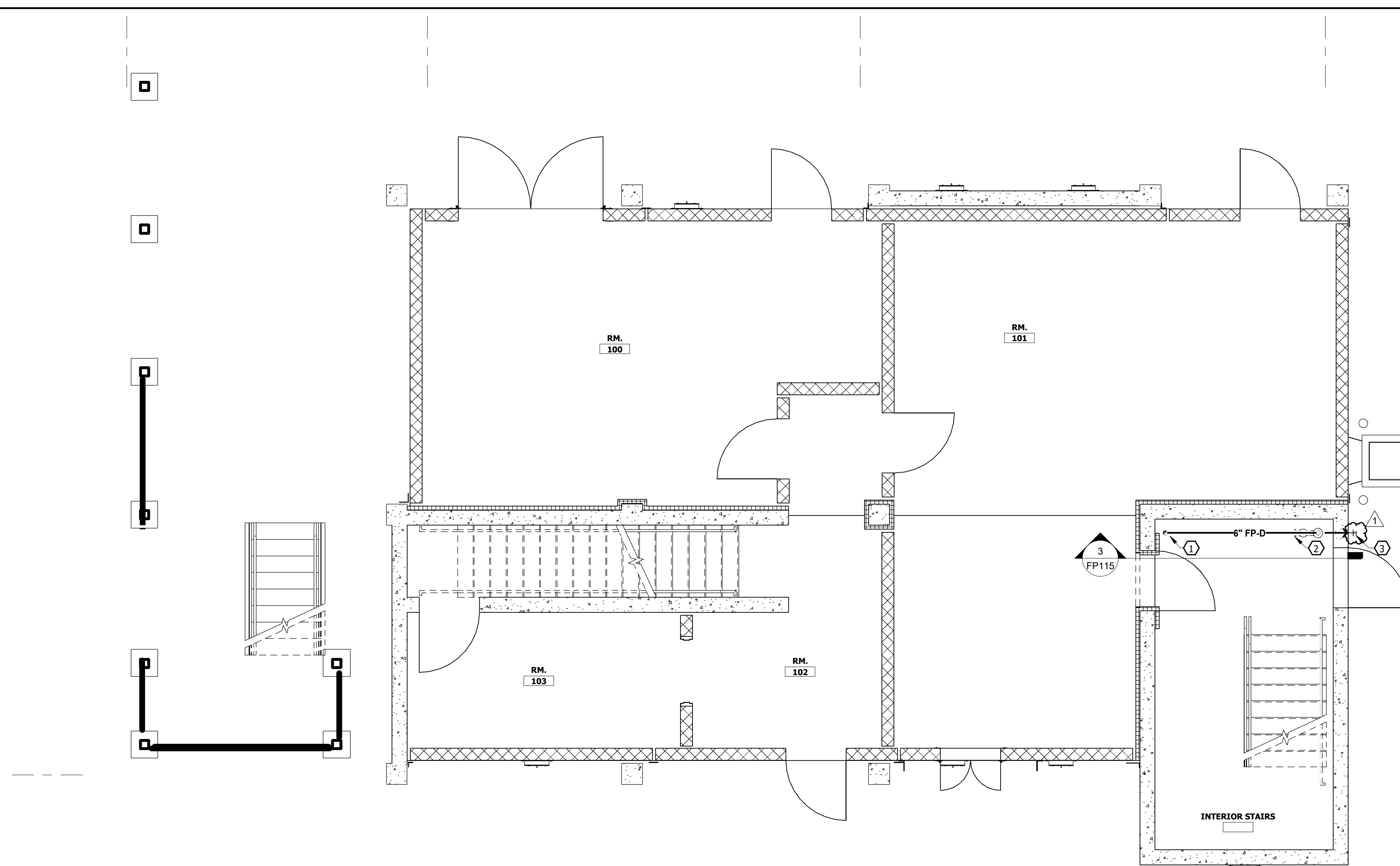
KEY NOTES TO FP113

- 1 6" DRY TRAINING STANDPIPE.
- 2 2-1/2" HOSE VALVE 48" AFF.
- 3 BALL VALVE FOR CONTROL OF SPRINKLERS. VALVE TO BE IN ACCESSIBLE LOCATION AT 66" AFF.
- 4 PENDENT SPRINKLER HEAD. TYPICAL OF 5. REMOVE ELEMENT.

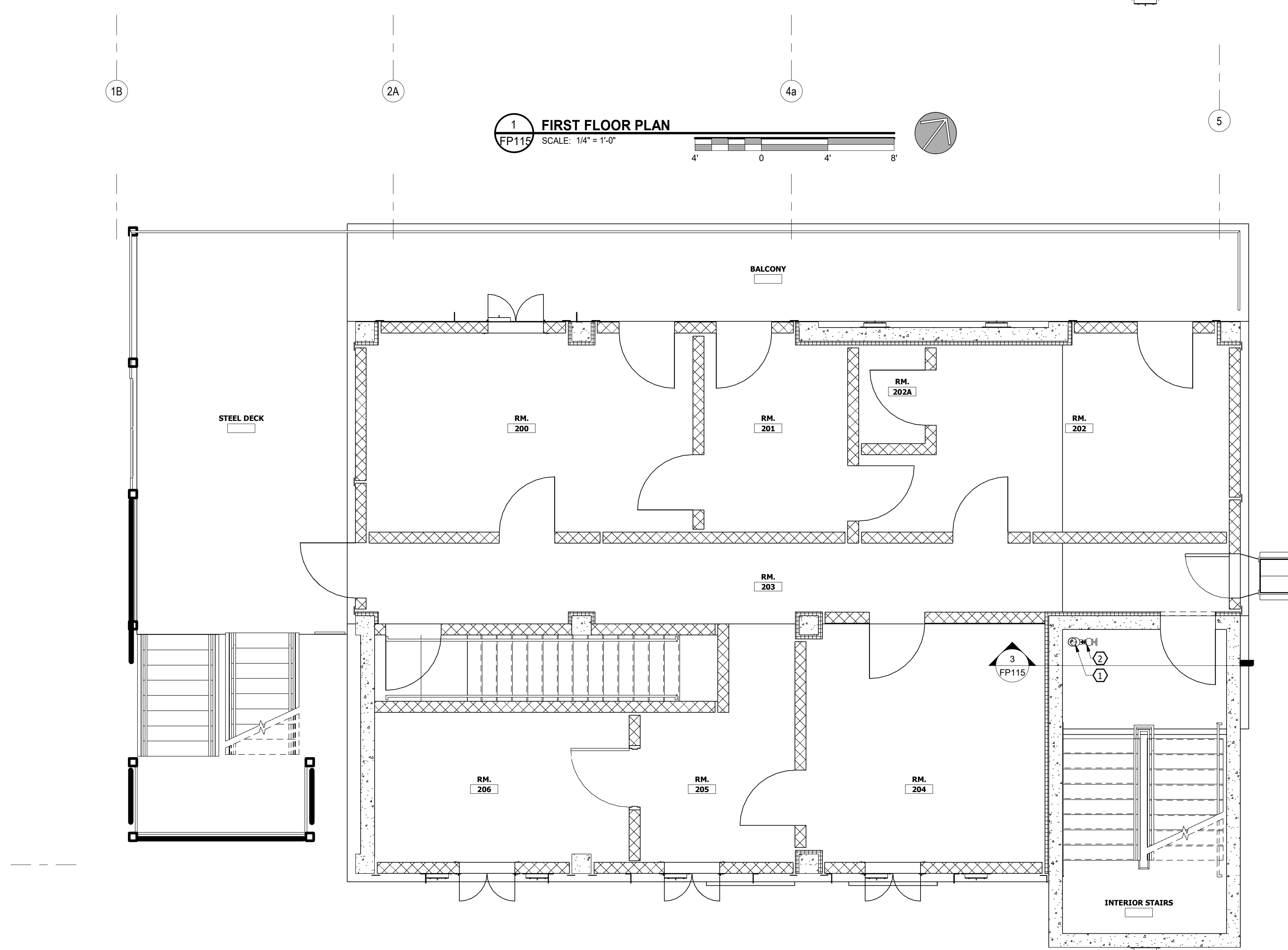


ALL FIRE PROTECTION SYSTEMS FOR THE TRAINING TOWER  
ARE PROVIDED FOR TRAINING PURPOSES ONLY.

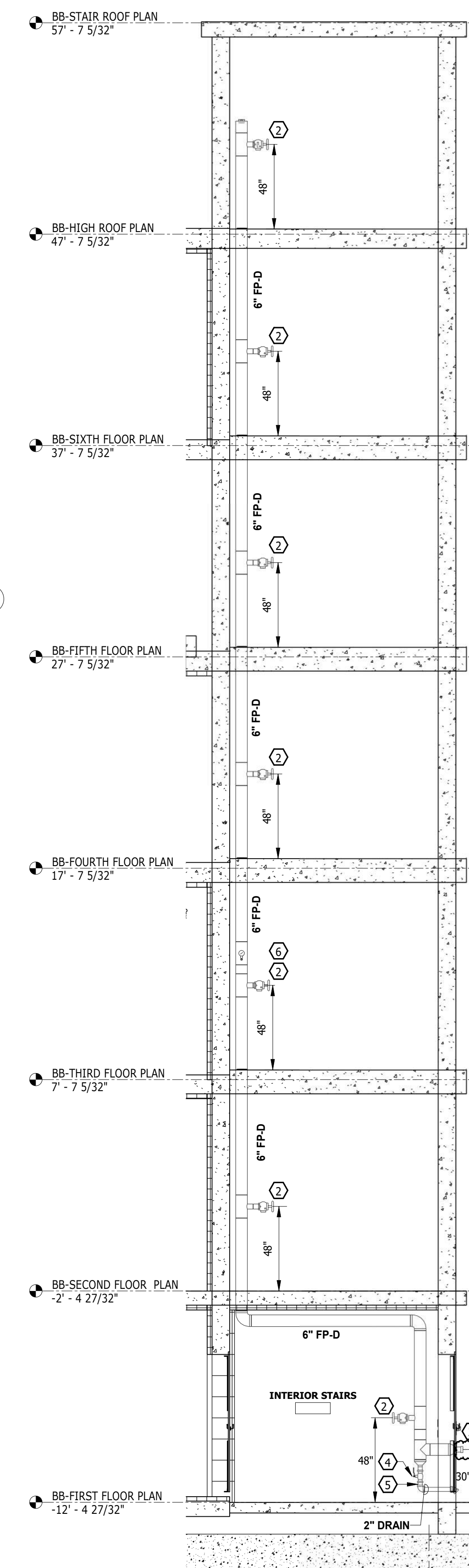




1 FIRST FLOOR PLAN  
SCALE: 1/4" = 1'-0"



2 SECOND FLOOR PLAN  
SCALE: 1/4" = 1'-0"



3 BURN BUILDING - STANDPIPE RISER  
SCALE: 1/4" = 1'-0"

ALL FIRE PROTECTION SYSTEMS FOR THE BURN BUILDING ARE PROVIDED FOR TRAINING PURPOSES ONLY.

- # GENERAL NOTES TO FP115
- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 3. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDC PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
  - 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.
- KEY NOTES TO FP115
- 1 6" DRY TRAINING STANDPIPE.
  - 2 2-1/2" HOSE VALVE 48" AFF.
  - 3 6" FDC CONNECTION.
  - 4 BALL VALVE FOR LOW POINT DRAIN.
  - 5 2" MAIN DRAIN TO EXTERIOR.
  - 6 BRANCH PIPING TO TRAINING ROOM SPRINKLER HEADS.

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NCCCS NO. 2303

*Karin R. Allen*  
032301  
REGISTERED  
ENGINEER  
IN N.C.  
05/01/2025

NO.	REVISION	DATE
1	ADDENDUM 02	05/01/25

JOB NUMBER  
**22-086**

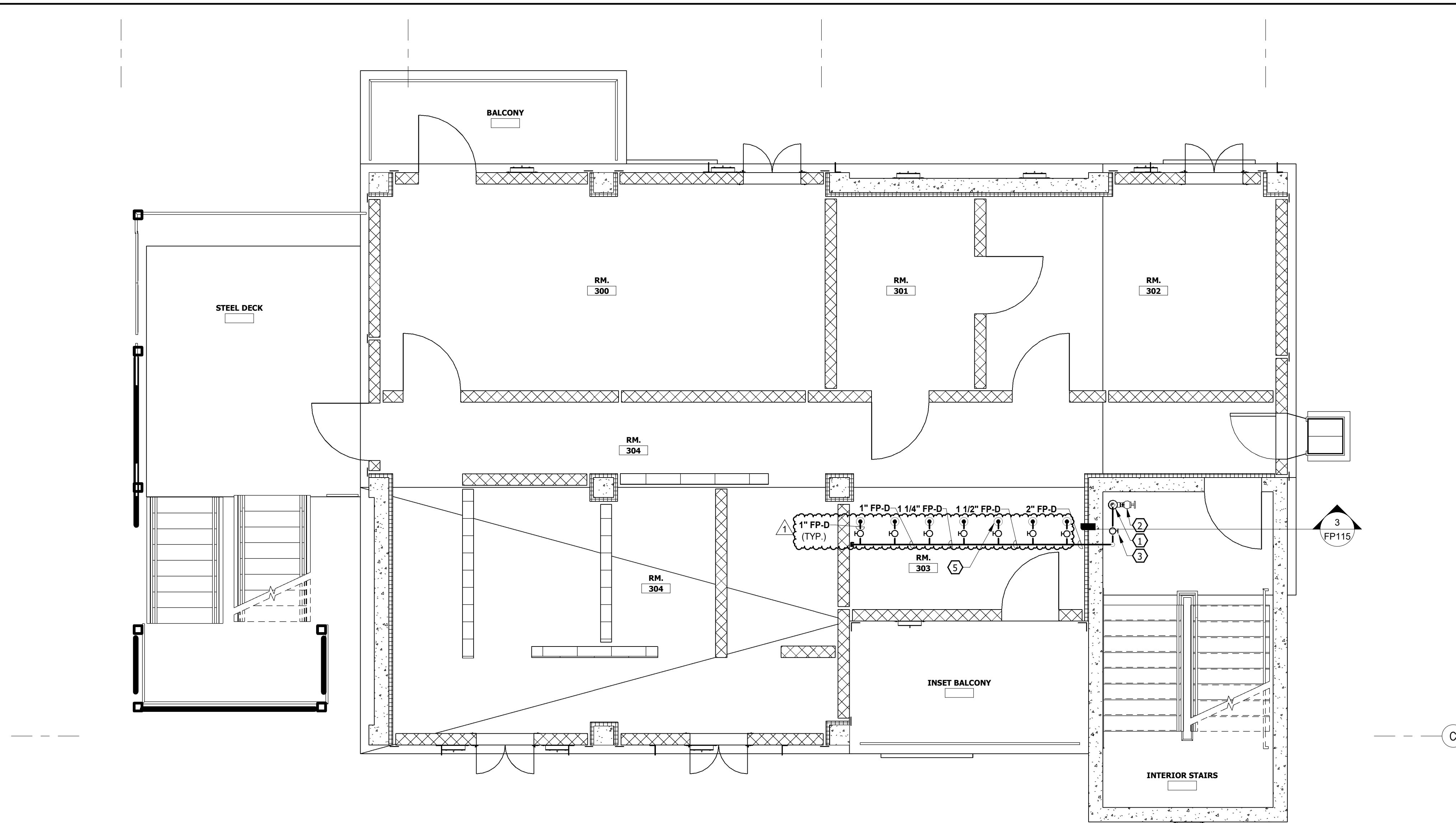
DATE ISSUED  
**03/14/2025**

PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**

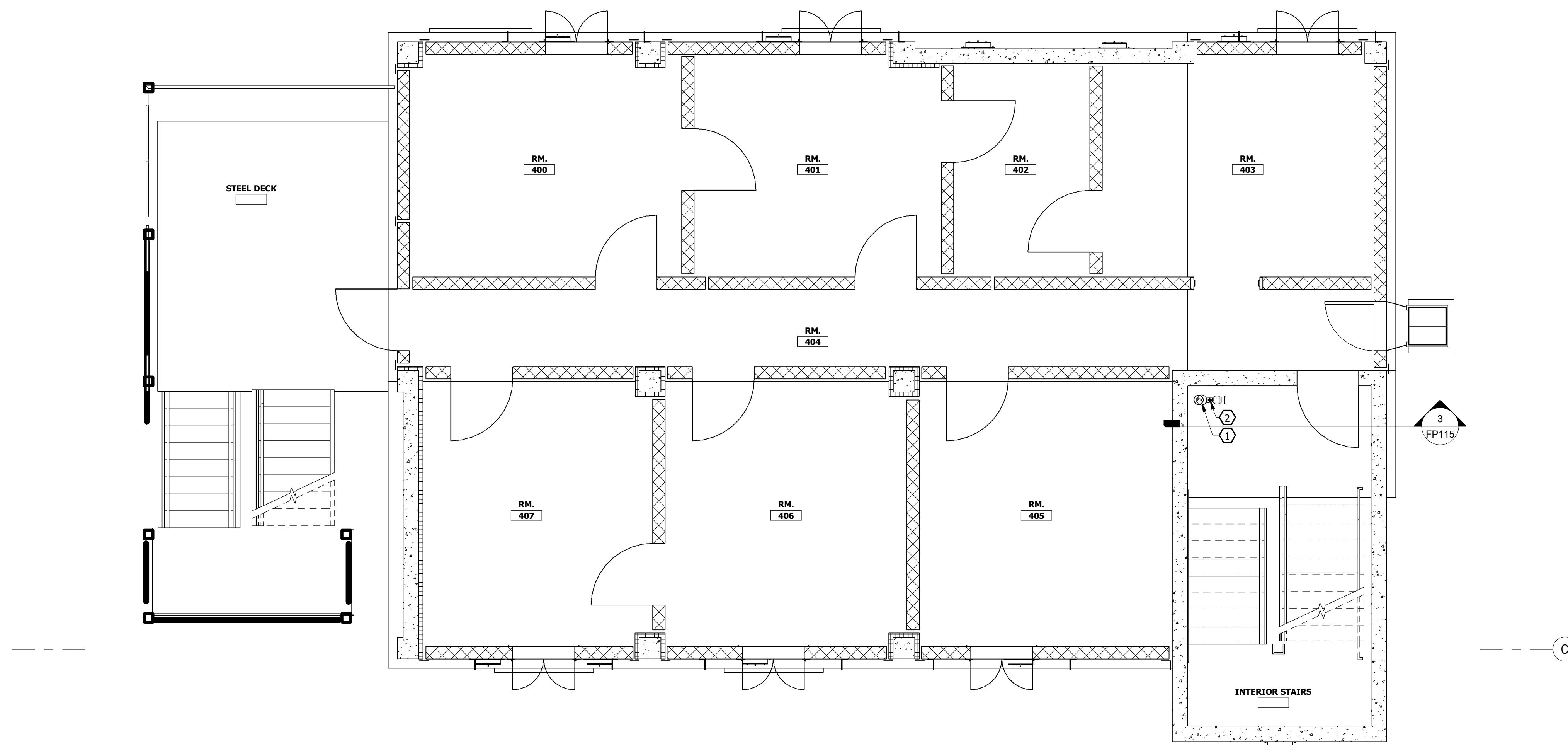
SHEET  
**PLANS - BURN BUILDING**

FP115





1 THIRD FLOOR PLAN  
FP116 SCALE: 1/4" = 1'-0"



2 FOURTH FLOOR PLAN  
FP116 SCALE: 1/4" = 1'-0"

- # GENERAL NOTES TO FP116
- 1 SYSTEM DESCRIPTION: THE SYSTEM IS COMPROMISED OF A 6" STANDPIPE WITH 2-1/2" HOSE VALVES AT EACH LEVEL. A BRANCH LINE WHICH FEEDS OPEN ELEMENT SPRINKLERS IS PROVIDED ON LEVEL 3. THE SYSTEM IS CHARGED BY FIRE TRUCK AT FDG PROVIDED ON WALL. SPRINKLERS SHALL BE CONTROLLED BY BALL VALVE LOCATED AT AN ACCESSIBLE HEIGHT NEXT TO STANDPIPE. SYSTEM TO BE INSTALLED SO THAT IT IS FULLY CAPABLE OF BEING DRAINED AFTER USE. BRANCH LINES SHALL BE PITCHED TO DRAIN AND DRAINS SHALL BE PROVIDED AT LOW POINTS.
  - 2 PIPING AND FITTINGS TO BE GALVANIZED STEEL.
- KEY NOTES TO FP116
- 1 6" DRY TRAINING STANDPIPE.
  - 2 2-1/2" HOSE VALVE 48" AFF.
  - 3 BALL VALVE FOR CONTROL OF SPRINKLERS. VALVE TO BE IN ACCESSIBLE LOCATION AT 66" AFF.
  - 5 PENDENT SPRINKLER HEAD. TYPICAL OF 7. REMOVE ELEMENT.

ALL FIRE PROTECTION SYSTEMS FOR THE BURN BUILDING  
ARE PROVIDED FOR TRAINING PURPOSES ONLY.

NO.	REVISION	DATE
1	ADDENDUM 02	05/01/25





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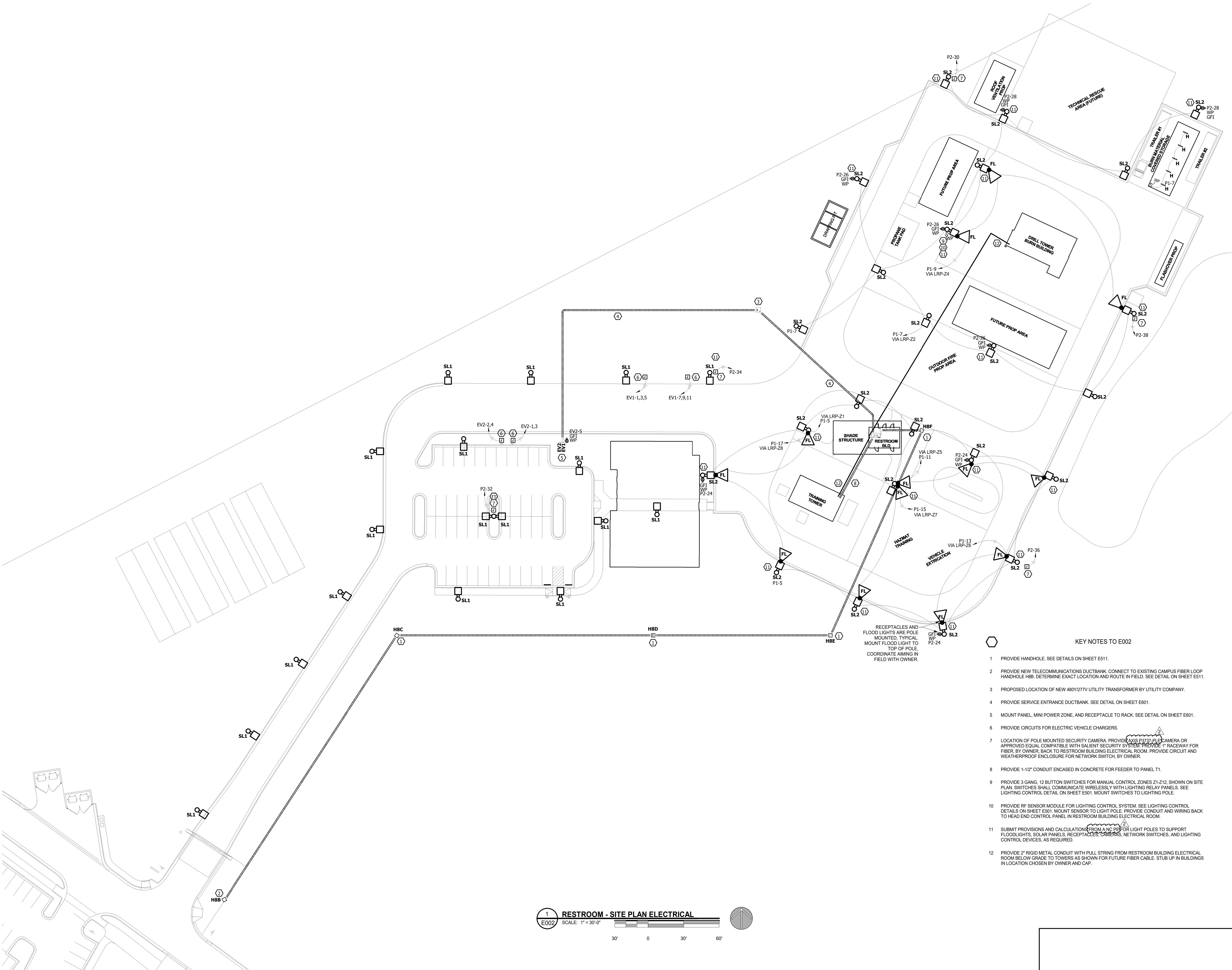


05/01/2025

NO.	REVISION	DATE
1	ADDENDUM 01	04/14/25
2	ADDENDUM 02	05/01/25

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**SITE PLAN**

E002



1 RESTROOM - SITE PLAN ELECTRICAL  
E002 SCALE: 1" = 30'-0"

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NCCCS NO. 2303



NO.	REVISION	DATE
1	ADDENDUM 02	05/01/25

JOB NUMBER  
**22-086**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**LIGHTING FIXTURE SCHEDULE**

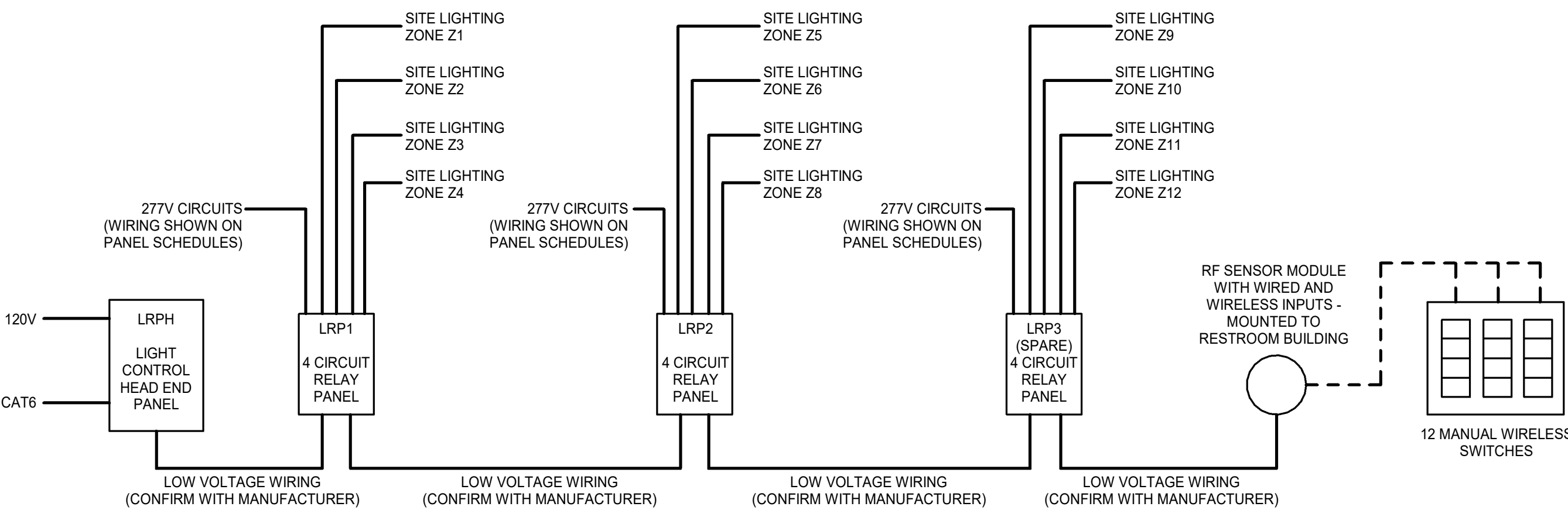
**E501**

LIGHTING FIXTURE SCHEDULE								
TYPE MARK	DESCRIPTION	MOUNTING	LUMENS	VOLTAGE	WATTAGE	CONTROL	FIXTURE MEETING SPECIFICATION	COMMENTS
A	LINEAR NARROW APERTURE PENDANT	PENDANT	500 LM/FT	120/277	9 VA/FOOT	0-10V	FINELITE HP4 CORONET L33 PMG ES4	COLOR AS SELECTED BY ARCHITECT
A2	SURFACE MOUNTED LINEAR LED	SURFACE	500 LM/FT	120/277	9 VA/FOOT	0-10V	FINELITE HP4 CORONET L33 PMG ES4	
B	6" RECESSED DOWNLIGHT	RECESSED	2000	120/277	23 VA	0-10 V	HE WILLIAMS 8DR ELITE HH6 RAYON RB06-FN	CLEAR DIFFUSE. PROVIDE WET LOCATION RATED FIXTURE
C	4" LONG CORNER MOUNTED LED	SURFACE, CORNER MOUNT	8000	120/277	80 VA	0-10V	ADVANTAGE LIGHTING LCF-4-40-8L-SH16-TG-J1 LEVITON CRC-3519	PROVIDE IP65 RATED FIXTURE WITH STAINLESS STEEL HOUSING AND TWO TEMPERED GLASS LENSES
D	LED LINEAR STRIP	PENDANT	5000	120/277	40 VA	0-10V	JADEMAR JSTRE ELITE OC4-LED LITHONIA CLX	COLOR AS SELECTED BY ARCHITECT
E	WALL MOUNT EMERGENCY LIGHTING UNIT	WALL	1100	120/277	5 VA	N/A	MAXILUME ELM-LED-803 CARPENTER CEM MULE SO-40 COMPASS CU2	
F	WALL MOUNTED STAIR LIGHT	SURFACE, WALL	5000	120/277	40 VA	0-10V	JADEMAR JSTRE ELITE OC4-LED LITHONIA CLX	PROVIDE INTEGRAL OCCUPANCY SENSOR
FL	EXTERIOR POLE MOUNT WIDE FLOOD LIGHT	POLE	8000	120/277	60 VA	ON/OFF	NLS NV-F2 JADEMAR JFL-PS RAYON T348LED	PROVIDE WIDE DISTRIBUTION. MOUNT TO POLE WITH SL1 FIXTURES
G	EXTERIOR ARCHITECTURAL WALL SCONCE	SURFACE, WALL	3000	120/277	23 VA	PHOTOCELL	JADEMAR JWP NLS NV-W LITHONIA WST	COLOR AS SELECTED BY ARCHITECT.
H	ROUGH SERVICE VAPOR PROOF LED	SURFACE, WALL	4000	120/277	33 VA	0-10V	JADEMAR JSD-VP ELITE OWS-LED LITHONIA VAP	
SL1	HIGH OUTPUT SOLAR ASSEMBLY SITE LIGHT POLE	POLE	11,135	SOLAR	N/A	INTEGRAL PHOTOCELL	PREFERRED BRAND ALTERNATE: SONARAY SR-3080-D	25' ALUMINUM POLE. 4000K COLOR. FIXTURE SHALL BE UL LISTED AND LABELED. CONFIGURE FOR 4 HOURS @ 100%. SUBMIT CALCULATIONS FROM A NCP AND PROVISIONS FOR MOUNTING FLOODLIGHTS, RECEPTACLES, CAMERAS, NETWORK SWITCHES, SOLAR PANELS, OR LIGHTING CONTROL DEVICES TO POLES.
SL2	ARCHITECTURAL OUTDOOR AREA LIGHT	POLE	11,336	277	104 VA	ON/OFF	NLS NV-1 RAYON T348LED LITHONIA DSX1	25' ALUMINUM POLE. 4000K COLOR. FIXTURE SHALL BE UL LISTED AND LABELED. SUBMIT CALCULATIONS FROM A NCP AND PROVISIONS FOR MOUNTING FLOODLIGHTS, RECEPTACLES, CAMERAS, NETWORK SWITCHES, OR LIGHTING CONTROL DEVICES TO POLES.

FIXTURE SCHEDULE NOTES:

- THIS FIXTURE SCHEDULE IDENTIFIES A FIXTURE THAT MEETS THE SPECIFIED PERFORMANCE REQUIREMENTS AND A LEVEL OF QUALITY REQUIRED FOR THE PROJECT. **MANUFACTURER'S NAMES AND FIXTURE SERIES/MODELS IN SCHEDULE ARE NOT A BRAND NAME SPECIFICATION.** EQUIVALENT FIXTURES BY MANUFACTURERS OTHER THAN THOSE LISTED MAY BE SUBMITTED FOR THIS PROJECT.
- PROVIDE LED DRIVERS SUITABLE FOR FULL RANGE DIMMING, INTEGRAL SURGE PROTECTION, CURRENT TOTAL HARMONIC DISTORTION (THD) OF <20% AND A POWER FACTOR >0.90. IN ADDITION, DRIVERS MUST BE RF SUPPRESSED FOR MINIMUM INJECTION OF FEEDBACK INTO SUPPLY LINES. MAXIMUM CURRENT THD AND MINIMUM POWER FACTOR MUST BE SUBMITTED AS A PART OF THE FIXTURE SUBMITTAL DATA.
- UNLESS OTHERWISE INDICATED, PROVIDE SINGLE DRIVER PER FIXTURE.
- PROVIDE MOUNTING FRAME AND RELATED ACCESSORIES FOR ALL FIXTURES AS REQUIRED TO MATCH CEILING CONSTRUCTION. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT CEILING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR MODIFICATION OF FIXTURE SCHEDULE MANUFACTURER'S PART NUMBERS FOR PURPOSES OF MATCHING CEILING CONSTRUCTION.
- PROVIDE DIMMING DRIVERS WHERE DIMMING CONTROLS ARE INDICATED ON THE PLANS.
- ALL FIXTURES TO HAVE A COLOR TEMPERATURE OF 4000K UNLESS NOTED OTHERWISE.
- UNLESS NOTED OTHERWISE, ALL FIXTURES SHALL INCLUDE INTEGRAL DRIVER.
- ALL FIXTURES SHALL BE UL OR THIRD PARTY LISTED AS COMPLETE ASSEMBLY.
- FOR LIGHT FIXTURES HAVING LINEAR VISUAL FEATURES (IE: CENTER BASKET, LOUVERS, ETC), COORDINATE AND ALIGN COMPONENTS IN A SIMILAR DIRECTION CONSISTENTLY ACROSS THE BUILDING SPACES.

SO DETAIL: IN0011 LED



PROVIDE A LIGHTING CONTROL RELAY SYSTEM, LUTRON ATHENA OR APPROVED EQUAL.

PROVIDE ALL WIRING AS REQUIRED BY MANUFACTURER. SEE RESTROOM BUILDING FLOOR PLAN FOR EQUIPMENT LOCATIONS. SEE SITE PLAN FOR LIGHTING FIXTURE LOCATIONS AND CONTROL ZONES. SEE PANEL SCHEDULES FOR CIRCUIT WIRING AND CONDUIT SIZES.

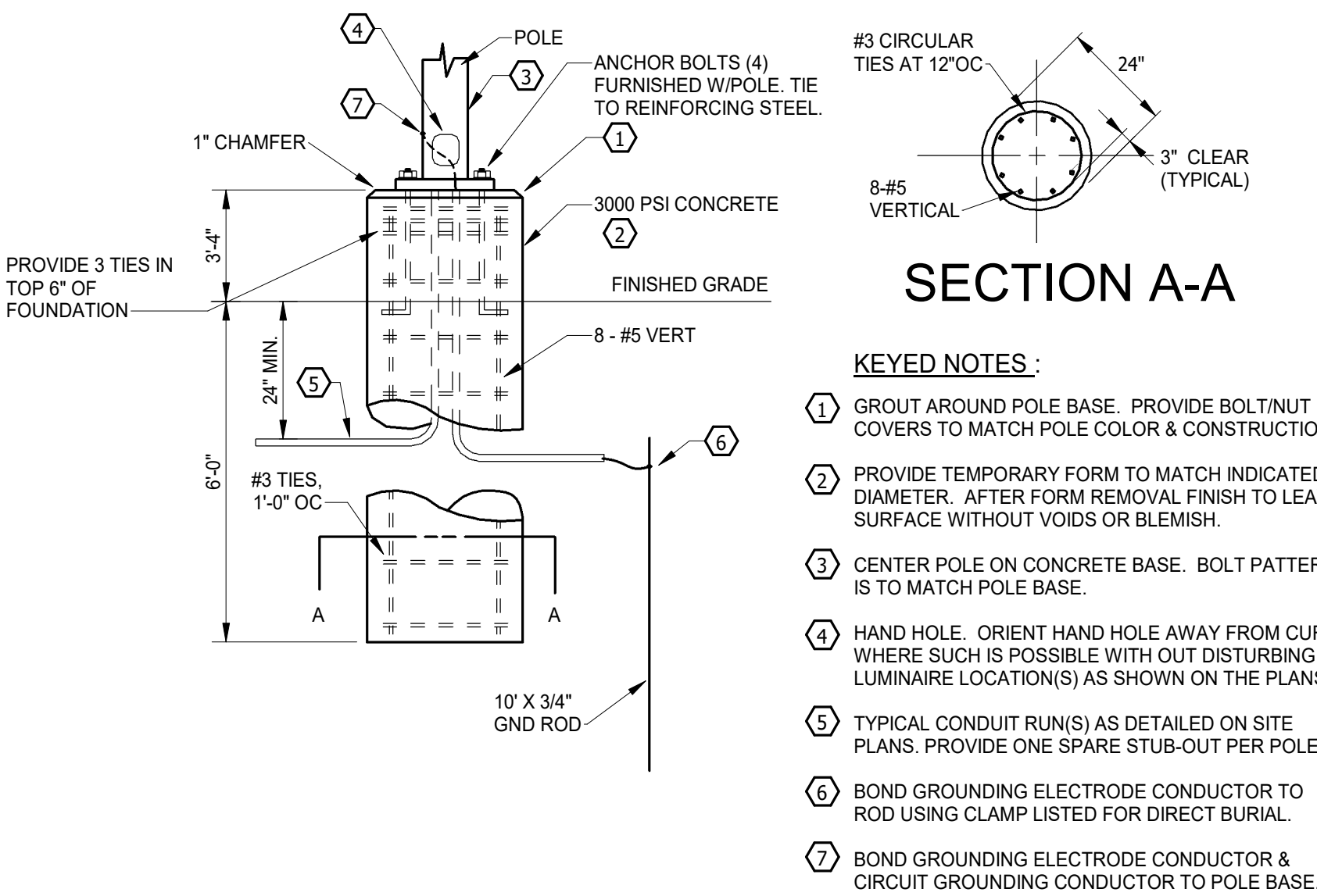
SYSTEM SHALL BE CAPABLE OF CONTROLLING UP TO 12 LIGHTING CIRCUITS. HEAD END PANEL SHALL BE PROGRAMMABLE FOR TIME OF DAY SETTINGS, OWNER SELECTED SCENE CONTROLS, AND AUTOMATIC SHUTOFF.

SYSTEM SHALL HAVE WIRELESS SWITCHES FOR MANUAL CONTROL OF EACH ZONE. SWITCHES WILL BE LOCATED IN RESTROOM BUILDING ELECTRICAL ROOM, TRAINING TOWER ELECTRICAL ROOM, AND LIGHT POLE ON SITE.

SYSTEM SHALL HAVE PHONE APP CAPABILITY FOR OWNER TO MANUALLY CONTROL THE LIGHTING REMOTELY.

**1 LIGHTING CONTROL RELAY PANEL**

SCALE: NTS

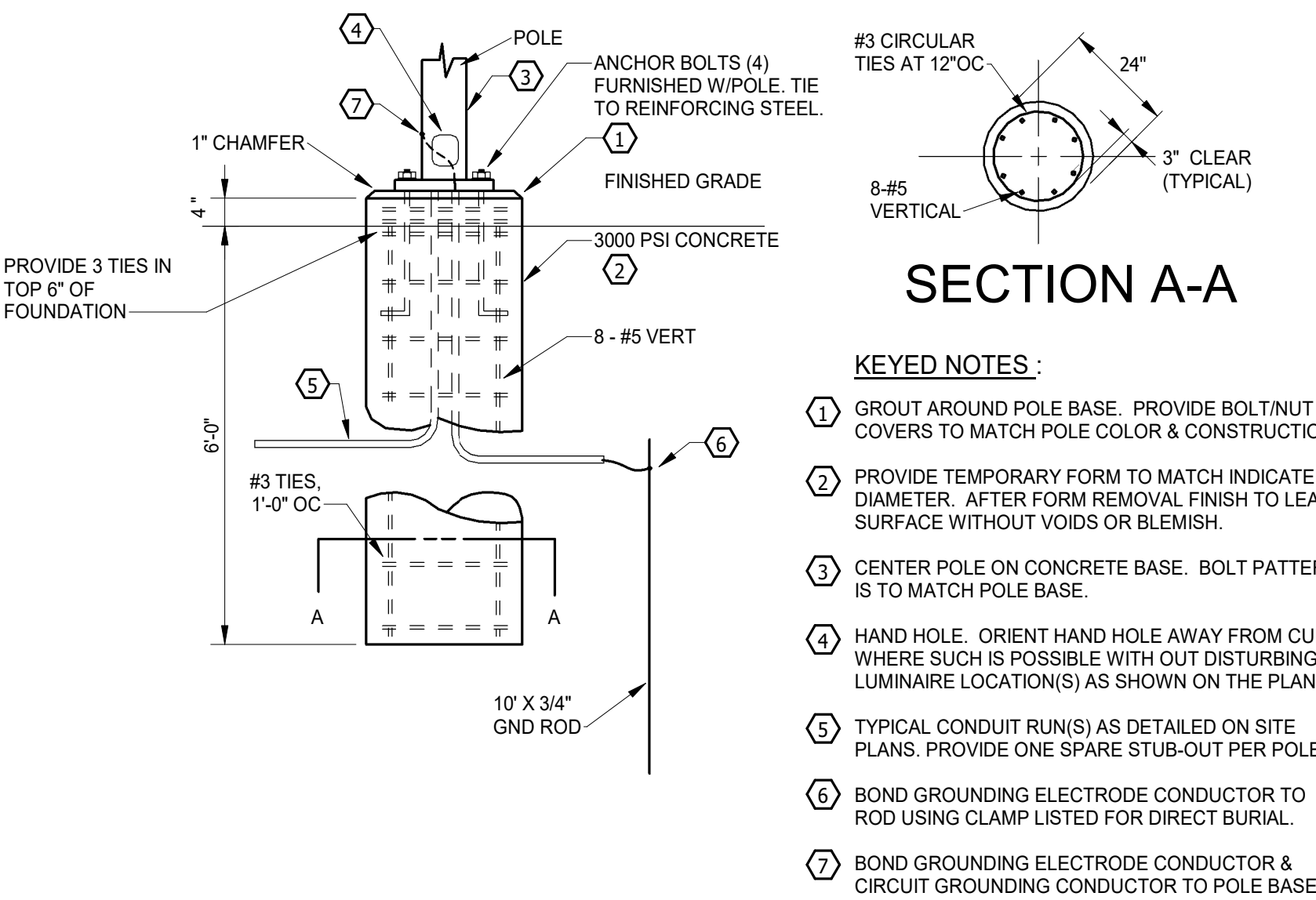


KEYED NOTES:

- GROUT AROUND POLE BASE. PROVIDE BOLT/NUT COVERS TO MATCH POLE COLOR & CONSTRUCTION.
- PROVIDE TEMPORARY FORM TO MATCH INDICATED DIAMETER. AFTER FORM REMOVAL FINISH TO LEAVE SURFACE WITHOUT VOIDS OR BLEMISH.
- CENTER POLE ON CONCRETE BASE. BOLT PATTERN IS TO MATCH POLE BASE.
- HAND HOLE. ORIENT HAND HOLE AWAY FROM CURB WHERE SUCH IS POSSIBLE WITH OUT DISTURBING LUMINAIRE LOCATION(S) AS SHOWN ON THE PLANS.
- TYPICAL CONDUIT RUN(S) AS DETAILED ON SITE PLANS. PROVIDE ONE SPARE STUB-OUT PER POLE.
- BOND GROUNDING ELECTRODE CONDUCTOR TO ROD USING CLAMP LISTED FOR DIRECT BURIAL.
- BOND GROUNDING ELECTRODE CONDUCTOR & CIRCUIT GROUNDING CONDUCTOR TO POLE BASE.

**2 LIGHT POLE BASE DETAIL (ON PAVEMENT)**

SCALE: NTS

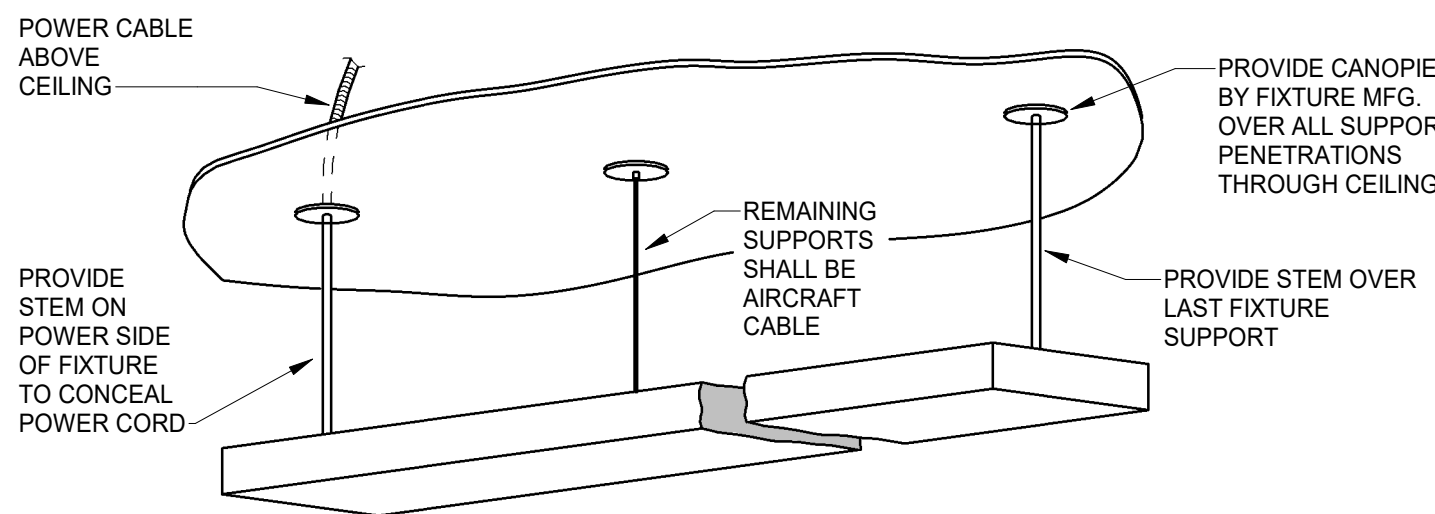


KEYED NOTES:

- GROUT AROUND POLE BASE. PROVIDE BOLT/NUT COVERS TO MATCH POLE COLOR & CONSTRUCTION.
- PROVIDE TEMPORARY FORM TO MATCH INDICATED DIAMETER. AFTER FORM REMOVAL FINISH TO LEAVE SURFACE WITHOUT VOIDS OR BLEMISH.
- CENTER POLE ON CONCRETE BASE. BOLT PATTERN IS TO MATCH POLE BASE.
- HAND HOLE. ORIENT HAND HOLE AWAY FROM CURB WHERE SUCH IS POSSIBLE WITH OUT DISTURBING LUMINAIRE LOCATION(S) AS SHOWN ON THE PLANS.
- TYPICAL CONDUIT RUN(S) AS DETAILED ON SITE PLANS. PROVIDE ONE SPARE STUB-OUT PER POLE.
- BOND GROUNDING ELECTRODE CONDUCTOR TO ROD USING CLAMP LISTED FOR DIRECT BURIAL.
- BOND GROUNDING ELECTRODE CONDUCTOR & CIRCUIT GROUNDING CONDUCTOR TO POLE BASE.

**3 LIGHT POLE BASE DETAIL (ON RAISED LANDSCAPE AREA)**

SCALE: NTS



GENERAL NOTES:

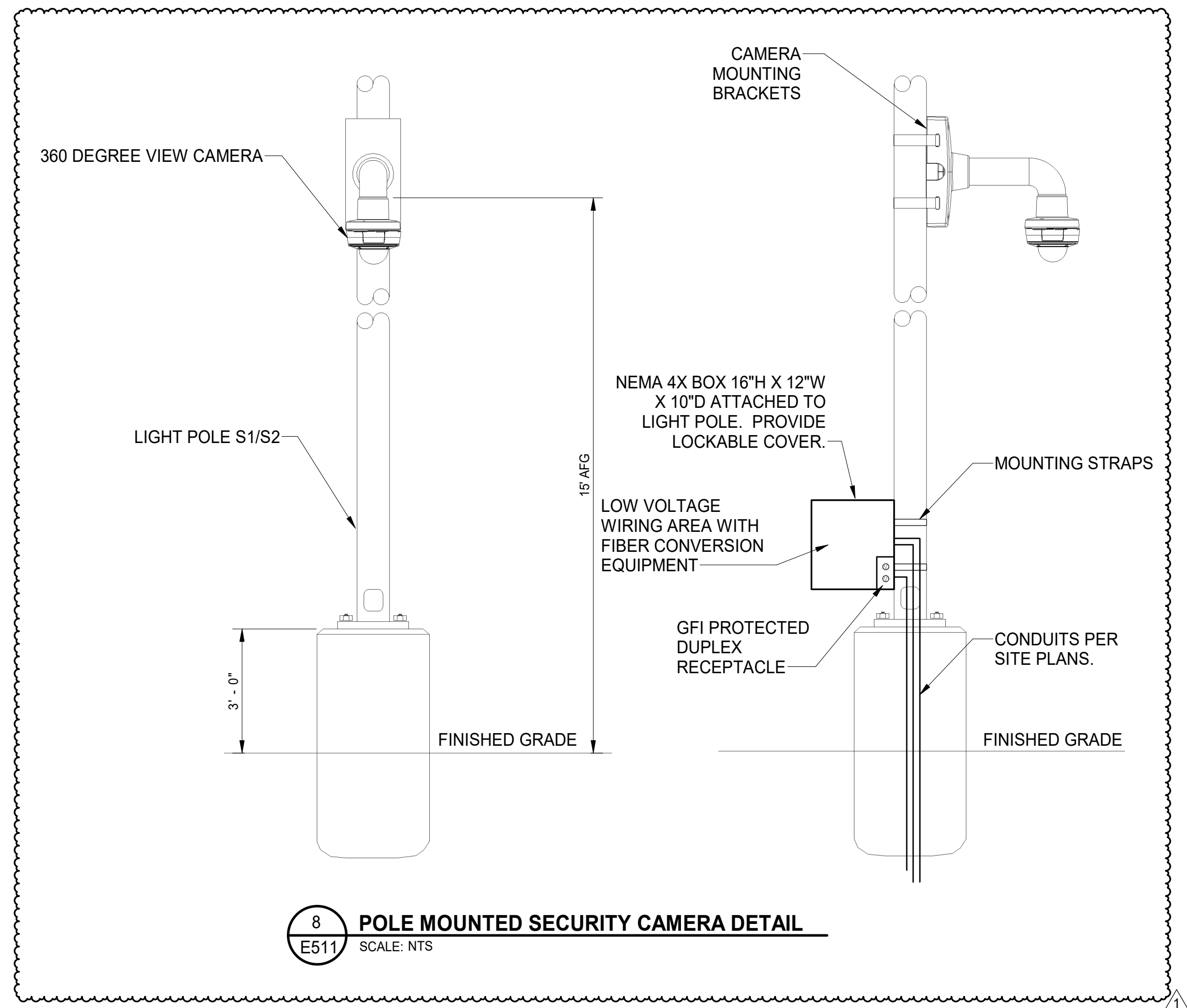
- FIXTURE STYLE AND NUMBER OF REQUIRED SUPPORTS WILL VARY BY FIXTURE TYPE.
- REFER TO MANUFACTURER'S SUPPLIED MOUNTING INSTRUCTIONS FOR EXACT REQUIREMENTS.

SO DETAIL: GE0022

**4 TYPICAL LINEAR FIXTURE INSTALLATION**

SCALE: NTS

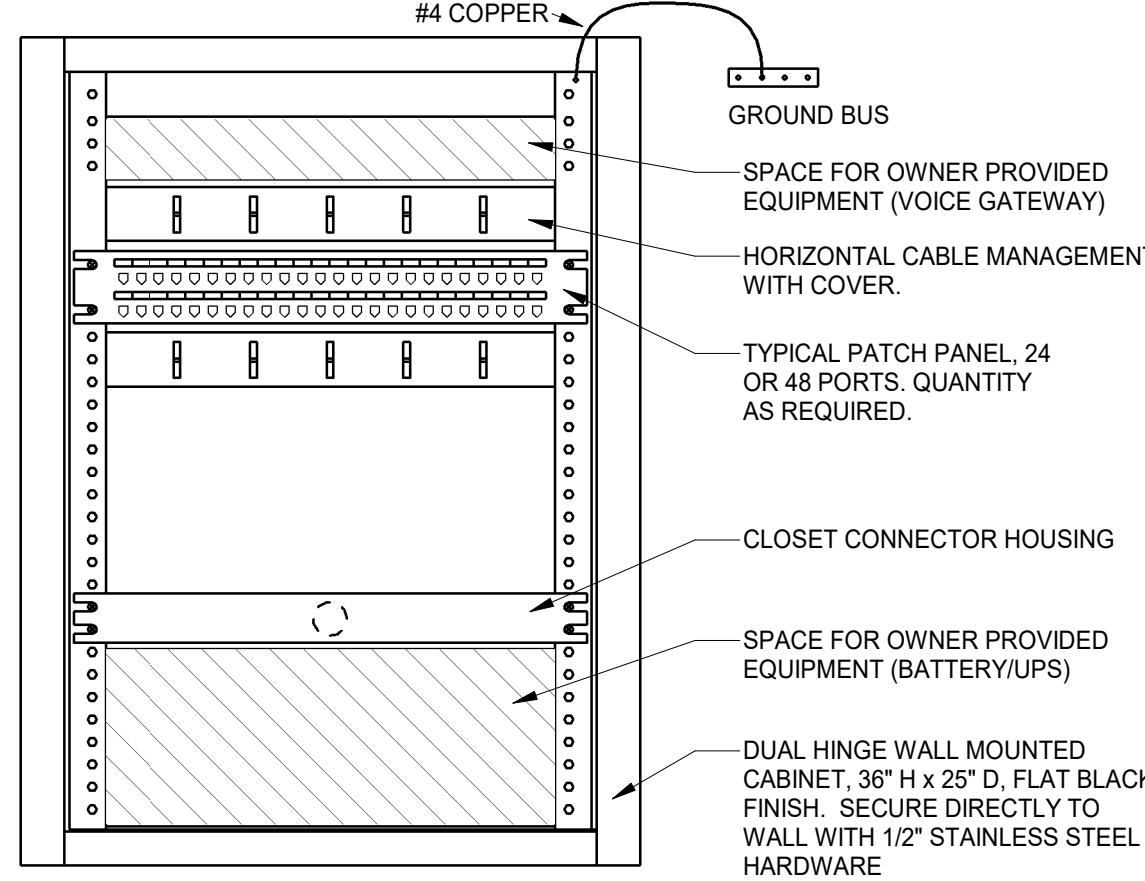
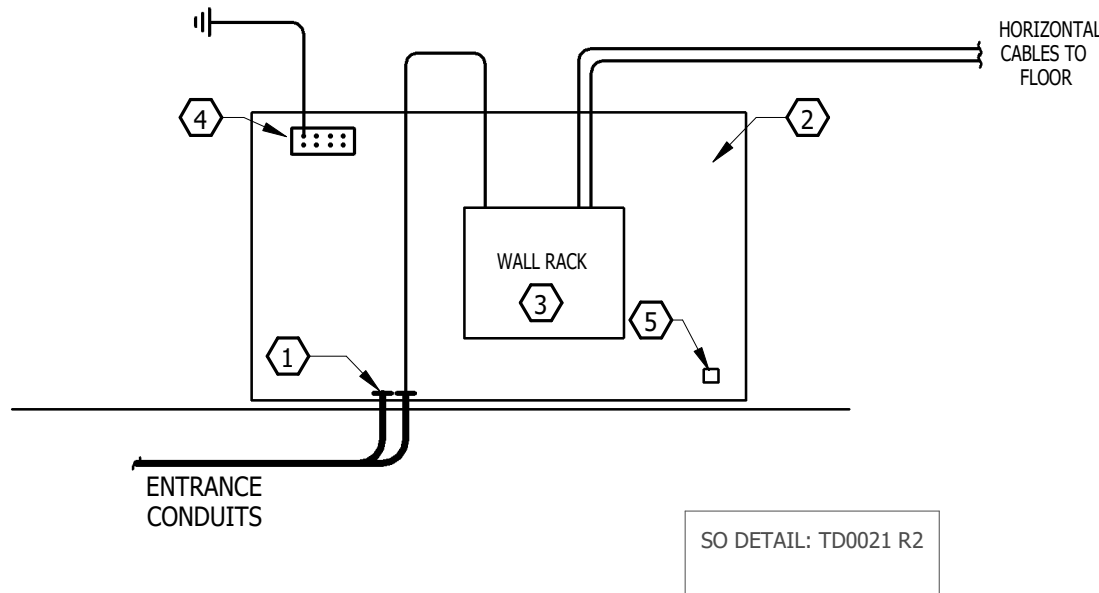




Security Scope & Equipment Lists		
Security Requirements		
<b>General Programming and Integration</b>		
1. All systems shall be programmed to a fully functional point by the security installer. This includes computer and server setup, network configuration, software installation, software configuration of all components to achieve optimum performance of the installed components.		
2. All systems shall be integrated unless noted otherwise.		
<b>Video Surveillance System</b>		
1. Camera	IP Based	
2. Function	Record & Live Monitoring	
3. Software	Selected	
4. Mapping	Maps must be loaded in software and camera placed	
5. Server	Server by Security Vendor (coordinate with C&I cameras)	
6. Link Switches	By WTC	
7. Powering	By Security Vendor	
8. Recording Cap	30 Days	
9. Recording Quality	10 FPS   1080P   H.265   High Quality	
10. Record On	Motion	
11. External View	Remote View & Mobile Apps Required	
<b>Security System Testing Requirements</b>		
1. All provided system shall be tested and reported with a certification from the installer and the date and time the testing took place.		
2. All active components shall be tested based upon the designed criteria for the system and a pass/fail test for all features shall be provided.		
3. Scope/Shop of all cameras to be provided to the owner after final installation and hook-up. Up to the adjustment for each camera must be signed to ensure that the owner has acceptable views.		
Video Surveillance Equipment List		
Manufacturer	Part Number	Description
Selenit	Complete Low	VMS Server and Software
Axis	P3737-PL-E	360 Degree Camera
Axis	TS4021-D	Pendant Adapter
Axis	T11107	Plate Mount
Axis	T1001	Ethernet Surge Protector
Cisco	Catalyst 9300	Network Switch (furnished and installed by WTCO)
Corning	OM6EUA-74701020	Fiber Optic Cable
Corning	SPN-010	Patch Panel

- GENERAL NOTES:**
- ACTIVE ELECTRONICS AND PATCH CORDS ARE PROVIDED AND INSTALLED BY OWNER.
  - FIRE SEAL ALL FLOOR PENETRATIONS.

- KEYED NOTES:**
- TELECOM SERVICE ENTRANCE CONDUITS, STUB CONDUITS UP 4" AFF AND BUSH. PROVIDE CAP DURING CONSTRUCTION. SEAL ENDS OF ALL CONDUITS AFTER INSTALLATION OF CABLES.
  - PROVIDE 3/4" THICK FIRE RETARDANT PLYWOOD BACKBOARD FROM FLOOR TO 8'-0" AFF ON WALL. PAINT PLYWOOD WHITE, LEAVING RATING LABELS VISIBLE FOR INSPECTIONS.
  - WALL MOUNTED TELECOMMUNICATIONS EQUIPMENT RACK. FIBER HOUSING AND CABLE MANAGEMENT BY ELECTRICAL CONTRACTOR. ELECTRONIC COMPONENTS BY OWNER.
  - WALL MOUNTED GROUND BUS PER PROJECT DETAIL WITH #3 GROUND TO EFFECTIVELY GROUND STRUCTURAL STEEL.
  - PROVIDE QUADRUPLX RECEPTACLES AT 24" AFF. REFER TO FLOOR PLANS FOR CIRCUITRY.

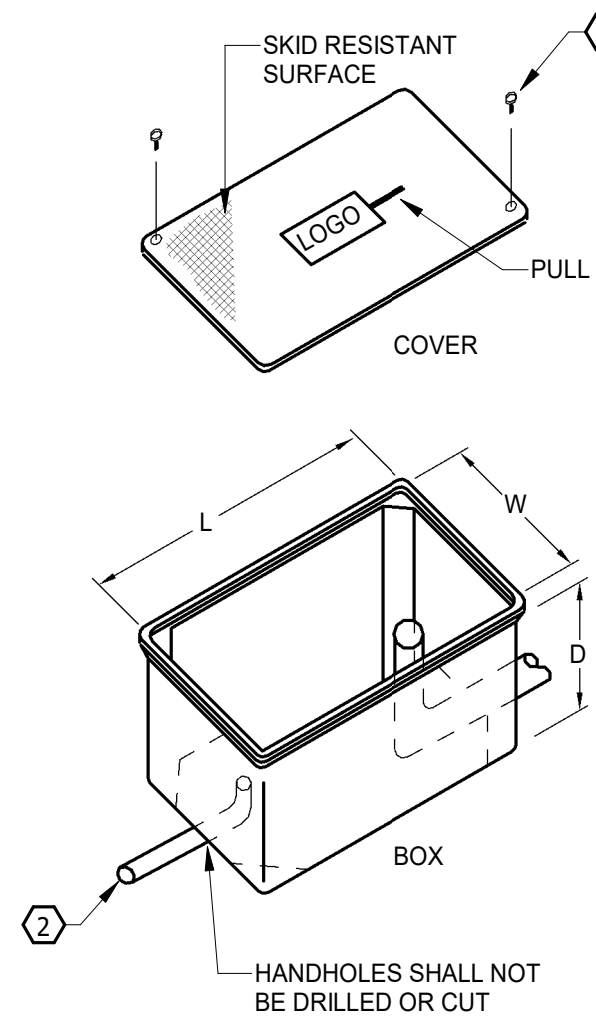


- GENERAL NOTES:**
- INDICATED ARRANGEMENT IS TYPICAL FOR NEW WALL MOUNTED RACK.
  - ALL CONNECTIONS BY CONTRACTOR TO 110 BLOCKS AT BACK OF PATCH PANELS. PATCH CORDS AND ACTIVE COMPONENTS PROVIDED AND INSTALLED BY THE OWNER.

- KEYED NOTES:**
- ROUTE SPECIFIED CABLE(S) TO DISTRIBUTION EQUIPMENT AND TERMINATE.
  - PROVIDE SPECIFIED CABLES TO LOCATION OF WIRELESS ACCESS POINT INDICATED ON PLANS. TERMINATE EACH CABLE AT ACCESS POINT END WITH RJ45 FITTING AND LEAVE 20" OF SERVICE LOOP-IN CABLE SUPPORTED ABOVE CEILING LEVEL.
- GENERAL NOTES:**
- ALL CAT. 6 CABLES TO BE TERMINATED ON DEDICATED CAT. 6A MODULAR PATCH PANEL.

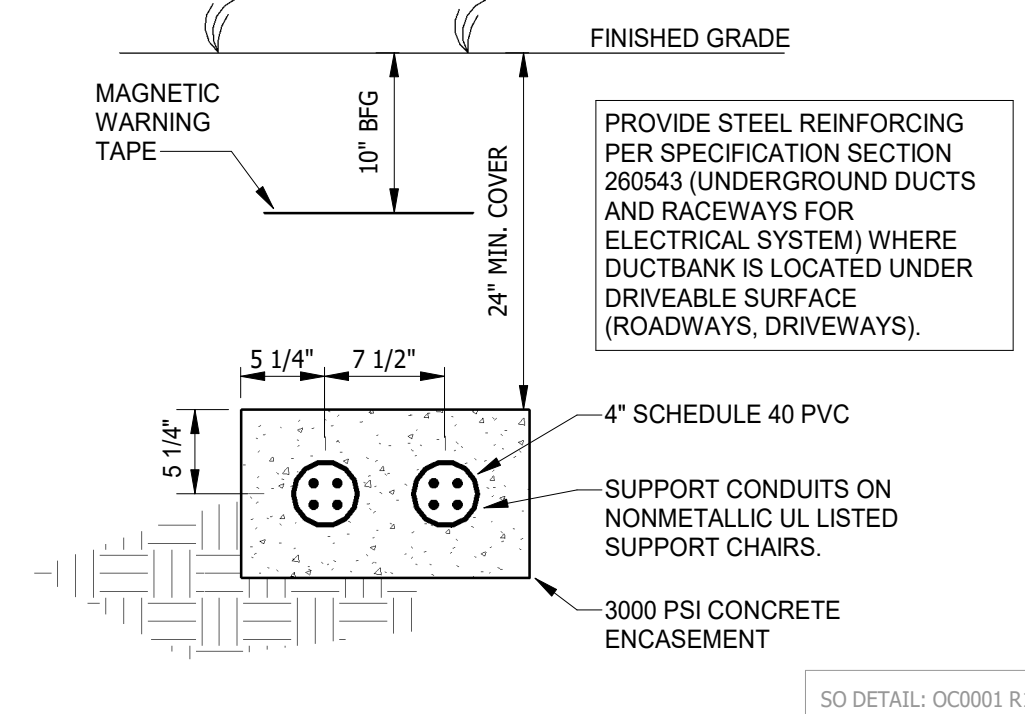
TELECOMMUNICATIONS OUTLET SCHEDULE			
SYMBOL	PORTS	FUNCTION	CABLE
	1	DATA	(1) CAT. 6
	2	DATA/DATA	(2) CAT. 6
	2	DATA/DATA	(2) CAT. 6A

TYPICAL TELECOM OUTLET SCHEDULE			
	1	DATA	(1) CAT. 6
	2	DATA/DATA	(2) CAT. 6
	2	DATA/DATA	(2) CAT. 6A



- GENERAL NOTES:**
- HEAVY WEAWE FIBERGLASS: BOX HAS OPEN BASE. PROVIDE GRAVEL FILL 12" DEEP BELOW BOX.
  - BOX DIMENSION IS 24" LONG x 24" WIDE x 11-1/4" DEEP.
  - PROVIDE BOX COVER LOGO, AS APPLICABLE.
  - BOX COVERS SHALL BE A HEAVY DUTY DESIGN, CAPABLE OF WITHSTANDING A LOAD OF 15,000 LBS. OVER A 10" SQUARE AREA.
  - SEE UNDERGROUND ENCLOSURE INSTALLATION DETAIL.

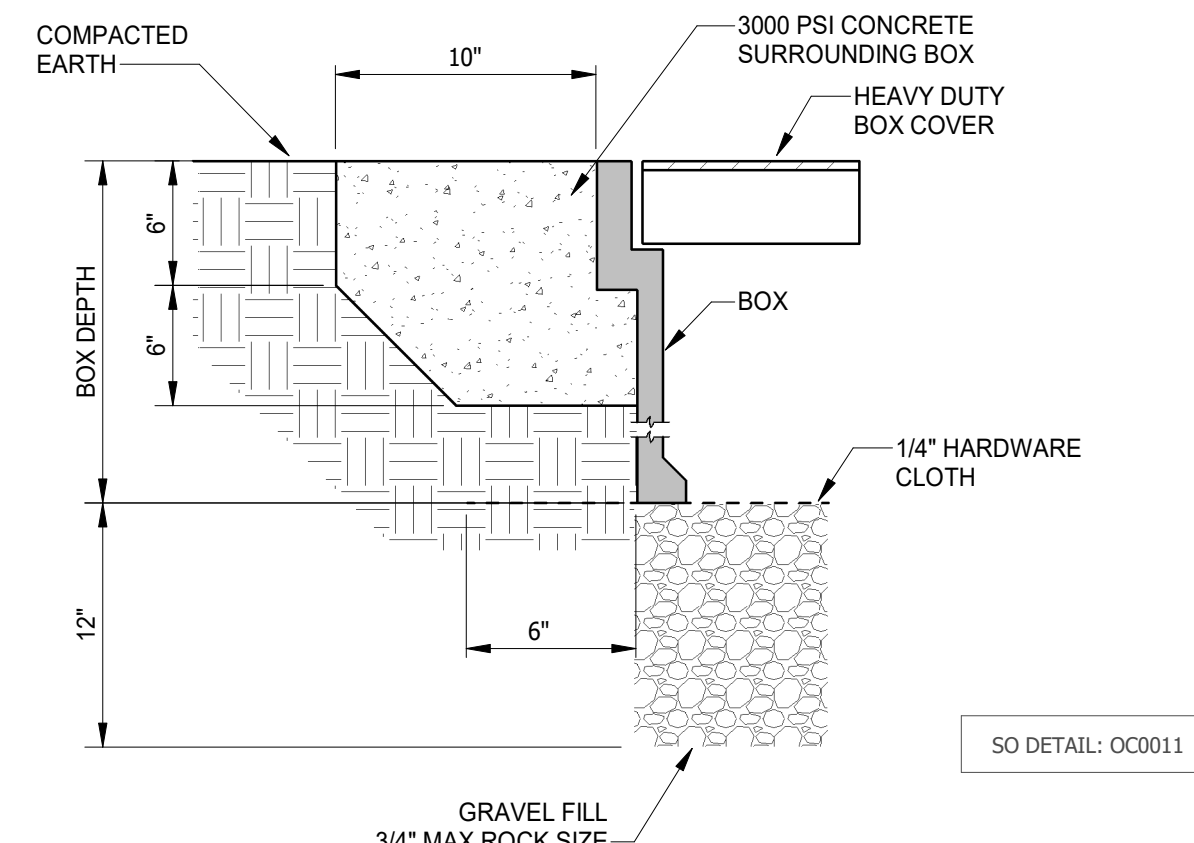
- KEYED NOTES:**
- PROVIDE TAMPER RESISTANT STAINLESS STEEL COVER HOLD-DOWN BOLTS.
  - TYPICAL CONDUIT ENTRY: CONDUIT SHALL ENTER BOX FROM THE BOTTOM AND EXTEND UP 6" INTO BOX.



TYPICAL TELECOM OUTLET SCHEDULE			
	1	DATA	(1) CAT. 6
	2	DATA/DATA	(2) CAT. 6
	2	DATA/DATA	(2) CAT. 6A

- KEYED NOTES:**
- 1" CONDUIT TO ELECTRICAL ROOM ABOVE WALL MOUNTED DISTRIBUTION RACK. BUSH ENDS OF PIPE.
  - REFER TO TELECOMMUNICATIONS OUTLET SCHEDULE.

TYPICAL TELECOM OUTLET SCHEDULE			
	1	DATA	(1) CAT. 6
	2	DATA/DATA	(2) CAT. 6
	2	DATA/DATA	(2) CAT. 6A



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05/01/2025

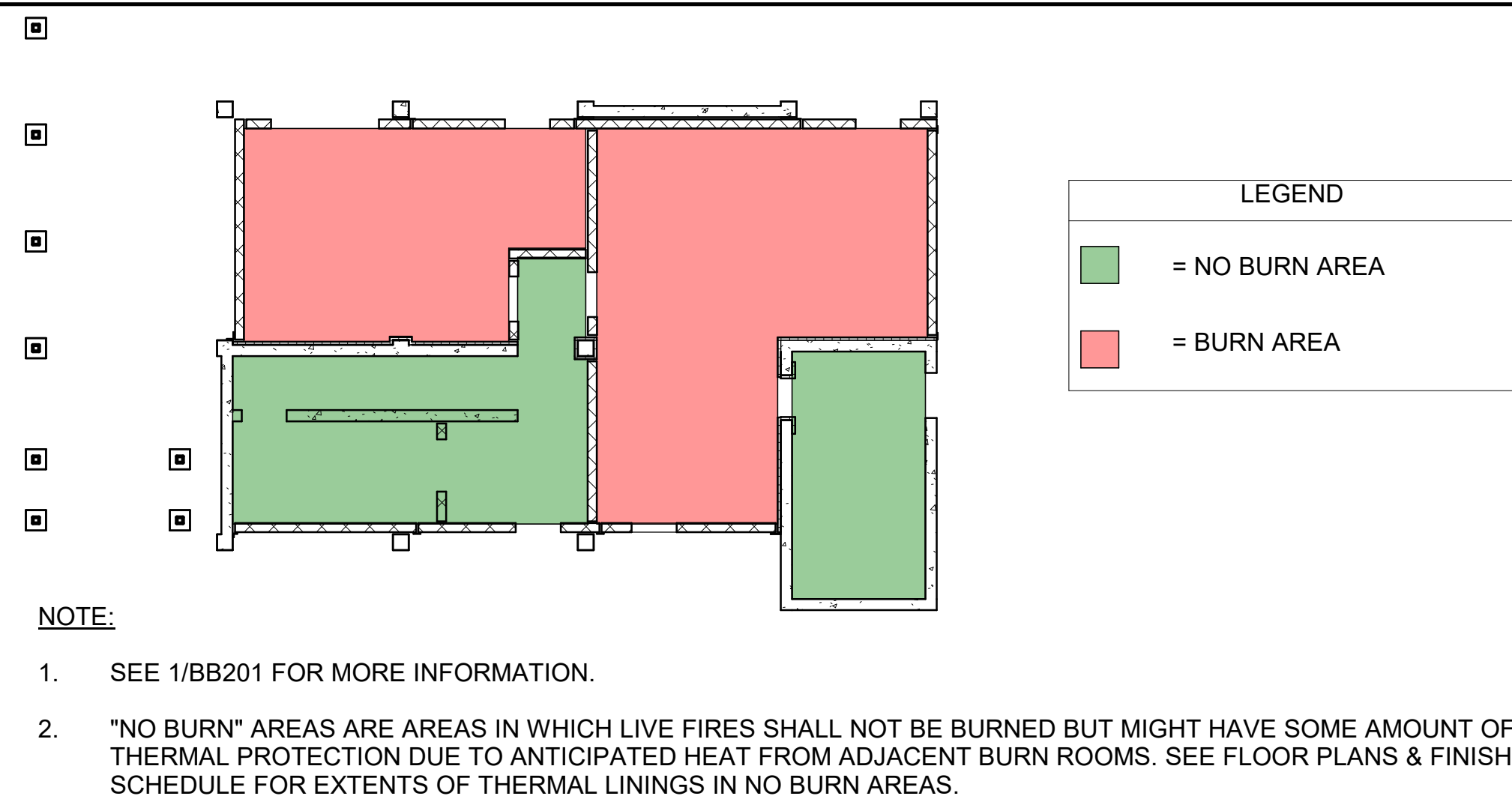
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1	ADDENDUM 02	05/01/25

JOB NUMBER  
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SHEET

**TELECOMMUNICATION SYSTEMS**

**E511**





**NOTE:**

- SEE 1/BB201 FOR MORE INFORMATION.
- "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

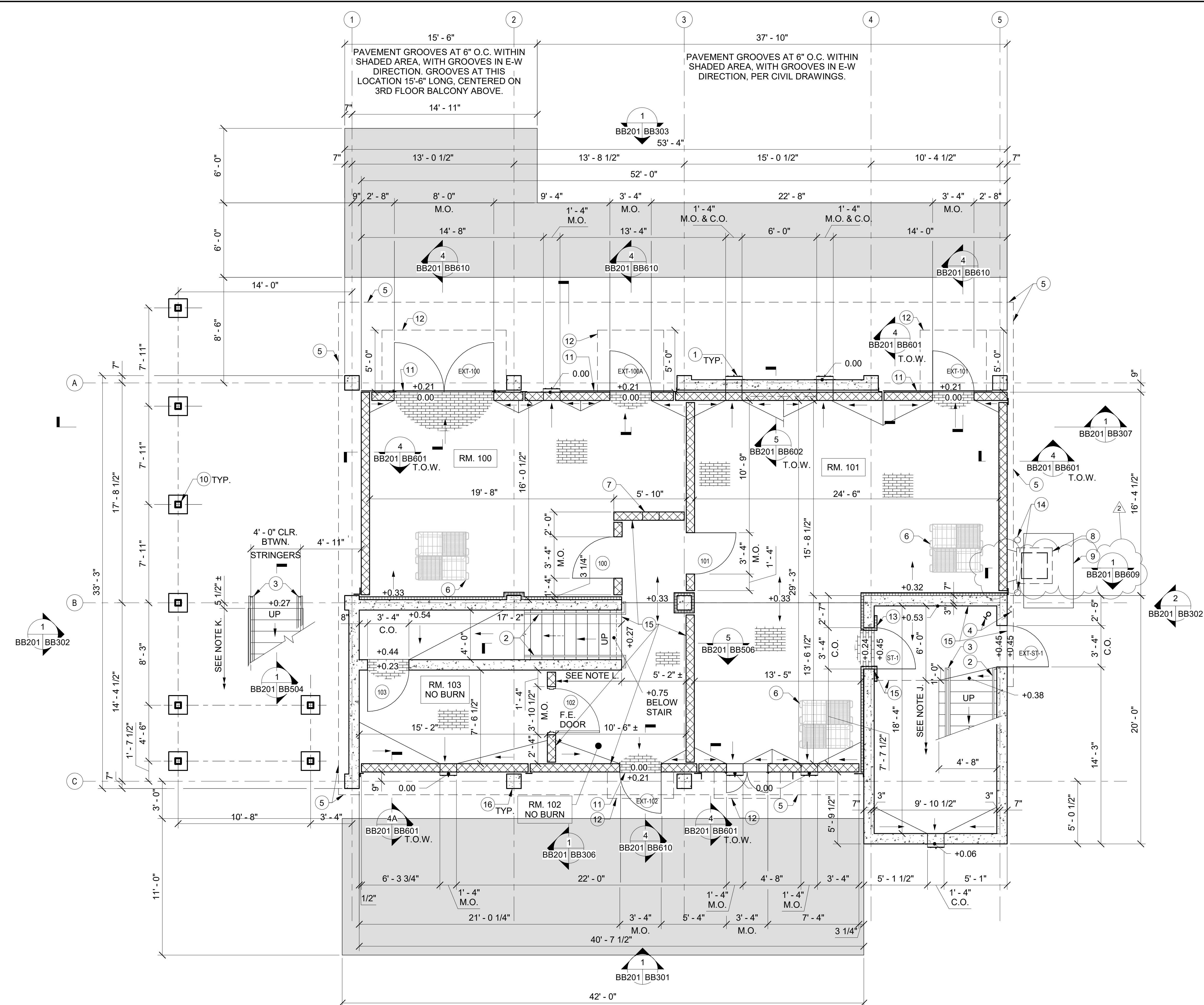
**FIRST FLOOR KEY PLAN**  
SCALE 3/32" = 1'-0"

FINISH SCHEDULE				
ROOM NOS.	CEILING FINISH	FLOOR FINISH	WALL FINISH	NOTES
100, 101	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1 & 2.
102	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTE 1.
103	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTE 1.
200, 205	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
201, 202, 202A, 203, 204	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
206	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTE 1 & 3.
2ND FLOOR BALCONY	CONCRETE & THERMAL LINING ROLLOVER TILES	CONCRETE	CMU & CONC.	SEE NOTES 1 & 2.
300	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
301, 302, 304	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
303	THERMAL LINING SYSTEM	FIRE BRICK	CMU, CONC., & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
INSET BALCONY	CONCRETE	CONCRETE	CMU & CONC.	SEE NOTE 1.
3RD FLOOR BALCONY	---	CONCRETE	CMU	SEE NOTE 1.
400, 406	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
401, 407	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
402, 403, 405	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
404	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
500, 501	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
502, 503, 505, 507	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
504	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
506	CONCRETE	FIRE BRICK	CMU	SEE NOTES 1 & 3.
600	THERMAL LINING SYSTEM	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
601	THERMAL LINING SYSTEM	FIRE BRICK	CMU	SEE NOTES 1 & 3.
602, 603	THERMAL LINING SYSTEM	FIRE BRICK	CMU & THERMAL LINING SYSTEM	SEE NOTES 1, 2, & 3.
604	CONCRETE	FIRE BRICK	CMU & CONC.	SEE NOTES 1 & 3.
INTERIOR STAIRS	CONCRETE & THERMAL LINING SYSTEM	CONCRETE	CONCRETE, EXCEPT CMU ABOVE 2ND FLOOR AT STRAIGHT RUN INTERIOR STAIR	SEE NOTES 1 & 4.

**FINISH SCHEDULE NOTES:**

- ALL EXPOSED CONCRETE AND CMU SURFACES ARE UNPAINTED.
- SEE PLANS FOR LOCATIONS AND EXTENTS OF THERMAL LINING SYSTEM ON CEILINGS AND WALLS.
- SEE SPECIFICATIONS FOR CONCRETE COATING/SEALER ON TOP OF CONCRETE SLAB (BELOW LOOSE LAID FIRE BRICK AT SECOND THRU SIXTH FLOORS ONLY, NOT AT FIRST FLOOR).
- PROVIDE THERMAL LINING SYSTEM AT CEILING AREA ABOVE MAIN LANDING IN STAIRWELL AT FIRST FLOOR ONLY AND AT ENTIRE CEILING OF STRAIGHT RUN STAIR.

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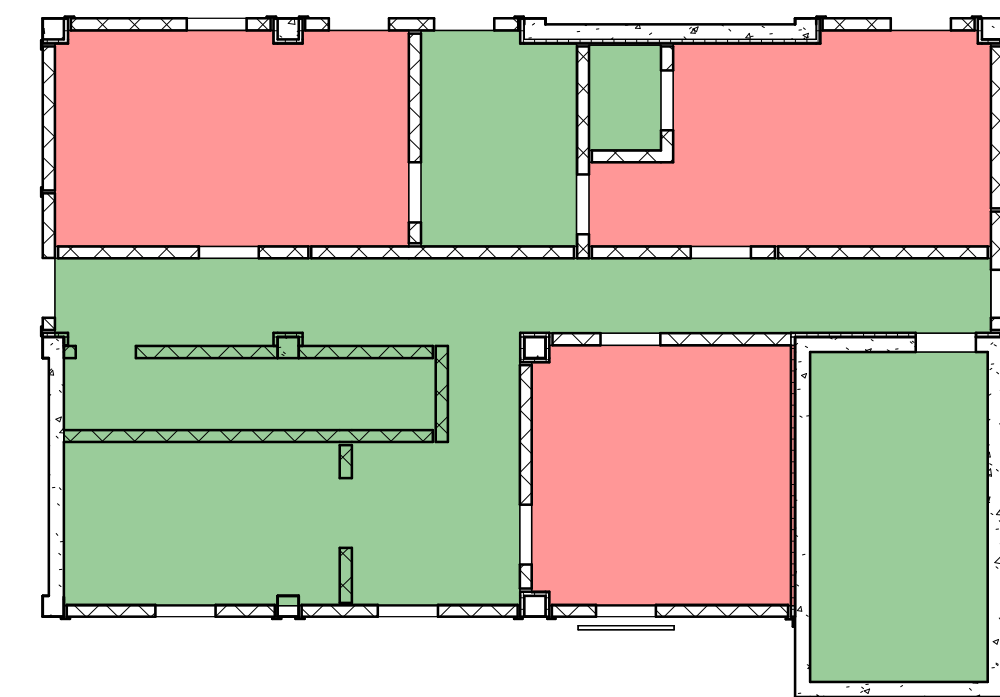
WAKE TECHNICAL COMMUNITY COLLEGE  
5345 ROLESVILLE RD, WENDELL, NC 27591  
NCCCS NO. 2303



NO.	REVISION	DATE
1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - SECOND FLOOR PLAN**

**BB202**

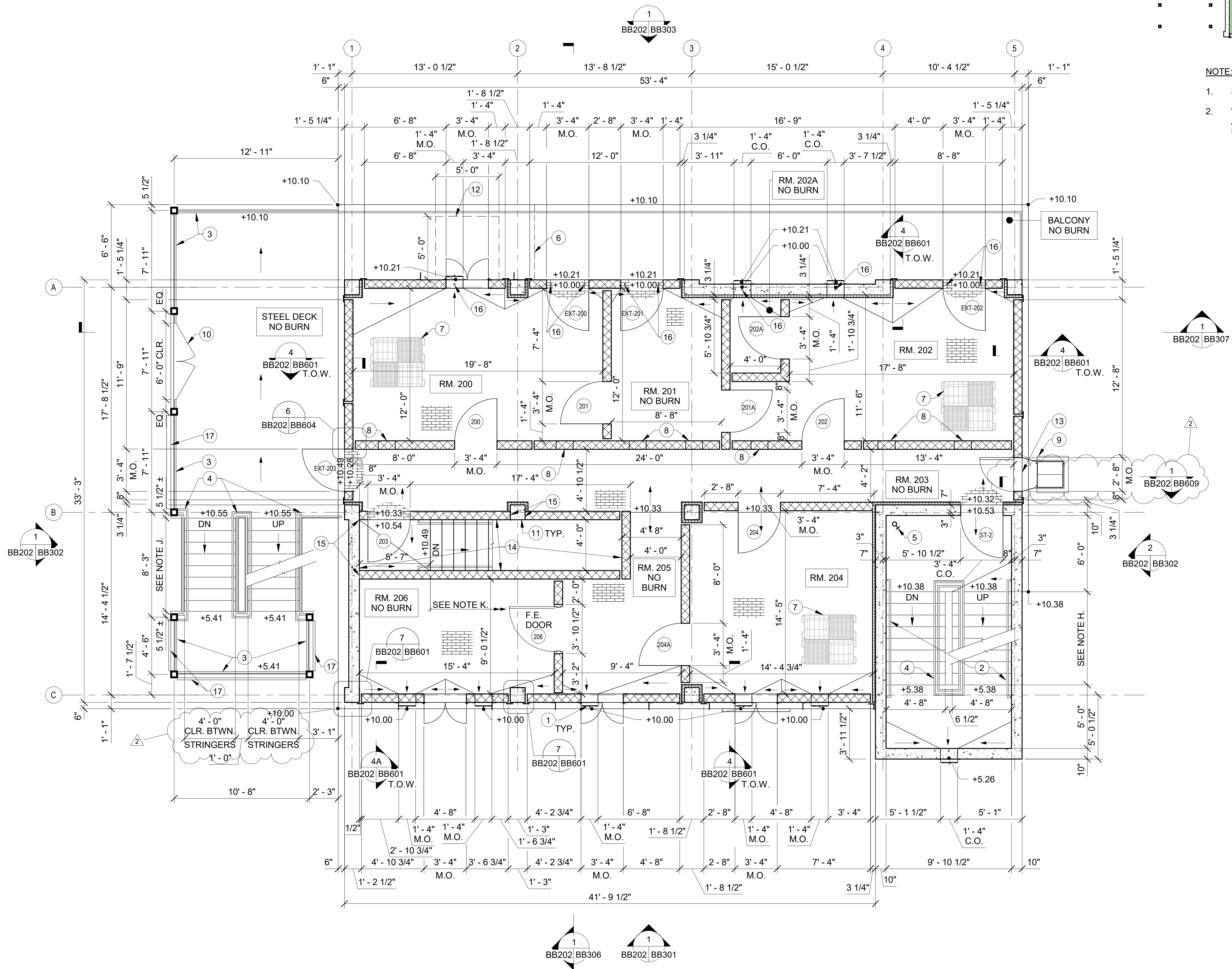


LEGEND	
<span style="color: green;">■</span>	= NO BURN AREA
<span style="color: red;">■</span>	= BURN AREA

**NOTE:**

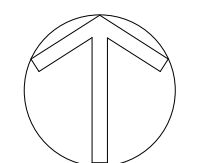
- SEE 1/BB202 FOR MORE INFORMATION.
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**2 SECOND FLOOR KEY PLAN**  
BB202 BB202 SCALE 3/32" = 1'-0"



**NOTES:**

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. xxx DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 37 LOCATIONS IN 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SECOND FLOOR DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SECOND FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 7/8" ± = 5'-1 3/4" ± FROM SECOND FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SECOND FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 17T @ 11" = 15' - 7", 1R @ 9 3/16" ±, 17R @ 6 11/16" ± = 10' - 2 5/8" ± PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ALLOWED ONLY IN ROOMS 200, 202 AND 204. NO BURNING IS ALLOWED IN ROOMS 201, 202A, 203, 205, 206, ON THE BALCONY, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.



**1 SECOND FLOOR PLAN**  
BB202 BB202 SCALE 1/4" = 1'-0"

**KEYED NOTES:**

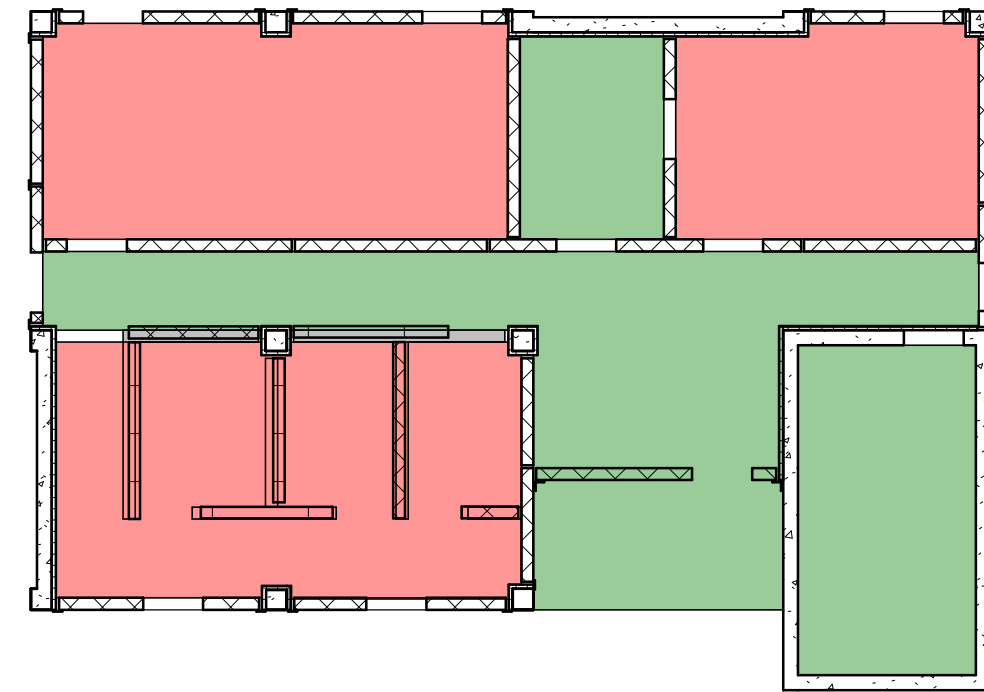
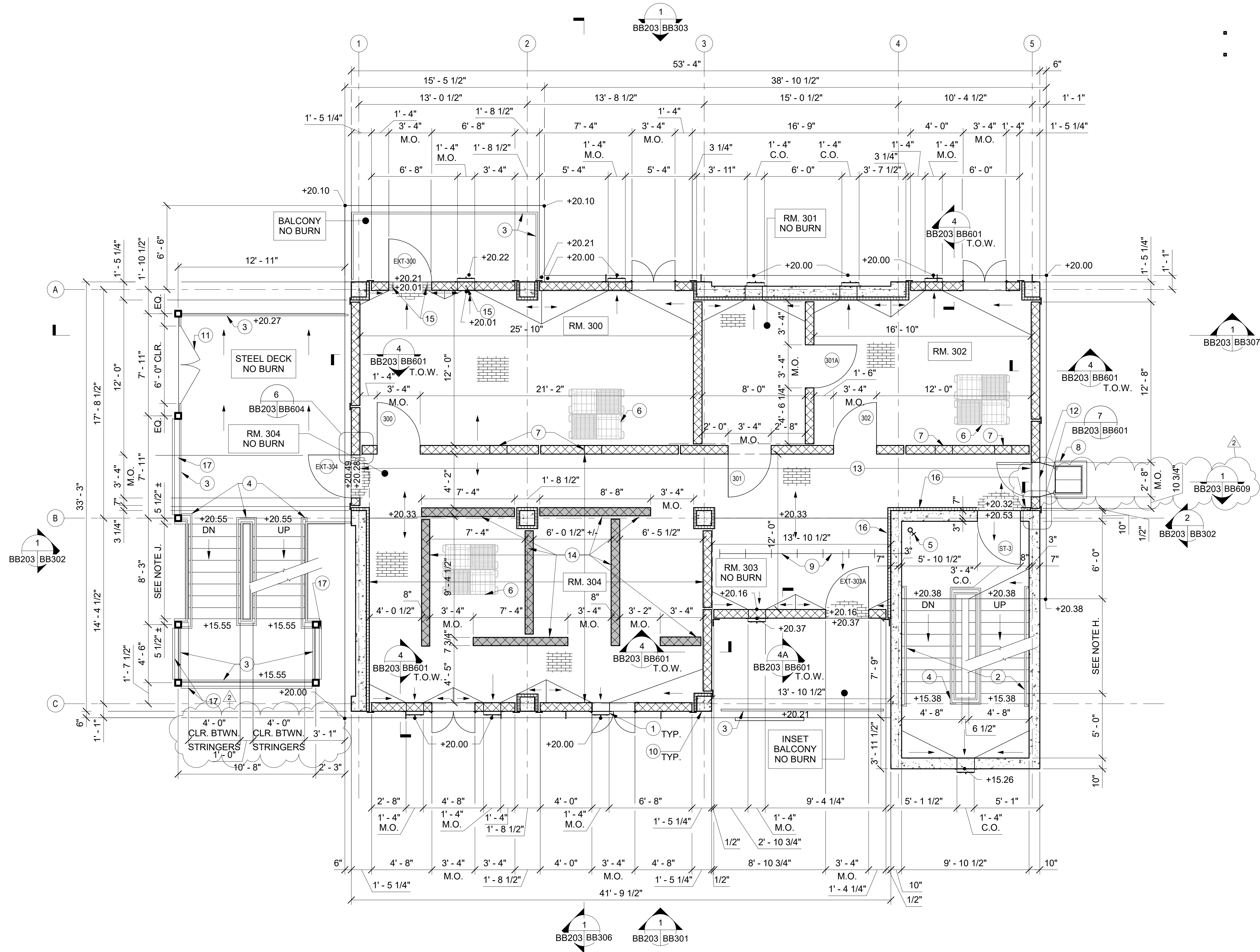
- SCUPPERS PER SHEET BB603 (9 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- EDGE OF THIRD FLOOR SLAB ABOVE.
- PROVIDE (3) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- THERMAL LINING ROLLOVER TILES AT UNDERSIDE OF SLAB ABOVE FOR EXTENTS SHOWN ON PLAN.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- CONNECT END OF CMU WALL TO CONC. COLUMN W/ DOVETAIL ANCHORS PER GEN. NOTE O.15 AND MORTAR TIGHT.

**KEYED NOTES:**

- PROVIDE WEEP PIPES BELOW FIRE BRICK AT NOTED DOOR AND SCUPPER OPENINGS PER DETAIL 8/BB603. PROVIDE (2) WEEP PIPES AT DOORWAYS WITH CENTER AT 6 3/4" INSIDE EACH DOOR JAMB AND PROVIDE (1) WEEP PIPE AT CENTER OF EACH SCUPPER OPENING. ALL WEEPS SHALL BE LOCATED AT EDGE OF SLAB STEP.
- CROSS BRACING PER DETAIL 1/BB505.
- SEE 1/BB601 & 2/BB602 FOR TOP-OF-WALL JOINT & BRACING DETAILS FOR INTERIOR WALLS.

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LEGEND	
<span style="color: green;">■</span>	= NO BURN AREA
<span style="color: red;">■</span>	= BURN AREA

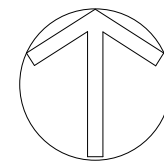
- NOTE:
- SEE 1/BB203 FOR MORE INFORMATION.
  - "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

2 THIRD FLOOR KEY PLAN  
BB203 BB203 SCALE 3/32" = 1'-0"

NOTES:

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 37 LOCATIONS IN 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.

- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM THIRD FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ALLOWED ONLY IN ROOMS 300, 302, AND 304. NO BURNING IS ALLOWED IN ROOMS 301, 303, ON THE BALCONY, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.



1 THIRD FLOOR PLAN  
BB203 BB203 SCALE 1/4" = 1'-0"

KEYED NOTES:

- SCUPPERS PER SHEET BB603 (10 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- PROVIDE (3) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- SPRINKLER LAB PER P DRAWINGS.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- CUBICLE WALLS PER DETAIL 6/BB601.
- PROVIDE WEEP PIPES BELOW FIRE BRICK AT NOTED DOOR AND SCUPPER OPENINGS PER DETAIL 8/BB603. PROVIDE (2) WEEP PIPES AT DOORWAYS WITH CENTER AT 6 3/4" INSIDE EACH DOOR JAMB AND PROVIDE (1) WEEP PIPE AT CENTER OF EACH SCUPPER OPENING. ALL WEEPS SHALL BE LOCATED AT EDGE OF SLAB STEP.
- PROVIDE THERMAL LINING AT TOP 2'-0" OF WALL AT NOTED LOCATIONS.
- CROSS BRACING PER DETAIL 1/BB505.

18 SEE 1/BB601 & 2/BB602 FOR TOP-OF-WALL JOINT & BRACING DETAILS FOR INTERIOR WALLS.

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NO.	REVISION	DATE
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**03/14/25**  
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**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - THIRD FLOOR PLAN**

BB203





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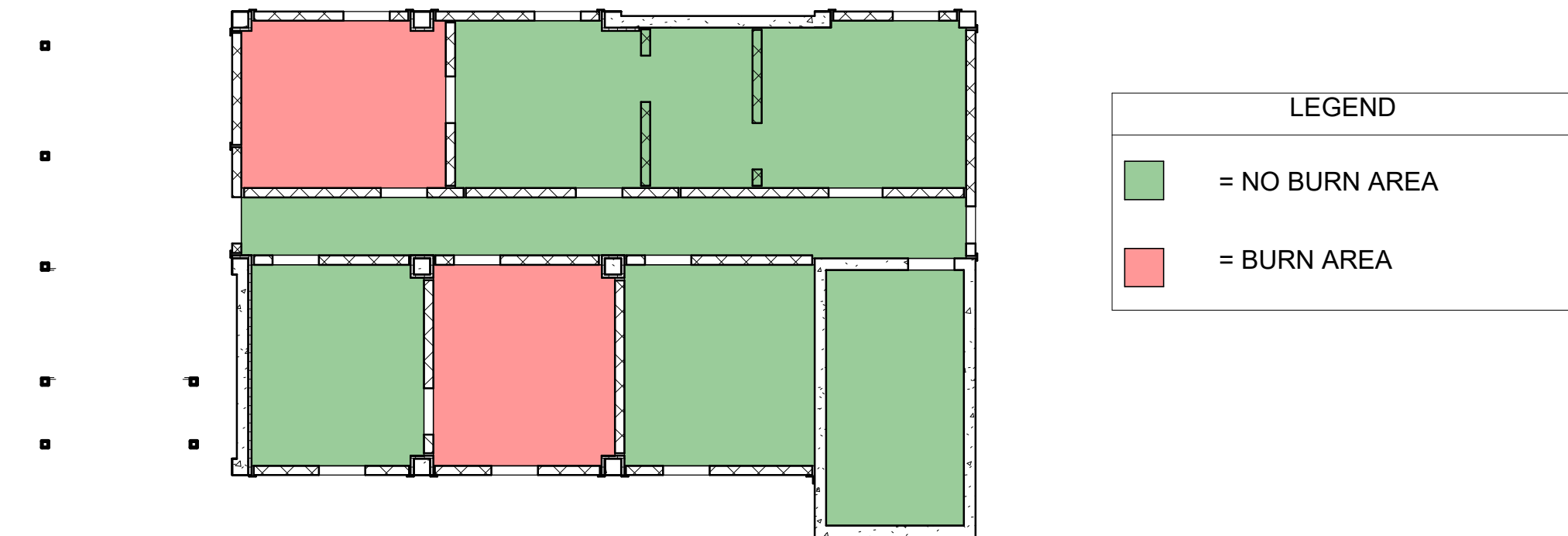
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**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING -  
FOURTH FLOOR  
PLAN**

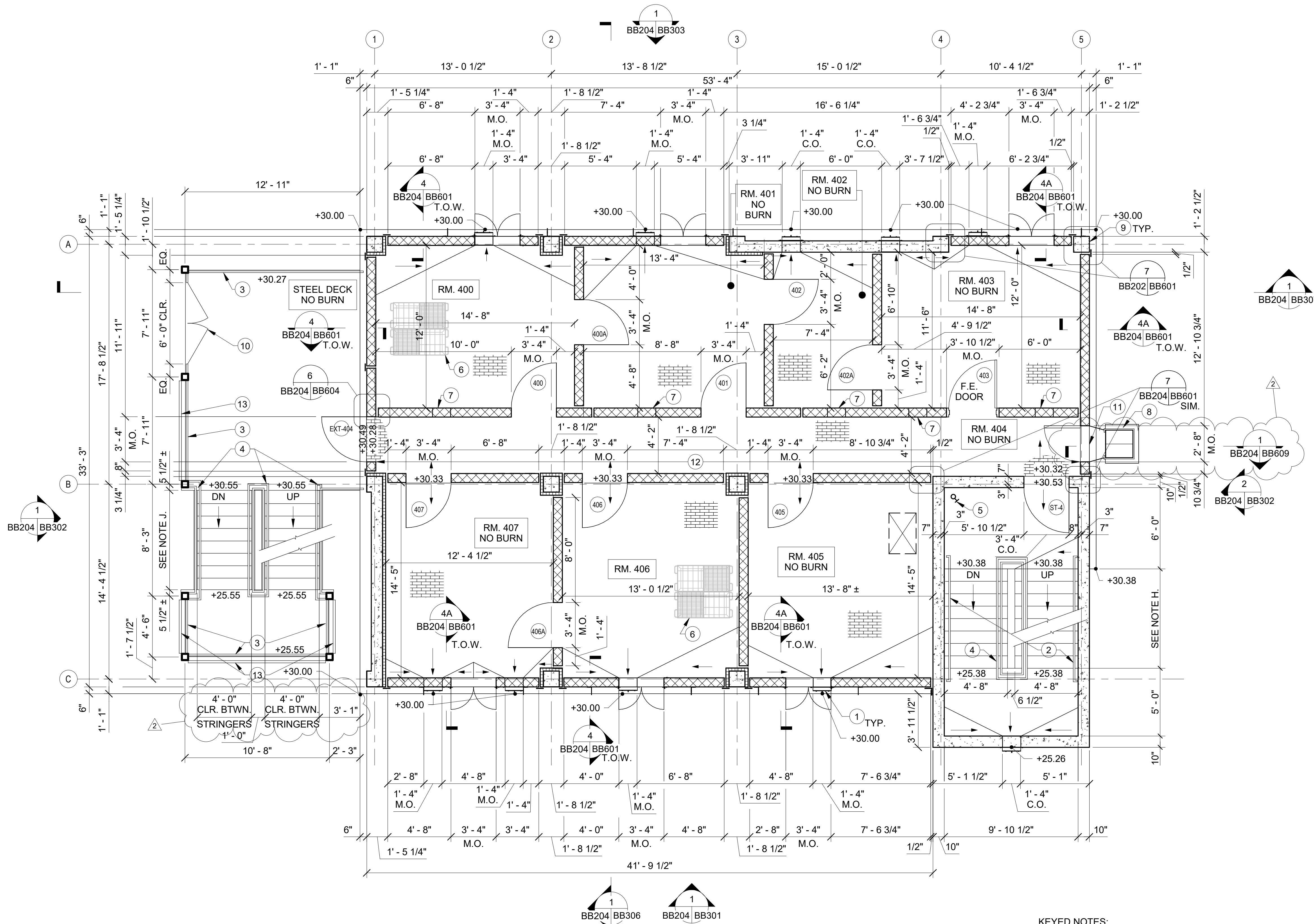
**BB204**



**NOTE:**

- SEE 1/BB204 FOR MORE INFORMATION.
- "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

**FOURTH FLOOR KEY PLAN**  
BB204 BB204 SCALE 3/32" = 1'-0"



**NOTES:**

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS, AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 37 LOCATIONS IN INTERIOR 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.

- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FOURTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ALLOWED ONLY IN ROOMS 400 AND 406. NO BURNING IS ALLOWED IN ROOMS 401, 402, 403, 404, 405, 407, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.

**FOURTH FLOOR PLAN**  
BB204 BB204 SCALE 1/4" = 1'-0"

**KEYED NOTES:**

- SCUPPERS PER SHEET BB603 (10 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- PROVIDE (2) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- CROSS BRACING PER DETAIL 1/BB505.
- SEE 1/BB601 & 2/BB602 FOR TOP-OF-WALL JOINT & BRACING DETAILS FOR INTERIOR WALLS.

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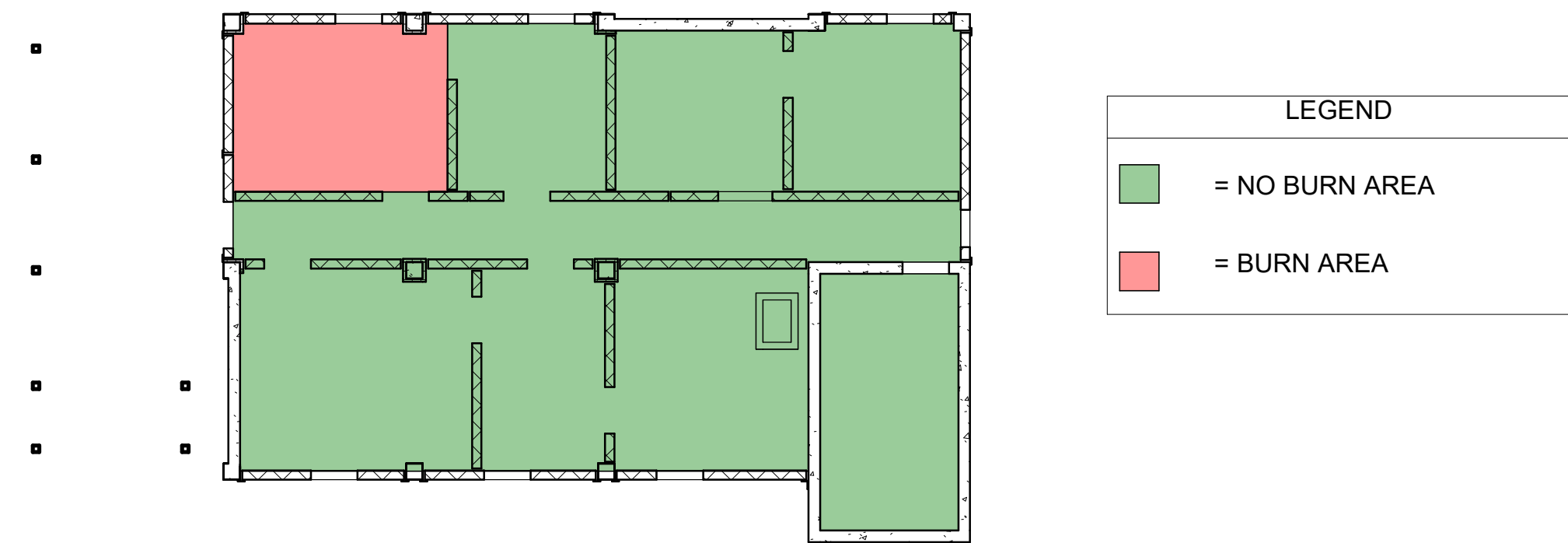
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**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - FIFTH FLOOR PLAN**

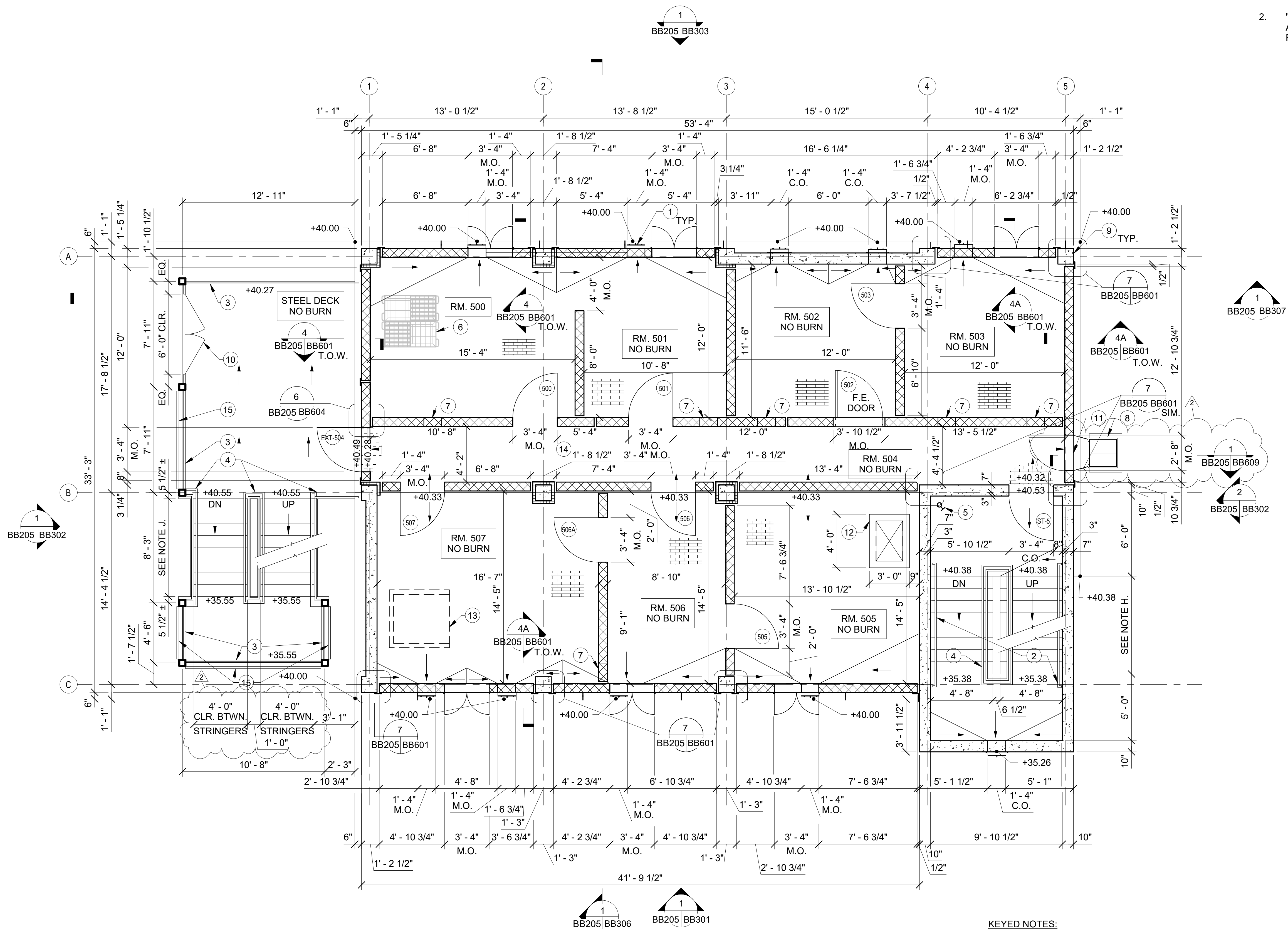
**BB205**



**NOTE:**

- SEE 1/BB205 FOR MORE INFORMATION.
- "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

**2 FIFTH FLOOR KEY PLAN**  
BB205 BB205 SCALE 3/32" = 1'-0"



**NOTES:**

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS. AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS.  
XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 36 LOCATIONS IN INTERIOR 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW. 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM FIFTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ONLY ALLOWED IN ROOM 500. NO BURNING IS ALLOWED IN ROOMS 501, 502, 503, 504, 505, 506, 507, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.

**1 FIFTH FLOOR PLAN**  
BB205 BB205 SCALE 1/4" = 1'-0"

**KEYED NOTES:**

- SCUPPERS PER SHEET BB603 (10 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- PROVIDE (1) TOTAL BURN RACK IN BURN ROOM PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- ATTIC ACCESS HATCH PER DETAIL 7/BB501.
- SHEET ROCK PULLDOWN PROP PER DETAIL 5/BB610.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- CROSS BRACING PER DETAIL 1/BB505.
- SEE 1/BB601 & 2/BB602 FOR TOP-OF-WALL JOINT & BRACING DETAILS FOR INTERIOR WALLS.

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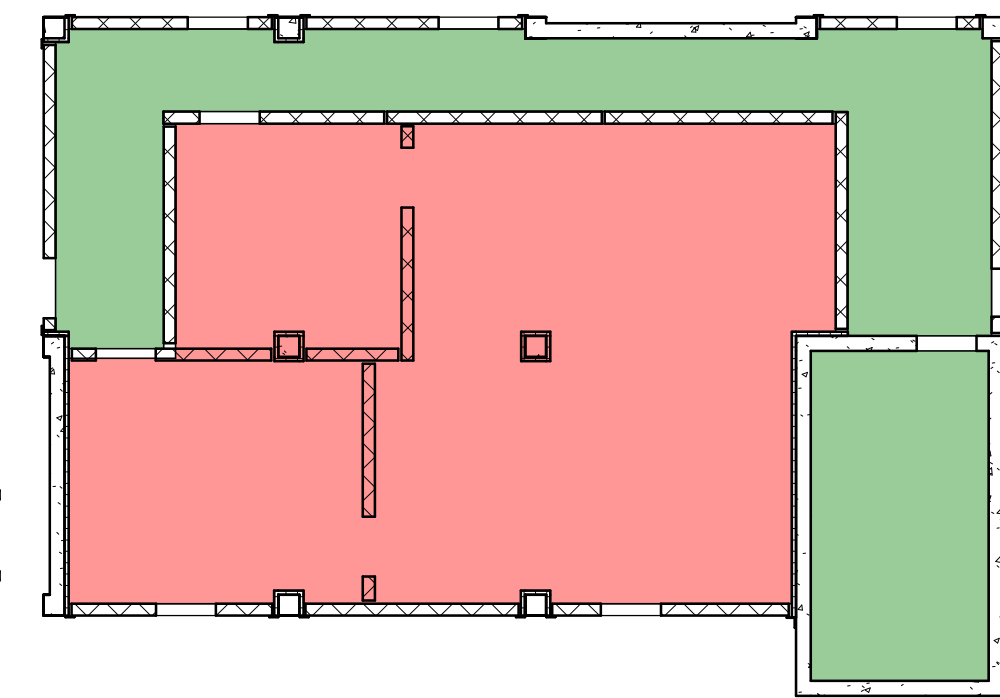
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SHEET  
**BURN BUILDING - SIXTH FLOOR PLAN**

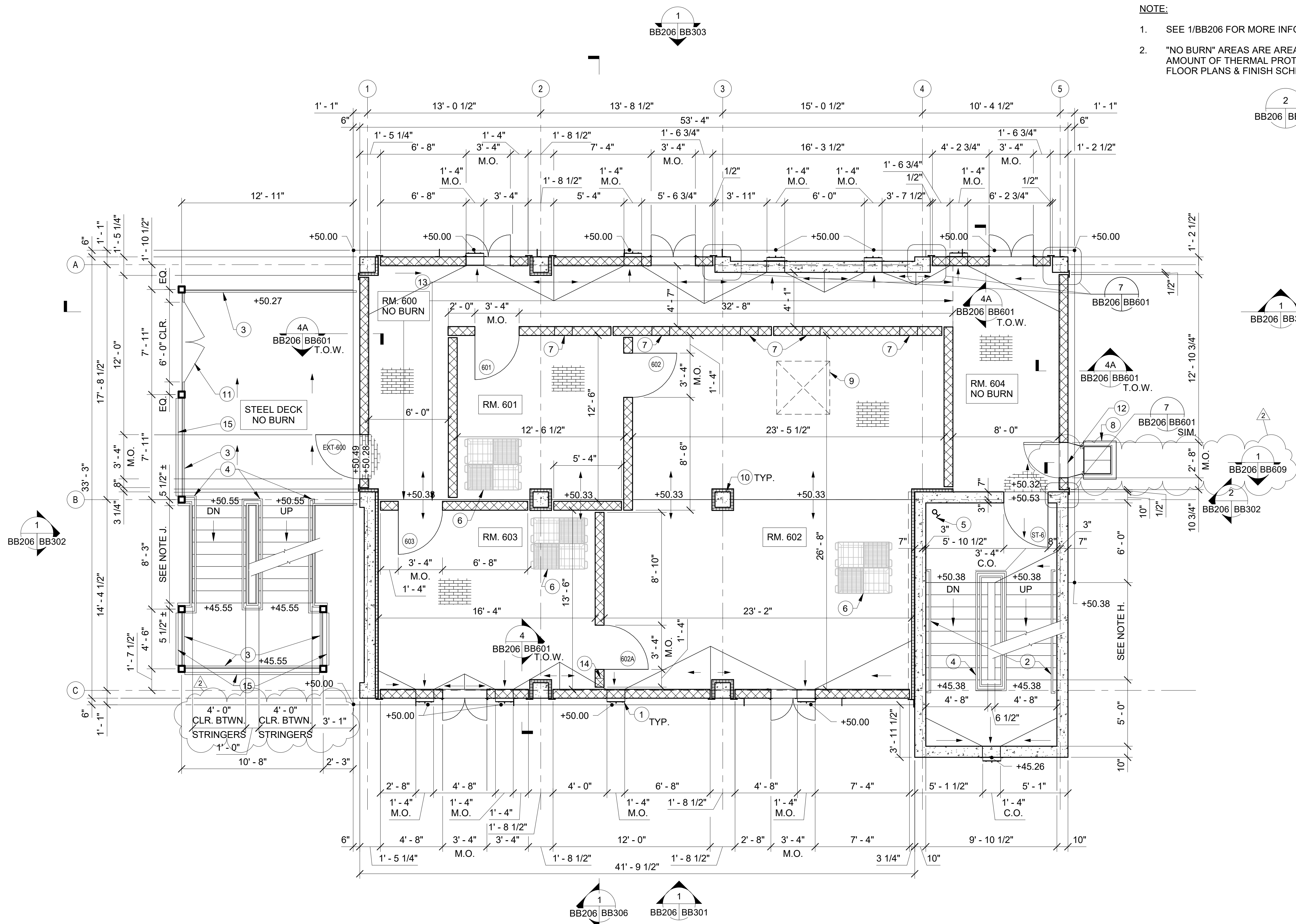
**BB206**



**NOTE:**

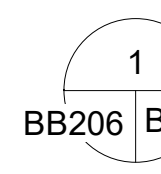
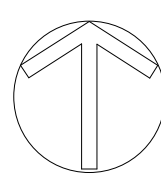
- SEE 1/BB206 FOR MORE INFORMATION.
- "NO BURN" AREAS ARE AREAS IN WHICH LIVE FIRES SHALL NOT BE BURNED BUT MIGHT HAVE SOME AMOUNT OF THERMAL PROTECTION DUE TO ANTICIPATED HEAT FROM ADJACENT BURN ROOMS. SEE FLOOR PLANS & FINISH SCHEDULE FOR EXTENTS OF THERMAL LININGS IN NO BURN AREAS.

**SIXTH FLOOR KEY PLAN**  
BB206 BB206 SCALE 3/32" = 1'-0"



**NOTES:**

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- AT DOORWAYS WITHOUT DOORS, PROVIDE FULL-HEIGHT OPENING WITH NO LINTEL AND PROVIDE BULLNOSED CORNERS AT BOTH JAMBS. ALSO PROVIDE BULLNOSED CORNERS AT JAMBS OF ALL DOOR AND WINDOW OPENINGS. AT ENDS OF WALLS THAT DO NOT INTERSECT OTHER WALLS, AND AT CORNERS OF INTERIOR WALLS. CHAMFER CORNERS AT ENDS OF CONCRETE WALLS, AND BOTH WALL FACES AROUND PERIMETER OF ALL DOOR & WINDOW OPENINGS IN CONC. WALLS, EXCEPT WHERE THERE ARE THERMAL LININGS AT THAT WALL FACE.
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- AT 29 LOCATIONS IN INTERIOR 8" NON-BEARING CMU WALLS, PROVIDE 1/2" OPEN VERTICAL WALL JOINT AT NEAREST HEAD JOINT LOCATIONS PER DETAIL 2/BB601 U.O.N.
- SEE GENERAL NOTES ON SHEET BB001 AND DETAILS ON SHEET BB602 FOR THERMAL LINING SYSTEM DETAILS.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SIXTH FLOOR DOWN TO INTERMEDIATE LANDING BELOW, 8T @ 11" = 7'-4", 9R @ 6 9/16" ± = 4'-10 13/16" ± FROM SIXTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 11/16" ± = 5'-0" FROM SIXTH FLOOR LANDING DOWN TO INTERMEDIATE LANDING BELOW, 8T @ 11" = 7'-4", 9R @ 6 9/16" ± = 4'-10 13/16" ± FROM SIXTH FLOOR LANDING UP TO INTERMEDIATE LANDING ABOVE. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- LIVE FIRE TRAINING IS ONLY ALLOWED IN ROOMS 601, 602, AND 603. NO BURNING IS ALLOWED IN ROOM 600, ON THE INTERIOR STAIRS, OR ON THE EXTERIOR STAIRS.
- SEE 1/BB601 AND 2, 2A, 2B/BB602 FOR TOP OF WALL CONDITIONS AT INTERIOR WALLS.



**SIXTH FLOOR PLAN**

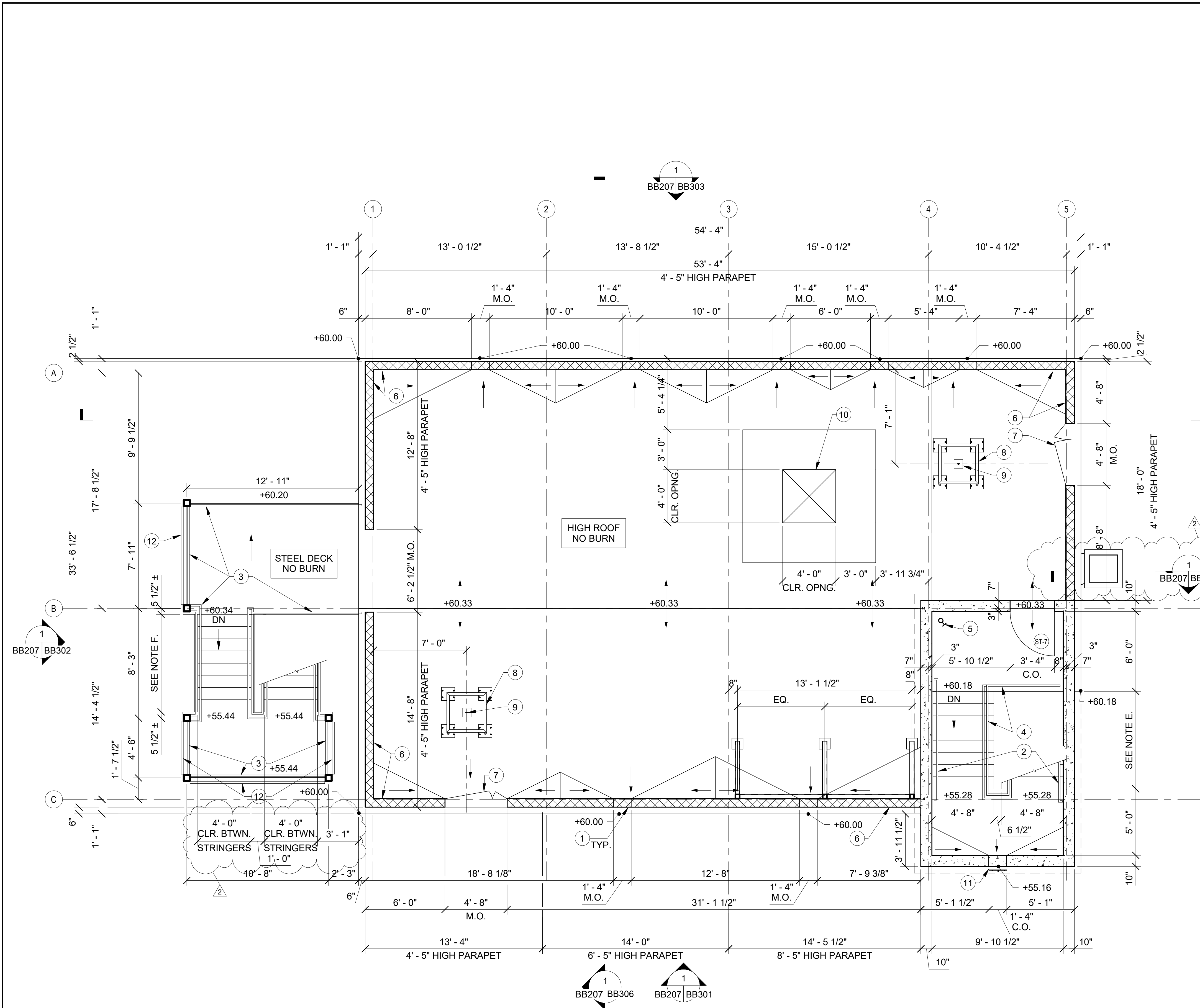
BB206 BB206 SCALE 1/4" = 1'-0"

**KEYED NOTES:**

- SCUPPERS PER SHEET BB603 (10 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- PROVIDE (3) TOTAL BURN RACKS IN BURN ROOMS PER DETAIL 3/BB610.
- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE PER DETAIL 6/BB603.
- DEBRIS CHUTE PER SHEET BB609.
- VENTILATION OPENING ABOVE.
- CONCRETE COLUMN PER DETAIL 1/BB501 (11 THUS).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 2/BB608.
- SINGLE-SWING WINDOW SHUTTER PER DETAIL 8/BB606.
- THERMAL LINING AT CEILING FOR EXTENTS SHOWN ON PLAN.
- PROVIDE 8"x8" OPENING AT BASE OF INTERIOR WALL FOR DRAINAGE SIM. TO DETAIL 6/BB603 BUT WITHOUT LINTEL PLATE
- CROSS BRACING PER DETAIL 1/BB505.
- SEE 1/BB601 & 2/BB602 FOR TOP-OF-WALL JOINT & BRACING DETAILS FOR INTERIOR WALLS.

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NOTES:

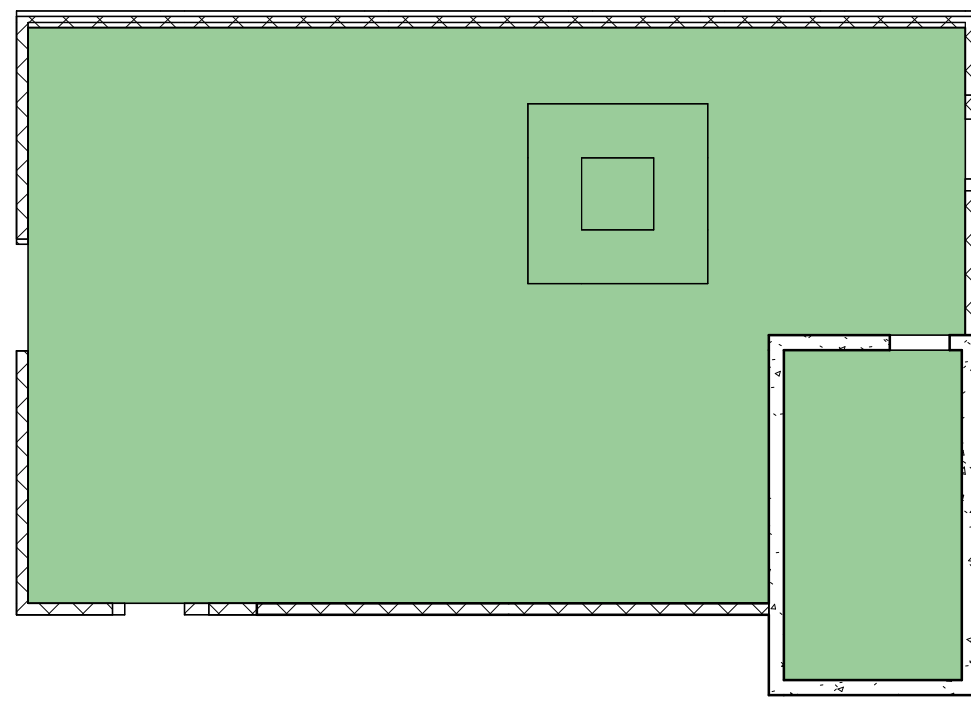
- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE AND TOP OF EXTERIOR STEEL DECK IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB AND TOP OF EXTERIOR STEEL GRATING ARE INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- ALL MASONRY WALLS SHALL BE 8" THICK (NOMINAL). ALL CONCRETE WALLS SHALL BE 10" THICK (ACTUAL).
- SEE SHEET BB604 & BB605 FOR DOOR DETAILS & SHEET BB606 FOR WINDOW DETAILS. XXX DENOTES DOOR MARK ON PLAN. SEE DOOR SCHEDULE ON SHEET BB605 FOR DOORS.
- 8T @ 11" = 7'-4", 9R @ 6 17/32" ± = 4'-10 3/4" ± FROM HIGH ROOF DOWN TO INTERMEDIATE LANDING BELOW. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- 8T @ 11" = 7'-4", 9R @ 6 9/16" ± = 4'-10 3/4" ± FROM HIGH ROOF LANDING DOWN TO INTERMEDIATE LANDING BELOW. PROVIDE EQUAL RISER HEIGHTS WITHIN EACH FLIGHT.
- PROVIDE "CRICKETS" IN TOP SURFACE OF SLAB, INTEGRAL WITH SLAB (NOT A TOPPING) WITH A NON-SLOPING RIDGE TO ACHIEVE GRADUAL, POSITIVE DRAINAGE TOWARDS SCUPPERS AND DOORS AT LOCATIONS SHOWN IN PLANS AS: MAXIMUM SLOPE OF CRICKETS BETWEEN NON-SLOPING RIDGE AND SCUPPER OR DOOR = 1/4 INCH PER FOOT, EXCEPT 1/8" PER FOOT AT STAIRWELL.
- NO BURNING IS ALLOWED ON THE HIGH ROOF.

KEYED NOTES:

- PROVIDE 16" (W) x 8" (H) OPENING AT BASE OF PARAPET FOR DRAINAGE PER DETAIL 6/BB603 (7 THUS).
- HANDRAIL PER DETAIL 1/BB607.
- FIXED GUARDRAIL PER DETAIL 2/BB607.
- FIXED GUARDRAIL W/HANDRAIL PER DETAILS 1/BB504 AND 4/BB607.
- DRY STANDPIPE PER P DRAWINGS.
- CMU PARAPET PER 3/BB601 (4'-5" AND 6'-5" HIGH PARAPETS) OR 3/BB602 (8' - 5" HIGH PARAPET ONLY).
- DOUBLE-SWINGING GUARDRAIL GATE PER DETAIL 1/BB608.
- ROPE FRAME PER DETAIL 1/BB610 (2 THUS).
- ROPE ANCHOR PER DETAIL 2/BB610 (2 THUS).
- VENTILATION OPENING WITH 3' - 0" CURB PER DETAIL 6/BB610.
- SCUPPER PER SHEET BB603 (1 THUS).
- CROSS BRACING PER DETAIL 1/BB505.

1  
BB207 | BB207 SCALE 1/4" = 1'-0"

**HIGH ROOF PLAN**

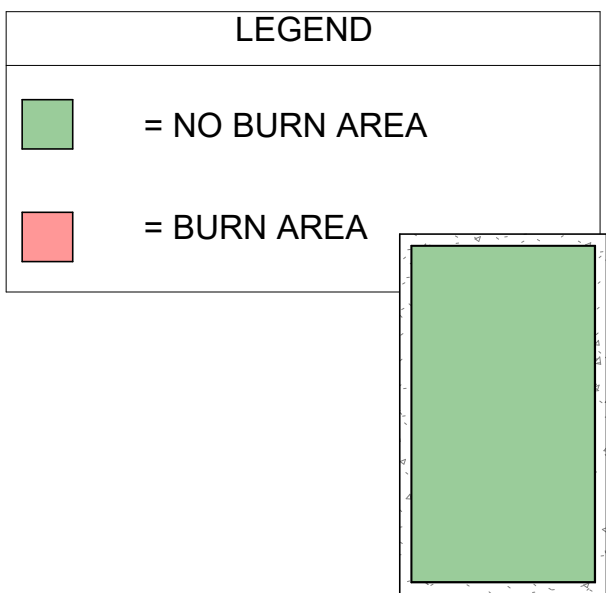


NOTE:

- SEE 1/BB207 FOR MORE INFORMATION.

3  
BB207 | BB207 SCALE 3/32" = 1'-0"

**HIGH ROOF KEY PLAN**

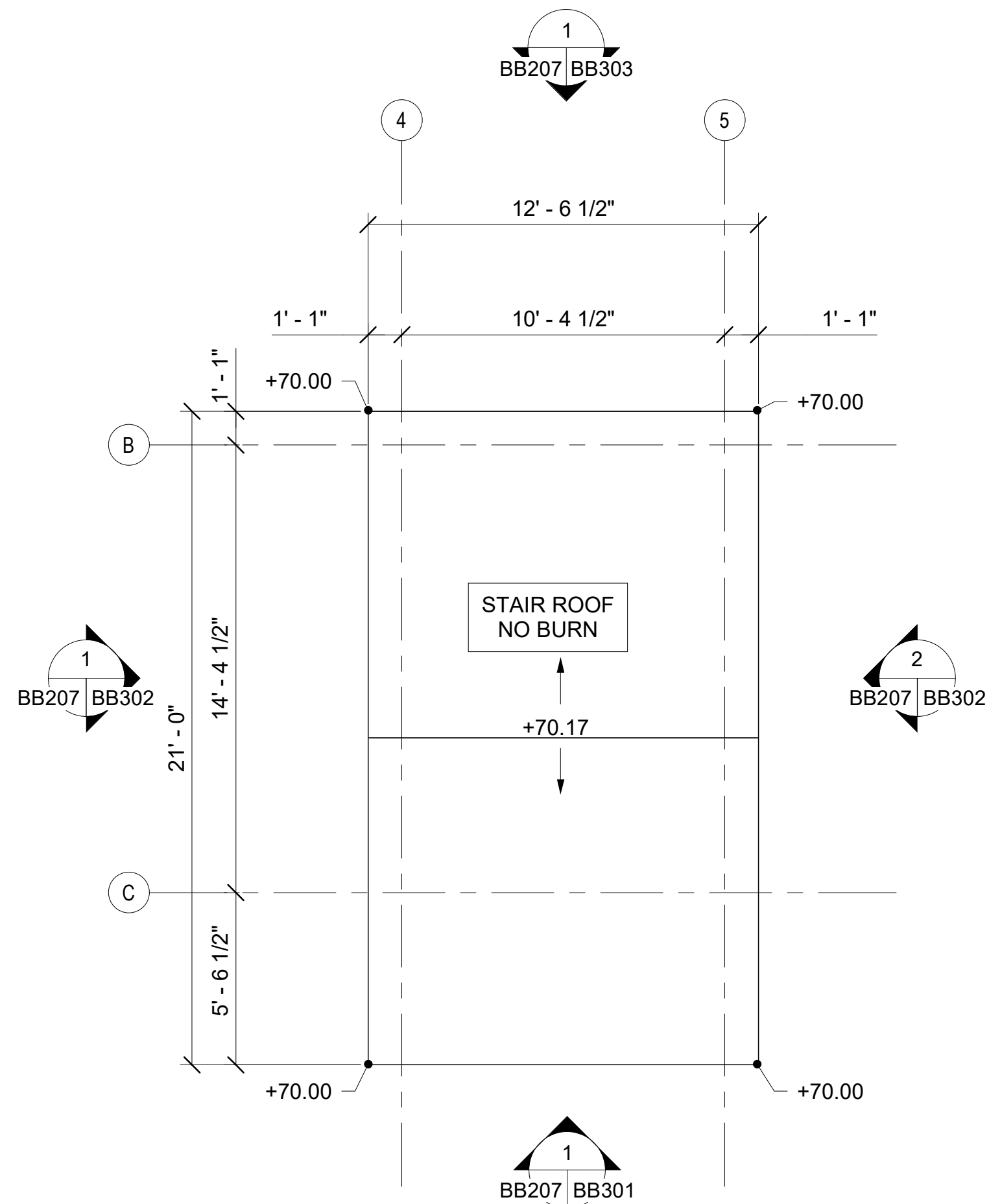


NOTE:

- SEE 2/BB207 FOR MORE INFORMATION.

4  
BB207 | BB207 SCALE 3/32" = 1'-0"

**STAIR ROOF KEY PLAN**



NOTES:

- DIRECTION OF DOWNWARD SLOPE OF TOP OF CONCRETE IS INDICATED WITH
- TOP OF FINISHED CONCRETE ELEVATION FOR THE BURN BUILDING SLAB IS INDICATED AS "X.XX" IN FEET ABOVE DATUM. SEE SHEET BB201 FOR DATUM.
- NO BURNING ALLOWED ON THE STAIR ROOF.

2  
BB205 | BB207 SCALE 1/4" = 1'-0"

**STAIR ROOF PLAN**

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2	Addendum #2	05/01/25





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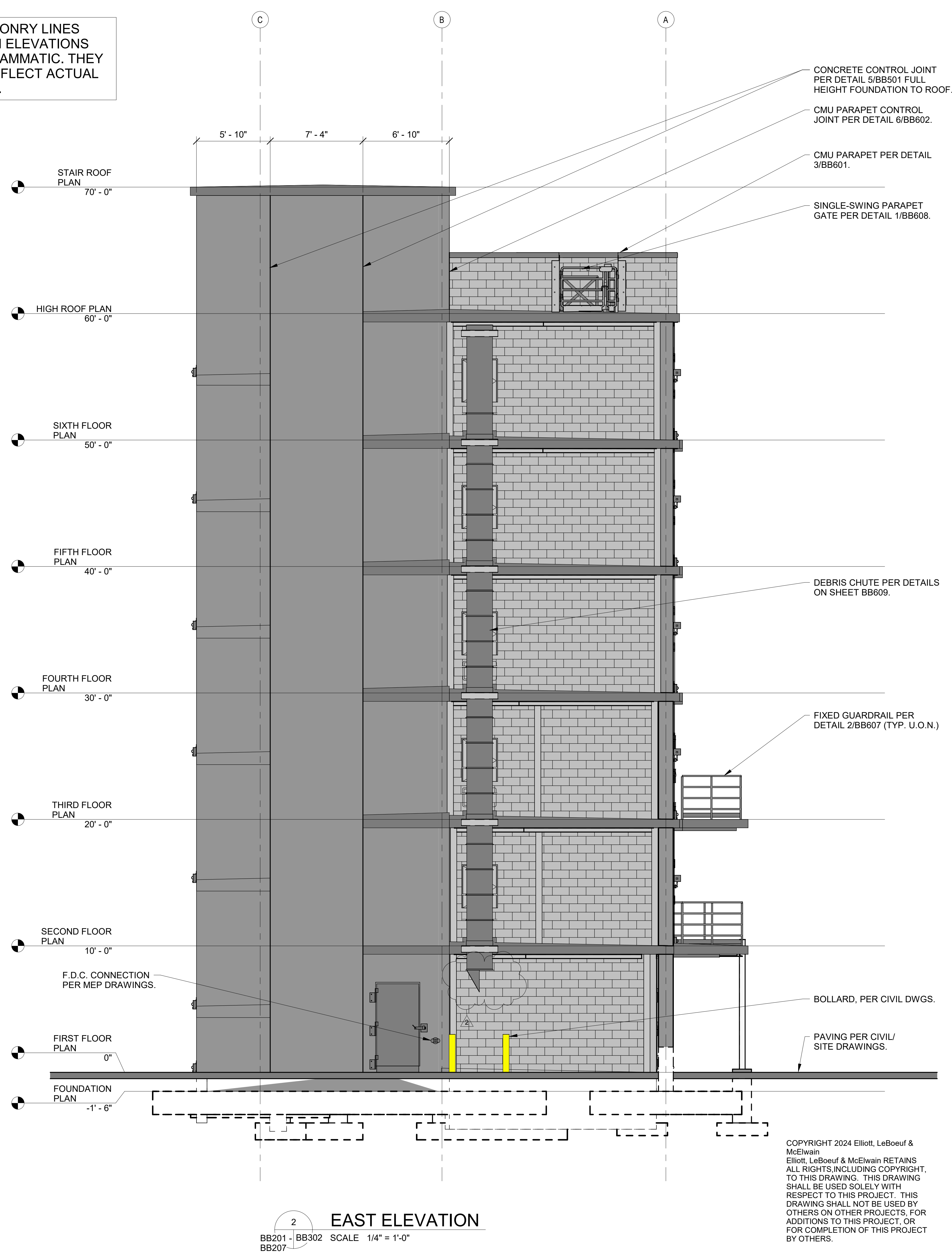
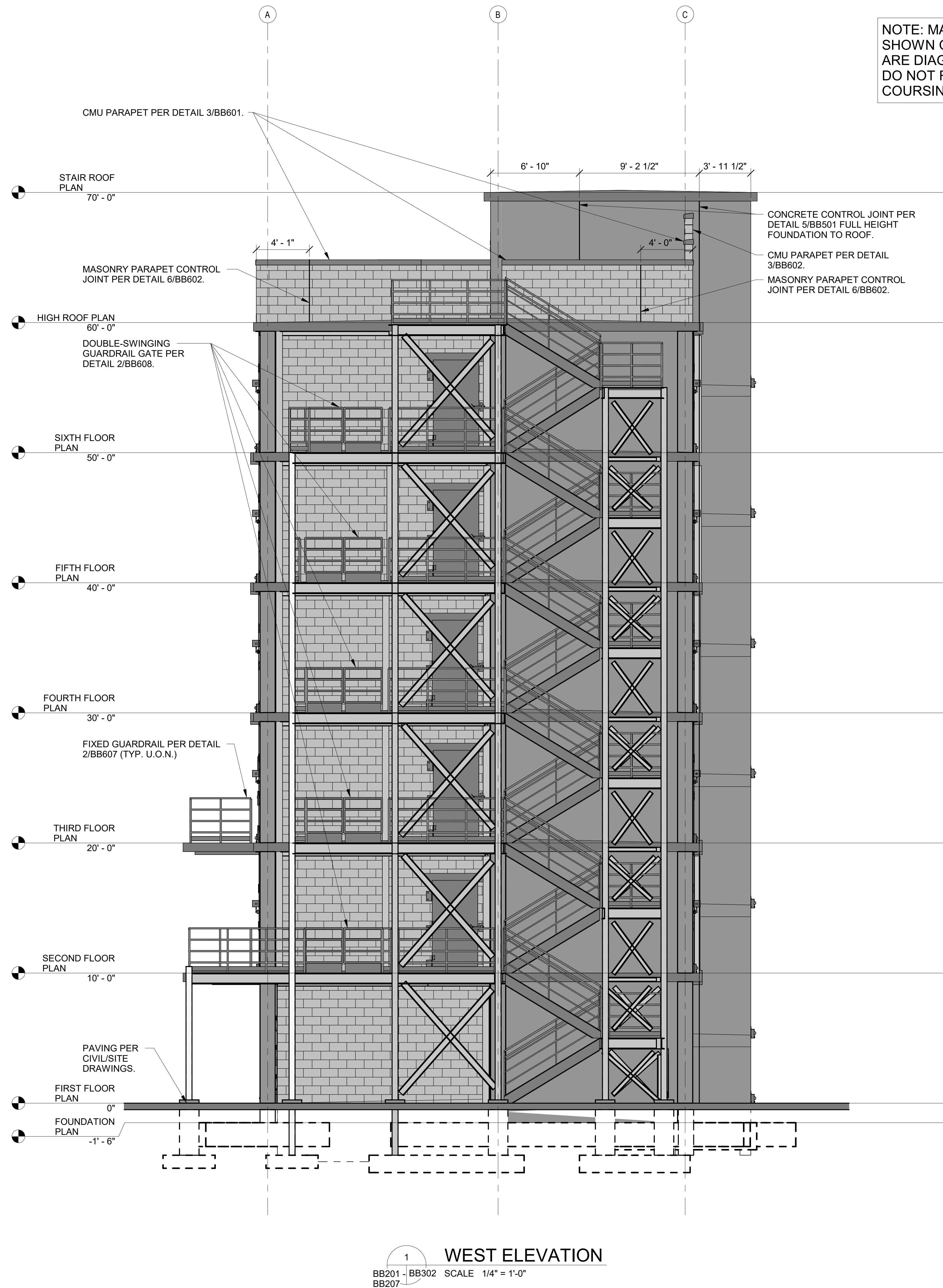
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NOTE: MASONRY LINES SHOWN ON ELEVATIONS ARE DIAGRAMMATIC. THEY DO NOT REFLECT ACTUAL COURSING.



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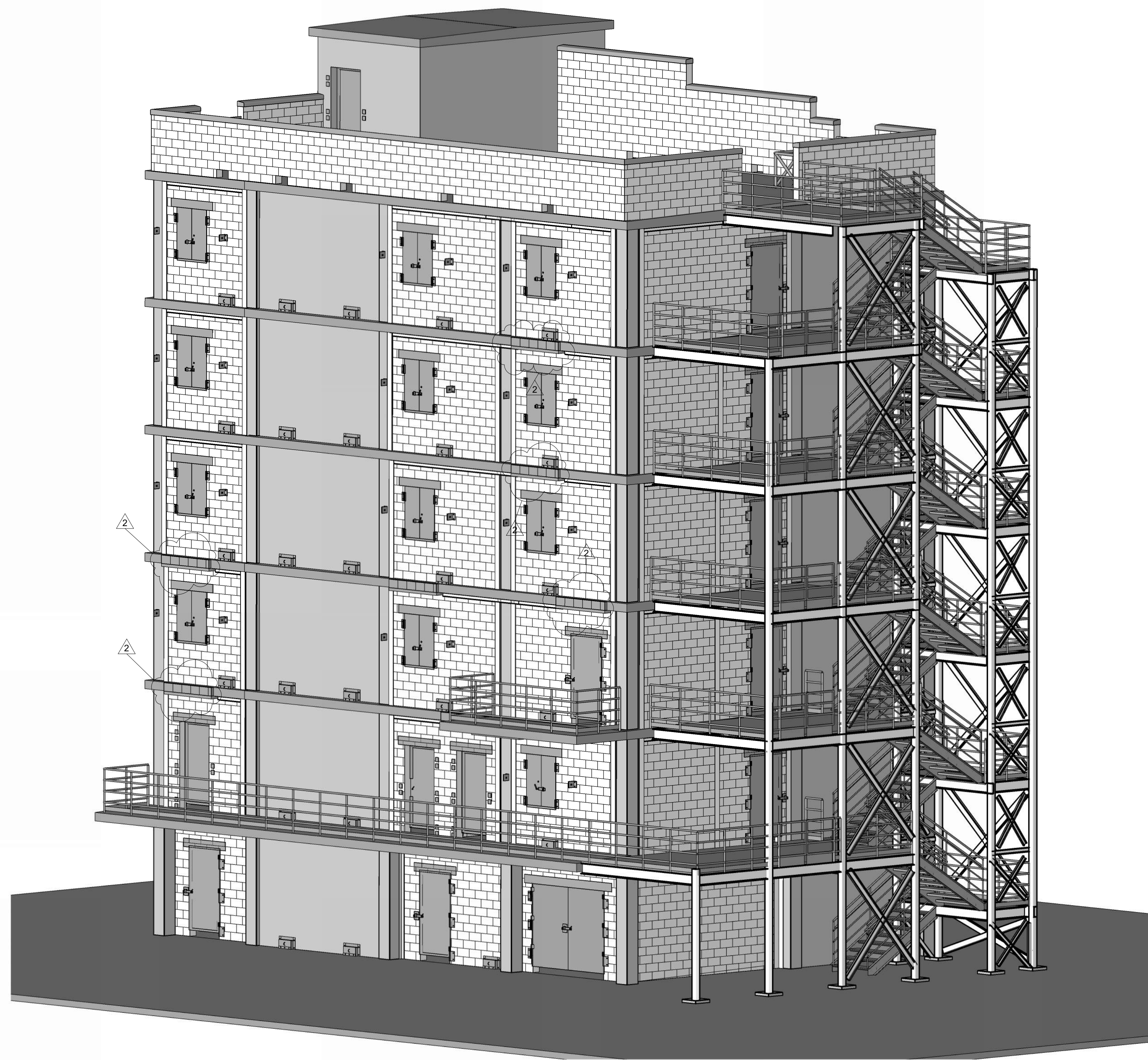
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**BURN BUILDING - NW & SW PERSPECTIVES**

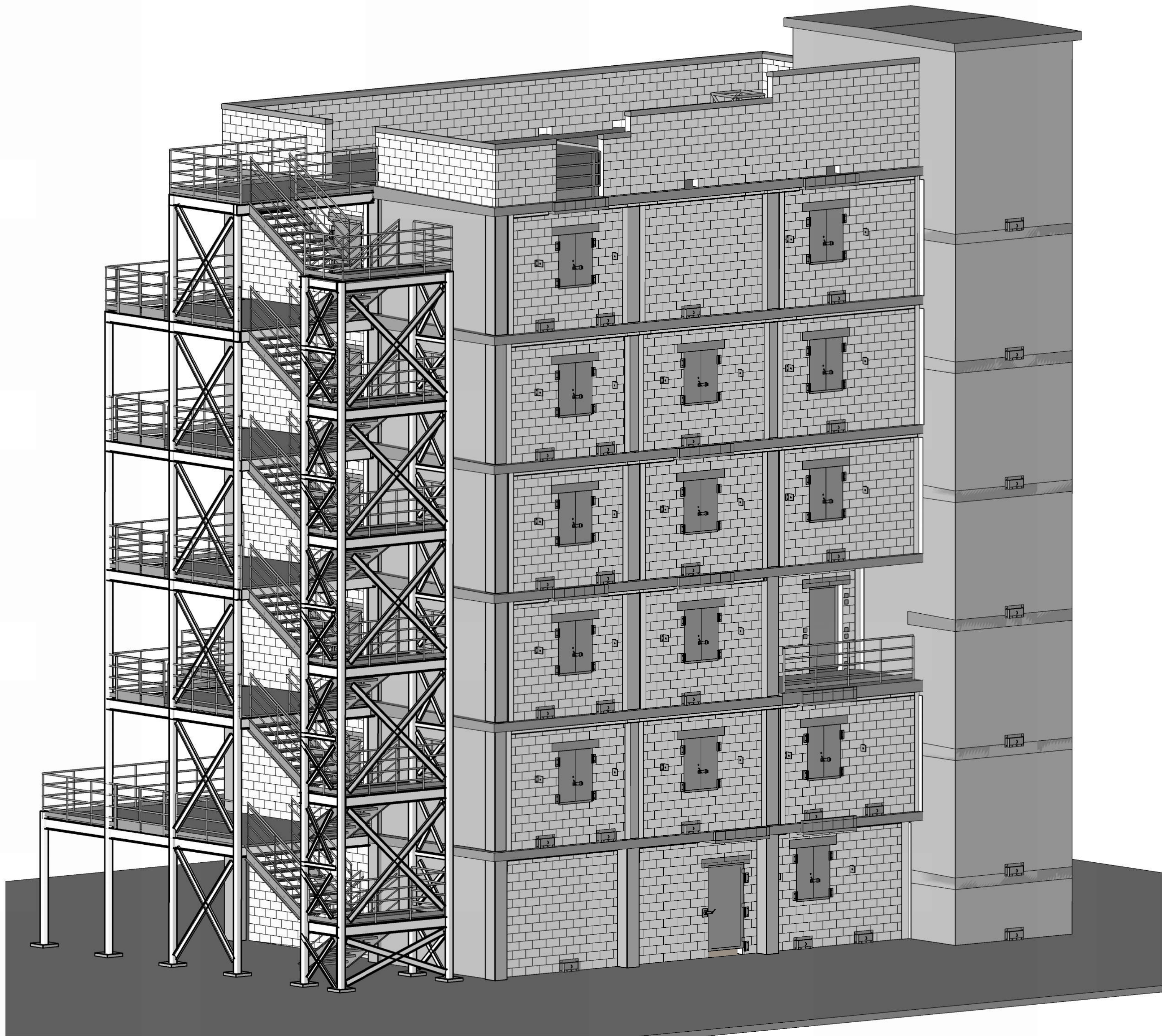
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ELEVATIONS FOR MATERIAL  
CALLOUTS.



1

NORTHWEST PERSPECTIVE

BB304 BB304 SCALE



2

SOUTHWEST PERSPECTIVE

BB304 BB304 SCALE

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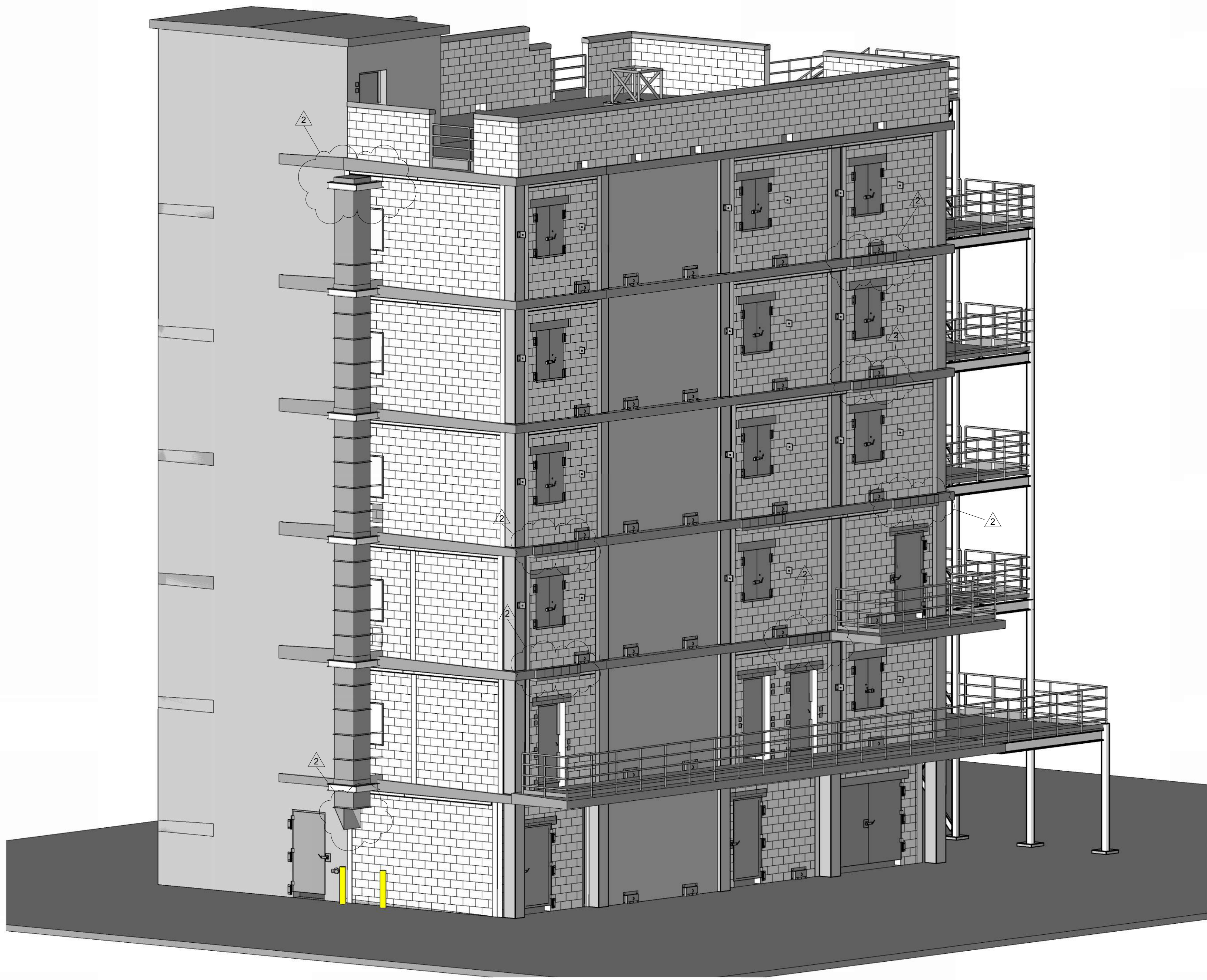


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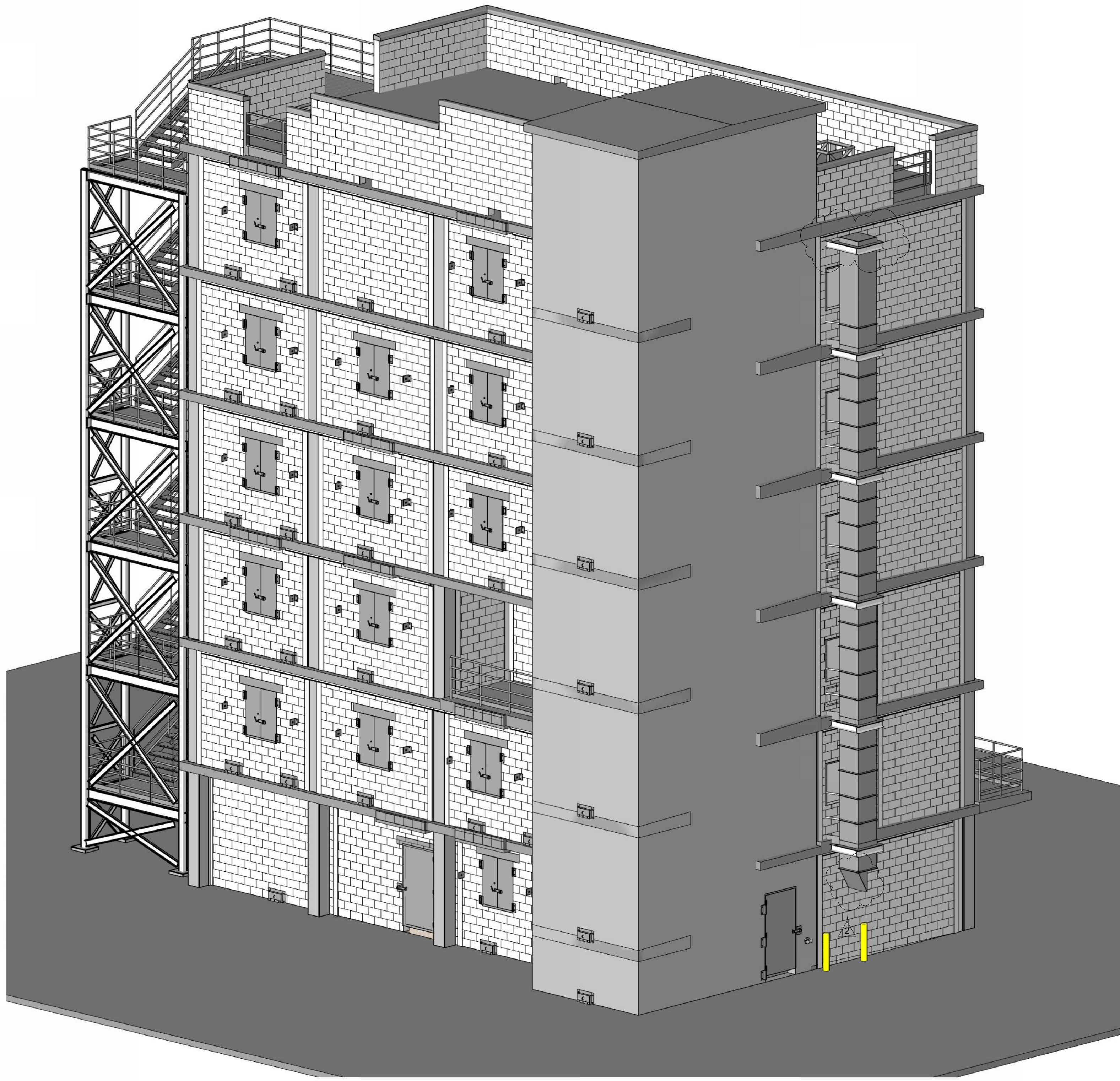


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CALLOUTS.



1 NORTHEAST PERSPECTIVE  
BB305/BB305 SCALE



2 SOUTHEAST PERSPECTIVE  
BB305/BB305 SCALE

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BB305





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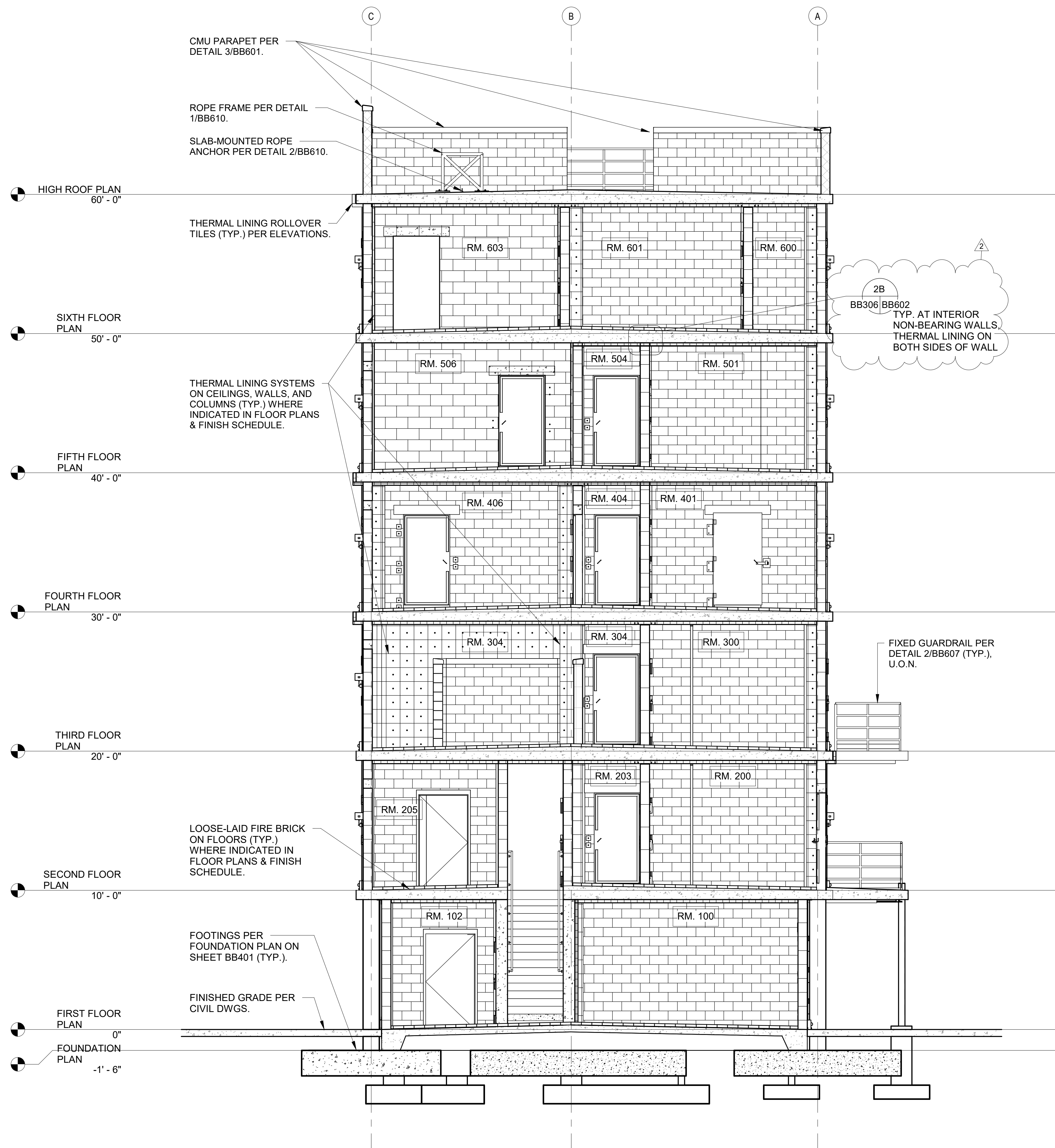
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**BURN BUILDING - BUILDING SECTIONS**

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1 BUILDING SECTION 1  
BB201- BB306 SCALE 1/4" = 1'-0"  
BB207



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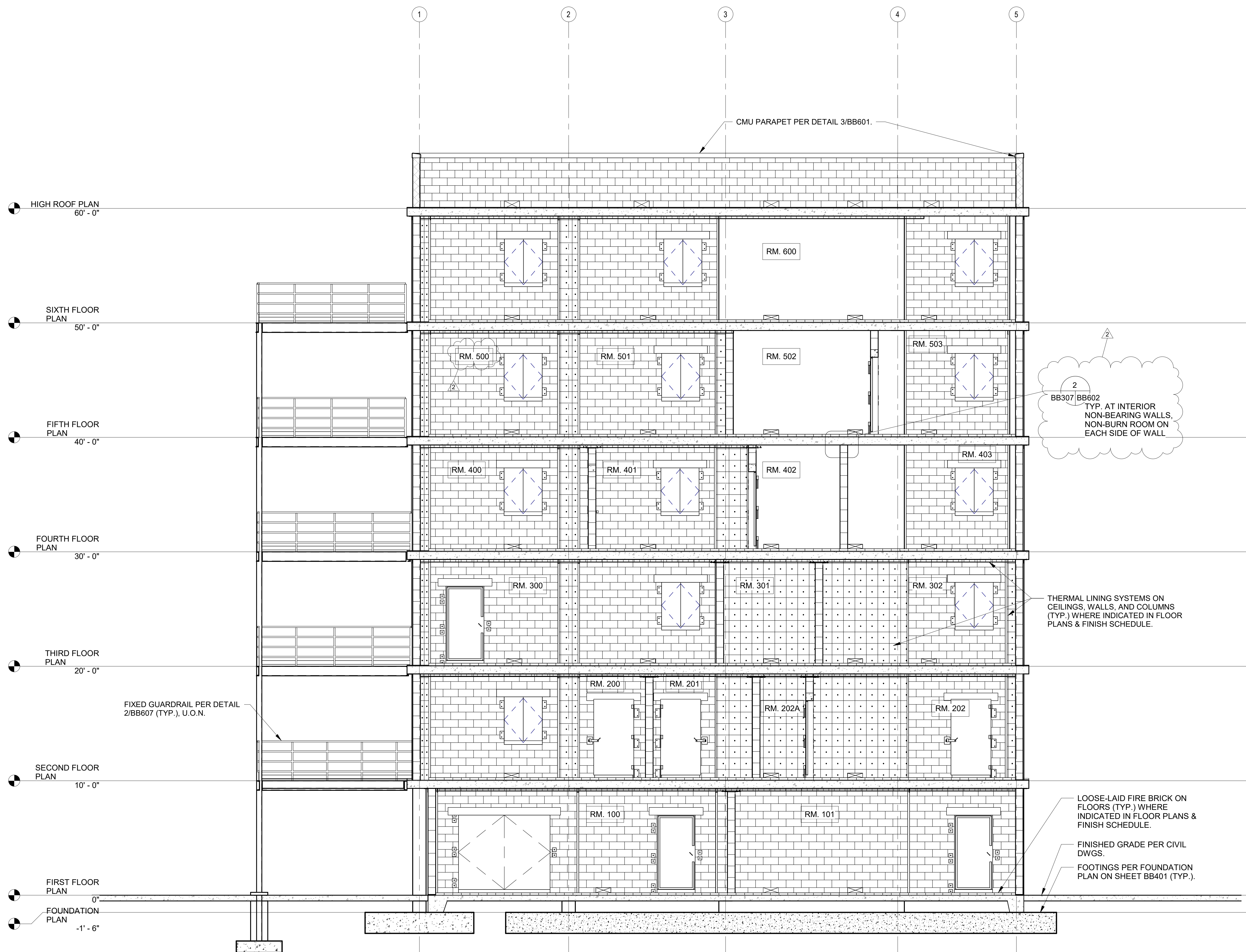
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**BUILDING SECTION 2**  
BB201 | BB307 | BB207 SCALE 1/4" = 1'-0"

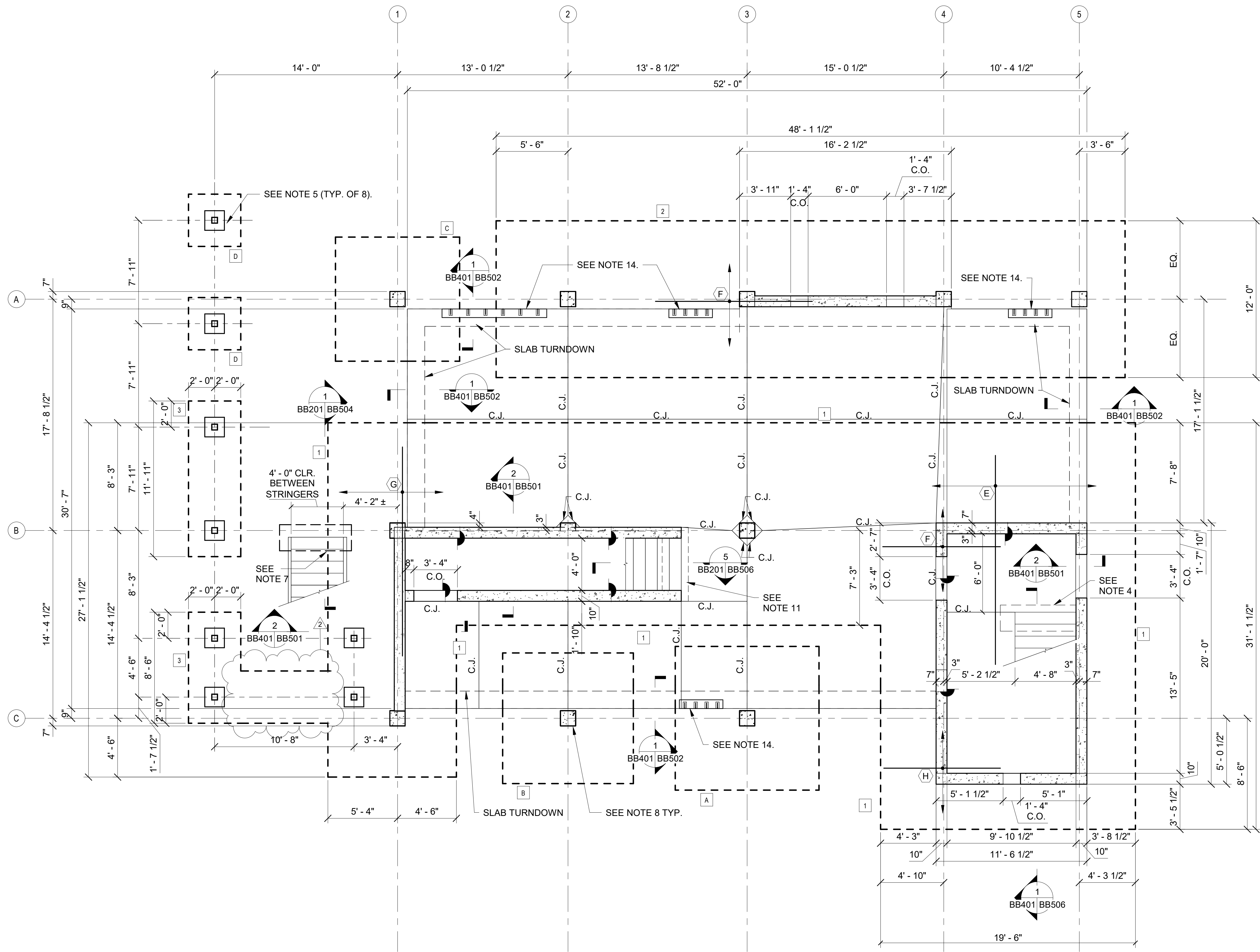
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JOB NUMBER <b>22056</b>
DATE ISSUED <b>03/14/25</b>
PROJECT STATUS <b>ISSUE FOR CONSTRUCTION</b>
SHEET <b>BURN BUILDING - FOUNDATION PLAN</b>

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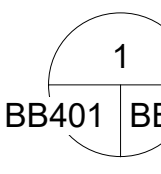
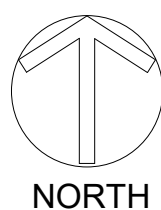
COLUMN FOOTING SCHEDULE				
MARK	WIDTH	LENGTH	THICKNESS	BOTTOM REINF.
A	11' - 0"	11' - 0"	2' - 1"	(11) #7 E.W.
B	10' - 0"	10' - 0"	1' - 10"	(10) #7 E.W.
C	9' - 6"	9' - 6"	1' - 10"	(9) #7 E.W.
D	4' - 0"	4' - 0"	1' - 0"	(5) #5 E.W.

WALL FOOTING SCHEDULE							
MARK	WIDTH	LENGTH	THICKNESS	BOTTOM REINF.		TOP REINF.	
				CONT. (B)	SHORT DIR. (BM)	CONT. (T)	SHORT DIR. (TM)
1	11' - 0"	11' - 0"	1' - 10"	#9@10" O.C. E.W.	-----	#9@10" O.C. E.W.	-----
2	12' - 0"	48' - 1 1/2"	1' - 10"	#8@12" O.C. E.W.	-----	#7@12" O.C. E.W.	-----
3	4' - 0"	CONT.	1' - 4"	(5) #6	#6@12" O.C.	(5) #6	#6@18" O.C.

\* MAT FOUNDATION IN UPSIDE-DOWN U SHAPE IN PLAN TO DIMENSIONS SHOWN. ALL FOOTING AREAS SHOWN AS 1 SHALL BE ONE LARGE MAT FOUNDATION.

#### NOTES:

- LOCATE TOPS OF FOOTINGS AT -1'-6" BELOW DATUM AND EXTERIOR FINISHED GRADE, U.O.N. SEE FIRST FLOOR PLAN BB201 FOR DATUM.
- SEE FOOTING SCHEDULE FOR FOOTINGS NOTED THUS [X]. WHERE WALL OR PEDESTAL FOOTINGS INTERSECT COLUMN OR MAT FOOTINGS, EXTEND WALL/PEDESTAL FOOTING BARS 4'-0" MIN. INTO COLUMN FOOTING.
- SEE FIRST FLOOR PLAN 1/BB201 FOR ALL SLAB ELEVATIONS AND SLOPES. SEE SECTION N OF THE GENERAL NOTES ON SHEET BB001 FOR SLAB THICKNESS AND REINFORCING.
- PROVIDE A 2'-0" WIDE x 5'-6" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 1/BB505.
- HSS 5 1/2x5 1/2x1/4 COLUMN ON 1'-6" SQ. CONCRETE PIER PER 2/BB504.
- CJ = CONTROL JOINT PER SPECIFICATIONS & GENERAL NOTES.
- PROVIDE A 2'-0" WIDE x 6'-0" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 1/BB504.
- 14" SQ. CONCRETE COLUMN PER 1/BB501.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH [H].
- SEE PLAN FOR ADDITIONAL REINFORCING:  
[E] = (16) #9 x 16' - 0" ADDITIONAL BOTTOM BARS AT 10" O.C.  
[F] = (6) #8 x 12' - 0" ADDITIONAL BOTTOM BARS AT 12" O.C.  
[G] = (7) #9 x 16' - 0" ADDITIONAL BOTTOM BARS AT 10" O.C.  
[H] = (6) #9 x 9' - 0" ADDITIONAL BOTTOM BARS AT 10" O.C.
- PROVIDE 2'-0" WIDE x 4'-0" LONG THICKENED SLAB AT BASE OF STAIR PER SECTION 5/BB506.
- SLAB-ON-GRADE SHALL BE CONTINUOUS THROUGH DOORWAY AND SCUPPER OPENINGS IN CONCRETE WALLS. SEE DETAIL 5/BB502 FOR ADDITIONAL SLAB REINFORCING AT DOOR & SCUPPER OPENINGS.
- ELEVATIONS TO DOOR HEADS VARY WITH FLOOR SLOPES AND SPOT ELEVATIONS. FORM CONCRETE WALL OPENINGS PER DETAILS RELATIVE TO FLOOR SPOT ELEVATION AT EACH LOCATION.
- CAST DOORWAY WELD PLATES INTO SLAB PER FIRST FLOOR PLAN AND DETAIL 4/BB610.



FOUNDATION PLAN

BB401 BB401 SCALE 1/4" = 1'-0"



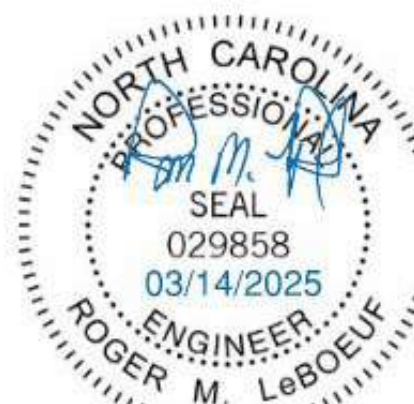


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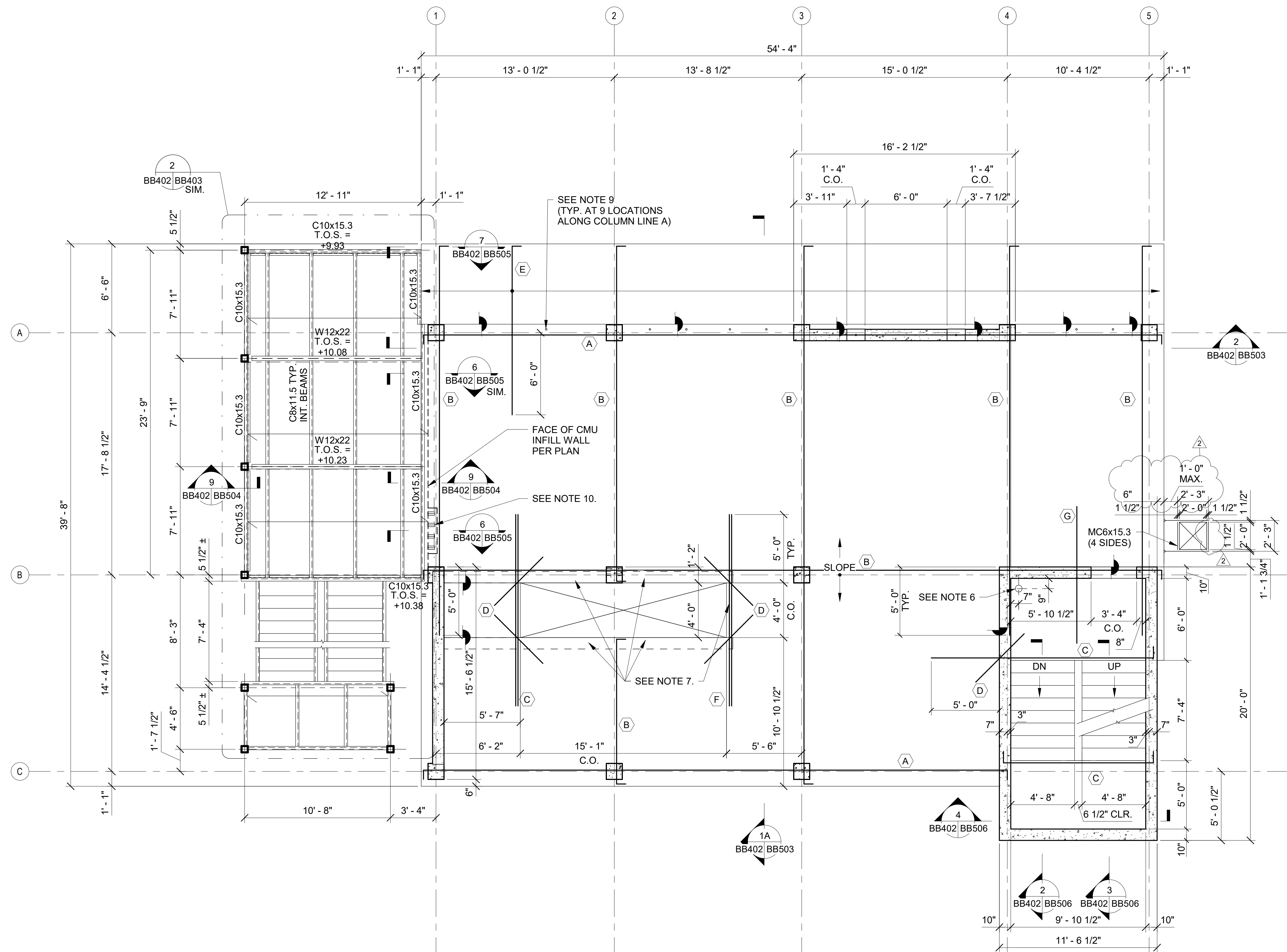
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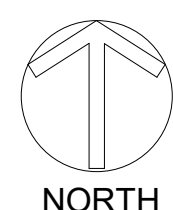
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**BURN BUILDING - SECOND FLOOR FRAMING PLAN**

BB402



**NOTES:**

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE SECOND FLOOR PLAN 1/BB202 FOR CONCRETE SLAB ELEVATIONS AND SLOPES. BOTTOM OF MAIN SLAB AT +9.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\rightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (3) #5 AT 3" O.C. ADDITIONAL TOP AND BOTTOM BARS, CENTERED BETWEEN EACH MAIN TOP AND BOTTOM BAR, FOR A DISTANCE OF 3'-0" FROM SLAB EDGE, SO THAT TOP AND BOTTOM BAR SPACING IS AT 3" O.C. IN COLUMN STRIP. SEE DETAIL 8/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (B) = (4) #5 ADDITIONAL TOP BARS AND BOTTOM BARS AT 12" O.C. CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS AND CENTERED ON COLUMN LINE. AT LEAST (2) TOP AND BOTTOM BARS SHALL BE WITHIN 3" OF COLUMN GRID, ONE ON EACH SIDE OF COLUMN GRID. SEE DETAIL 9/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = #5 @ 12" O.C. ADDITIONAL TOP BARS CENTERED BETWEEN MAIN TOP BARS. (E) BARS DO NOT HAVE TO BE ADDED WHERE A OR B BARS HAVE ALREADY BEEN ADDED.
  - (F) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
  - (G) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- PROVIDE WALL DOWELS PER DETAIL 1/BB601 ONLY FOR CMU WALLS ABOVE SECOND FLOOR SLAB AROUND INTERIOR STRAIGHT RUN STAIRS.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH  $\nabla$ .
- PROVIDE WEEPS THROUGH SLAB PER KEYED NOTE 16 ON 1/BB202.
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.

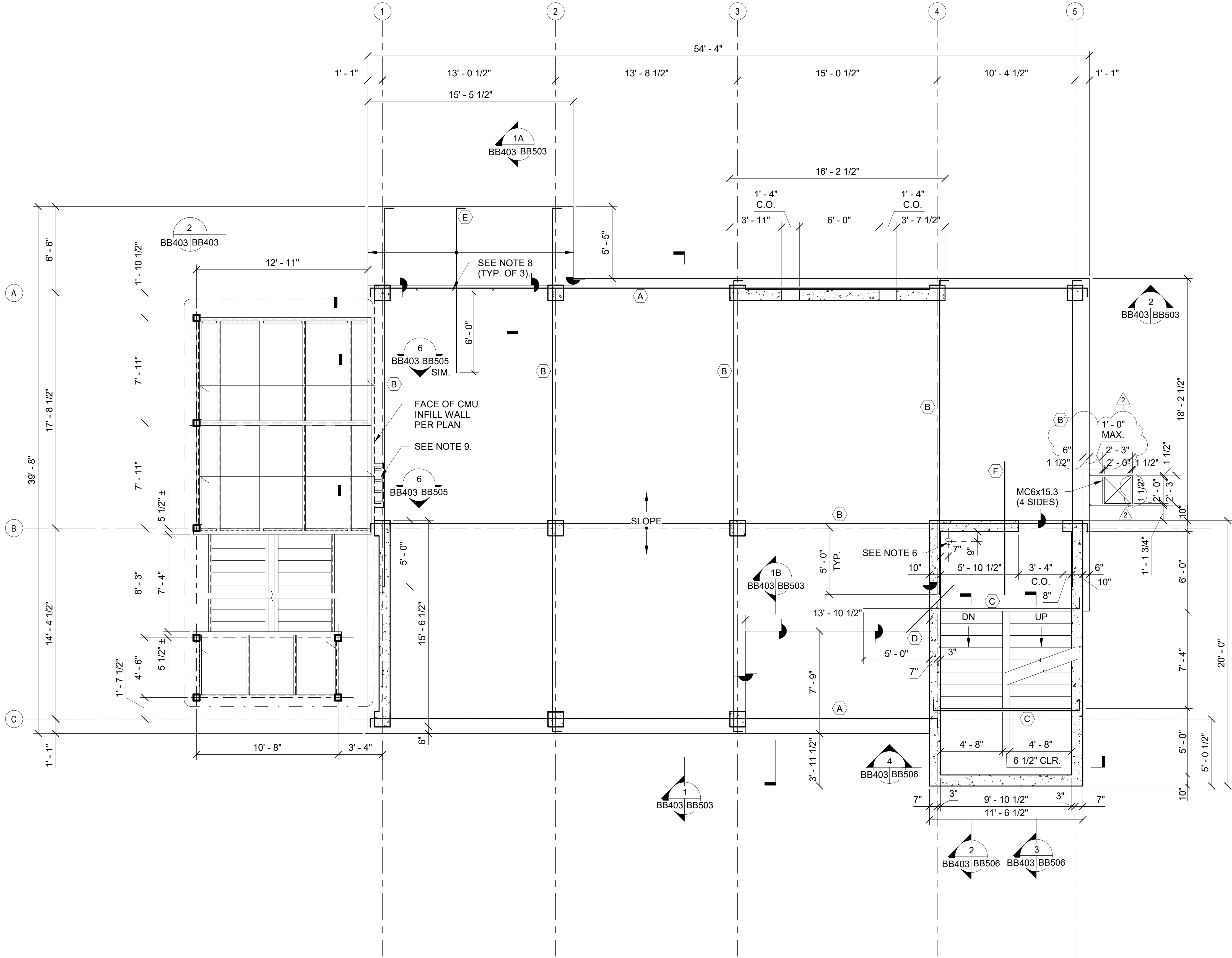


1  
BB402 BB402 SCALE 1/4" = 1'-0"

**SECOND FLOOR FRAMING PLAN**

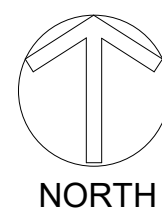
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NOTES:

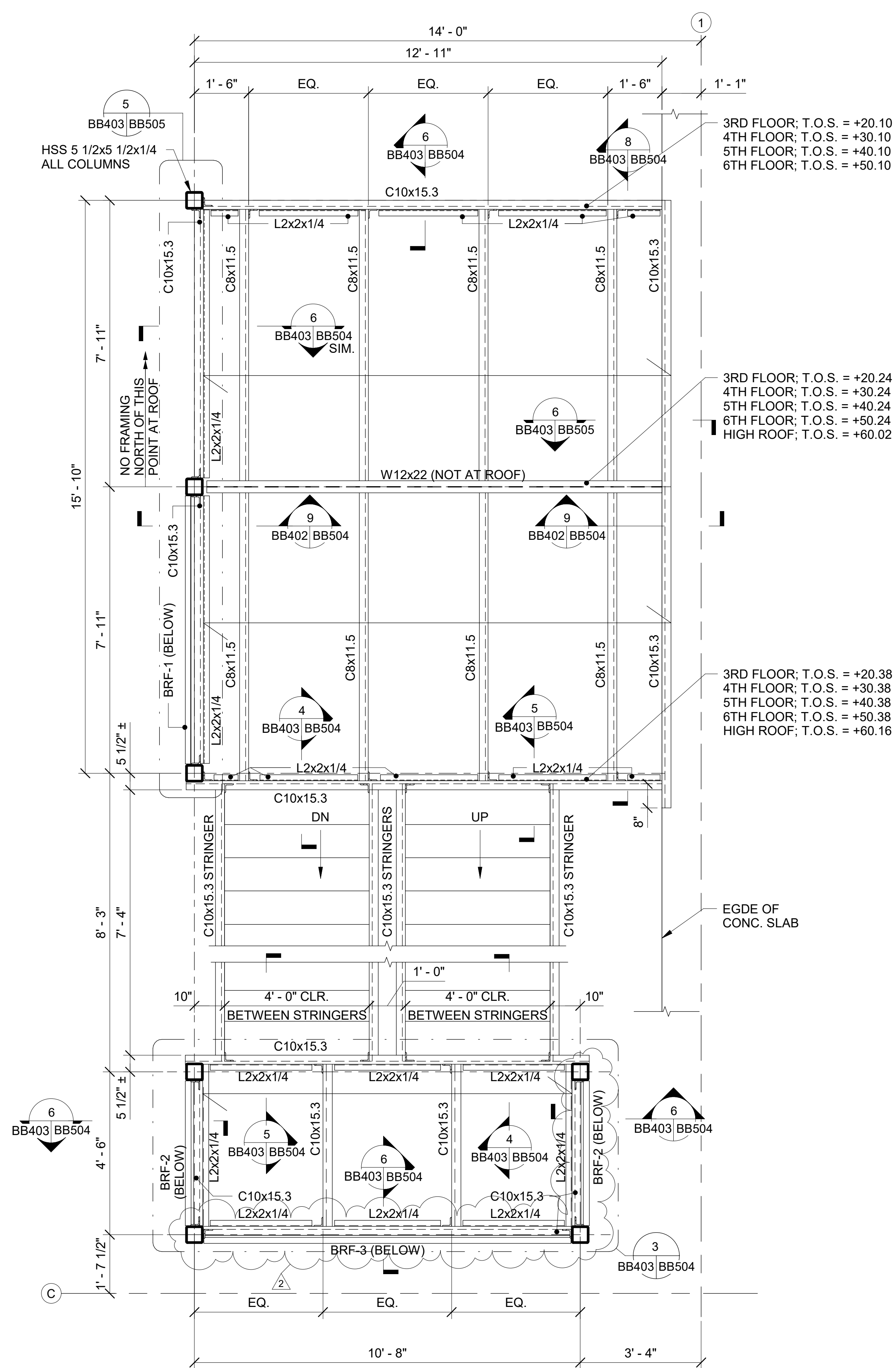
- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE THIRD FLOOR PLAN 1/BB203 FOR CONCRETE SLAB ELEVATIONS AND SLOPES. BOTTOM OF MAIN SLAB AT +19.33' U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\rightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (3) #5 AT 3" O.C. ADDITIONAL TOP AND BOTTOM BARS, CENTERED BETWEEN EACH MAIN TOP AND BOTTOM BAR, FOR A DISTANCE OF 3'-0" FROM SLAB EDGE, SO THAT TOP AND BOTTOM BAR SPACING IS AT 3" O.C. IN COLUMN STRIP. SEE DETAIL 8/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (B) = (4) #5 ADDITIONAL TOP BARS AND BOTTOM BARS AT 12" O.C. CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS AND CENTERED ON COLUMN LINE. AT LEAST (2) TOP AND BOTTOM BARS SHALL BE WITHIN 3" OF COLUMN GRID, ONE ON EACH SIDE OF COLUMN GRID. SEE DETAIL 9/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = #5 @ 12" O.C. ADDITIONAL TOP BARS CENTERED BETWEEN MAIN TOP BARS. (E) BARS DO NOT HAVE TO BE ADDED WHERE (B) BARS HAVE ALREADY BEEN ADDED.
  - (F) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH  $\nabla$ .
- PROVIDE WEEPS THROUGH SLABS PER KEYED NOTE 15 ON 1/BB203.
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



1

THIRD FLOOR FRAMING PLAN

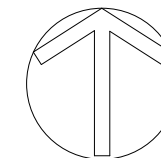
BB403 BB403 SCALE 1/4" = 1'-0"



NOTES:

- BRF-1, BRF-2, & BRF-3 BRACED FRAMES PER 1/BB505.
- $\rightarrow$  DENOTES DIRECTION OF GRATING PLANK.
- STEEL DECK FRAMING SLOPES WITH INTERIOR CONCRETE SLAB. TOP OF STEEL FRAMING IS SHOWN FOR E-W BEAMS. TOP OF STEEL FOR N-S BEAMS VARIES UNIFORMLY BETWEEN COLUMNS AND E-W BEAMS.
- TOP OF GRATING SHALL BE 2" HIGHER THAN TOP OF STEEL FRAMING.
- ALL STEEL SHALL BE HOT DIP GALVANIZED, U.O.N.

EXTERIOR STAIRS - 3RD FLOOR THROUGH ROOF



2

BB403 BB403 SCALE 1/2" = 1'-0"

HH

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WTCC EWS - FIRE & RESCUE TRAINING CENTER

WAKE TECHNICAL COMMUNITY COLLEGE

5345 ROLESVILLE RD, WENDELL, NC 27591

NCCCS NO. 2303



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1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

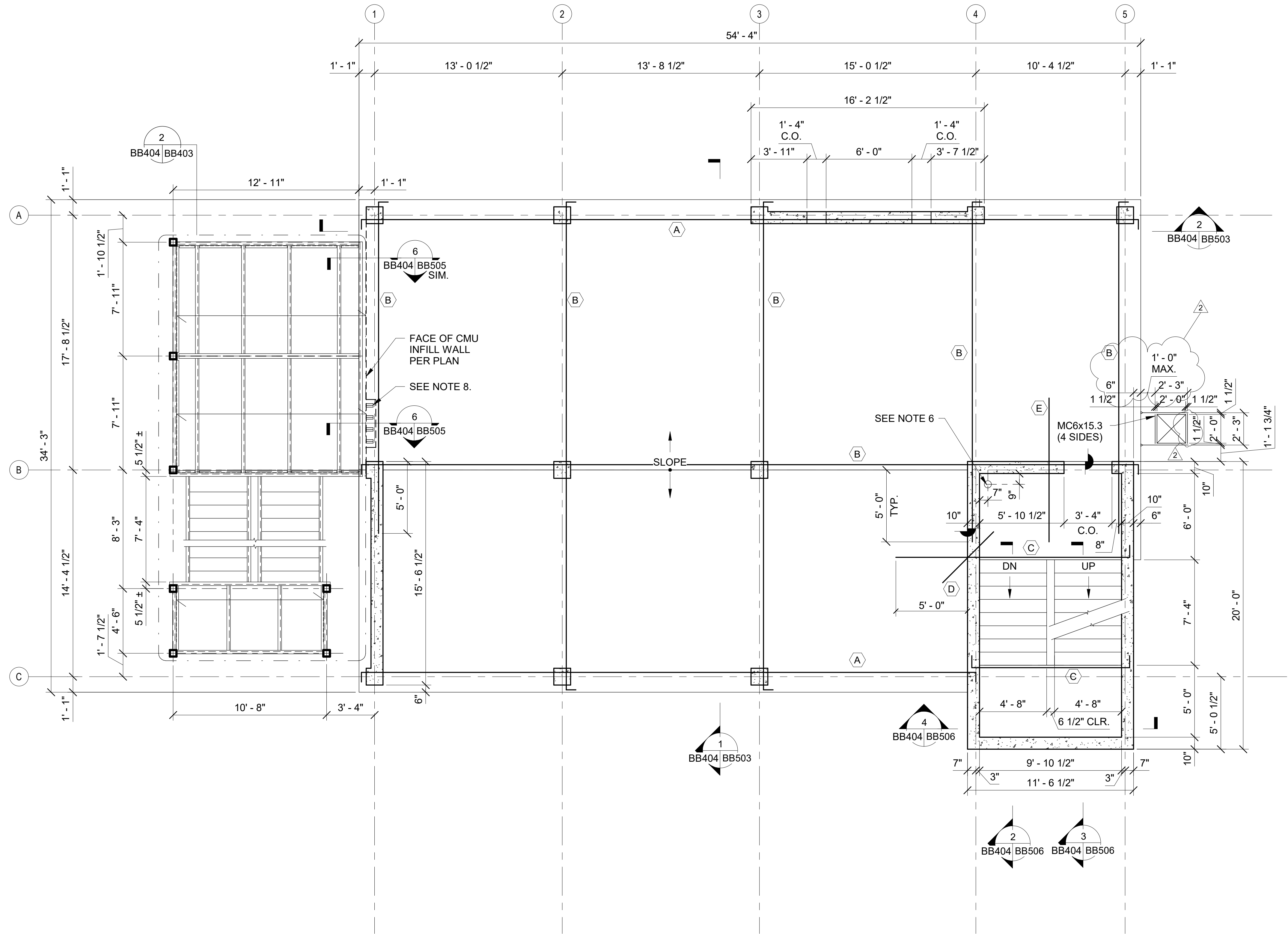
JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - THIRD FLOOR FRAMING PLAN**

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BB403





NOTES:

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE FOURTH FLOOR/LOW ROOF PLAN 1/BB204 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +29.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (3) #5 AT 3" O.C. ADDITIONAL TOP AND BOTTOM BARS, CENTERED BETWEEN EACH MAIN TOP AND BOTTOM BAR, FOR A DISTANCE OF 3'-0" FROM SLAB EDGE, SO THAT TOP AND BOTTOM BAR SPACING IS AT 3" O.C. IN COLUMN STRIP. SEE DETAIL 8/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (B) = (4) #5 ADDITIONAL TOP BARS AND BOTTOM BARS AT 12" O.C. CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS AND CENTERED ON COLUMN LINE. AT LEAST (2) TOP AND BOTTOM BARS SHALL BE WITHIN 3' OF COLUMN GRID. ONE ON EACH SIDE OF COLUMN GRID. SEE DETAIL 9/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH .
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



1  
BB404 BB404 SCALE 1/4" = 1'-0"

FOURTH FLOOR FRAMING PLAN

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1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET

**BURN BUILDING -  
FOURTH FLOOR  
FRAMING PLAN**

BB404





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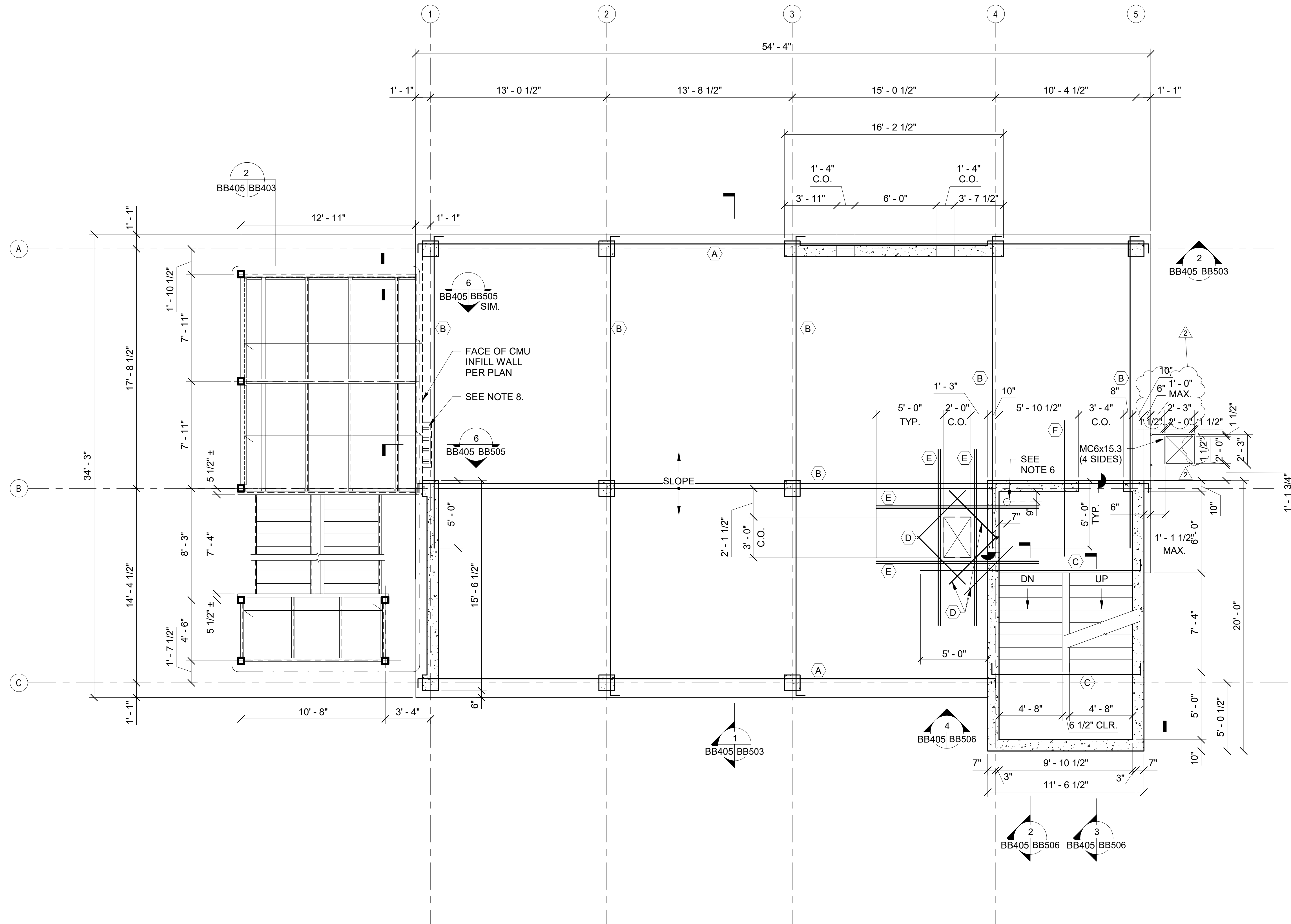


REVISION	DATE
Addendum #1	04/14/25
Addendum #2	05/01/25

B NUMBER  
**2056**  
 DATE ISSUED  
**3/14/25**  
 PROJECT STATUS  
**ISSUE FOR  
 CONSTRUCTION**

**TURN BUILDING -  
FIFTH FLOOR  
FRAMING PLAN**

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## FIFTH FLOOR FRAMING PLAN

SCALE 1/4" = 1'-0"



NORTH

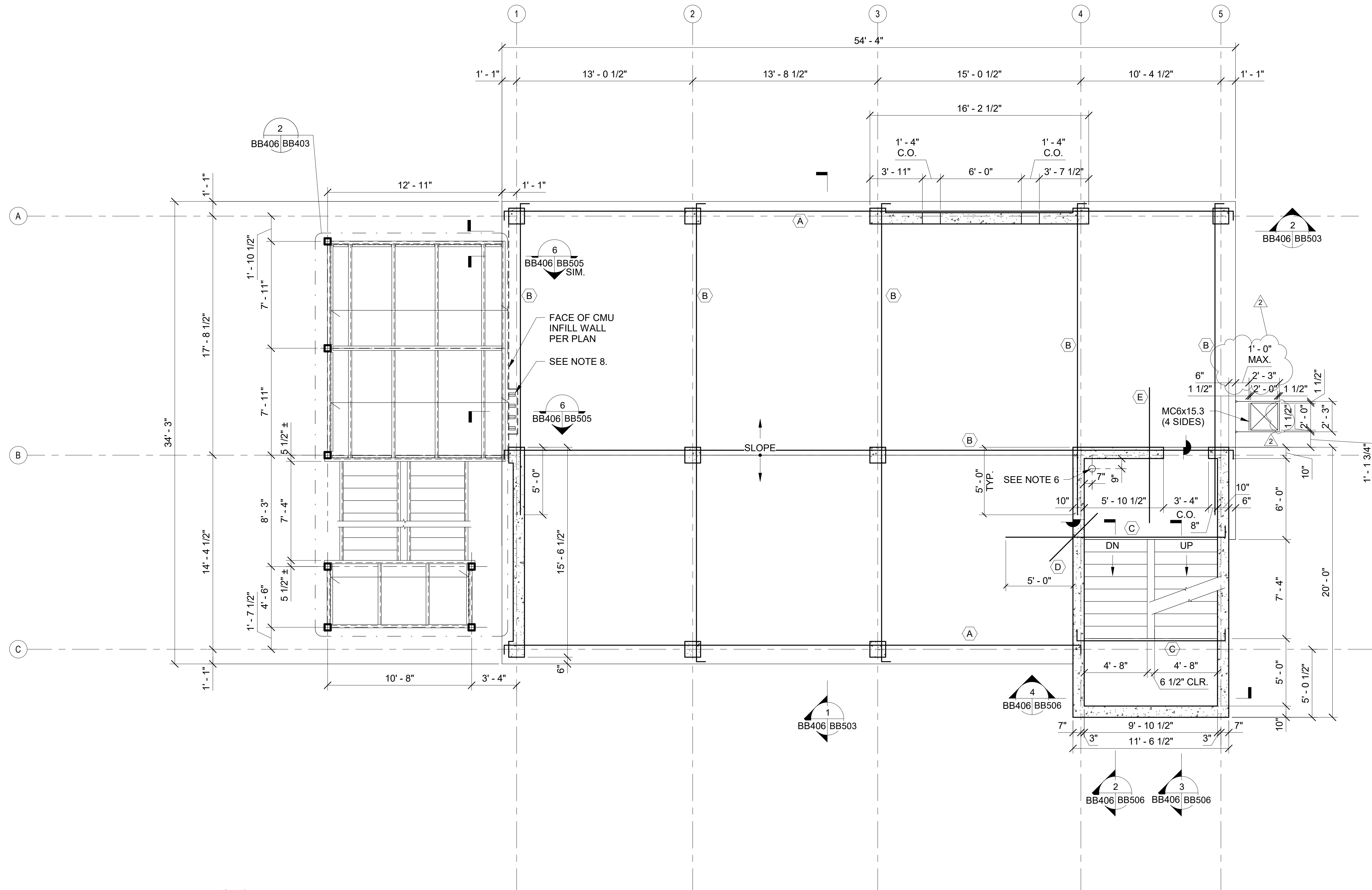
NOTES:

1. SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE FIFTH FLOOR PLAN 1/B205 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +39.33'. U.O.N.
  2. SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
  3. OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
  4. SEE PLAN FOR ADDITIONAL REINFORCING:
    - (A) = (3) #5 AT 3" O.C. ADDITIONAL TOP AND BOTTOM BARS, CENTERED BETWEEN EACH MAIN TOP AND BOTTOM BAR, FOR A DISTANCE OF 3'-0" FROM SLAB EDGE, SO THAT TOP AND BOTTOM BAR SPACING IS AT 3" O.C. IN COLUMN STRIP. SEE DETAIL 8/BB502 FOR SPACING WITHIN COLUMN STRIP.
    - (B) = (4) #5 ADDITIONAL TOP BARS AND BOTTOM BARS AT 12" O.C. CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS AND CENTERED ON COLUMN LINE. AT LEAST (2) TOP AND BOTTOM BARS SHALL BE WITHIN 3" OF COLUMN GRID, ONE ON EACH SIDE OF COLUMN GRID. SEE DETAIL 9/BB502 FOR SPACING WITHIN COLUMN STRIP.
    - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
    - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
    - (E) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
    - (F) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
  5. PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
  6. PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
  7. A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH .
  8. CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.

NO.	REVISION	DATE
1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

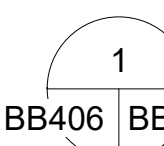
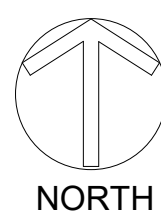
JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
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**BURN BUILDING - SIXTH FLOOR FRAMING PLAN**

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**NOTES:**

- SLAB THICKNESS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE SIXTH FLOOR PLAN 1/BB206 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +49.33', U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (3) #5 AT 3" O.C. ADDITIONAL TOP AND BOTTOM BARS, CENTERED BETWEEN EACH MAIN TOP AND BOTTOM BAR, FOR A DISTANCE OF 3'-0" FROM SLAB EDGE, SO THAT TOP AND BOTTOM BAR SPACING IS AT 3" O.C. IN COLUMN STRIP. SEE DETAIL 8/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (B) = (4) #5 ADDITIONAL TOP BARS AND BOTTOM BARS AT 12" O.C. CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS AND CENTERED ON COLUMN LINE. AT LEAST (2) TOP AND BOTTOM BARS SHALL BE WITHIN 3" OF COLUMN GRID, ONE ON EACH SIDE OF COLUMN GRID. SEE DETAIL 9/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.
- A 2 1/2" STEP IN TOP OF CONCRETE IS DESIGNATED WITH .
- CAST DOORWAY WELD PLATES INTO SLAB PER FLOOR PLAN AND DETAIL 6/BB505.



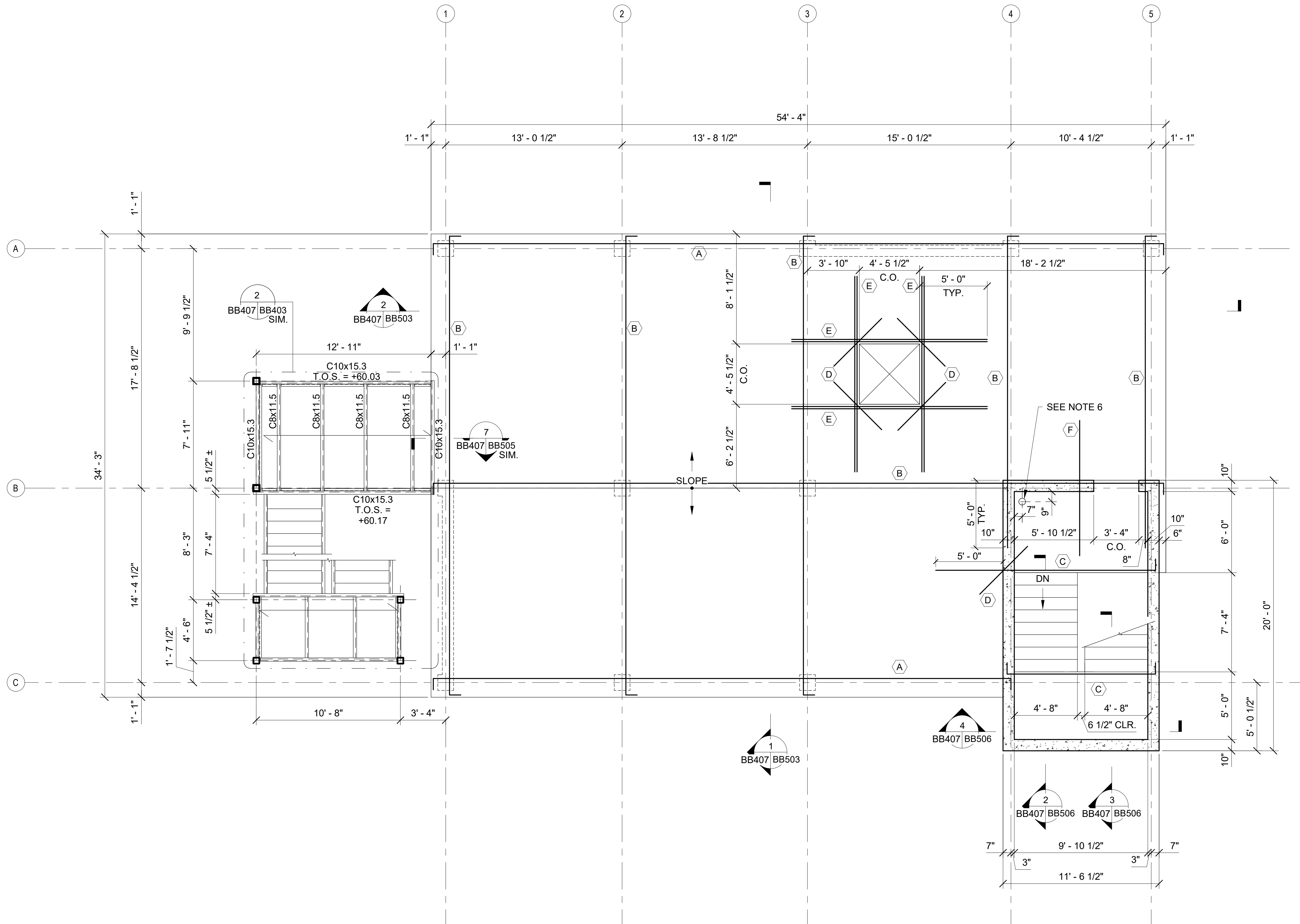
**SIXTH FLOOR FRAMING PLAN**

BB406 BB406 SCALE 1/4" = 1'-0"



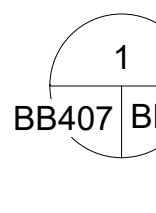
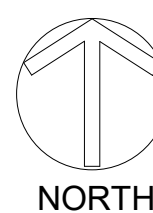
NO.	REVISION	DATE
1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

JOB NUMBER <b>22056</b>
DATE ISSUED <b>03/14/25</b>
PROJECT STATUS <b>ISSUE FOR CONSTRUCTION</b>
SHEET <b>BURN BUILDING - HIGH ROOF &amp; STAIR ROOF FRAMING PLANS</b>



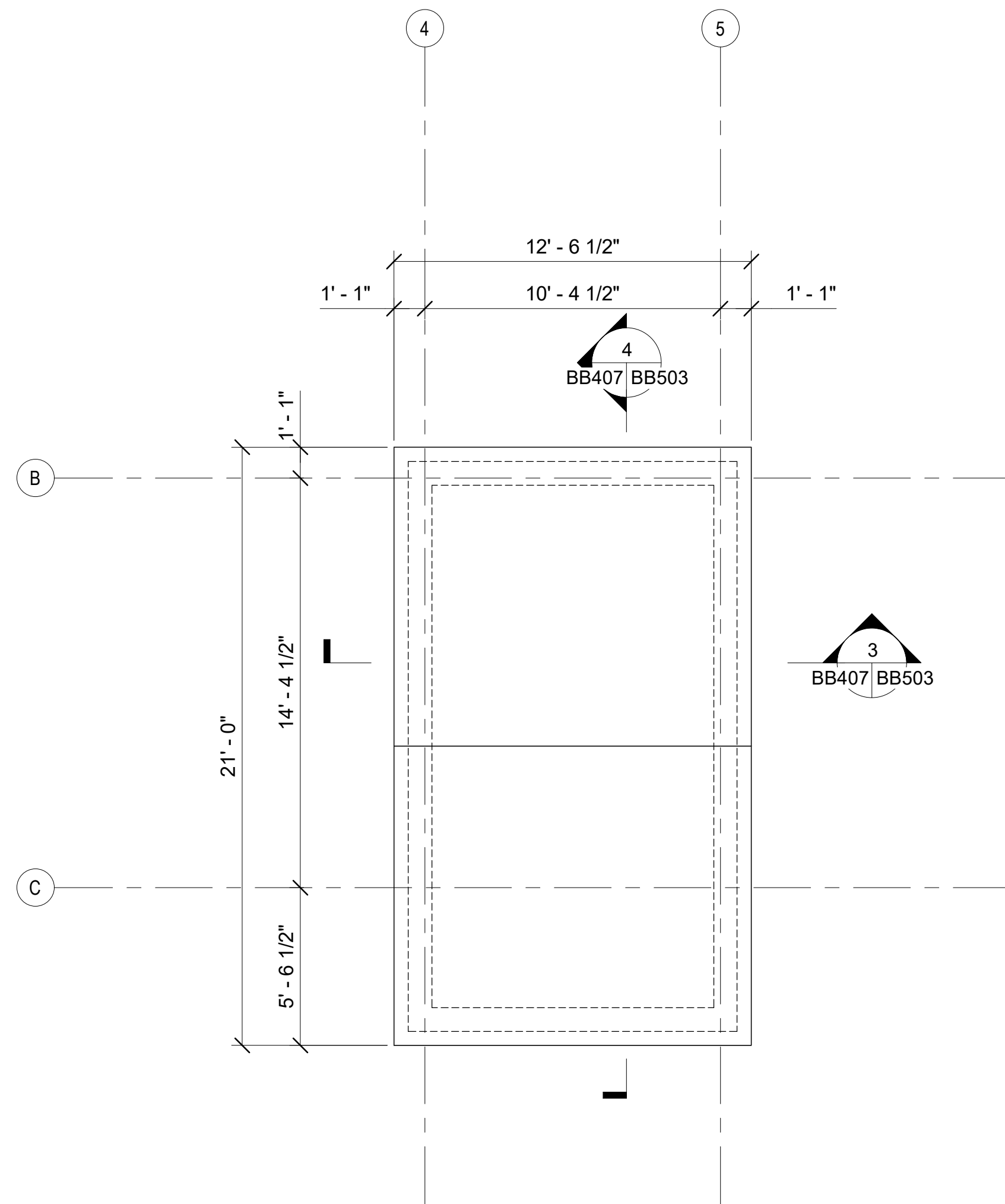
**NOTES:**

- SLAB THICKNESS OVER STAIRS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE HIGH ROOF PLAN 1/BB207 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +59.33'. U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\rightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- SEE PLAN FOR ADDITIONAL REINFORCING:
  - (A) = (3) #5 AT 3" O.C. ADDITIONAL TOP AND BOTTOM BARS, CENTERED BETWEEN EACH MAIN TOP AND BOTTOM BAR, FOR A DISTANCE OF 3'-0" FROM SLAB EDGE, SO THAT TOP AND BOTTOM BAR SPACING IS AT 3" O.C. IN COLUMN STRIP. SEE DETAIL 8/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (B) = (4) #5 ADDITIONAL TOP BARS AND BOTTOM BARS AT 12" O.C. CENTERED BETWEEN MAIN TOP BARS AND MAIN BOTTOM BARS AND CENTERED ON COLUMN LINE. AT LEAST (2) TOP AND BOTTOM BARS SHALL BE WITHIN 3" OF COLUMN GRID, ONE ON EACH SIDE OF COLUMN GRID. SEE DETAIL 9/BB502 FOR SPACING WITHIN COLUMN STRIP.
  - (C) = (4) #5 ADDITIONAL BOTTOM BARS AT EDGE OF STAIR LANDING.
  - (D) = (2) EACH, #5 x 5'-0" LONG DIAGONAL TOP & BOTTOM BARS AT CORNER OF OPENING.
  - (E) = (2) EACH, #5 ADDITIONAL TOP & BOTTOM BARS AT EDGE OF OPENING.
  - (F) = (3) #5 x 10' - 0" LONG ADDITIONAL TOP BARS AT 12" O.C. CENTERED ON GRIDLINE B.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.
- PROVIDE PERMANENT 8" DIA. SCHED. 40 PVC PIPE SLEEVE THROUGH SLAB FOR STANDPIPE CAST INTO SLAB. DO NOT CORE DRILL SLAB.



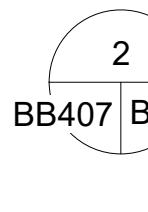
**HIGH ROOF FRAMING PLAN**

BB407 BB407 SCALE 1/4" = 1'-0"



**NOTES:**

- SLAB THICKNESS OVER STAIRS SHALL BE 8" MINIMUM. SLOPE TOP SURFACE ONLY. SEE STAIR ROOF PLAN 2/BB207 FOR CONCRETE SLAB ELEVATIONS, AND SLOPES. BOTTOM OF MAIN SLAB AT +69.33'. U.O.N.
- SLAB REINFORCING SHALL BE #5 AT 12" O.C. CONTINUOUS BOTH WAYS TOP AND BOTTOM.
- OUTERMOST REINFORCING LAYERS SHALL BE IN THIS DIRECTION  $\rightarrow$  IN PLAN. SLOPE TOP BARS IN N-S DIRECTION WITH TOP OF SLAB TO MAINTAIN PROPER COVER OVER ENTIRE BAR LENGTH.
- PROVIDE STANDARD 90° END HOOKS ON ALL TOP AND BOTTOM BARS UNLESS OTHERWISE SHOWN. HOOKS DO NOT HAVE TO BE VERTICAL. HOOKS CAN BE ROTATED TO MAINTAIN PROPER COVER AT ENDS OF BARS.

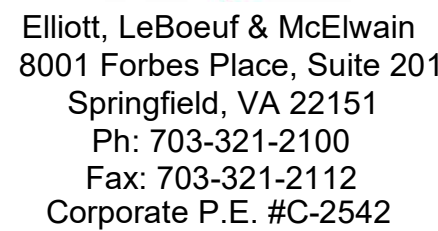


**STAIR ROOF FRAMING PLAN**

BB407 BB407 SCALE 1/4" = 1'-0"

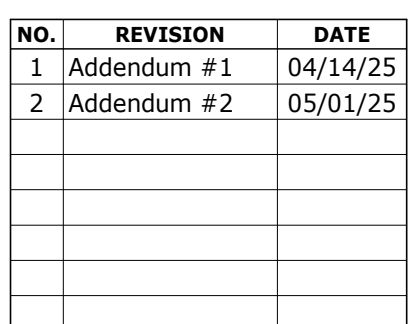
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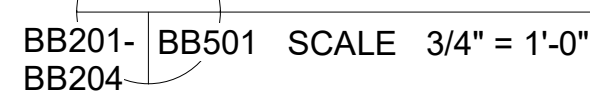
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PROJECT STATUS  
**ISSUE FOR  
CONSTRUCTION**

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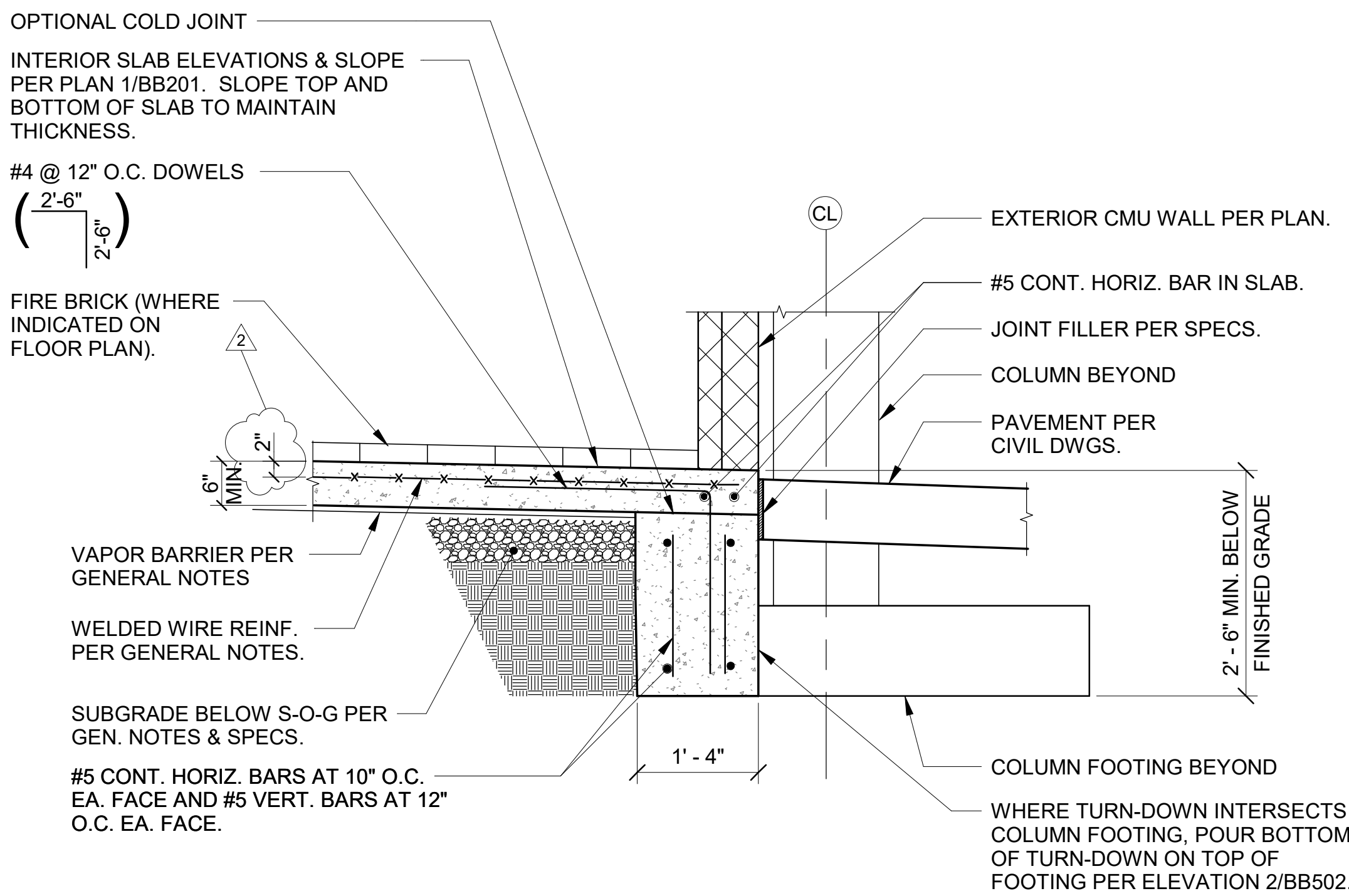
SHEET

BB501



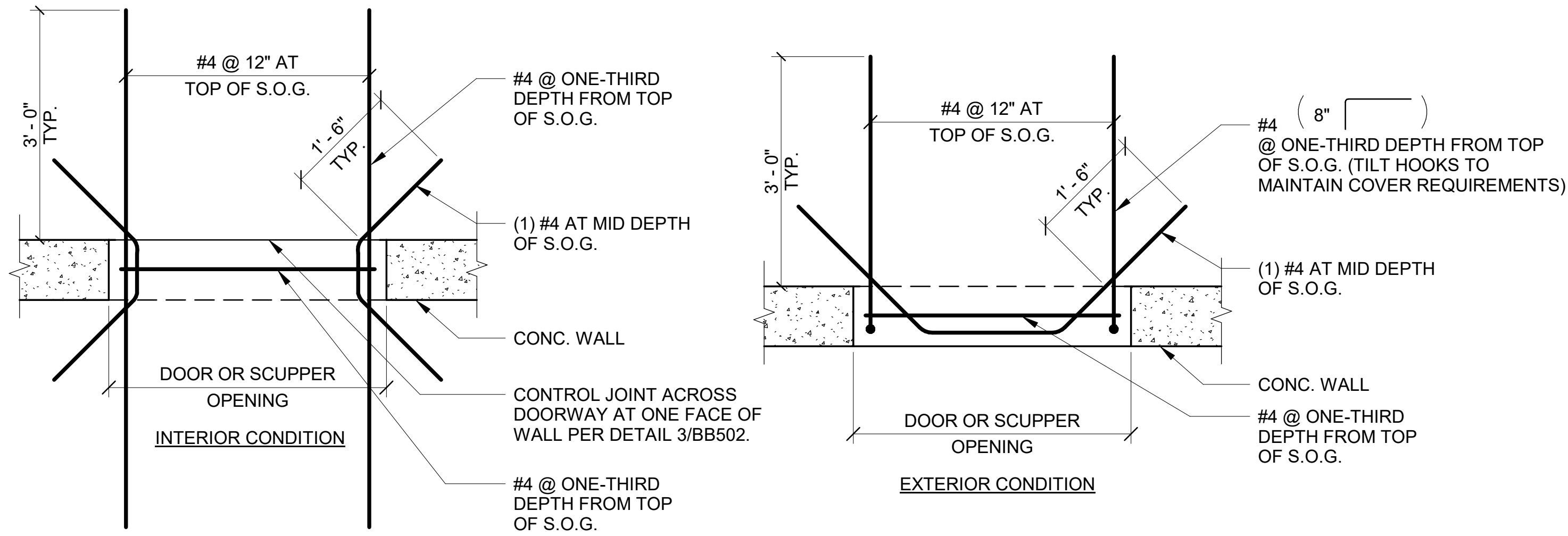
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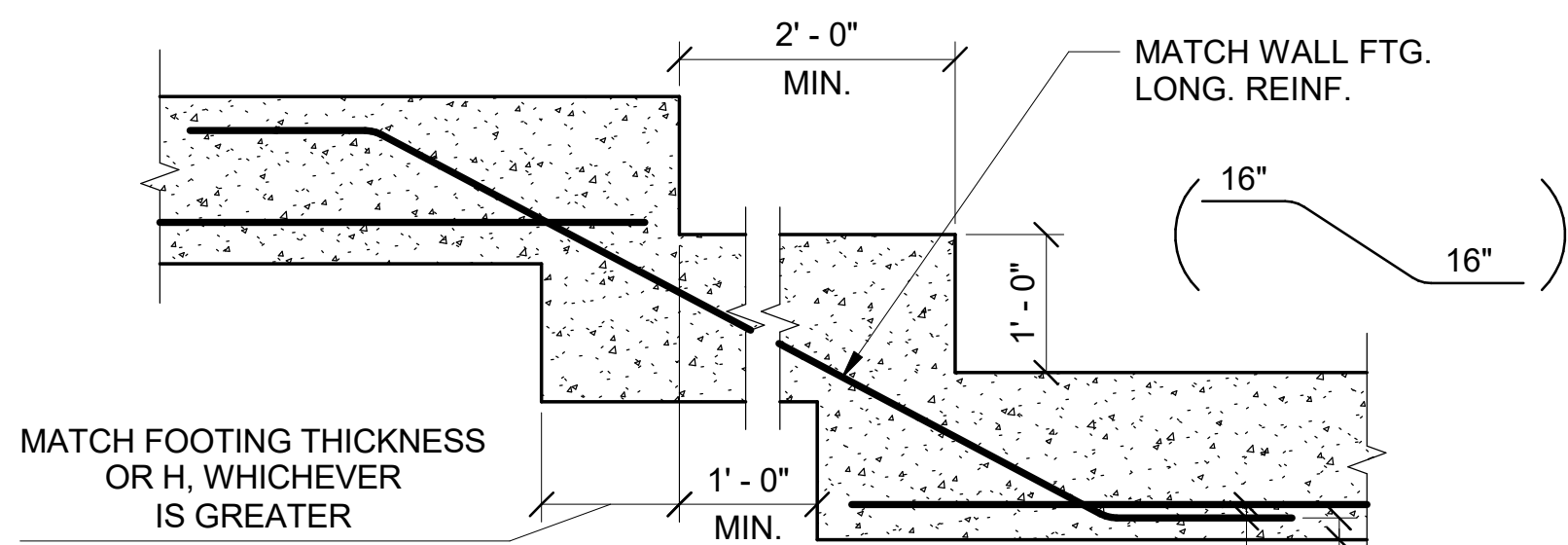
**TYPICAL SLAB TURNDOWN SECTION AT BUILDING EXTERIOR 1**

BB401 BB502 SCALE 3/4" = 1'-0"



**TYPICAL PLAN-REINF. IN S.O.G. AT WALL OPENING DETAIL**

BB401 BB502 SCALE 3/4" = 1'-0"

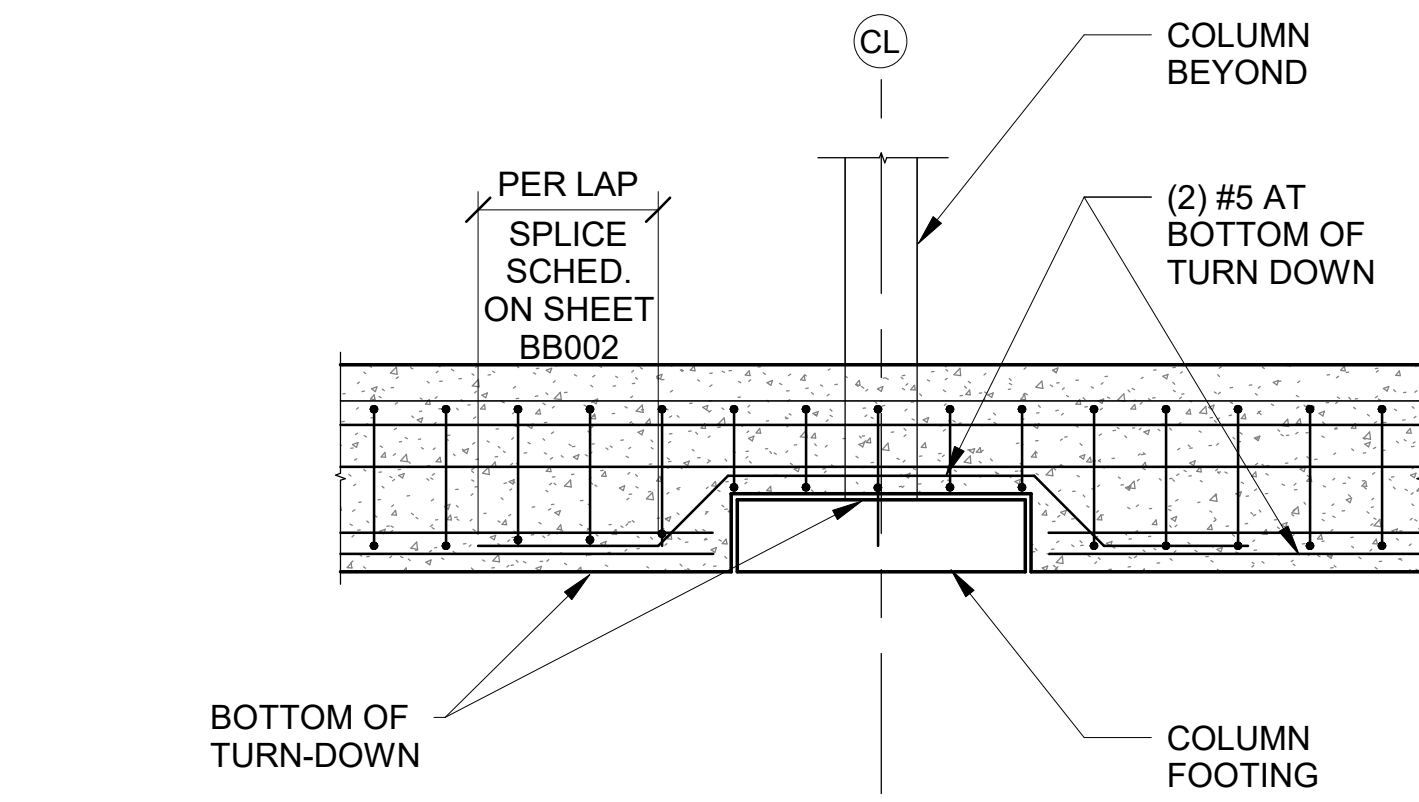


**NOTES:**

1. DETAIL SHOWS BOTTOM LONGITUDINAL BARS ONLY. WHERE TOP LONGITUDINAL BARS ARE REQUIRED, PROVIDE DIAGONAL BARS AT TOP (THRU STEP).
2. CONTINUE TRANSVERSE BARS (NOT SHOWN) THRU STEP.

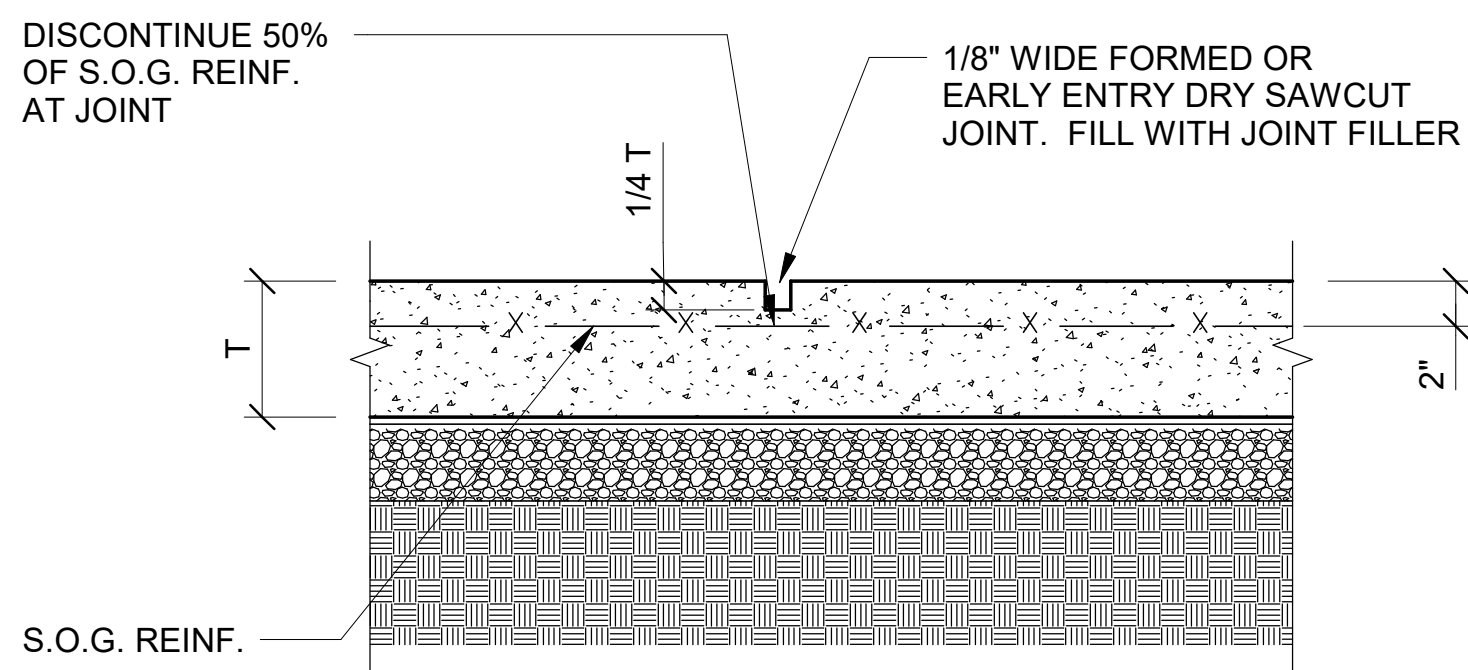
**TYPICAL CONCRETE WALL FOOTING STEP DETAIL**

BB502 BB502 SCALE 3/4" = 1'-0"



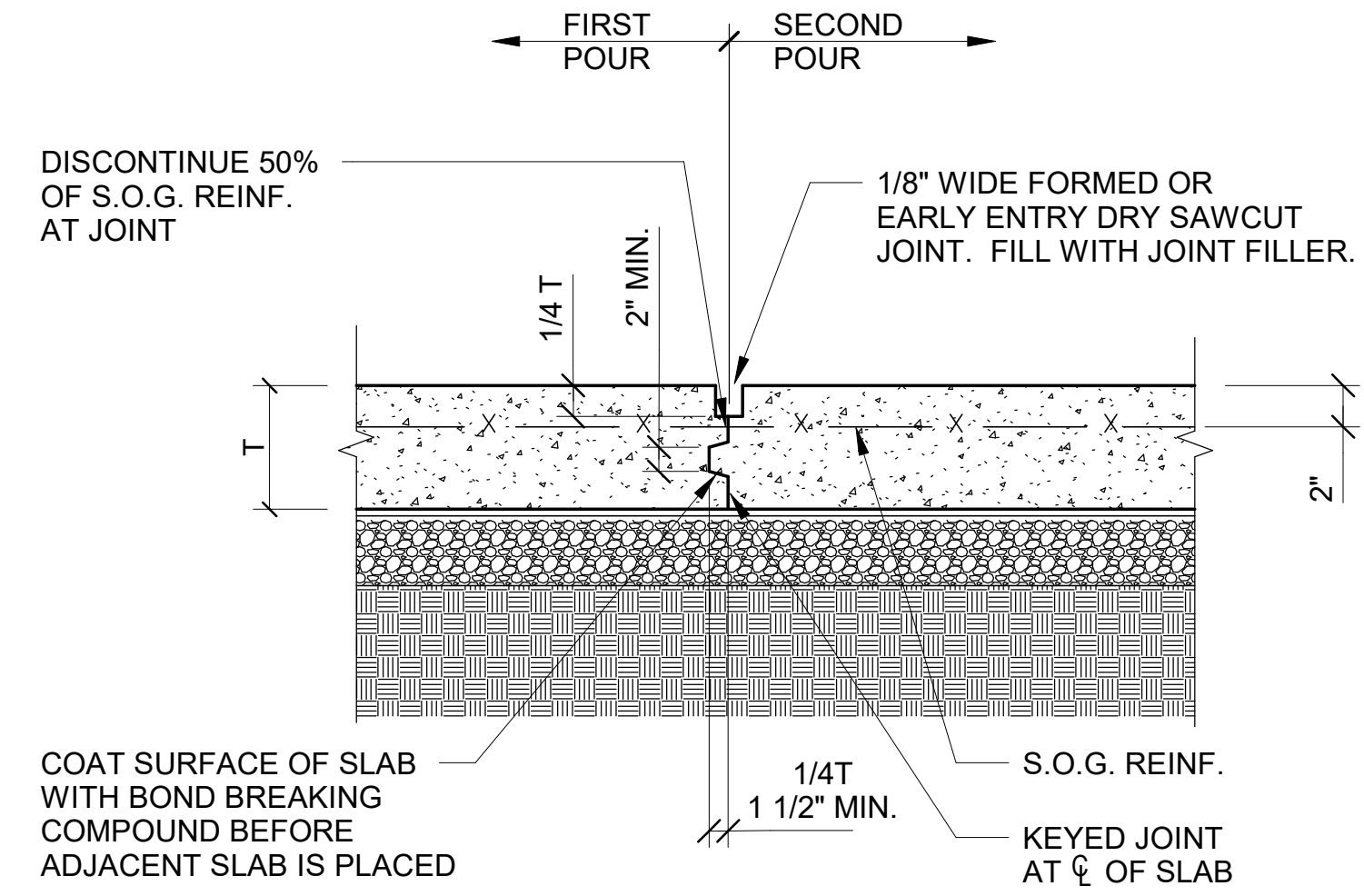
**TYPICAL ELEVATION TURN-DOWN SLAB STEP**

BB401 BB502 SCALE 3/8" = 1'-0"



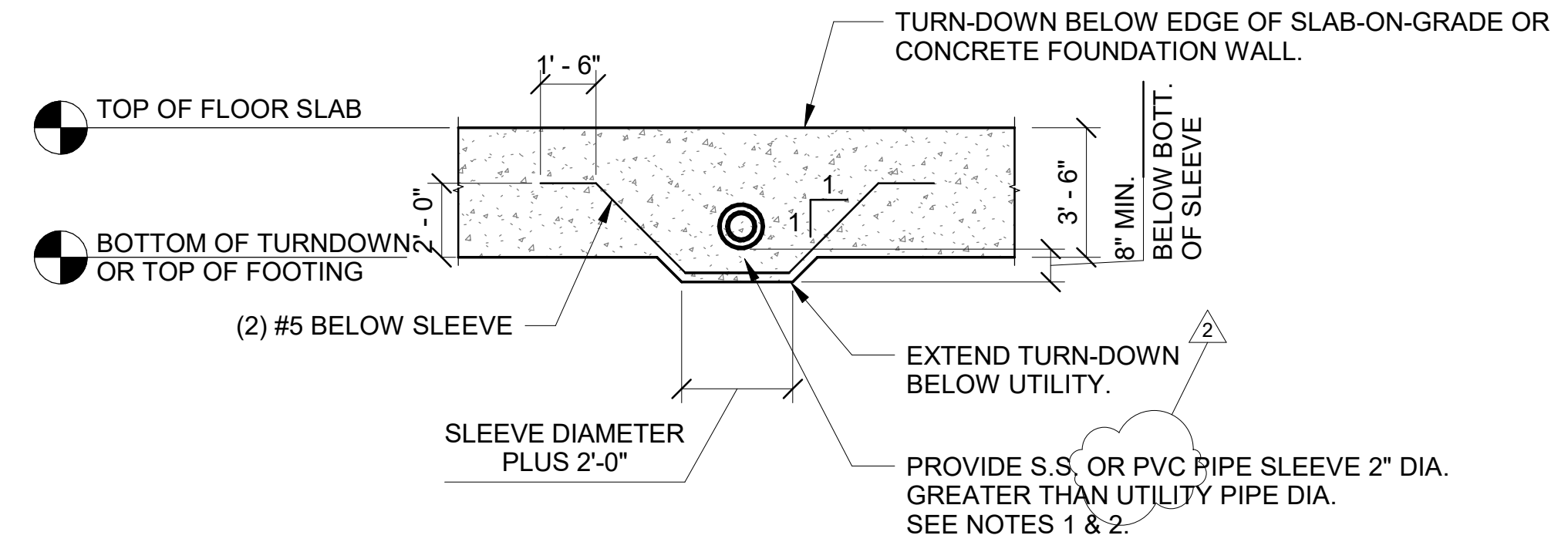
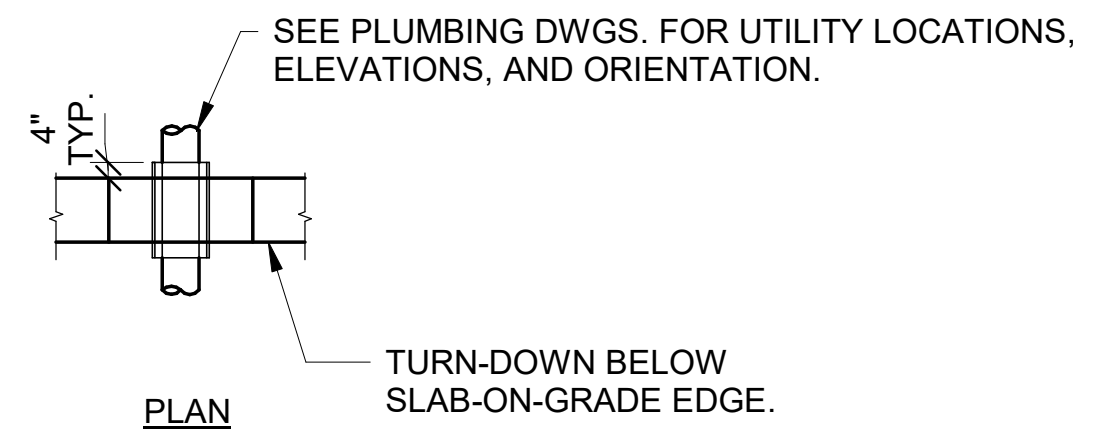
**TYPICAL S.O.G. CONTROL JOINT DETAIL**

BB502 BB502 SCALE 3/4" = 1'-0"



**TYPICAL S.O.G. CONSTRUCTION JOINT DETAIL**

BB502 BB502 SCALE 3/4" = 1'-0"



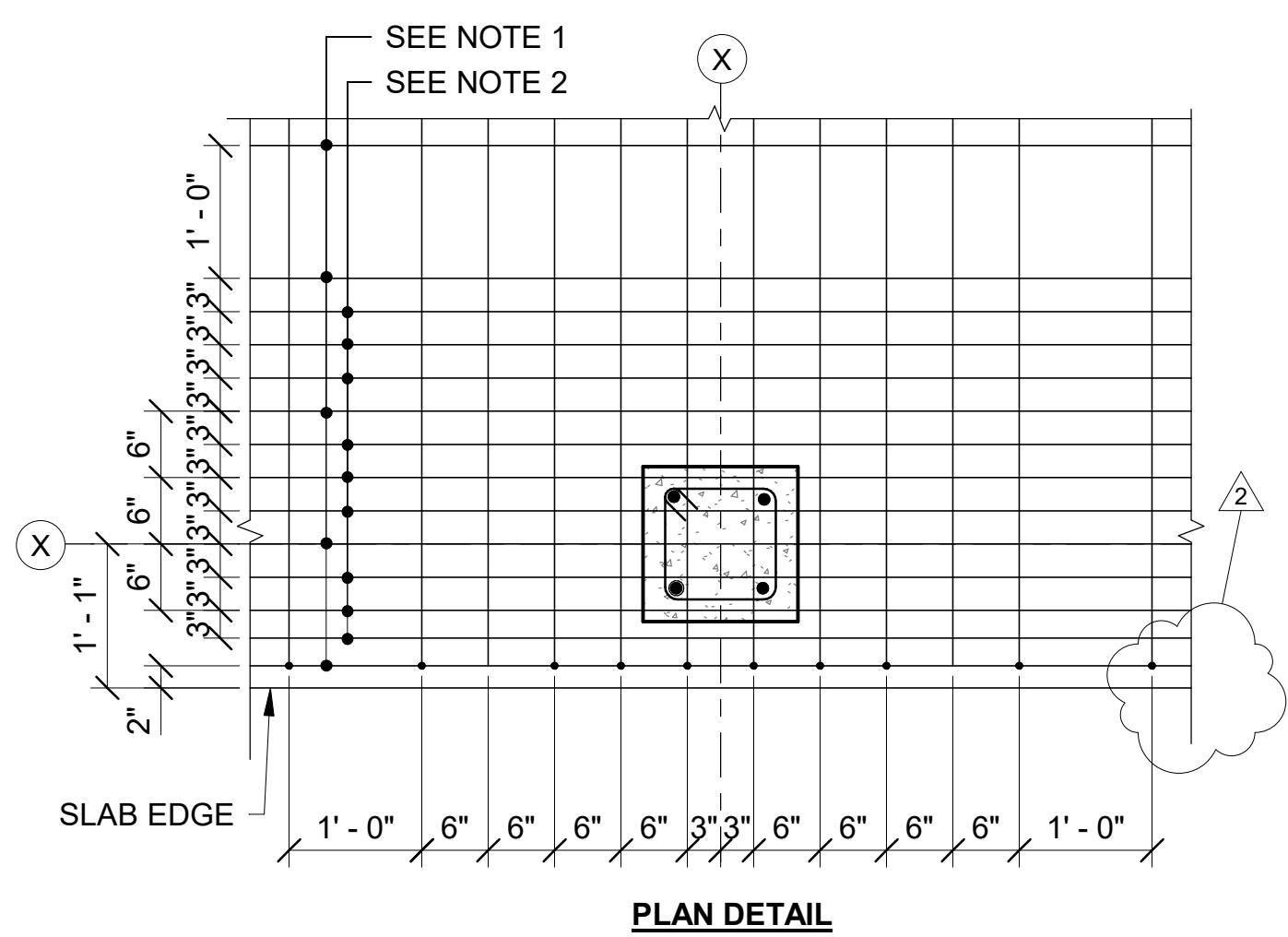
**ELEVATION AT SHALLOW UTILITY (LESS THAN 4'-0" BELOW SLAB)**

**NOTES:**

1. FILL SPACE BETWEEN PIPE AND PIPE SLEEVE WITH EXPANDED POLYSTYRENE INSULATION.
2. SLEEVE FOUNDATION ABOVE BOTTOM OF TURNDOWN OR TOP OF WALL FOOTING.
3. IF UTILITY IS BELOW BOTTOM OF TURNDOWN, NOTIFY ENGINEER FOR DIRECTION.
4. IF UTILITY PASSES THROUGH A CONC. WALL, SLEEVE WALL SIM. TO THIS DETAIL. IF UTILITY IS WITHIN OR BELOW WALL FOOTING, STEP FOOTING DOWN BELOW UTILITY PER DETAIL 7/BB502 OR LOWER ENTIRE LENGTH OF FOOTING TO PASS BELOW UTILITY AND SLEEVE WALL. NOTIFY ENGINEER IF THIS CONDITION EXISTS.

**TURNDOWN FOOTING AT UTILITY CROSSING DETAIL**

BB401 BB502 SCALE 1/4" = 1'-0"

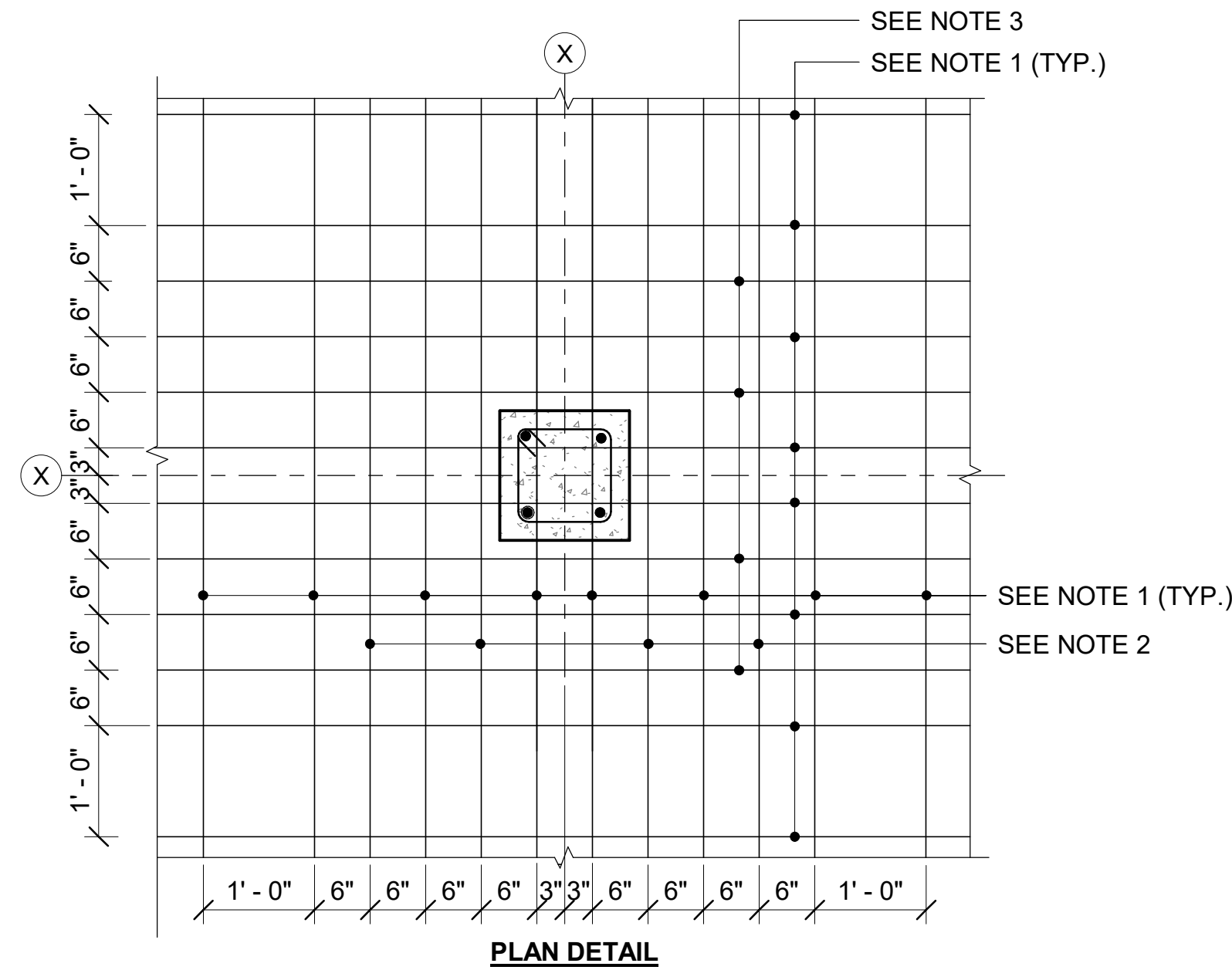


**NOTES:**

1. (5) #5 TYPICAL T&B REINFORCING PER FRAMING PLAN.
2. (9) #5 ADDITIONAL T&B BARS IN THE E-W DIRECTION PER FRAMING PLAN.
3. SEE DETAIL 9/BB502 FOR ADDITIONAL REINFORCING IN N-S DIRECTION.

**PLAN DETAIL - TYPICAL SLAB REINFORCING THROUGH EXTERIOR COLUMN**

BB502 BB502 SCALE 3/4" = 1'-0"



**NOTES:**

1. (8) #5 TYPICAL T&B REINFORCING BOTH WAYS PER FRAMING PLAN.
2. (4) #5 ADDITIONAL TOP AND BOTTOM BARS IN THE N-S DIRECTION PER FRAMING PLAN.
3. (4) #5 ADDITIONAL TOP AND BOTTOM BARS IN THE E-W DIRECTION PER FRAMING PLAN.

**PLAN DETAIL - TYPICAL SLAB REINFORCING THROUGH INTERIOR COLUMN**

BB502 BB502 SCALE 3/4" = 1'-0"

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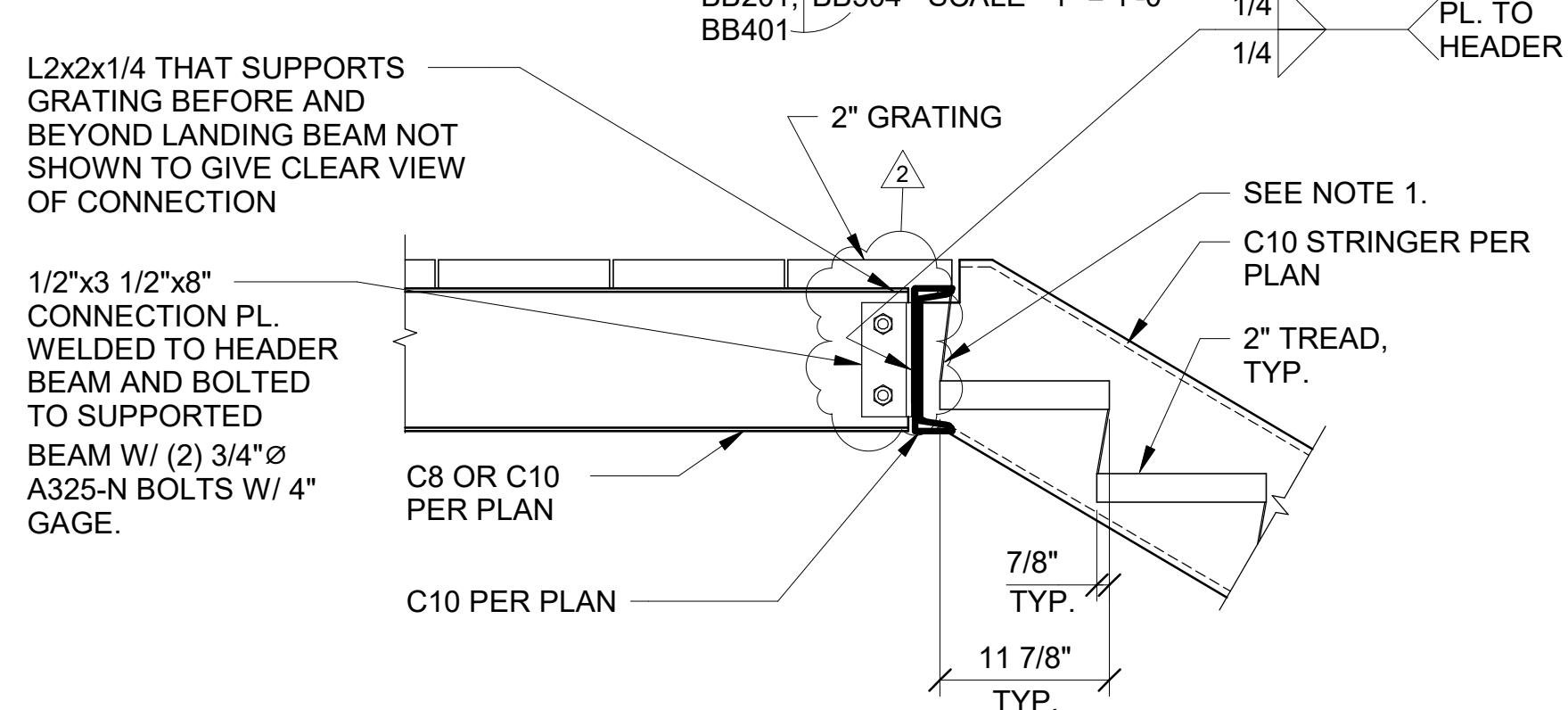
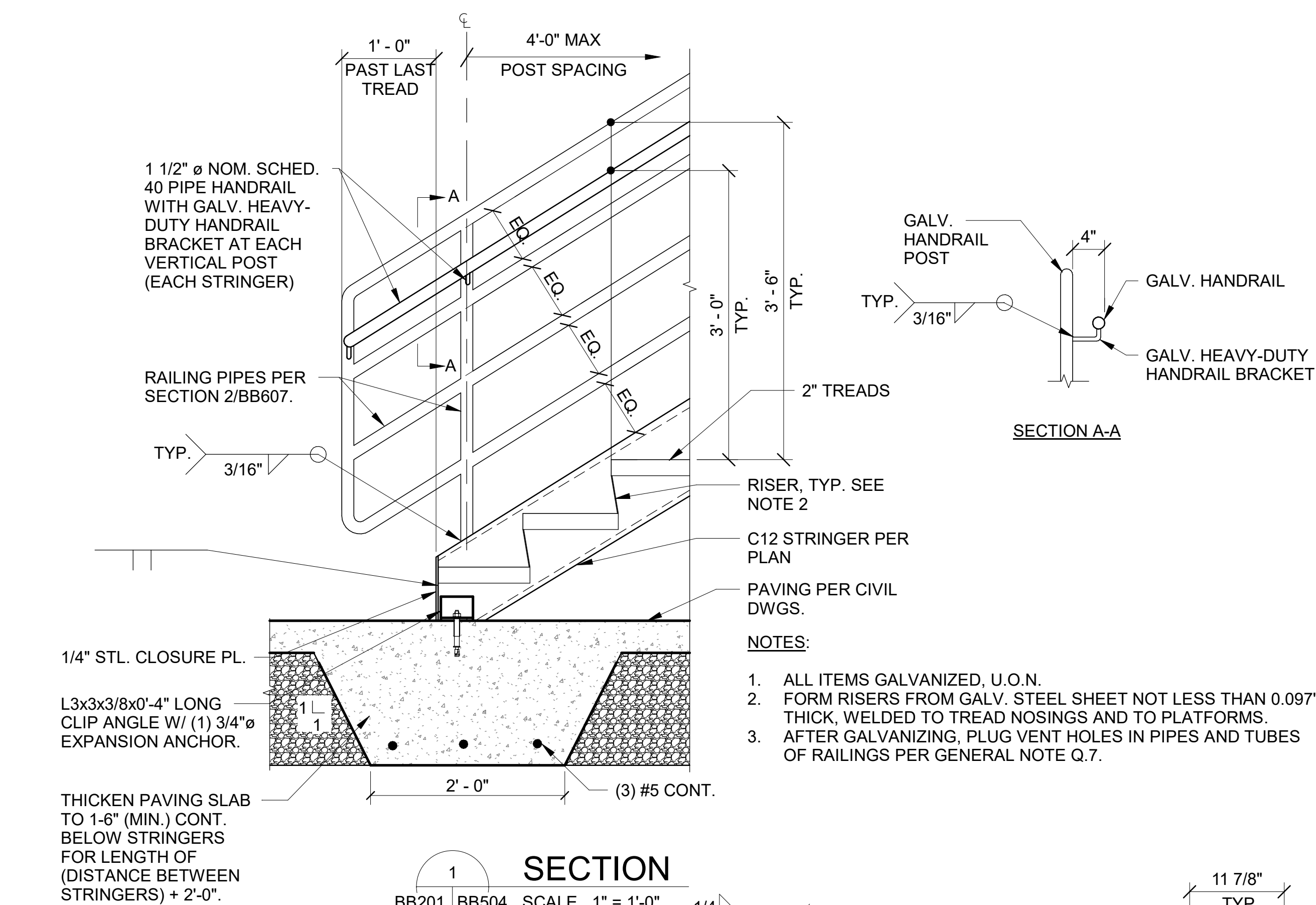


NO.	REVISION	DATE
1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/25**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**BURN BUILDING - FOUNDATION DETAILS**

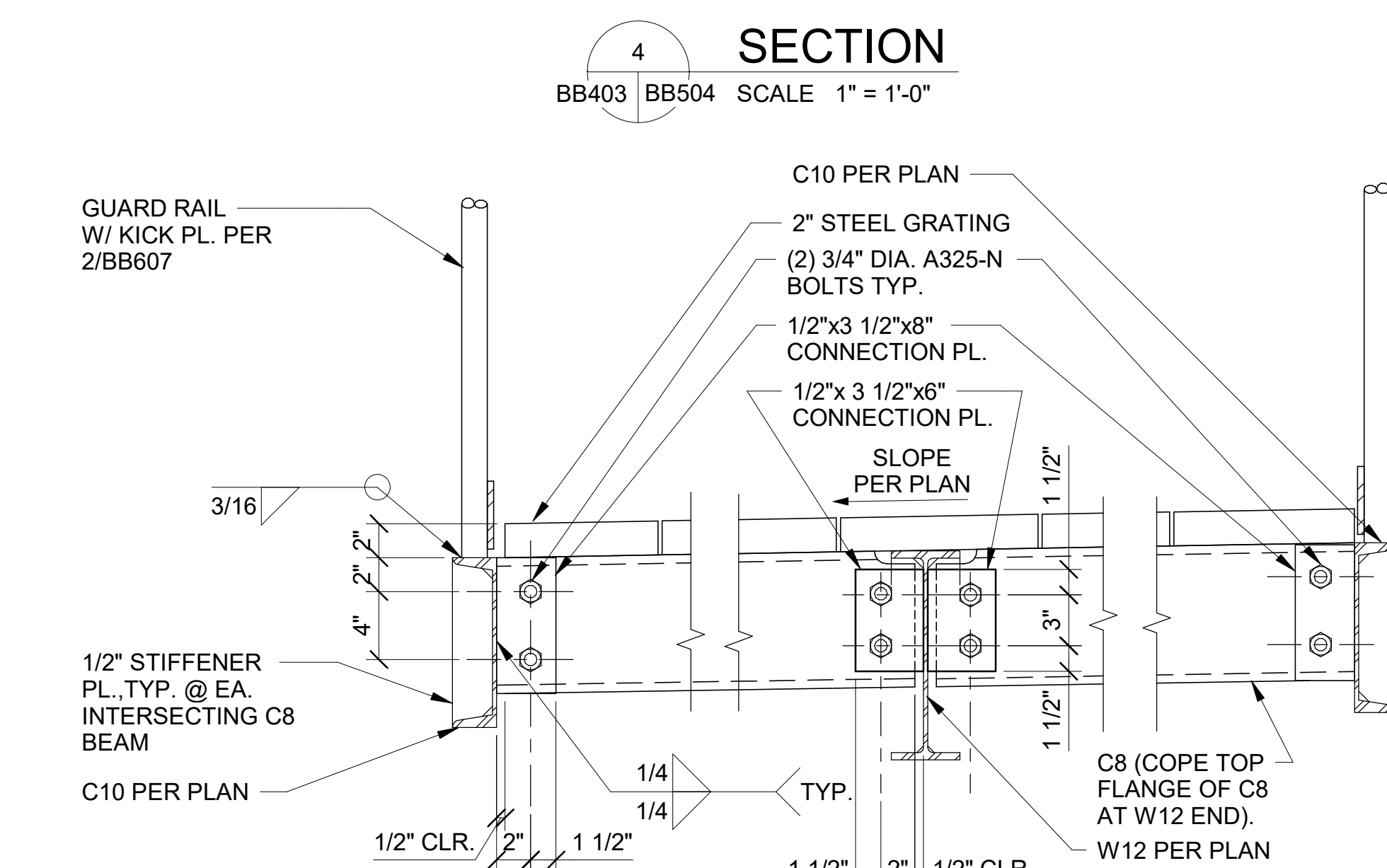
**BB502**





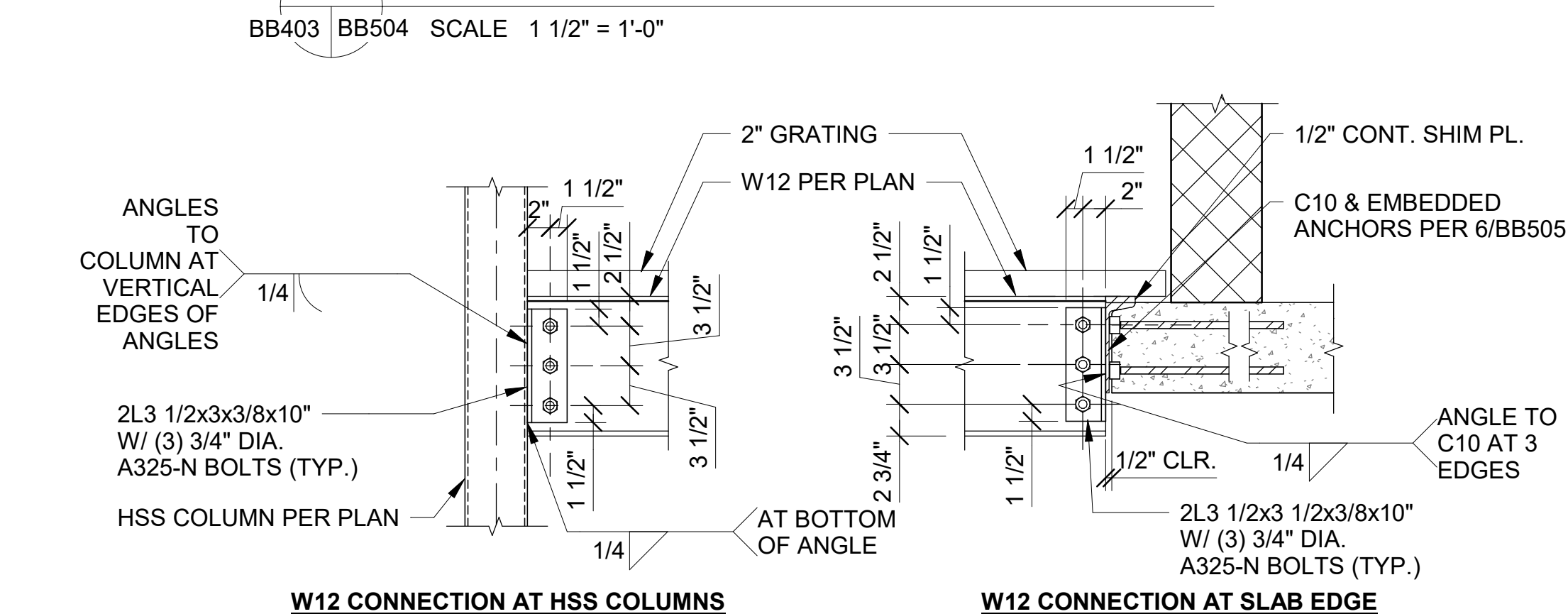
NOTE:

1. FORM RISERS FROM GALV. STEEL SHEET NOT LESS THAN 0.097" THICK, WELDED TO TREAD NOSINGS AND TO PLATFORMS.
2. CONNECT STAIR STRINGER TO LANDING BEAM WITH 13x3x3/8x0'-6" LONG SHOP WELDED TO STRINGER AND BOLTED TO LANDING BEAM WITH (2) 3/4" DIA. A325-N BOLTS. LOCATE CLIP ANGLE ON OPPOSITE SIDE OF STRINGER FROM TREAD.

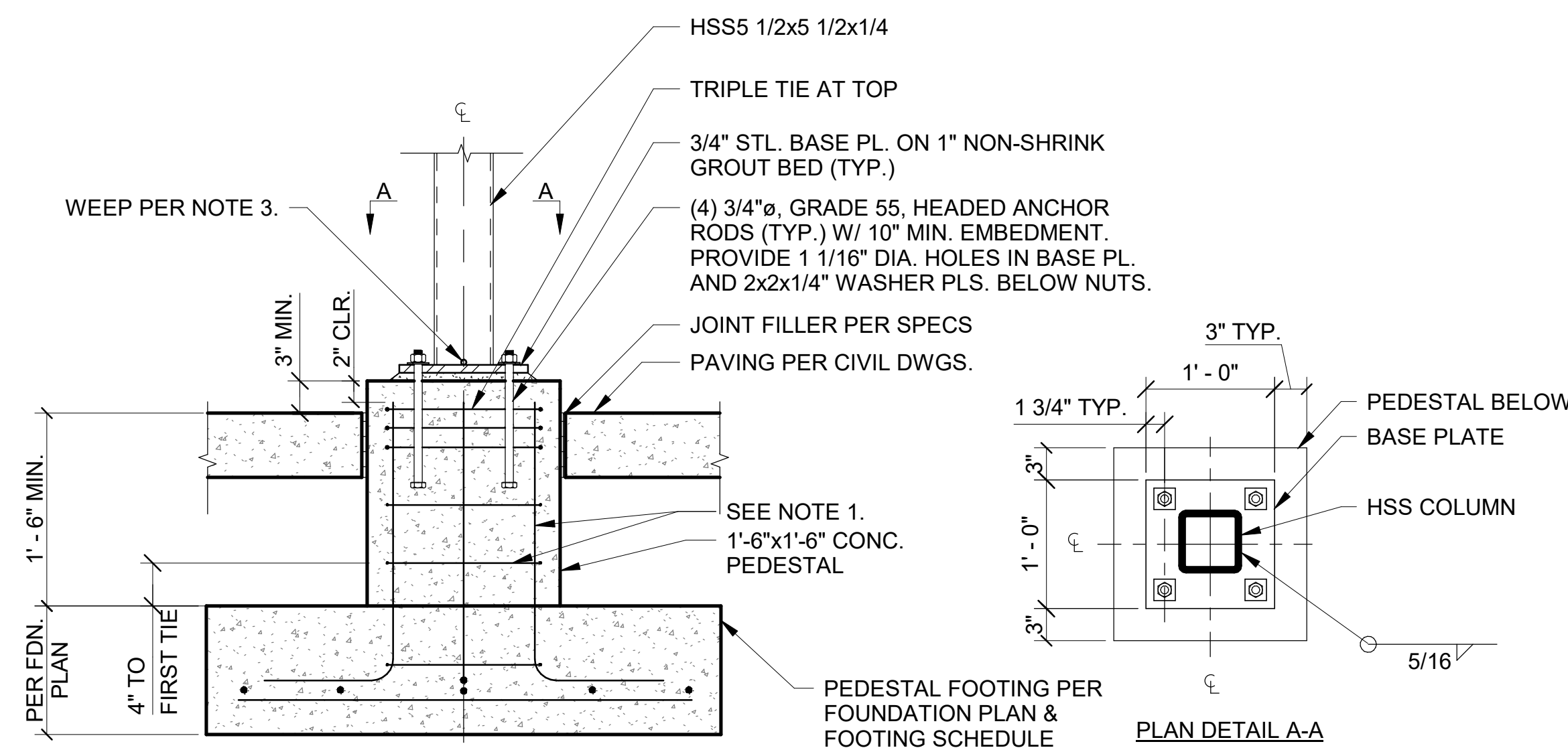


NOTE: CONT. L2x2x1/4 WELDED TO C10'S TO SUPPORT GRATING IS NOT SHOWN TO PROVIDE A CLEAR VIEW OF BEAM CONNECTIONS.

## SECTION - STEEL DECK FRAMING CONNECTIONS



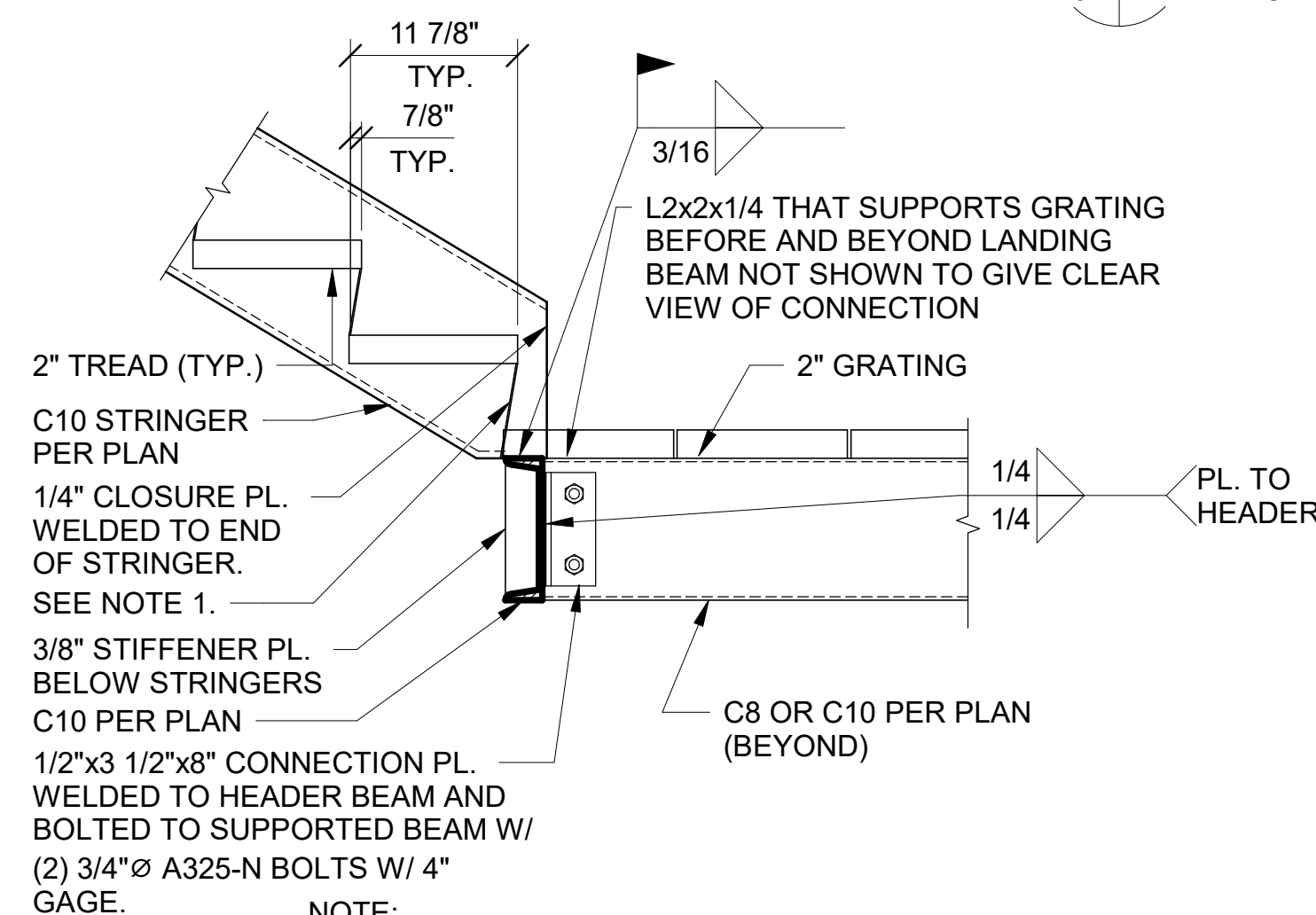
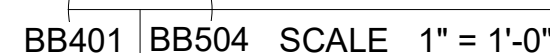
## W12 CONNECTIONS



NOTES:

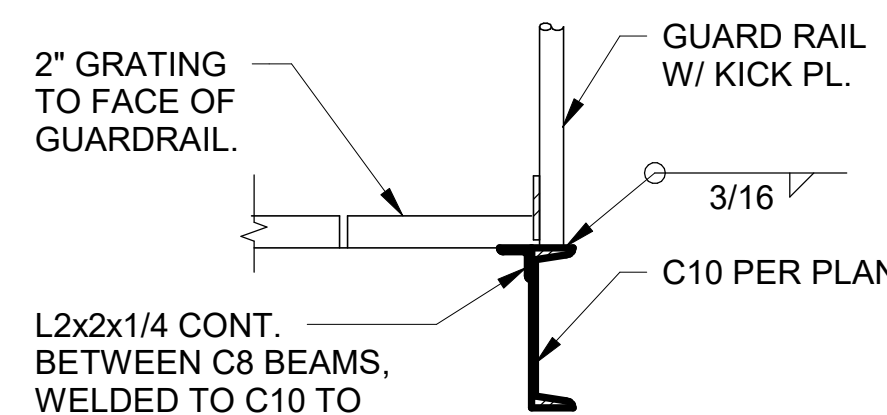
1. PROVIDE (8) #6 VERTICAL BARS W/ 90° END HOOKS IN FOOTINGS AND #4 CLOSED TIES AT 12" O.C. MAX. IN ALL CONCRETE PEDESTALS.
2. PROVIDE HOT-DIP GALVANIZED STEEL FOR ALL STEEL PIECES, U.O.N.
3. PROVIDE 1/2" Ø WEEP HOLE AT BOTTOM OF TUBE THRU SIDE WALL AT ONE FACE, AT TOP OF BASE PLATE, SHOP DRILLED BEFORE GALVANIZING.

## CONCRETE PEDESTAL DETAIL

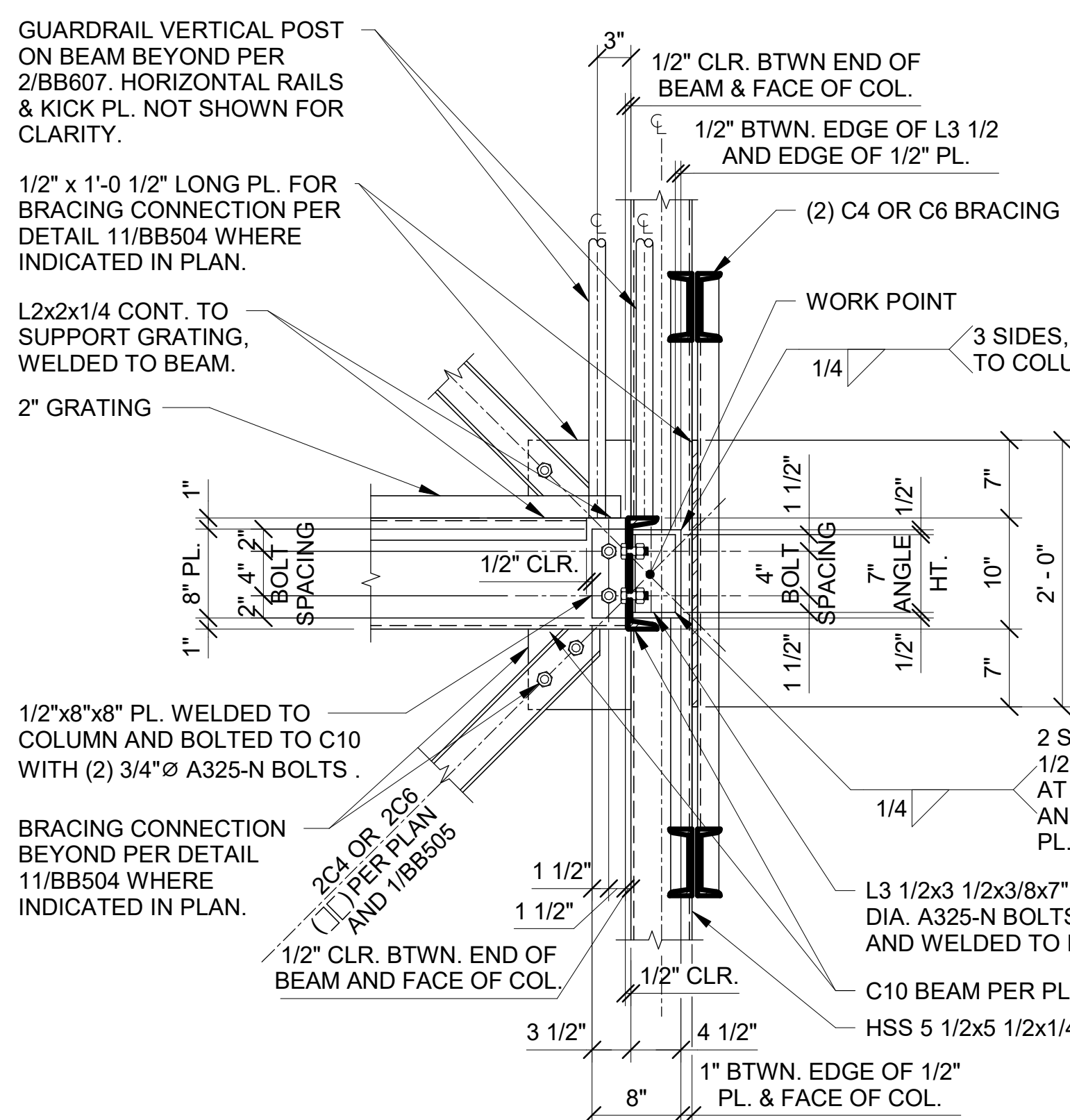
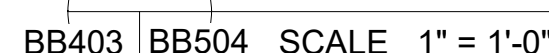


NOTE:

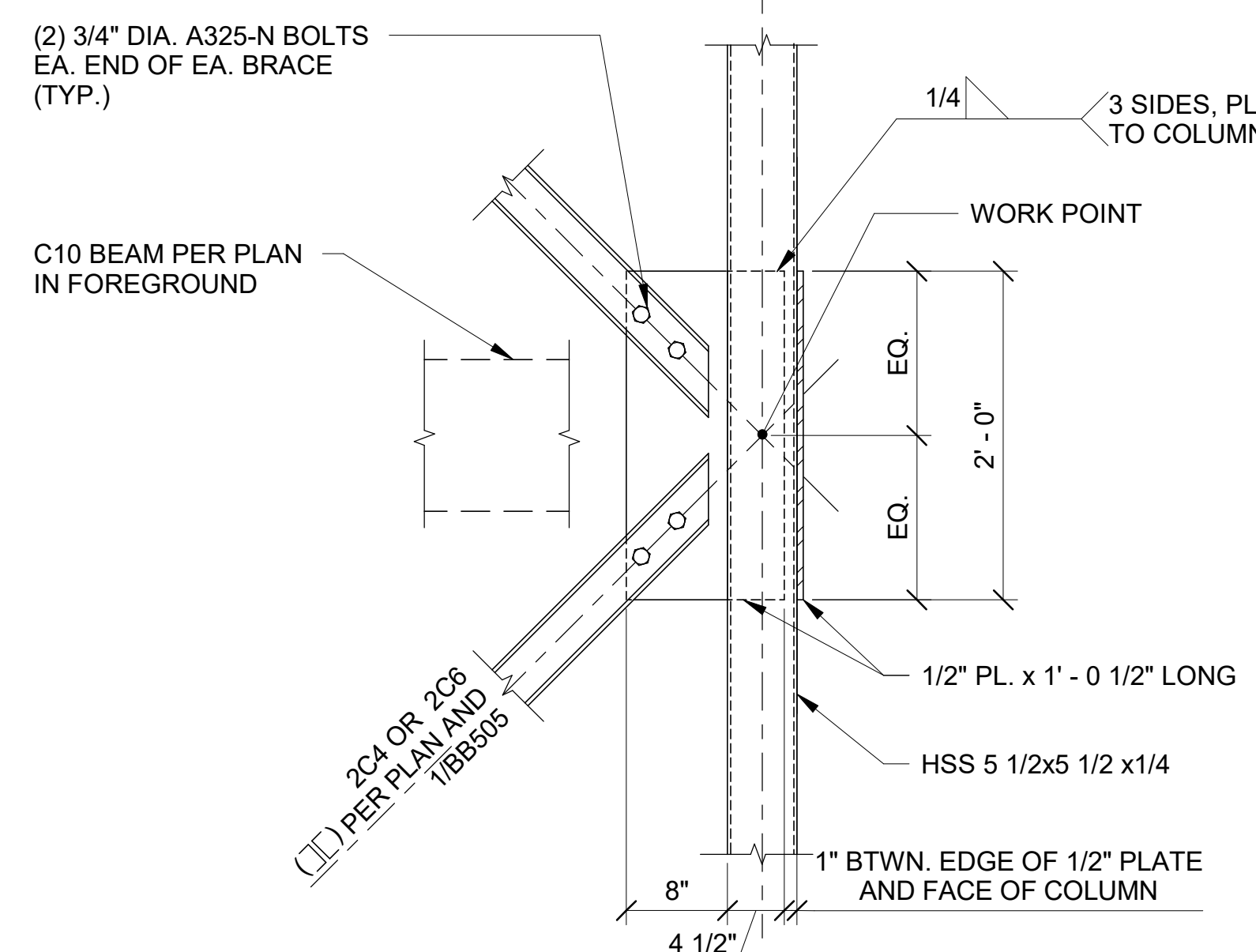
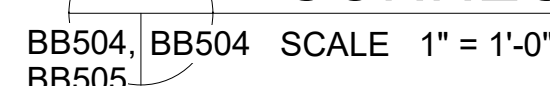
1. FORM RISERS FROM GALV. STEEL SHEET NOT LESS THAN 0.097" THICK, WELDED TO TREAD NOSINGS AND TO PLATFORMS.



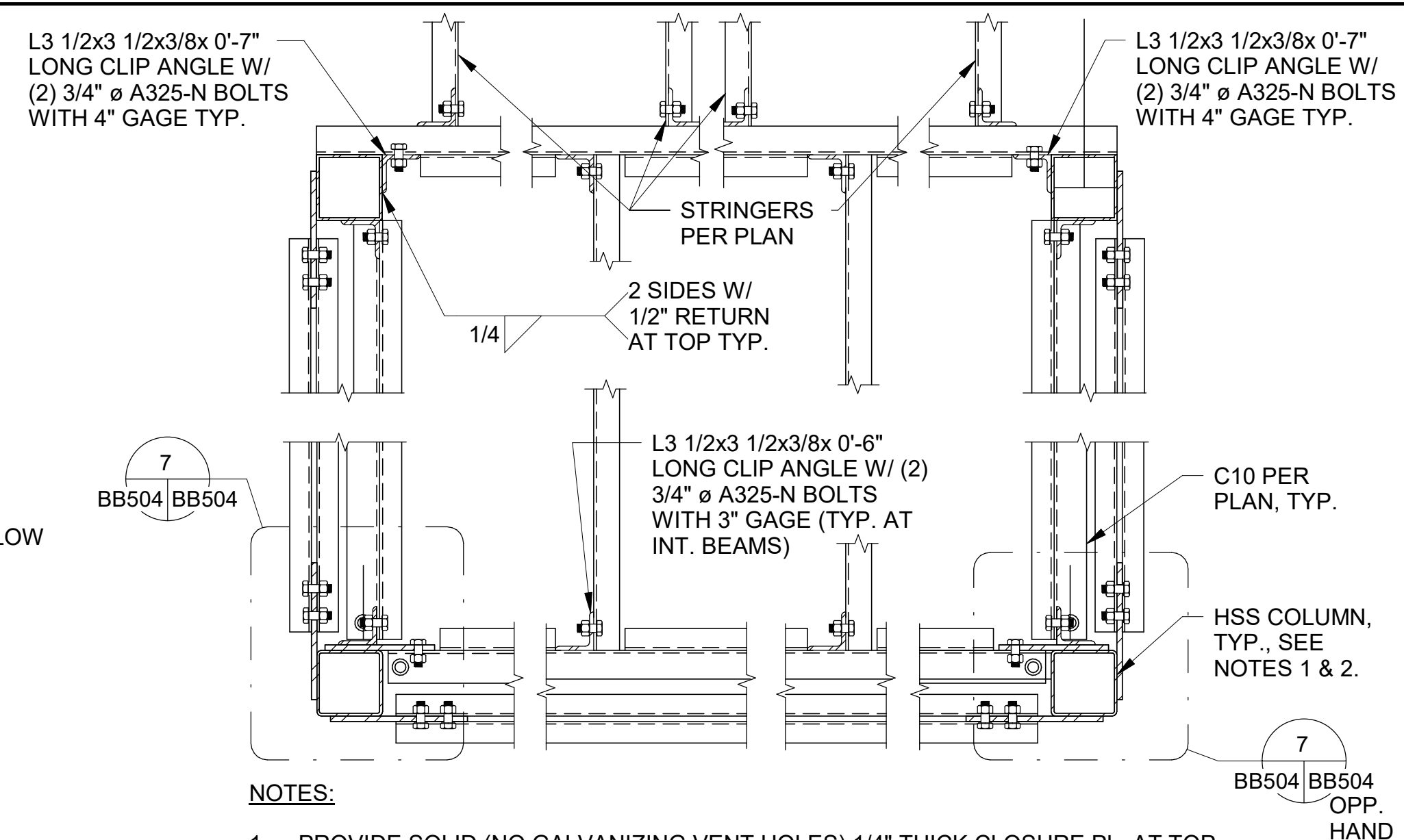
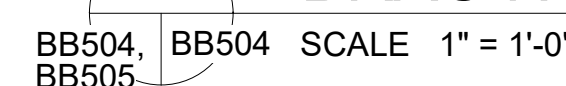
## SECTION



## CROSS BRACING BEAM TO COLUMN CONNECTION



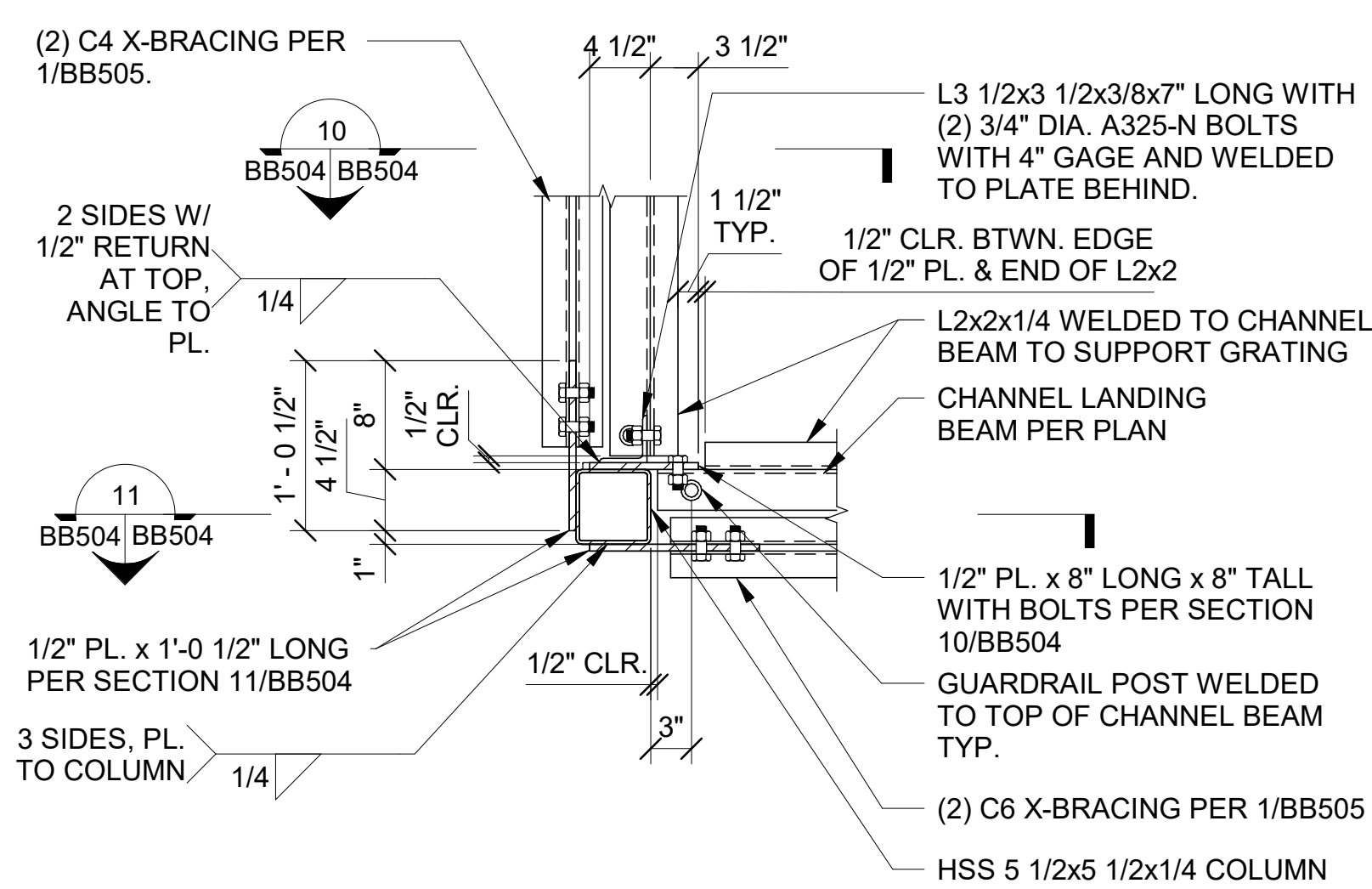
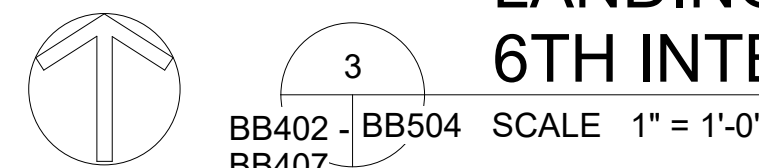
## BRACING CONNECTION



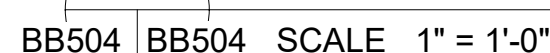
NOTES:

1. PROVIDE SOLID (NO GALVANIZING VENT HOLES) 1/4" THICK CLOSURE PL. AT TOP OF ALL TUBE COLUMNS, WELDED ALL AROUND TO PREVENT MOISTURE FROM ENTERING THE TUBES.
2. SEE 2/BB403 FOR FRAMING SIZES.
3. PROVIDE 1/2" Ø WEEP HOLE AT BOTTOMS OF TUBES PER 2/BB504

PLAN DETAIL - INTERMEDIATE STAIR  
LANDING FRAMING PLAN, 1ST THROUGH  
6TH INTERMEDIATE LANDINGS



## PLAN DETAIL - INTERMEDIATE STAIR LANDING BEAMS TO COLUMNS



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NCCCS NO. 2303



NO.	REVISION	DATE
1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

JOB NUMBER  
**22056**

---

DATE ISSUED  
**03/14/25**

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PROJECT STATUS  
**ISSUE FOR  
CONSTRUCTION**

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SHEET

**BURN BUILDING -  
CONCRETE STAIR  
SECTIONS**

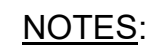
BB506



1. PROVIDE GALVANIZED, SLIP-RESISTANT STAIR NOSSING (TYP. AT ALL TREADS). PROVIDE 1/4" MIN. THICK, GRADE 2, ROUNDED-EDGE STAIR NOSSING, 1 1/2" DEEP x 3" WIDE x 3'-11" LONG, TIGHT TO CONCRETE WALL TO AVOID GUARDRAIL BASE PLATE AT OPPOSITE END OF TREAD. PROVIDE SLIPNOT STAIR NOSSING WITH J-HOOKS, AS MANUFACTURED BY SLIPNOT METAL SAFETY FLOORING AT (800) 754-7668 OR WWW.SLIPNOT.COM, OR AN EQUIVALENT APPROVED BY THE ENGINEER. INSTALL STAIR NOSSINGS IN ACCORDANCE WITH REQUIREMENTS OF THE MANUFACTURER.
2. WALL REINFORCING HAS BEEN OMITTED FOR CLARITY.
3. CONNECT INTERMEDIATE LANDING SLAB TO CONCRETE WALLS USING DOWEL-IN SYSTEM BY DAYTON SUPERIOR, OR AN APPROVED EQUIVALENT/ ERICO OR BARSPLICE PRODUCTS, INC. FOR EACH REINFORCING BAR THAT PASSES FROM THE LANDING SLAB INTO WALL. PROVIDE A #5 D102A 90° HOOKED DOWEL BAR SPLICER CANT INTO WALL, WITH DIMENSIONS A=5" & B=2" - 7", PLUS A #5 D-101 90° HOOKED DOWEL BAR SPLICER CANT INTO WALL, LAPPING THE SLAB REINFORCING AT HALF-2, 7" MIN. LAP. LAP WITH BOTH WHERE CONCRETE STAIR SIDES INTERSECT CONCRETE WALLS, CONNECT STAIR SLABS TO CONCRETE WALLS USING DOWEL-IN SYSTEM DESCRIBED IN NOTE 3.

## CONCRETE STAIR SECTION

BB201, BB506 SCALE 3/4" = 1'-0"  
BB401



1. PROVIDE SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS) PER NOTE 1 OF SECTION 1/BB506.
2. WALL REINFORCING HAS BEEN OMITTED FOR CLARITY.
3. CONNECT SIDES OF CONCRETE STAIRS TO CONCRETE WALLS PER NOTE 4 OF SECTION 1/BB506.

## CONCRETE STAIR SECTION

BB402 - BB506 SCALE 3/4" = 1'-0"  
BB407



1. PROVIDE SLIP-RESISTANT STAIR NOSING (TYP. AT ALL TREADS) PER NOTE 1 OF SECTION 1/BB506.
2. WALL REINFORCING HAS BEEN OMITTED FOR CLARITY.
3. CONNECT SIDES OF CONCRETE STAIRS TO CONCRETE WALLS PER NOTE 4 OF SECTION 1/BB506.

## CONCRETE STAIR SECTION

BB402 - BB506 SCALE 3/4" = 1'-0"  
BB407



1. SLOPE TOP SURFACE OF LANDING SLAB PER FLOOR PLANS.
2. SEE SECTION 2/BB501 FOR TYPICAL CONC. WALL REINF. WHICH HAS BEEN OMITTED FROM THIS SECTION FOR CLARITY.

## INTERMEDIATE STAIR LANDING SECTION

BB402 - BB506 SCALE 3/4" = 1'-0"  
BB407



1. PROVIDE GALVANIZED, SLIP-RESISTANT STAIR NOSING CAST IN SLAB (TYP. AT ALL TREADS). PROVIDE 1/4" MIN. THICK, GRADE 2, ROUNDED-EDGE STAIR NOSINGS, 3/4" DEEP X 4" WIDE X 3'-8" LONG. PROVIDE SLIPNOT STAIR NOSINGS WITH J-HOOKS, AS MANUFACTURED BY SLIPNOT METAL SAFETY FLOORING AT (800) 754-7668 OR WWW.SLIPNOT.COM, OR AN EQUIVALENT APPROVED BY THE ENGINEER. INSTALL STAIR NOSINGS IN ACCORDANCE WITH REQUIREMENTS OF THE MANUFACTURER.
2. WHERE CONCRETE STAIR SIDES INTERSECT CONCRETE WALLS, CONNECT STAIR SLABS TO CONCRETE WALLS USING DOWEL-IN SYSTEM DESCRIBED IN NOTE 3 OF 1/BB306.

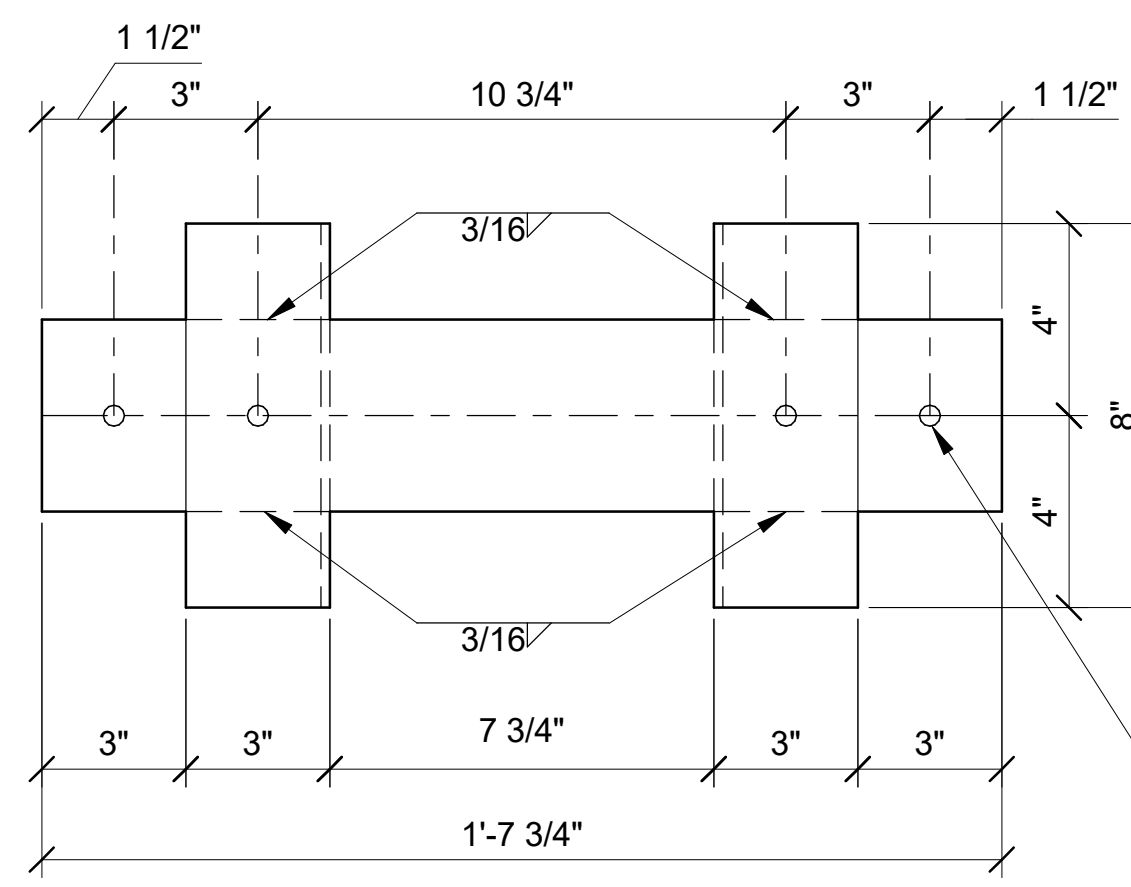
### STRAIGHT RUN STAIR

## CONCRETE STAIR SECTION

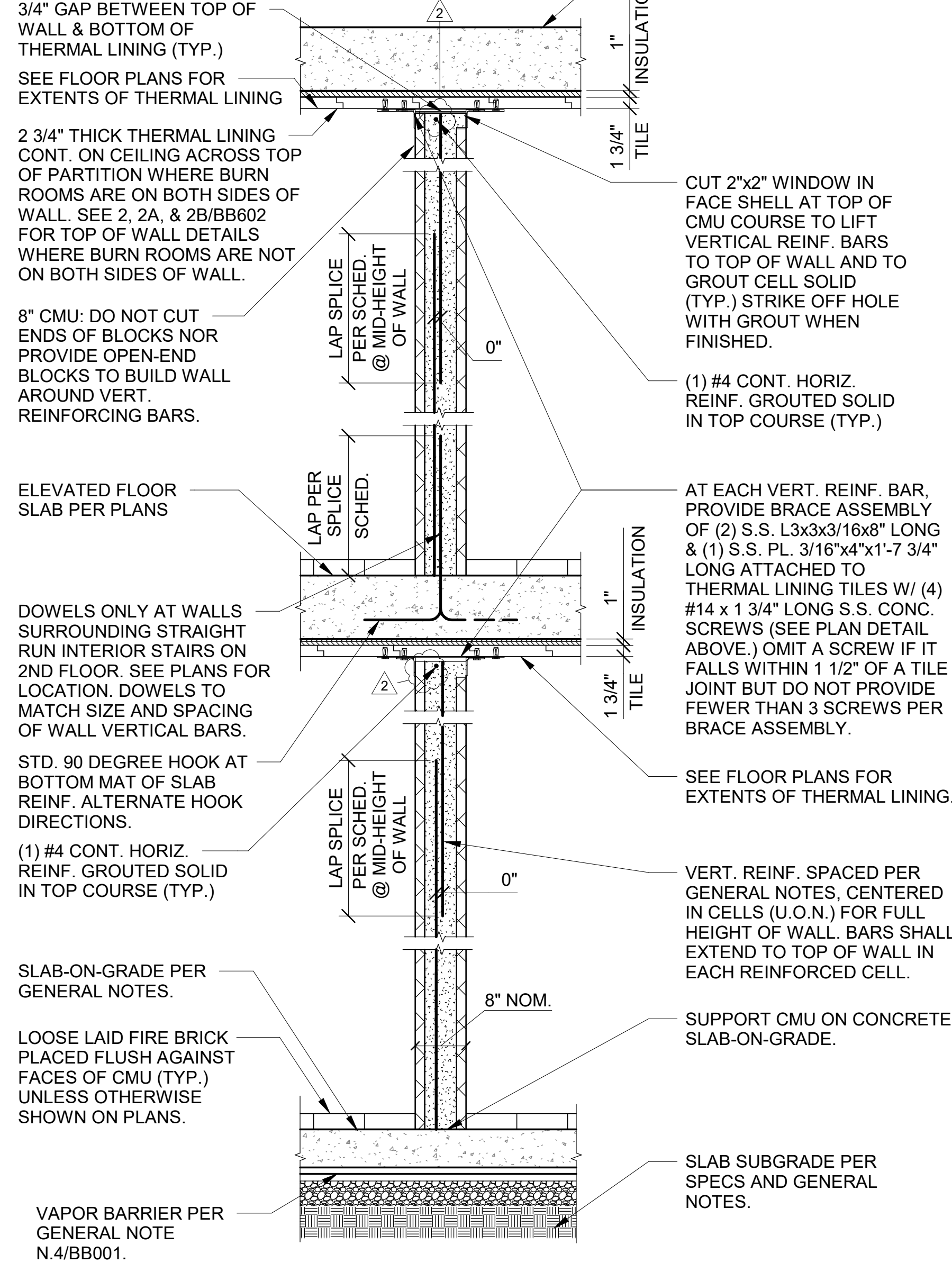
BB201, BB506 SCALE 3/8" = 1'-0"  
BB401

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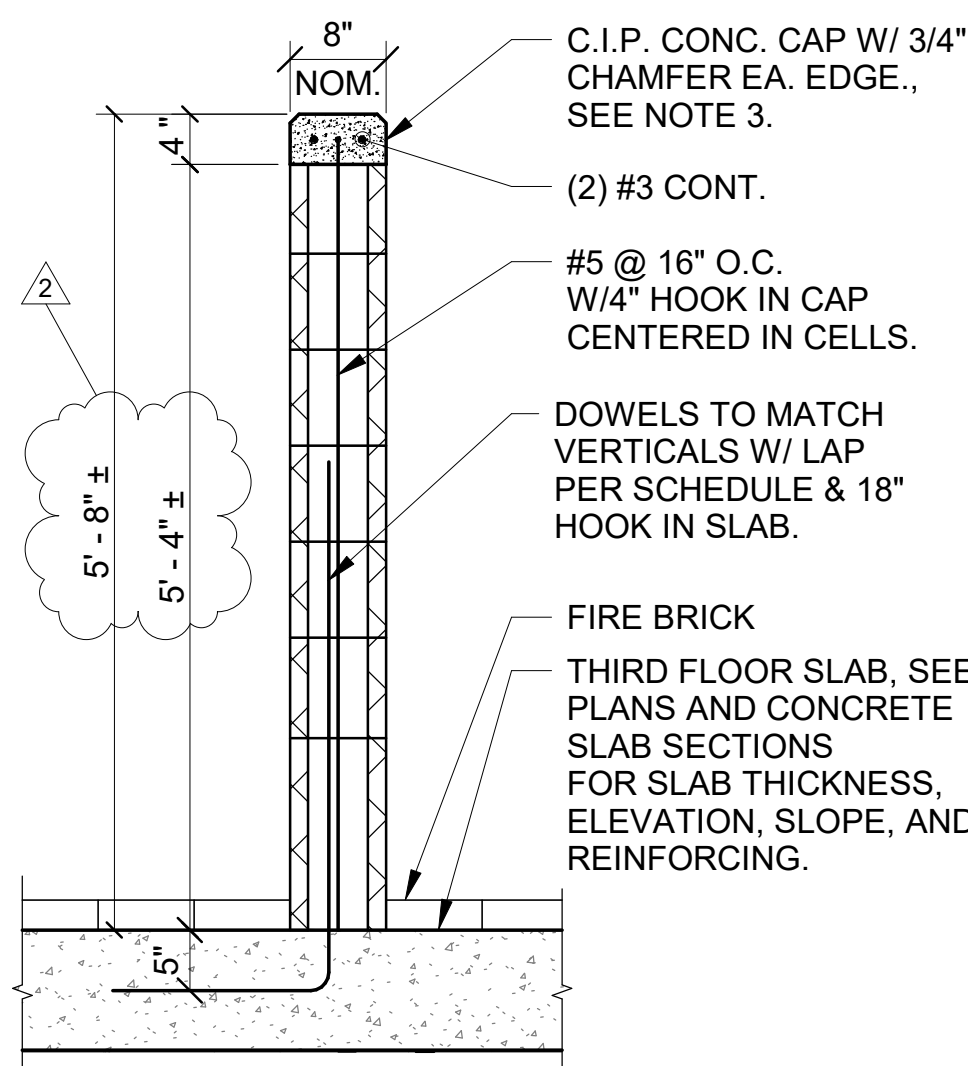
**PLAN DETAIL OF BRACE**  
SCALE 3" = 1' - 0"



- NOTES:**
- SEE 8/BB601 FOR TYPICAL LINTEL DETAILS.
  - INSTALL THERMAL LININGS AT CEILING PRIOR TO CONSTRUCTING INTERIOR WALLS (ONLY FOR WALLS WHERE A BURN ROOM IS ON BOTH SIDES OF THE WALL). SEE DETAILS 2, 2A, & 2B/BB602 FOR TOP OF WALL DETAILS WHERE BURN ROOMS ARE NOT ON BOTH SIDES OF WALLS.
  - CUT BOTTOM COURSE TO ACCOUNT FOR SLAB SLOPE AND PROVIDE FULL 8" TALL COURSE AT TOPS OF ALL WALLS. IF WALL DOES NOT COURSE HORIZONTALLY, PROVIDE SHORT COURSE WITHIN WALL LENGTH AT ANY LOCATION OTHER THAN AT ENDS OF WALL OR AT DOOR OR WINDOW JAMBS.
  - PROVIDE HORIZONTAL JOINT REINFORCING AT 16" O.C. MAX.
  - GROUT ALL CELLS SOLID FULL HEIGHT.

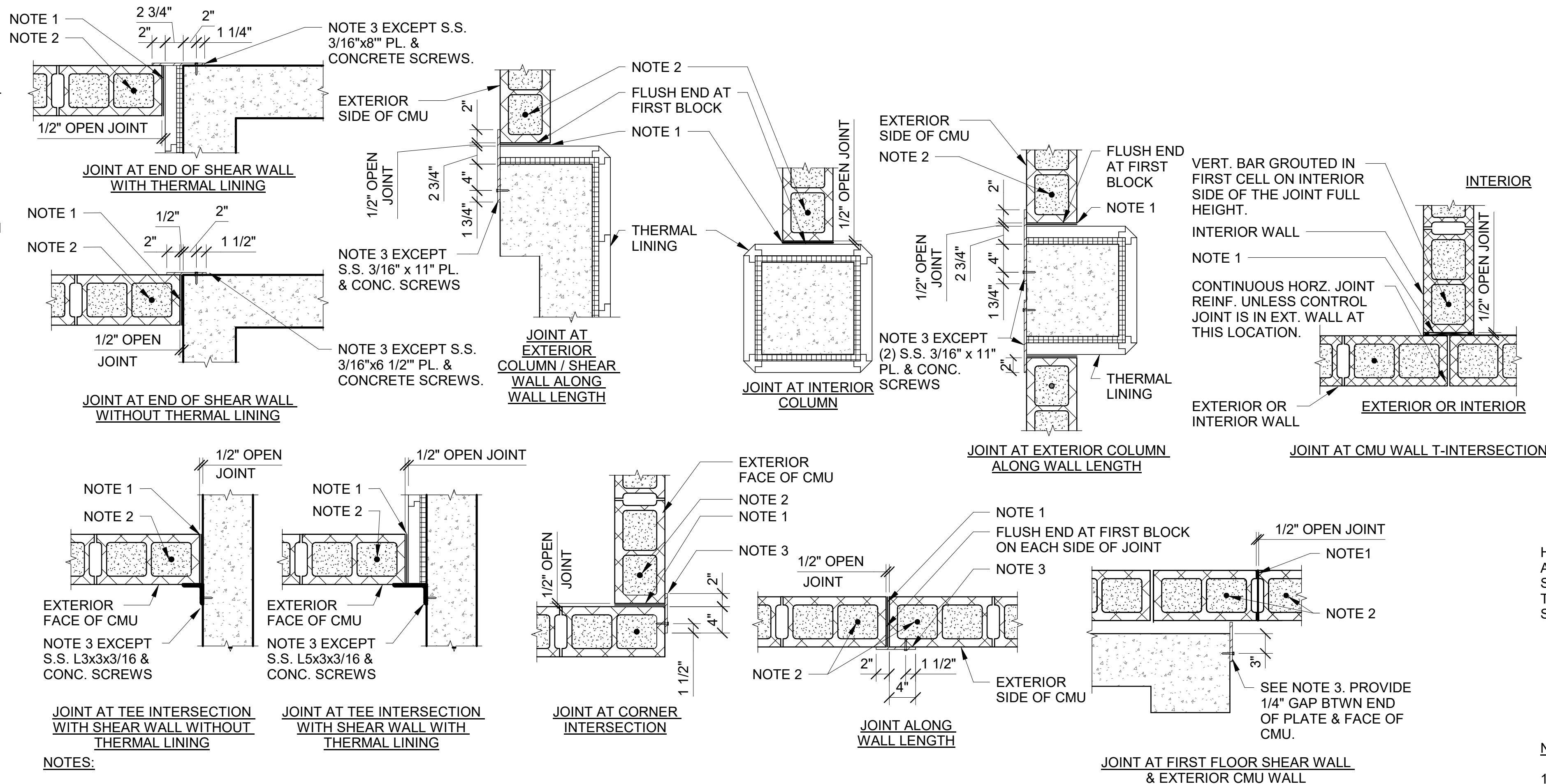
## TYPICAL INTERIOR NON-BEARING MASONRY WALL REINFORCING AND BRACING DETAILS

BB201 - BB601 SCALE 3/4" = 1'-0"  
BB206

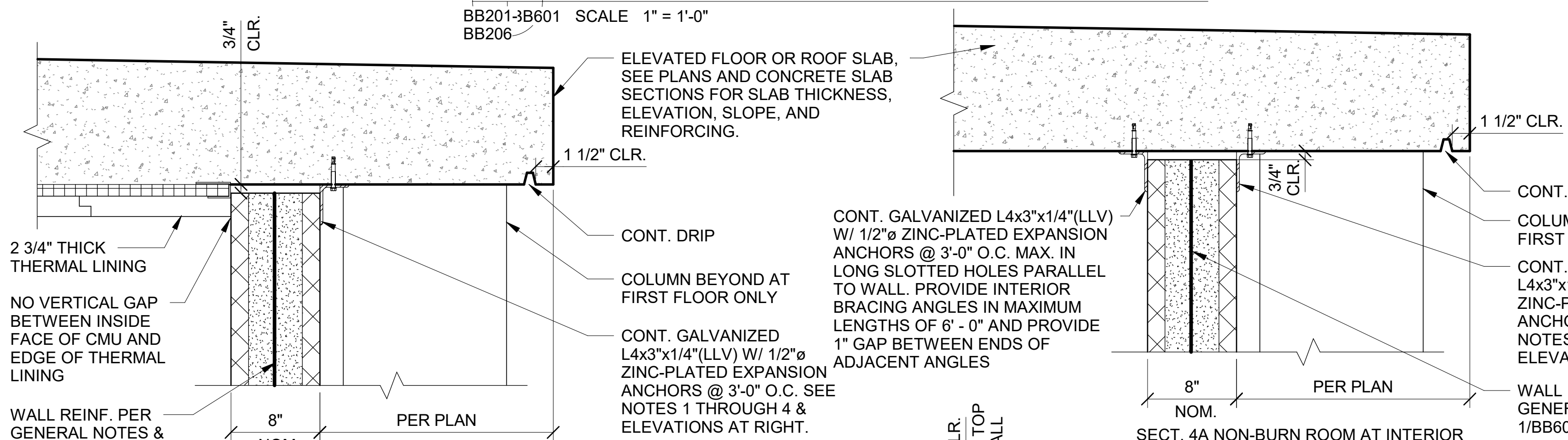


- NOTES:**
- PROVIDE HORIZ. JOINT REINFORCING @ 16" O.C. MAX. PER GENERAL NOTES & SPECS.
  - GROUT ALL CELLS SOLID.
  - CONC. CAP SHALL BE C.I.P., AIR-ENTRAINED CONCRETE PER GENERAL NOTE L.12 ON SHEET BB001.
  - TOPS OF ALL CUBICLE WALLS SHALL BE AT THE SAME ELEVATION. CUT BOTTOM COURSE AS NECESSARY ALONG SLAB SLOPE.

BB203 BB601 SCALE 3/4" = 1'-0"

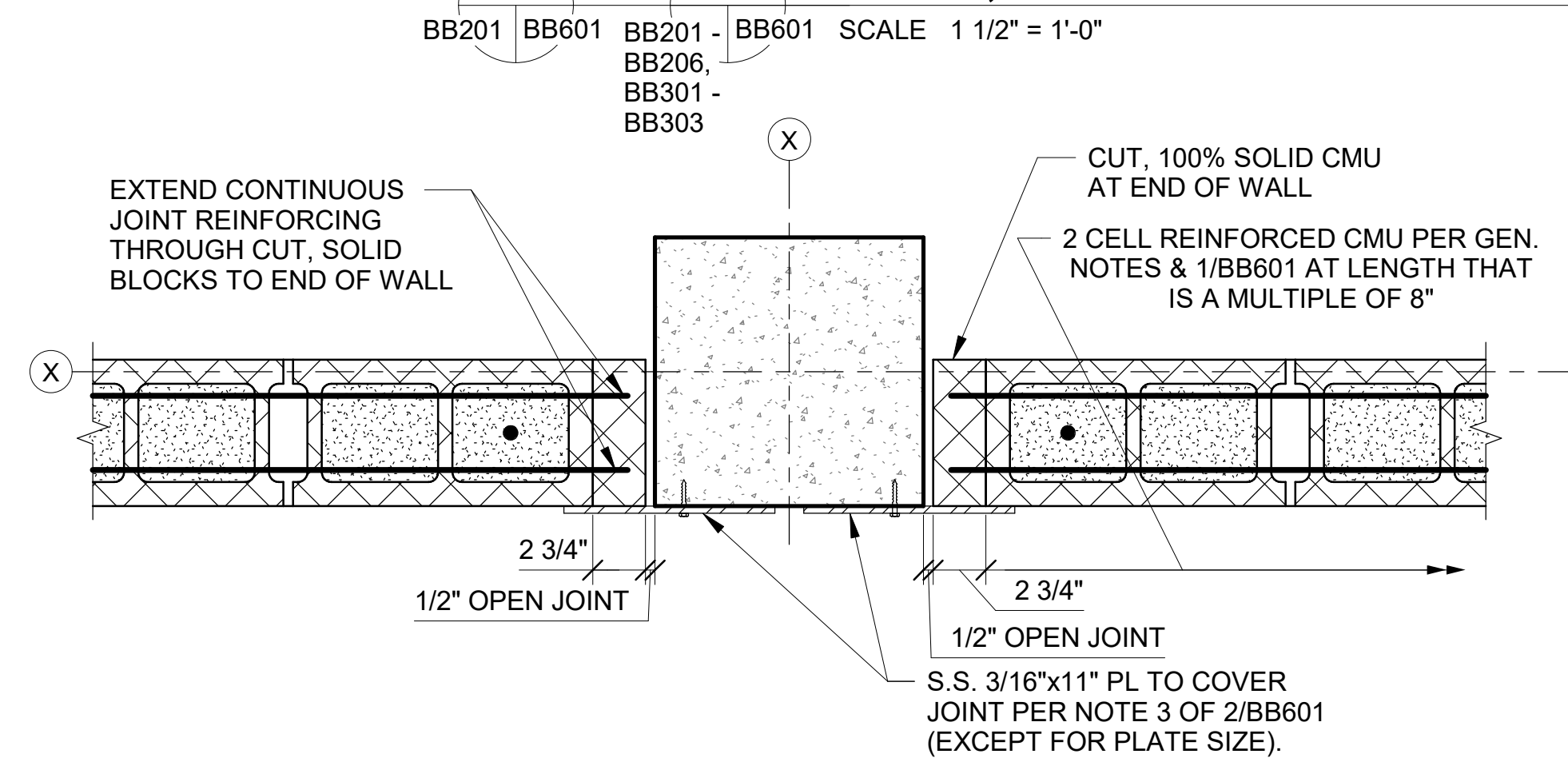


## PLAN DETAILS - OPEN JOINTS IN WALLS



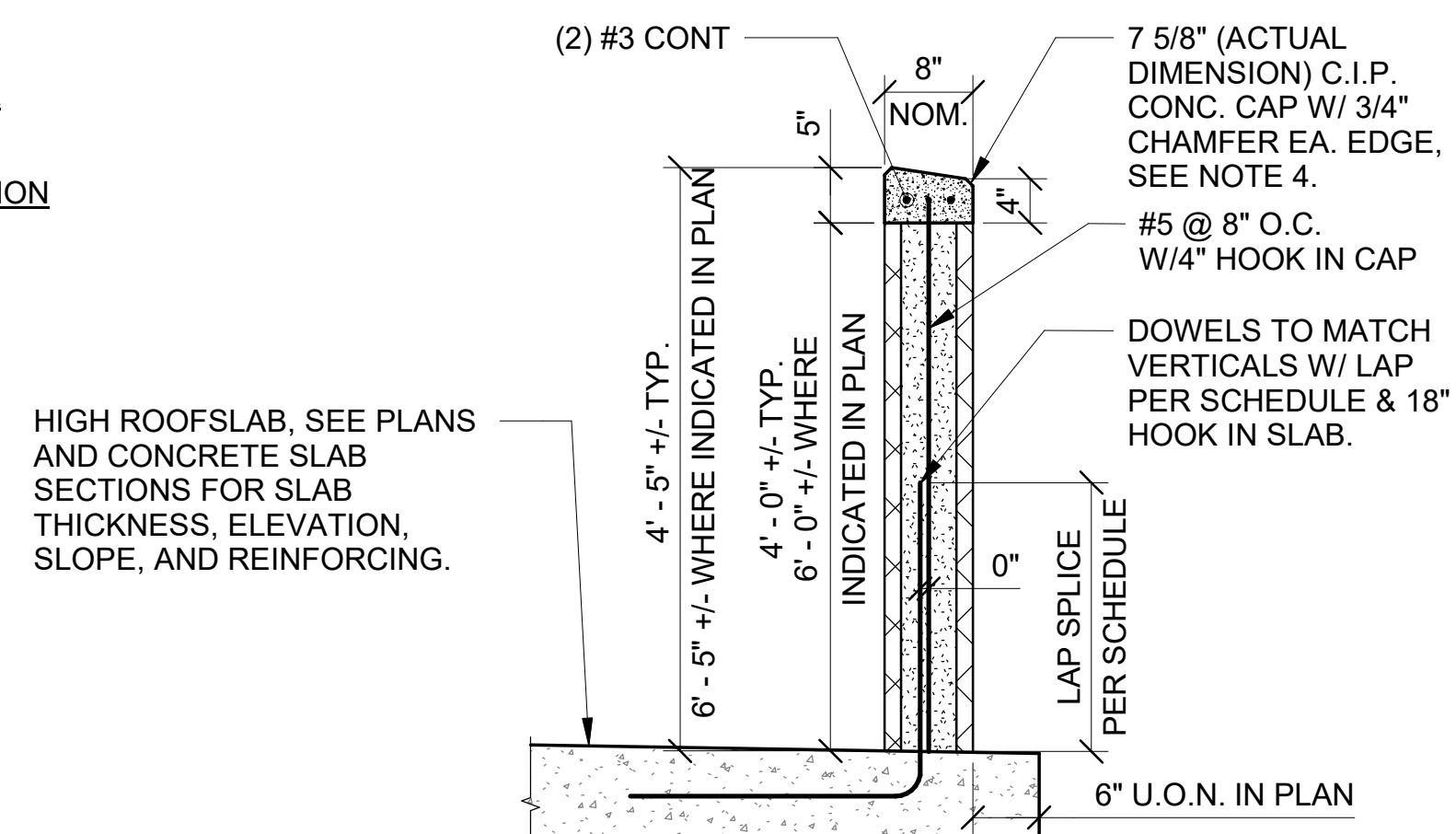
- NOTES:**
- WHERE BRACING ANGLE TERMINATES AT AN EXPANSION JOINT, STOP BRACING ANGLES 1/2" FROM THE EDGE OF THE JOINT COVER PLATE. WHERE BRACING ANGLE IS CONTINUOUS AT EXPANSION JOINT, RUN BRACING ANGLE OVER TOP OF JOINT COVER PLATE. SEE ELEVATION VIEWS TO RIGHT OF SECTION VIEW. ACCOUNT FOR THIS WHEN SHOT CUTTING ANGLES TO LENGTHS INDICATED IN PLANS ON SHEETS BB208 & BB209.
  - PROVIDE 1" GAP BETWEEN ENDS OF BRACING ANGLES AND EDGE OF TILES AT ALL ROLLOVER TILE LOCATIONS ABOVE EXTERIOR DOORS AND WINDOWS, AS INDICATED IN PLANS ON SHEETS BB208 & BB209.
  - PROVIDE 1" GAP IN BRACING ANGLES AT LOCATIONS INDICATED IN PLANS ON BB208 & BB209.
  - AT FIRST FLOOR, WHERE BRACING ANGLES PASS CONTINUOUSLY BETWEEN WALL AND COLUMN, TRIM THE HORIZONTAL LEG OF THE ANGLE TO 1 1/2" BETWEEN THE WALL AND COLUMN.

## TYPICAL SECTION - TOP OF NON-BEARING WALL, EXTERIOR CONDITION



## PLAN DETAIL - END OF WALL AND OPEN JOINT AT EXT. COLUMNS WITH NO THERMAL LININGS

BB204 - BB601 SCALE 1 1/2" = 1'-0"  
BB206

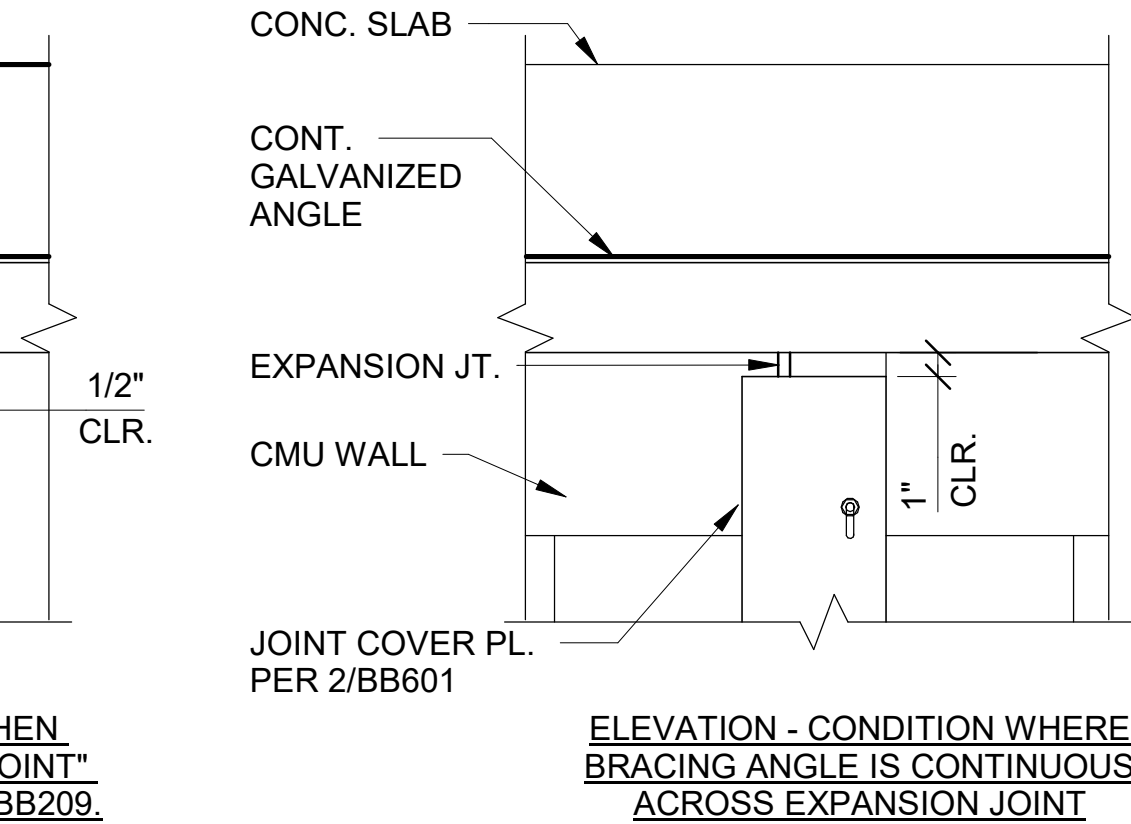


- NOTES:**
- PROVIDE HORIZ. JOINT REINFORCING @ 16" O.C. MAX. PER GENERAL NOTES & SPECIFICATIONS.
  - TOP OF PARAPET WALL SHALL BE AT THE SAME ELEVATION, INCLUDING ALONG LENGTH OF SLOPING SLAB. CUT BOTTOM COURSE AS NECESSARY ALONG SLAB SLOPE.
  - GROUT ALL CELLS SOLID.
  - CONC. CAP SHALL BE C.I.P., 4,500 PSI, AIR-ENTRAINED CONCRETE PER GENERAL NOTE L.12 ON SHEET BB001.

## CMU PARAPET SECTION

BB207 BB601 SCALE 3/4" = 1'-0"

NOT USED  
5  
BB601 SCALE 3/4" = 1'-0"

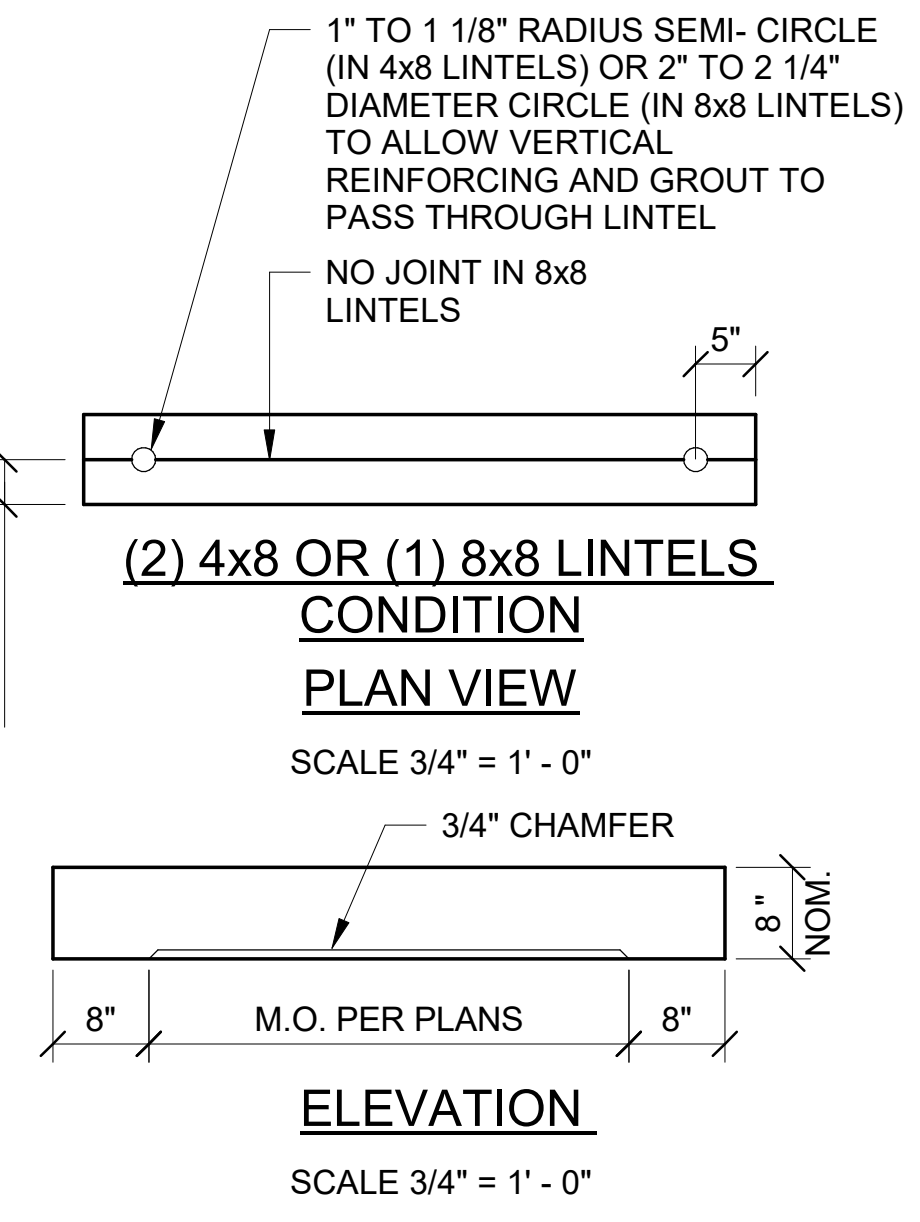


## SECTION AT NON-BEARING WALLS

- NOTES:**
- THIS DETAIL APPLIES TO ALL CMU OPENINGS, U.O.N.
  - (1) #4 TOP AND BOTTOM IN EACH 4"x8" REFRACTORY LINTEL.
  - BEAR REFRACTORY LINTELS ON WALL FOR 8" AT EACH END.
  - PROVIDE PRECAST REFRACTORY CONCRETE LINTELS PER SPECIFICATIONS AT ALL MASONRY WALL OPENINGS.
  - PROVIDE HORIZ. JOINT REINF. IN FIRST BED JOINT IN CMU ABOVE REFRACTORY CONCRETE LINTELS.

## TYP. LINTEL DETAILS

BB601 BB601 SCALE 1 1/2" = 1'-0"



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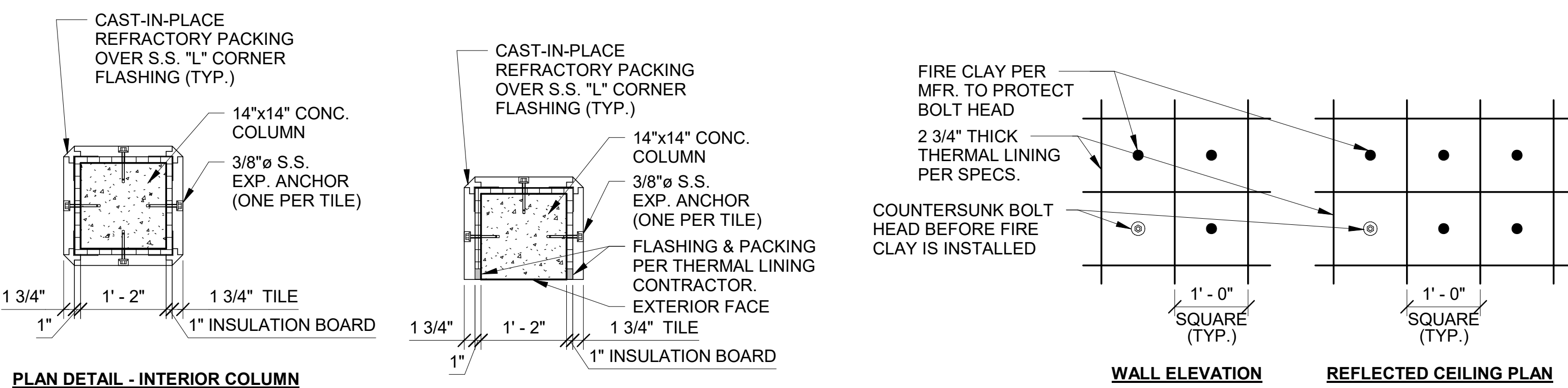


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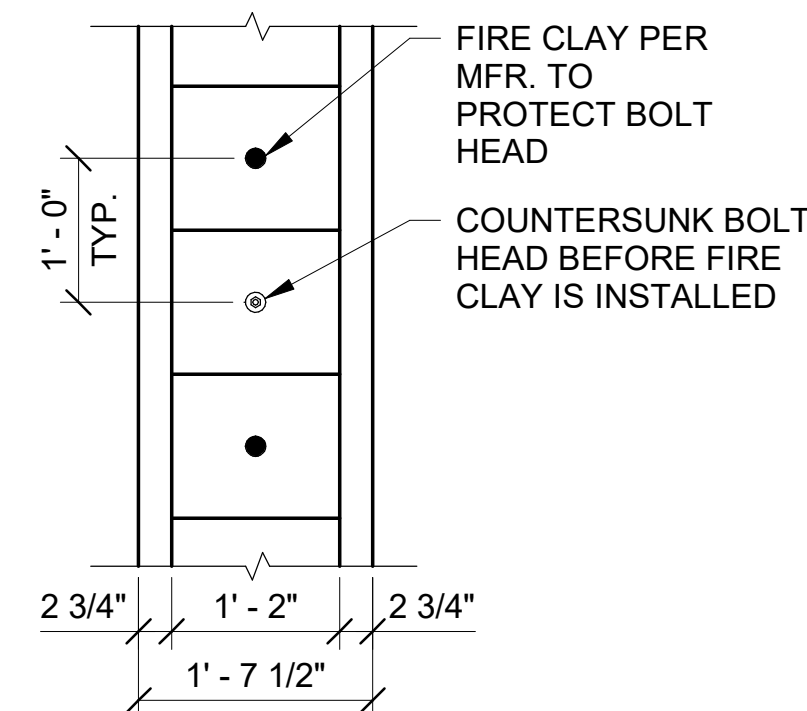
**BURN BUILDING - TYPICAL MASONRY DETAILS**



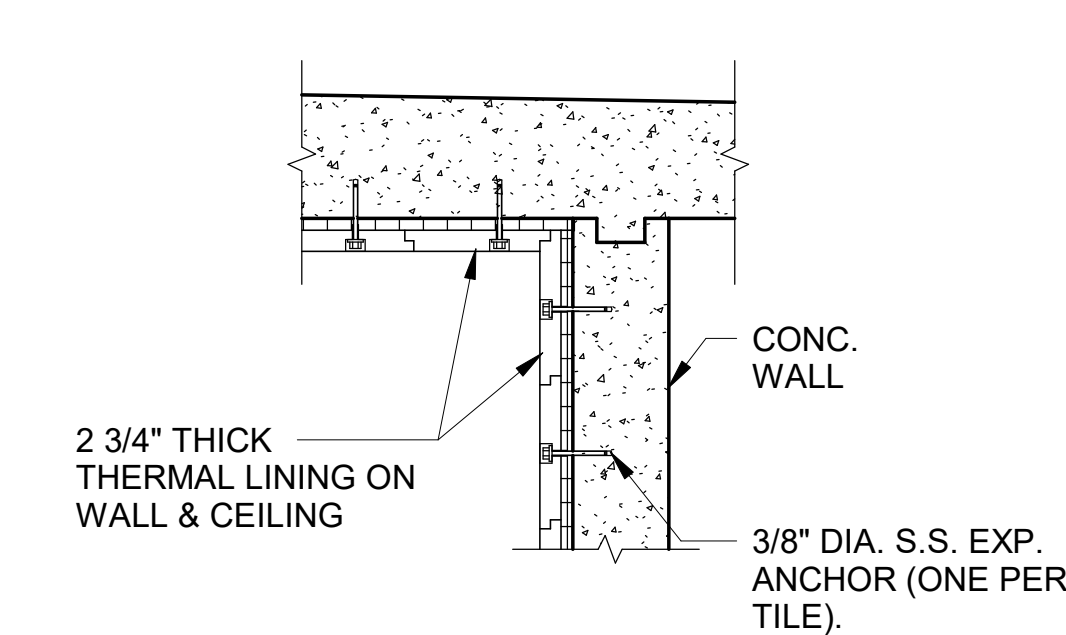


PLAN DETAIL - INTERIOR COLUMN

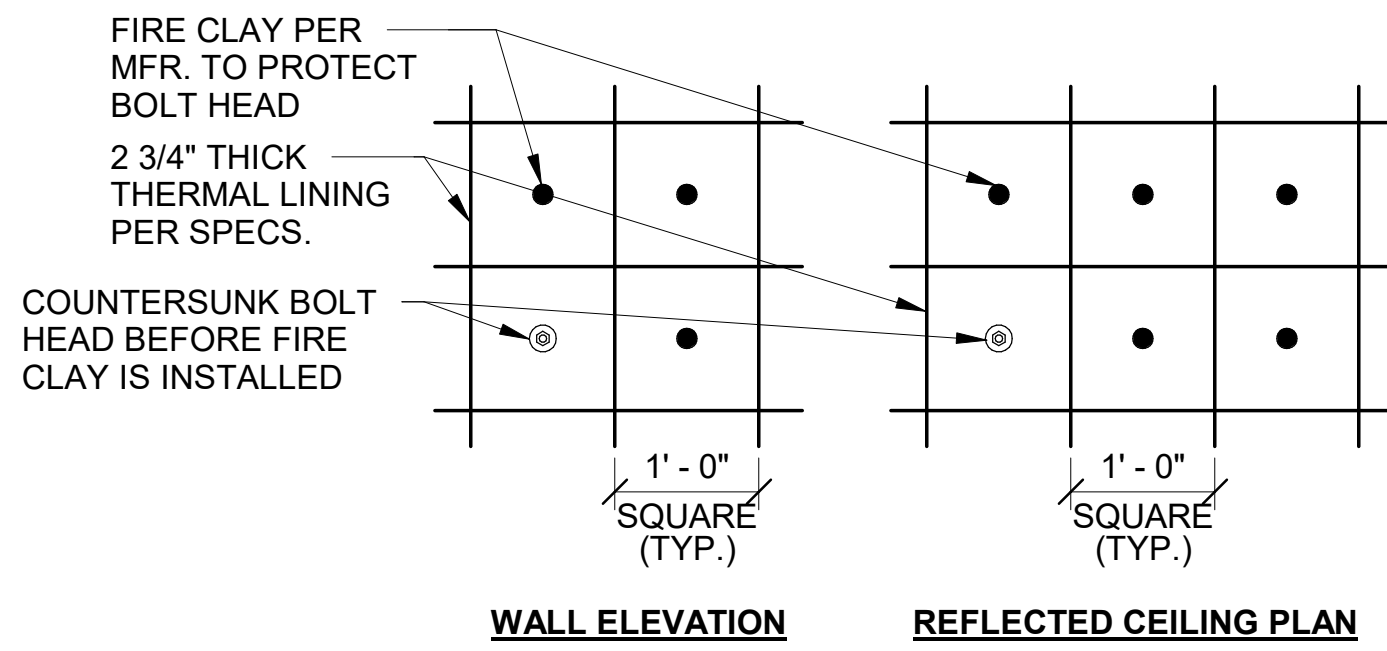
PLAN DETAIL - UPPER LEVEL EXTERIOR COLUMN



ELEVATION

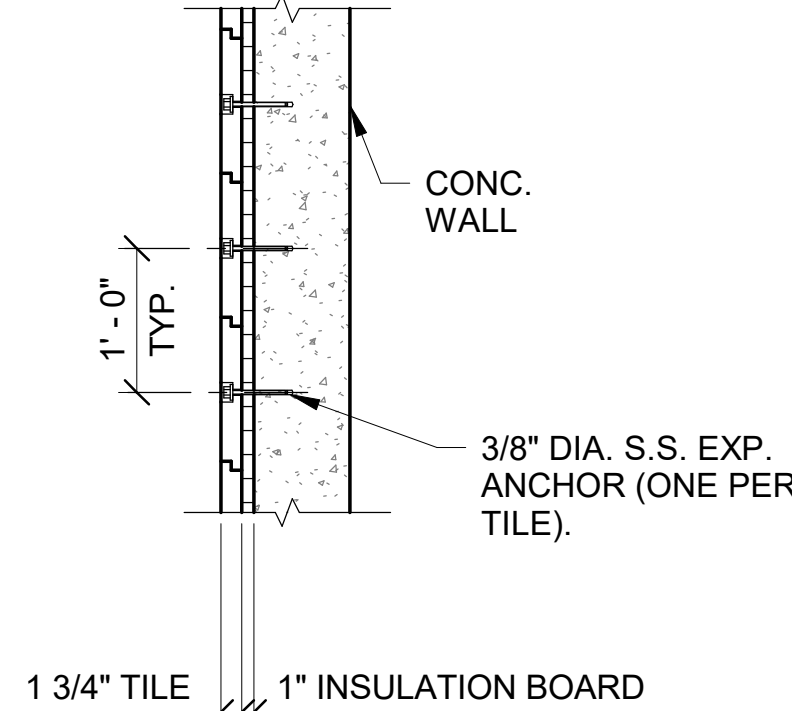


SECTION - CONCRETE STRUCTURAL WALL W/ LINING ON 1 SIDE



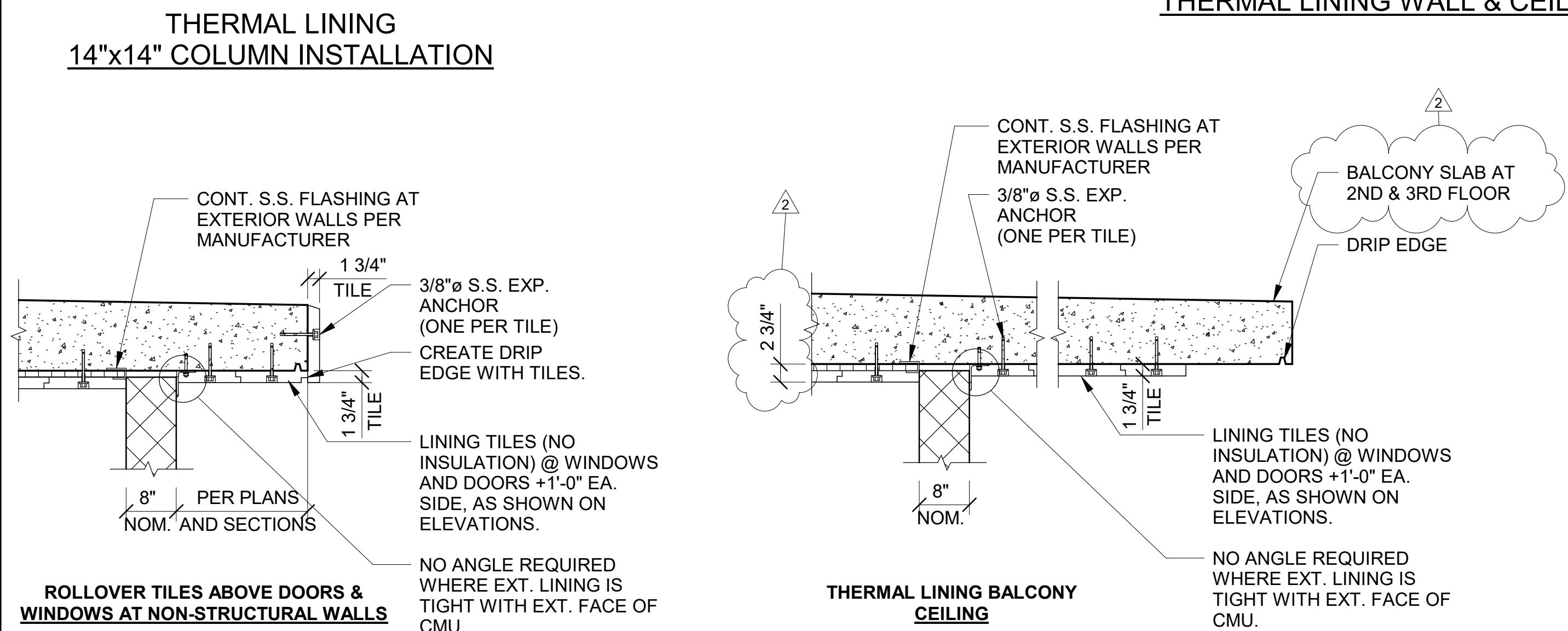
WALL ELEVATION

REFLECTED CEILING PLAN



TYPICAL WALL SECTION

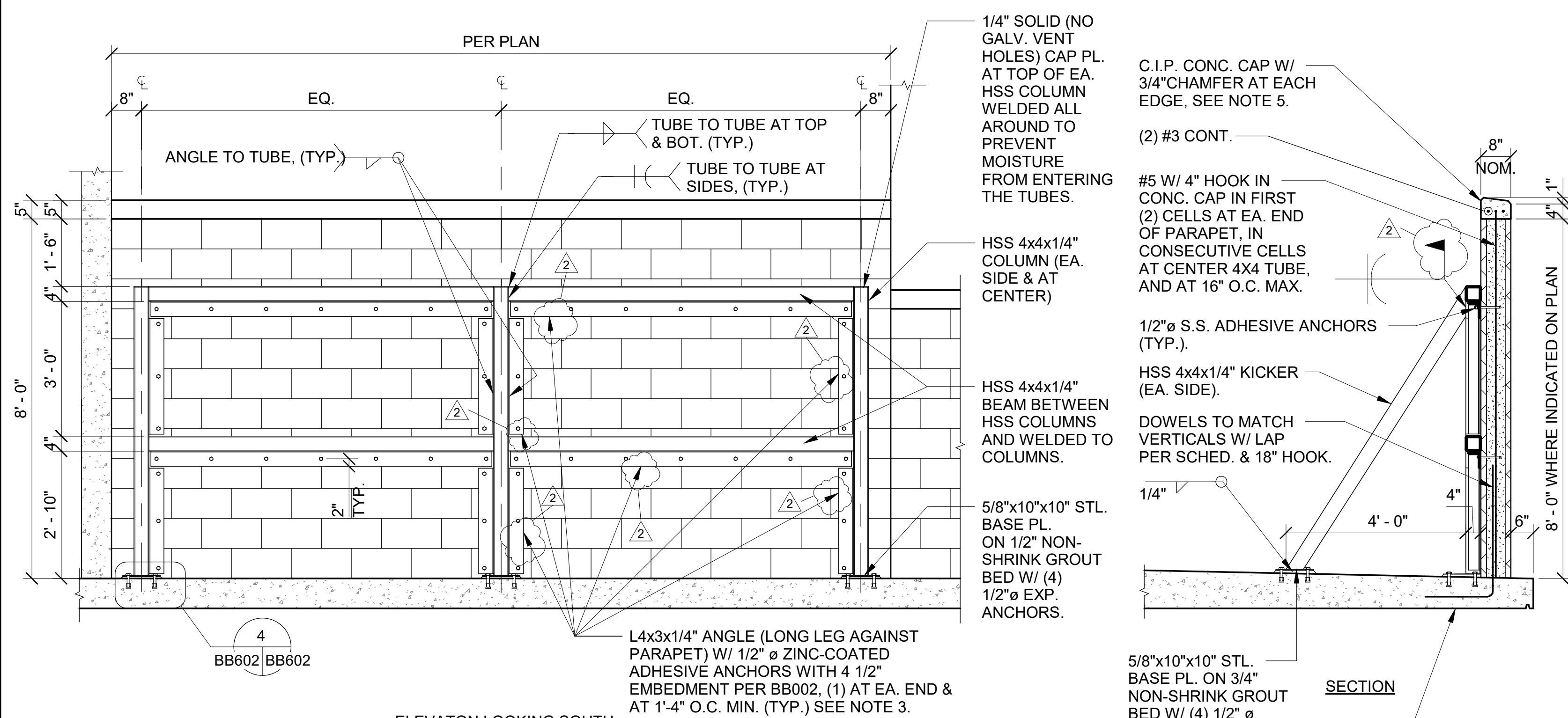
### THERMAL LINING WALL & CEILING INSTALLATION



### THERMAL LINING EXTERIOR ROLLOVER INSTALLATION

### TYPICAL THERMAL LINING DETAILS

BB201 - BB602 SCALE 3/4" = 1'-0"

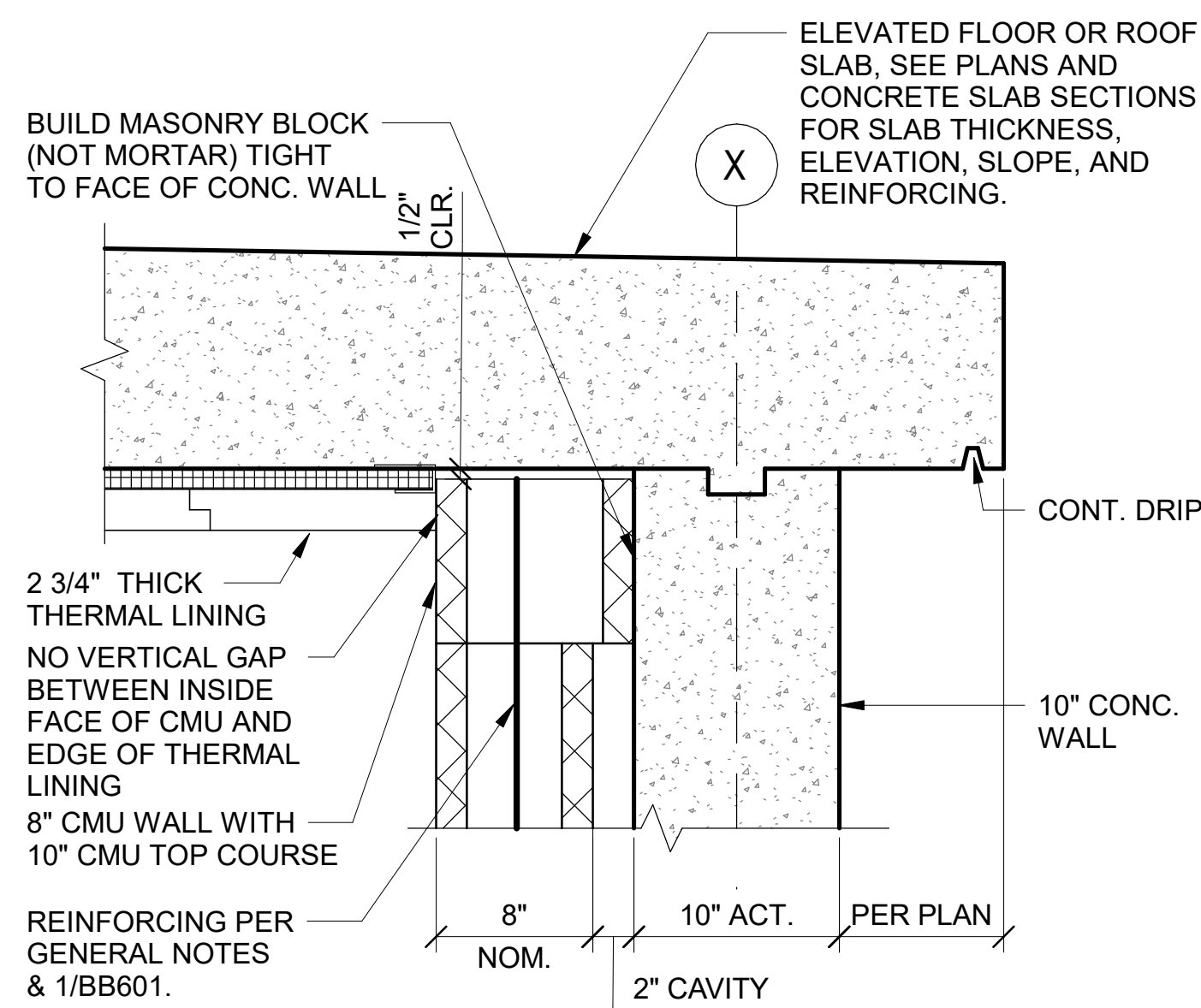


#### NOTES:

- PROVIDE JOINT REINFORCING @ 16" O.C.
- ALL METAL PIECES IN THIS DETAIL SHALL BE GALV., U.O.N.
- PROVIDE 1/2" CLR. GAP BETWEEN ENDS OF ALL ANGLES AND ADJACENT ANGLES, COLUMNS, OR BEAMS. WELD SHORT LEG TO TUBE & ANCHOR LONG LEG TO WALL.
- GROUT ALL CELLS SOLID, INCLUDING UNREINFORCED CELLS.
- CONC. CAP SHALL BE C.I.P., 5,000 PSI, AIR-ENTRAINED CONCRETE PER GENERAL NOTE L-12 ON SHEET BB601.
- PROVIDE (1) 1/2" WEEP HOLE AT BOTTOM OF EA. VERTICAL & DIAGONAL ON DOWNHILL FACE OF TUBE. DRILL WEEP HOLES PRIOR TO GALVANIZING. WEEP HOLES IN FACE OF TUBE, NOT IN BASE PLATE.

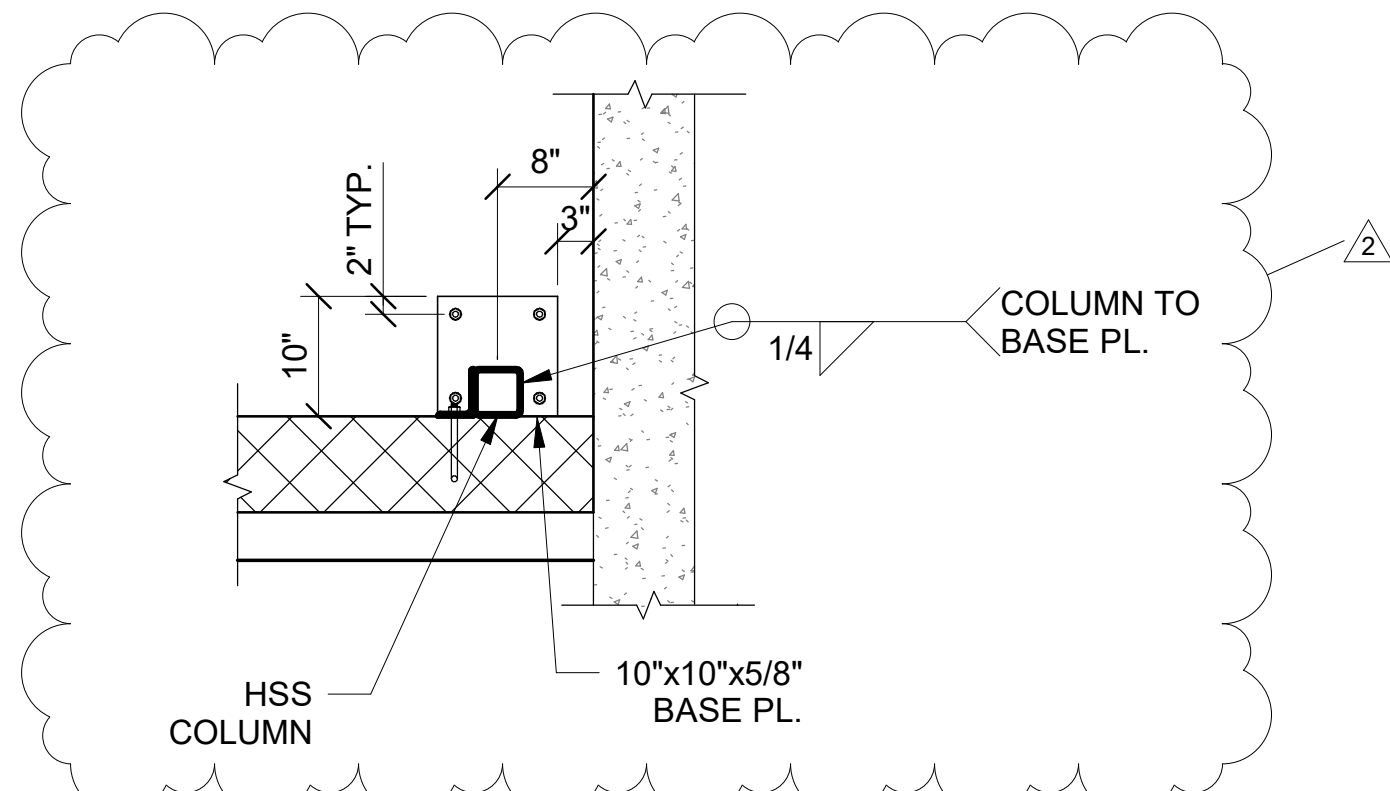
### 8' - 5" PARAPET WALL DETAIL

BB207 BB602 SCALE 1/2" = 1'-0"



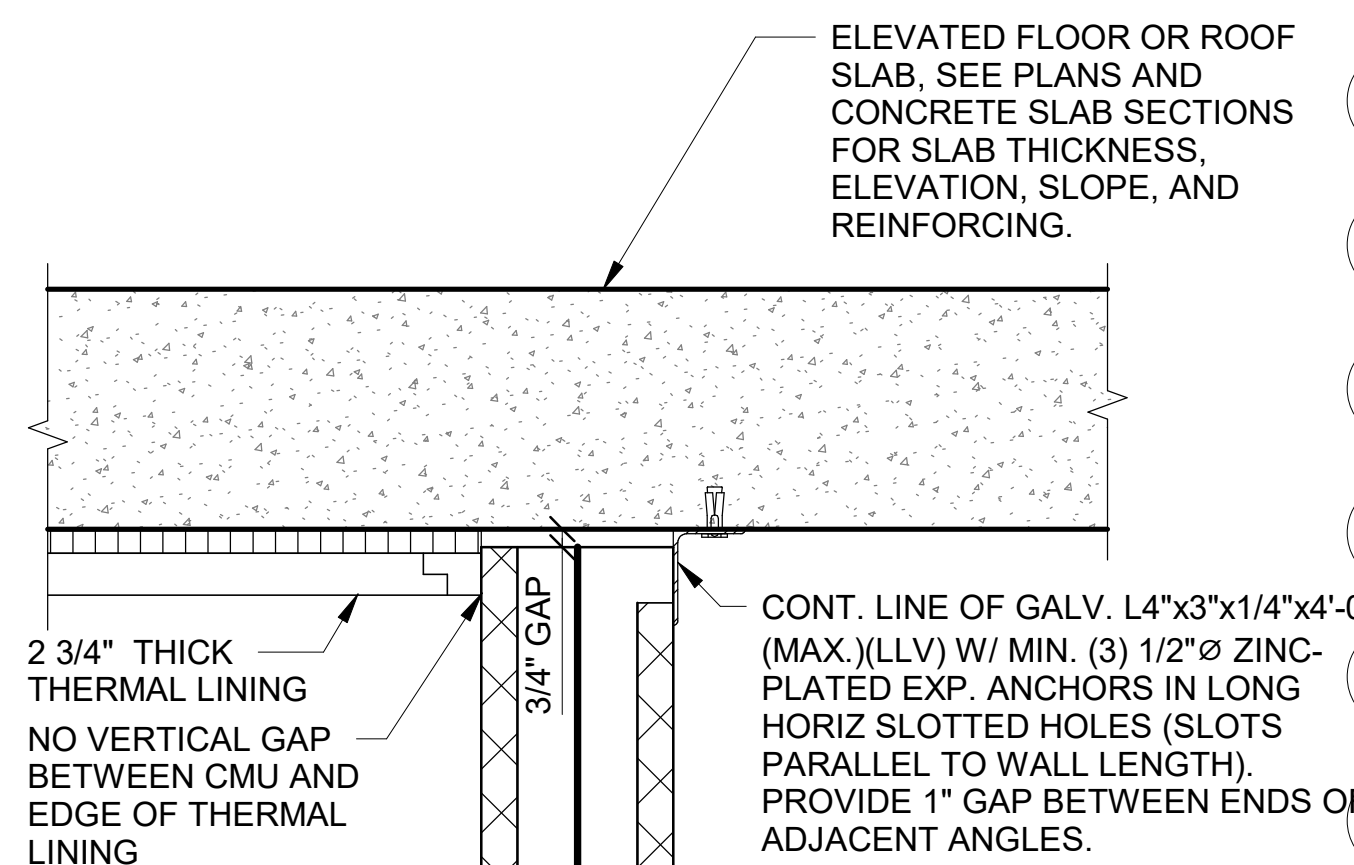
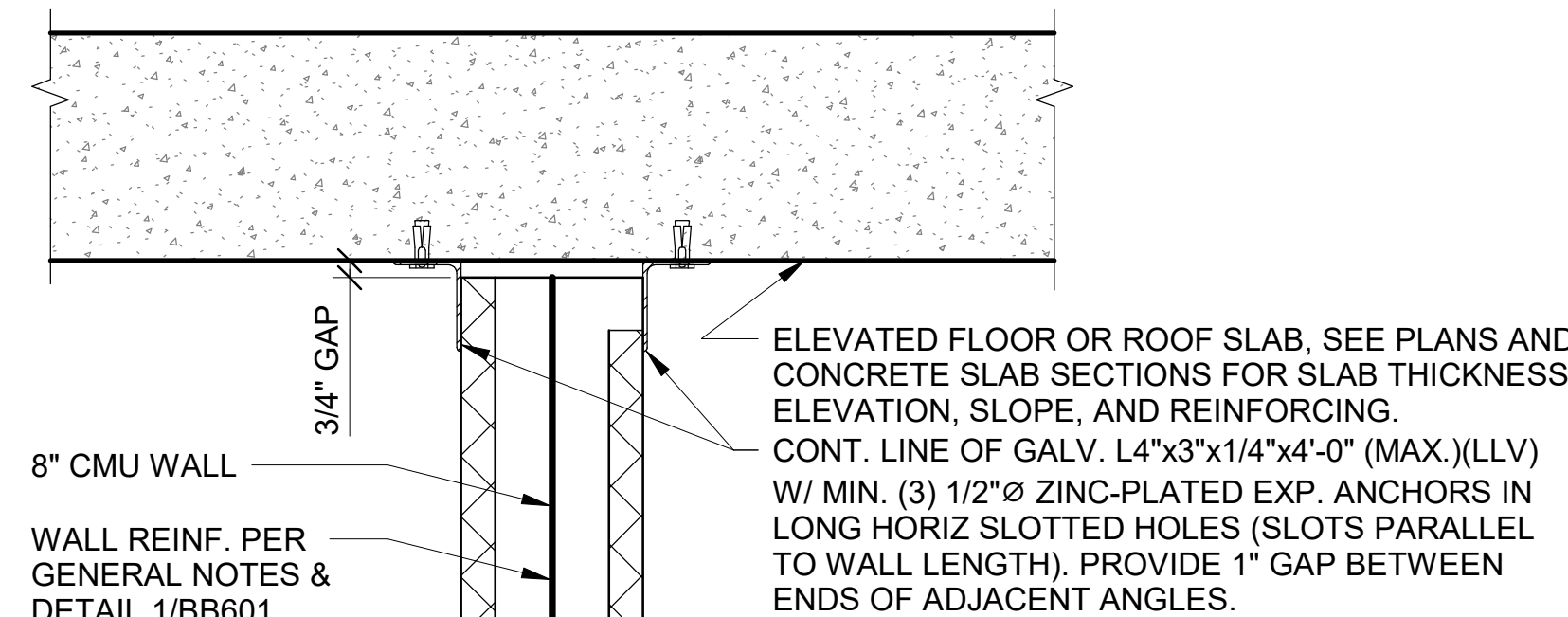
### TYPICAL SECTION - TOP OF CMU PARTITION AT CONCRETE SHEAR WALL

BB201 BB602 SCALE 1 1/2" = 1'-0"



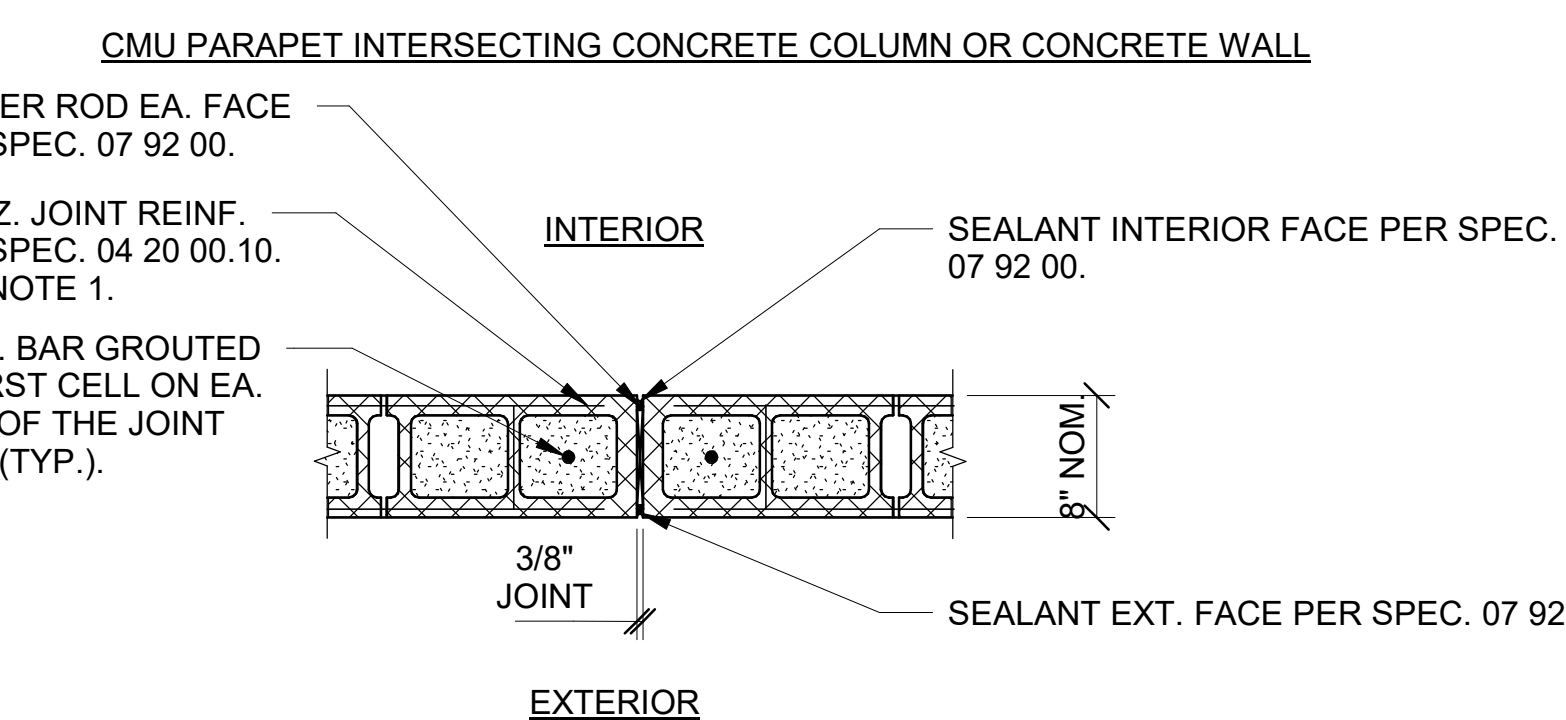
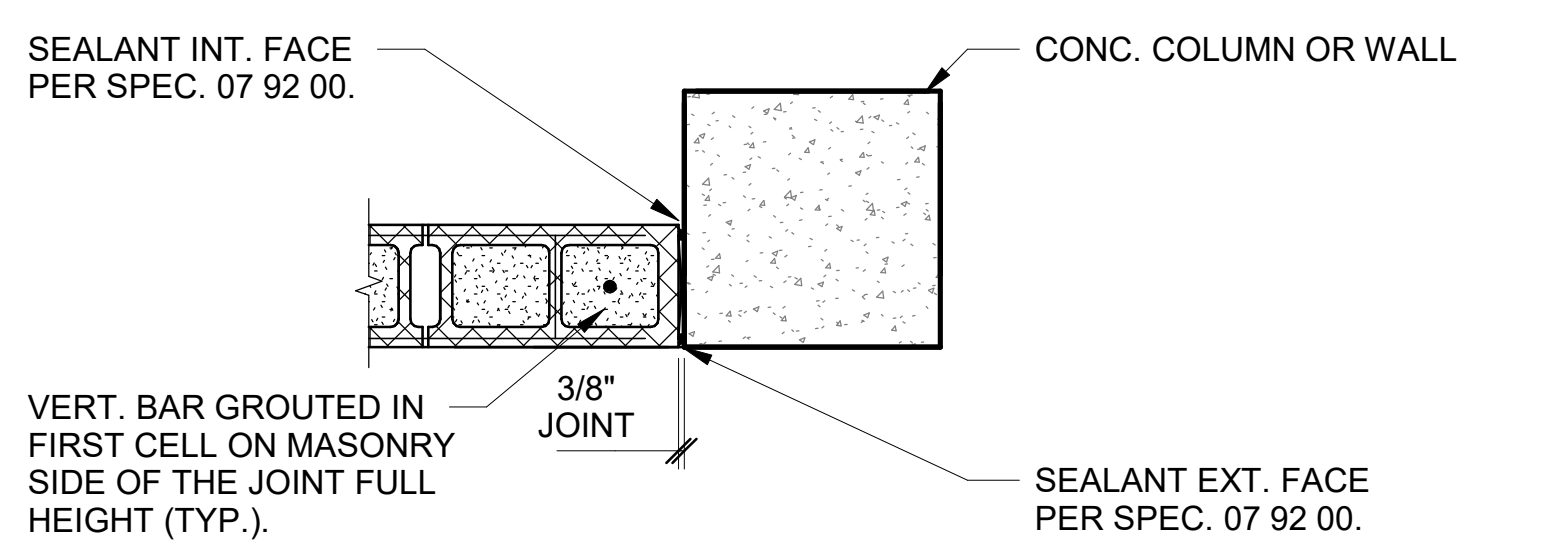
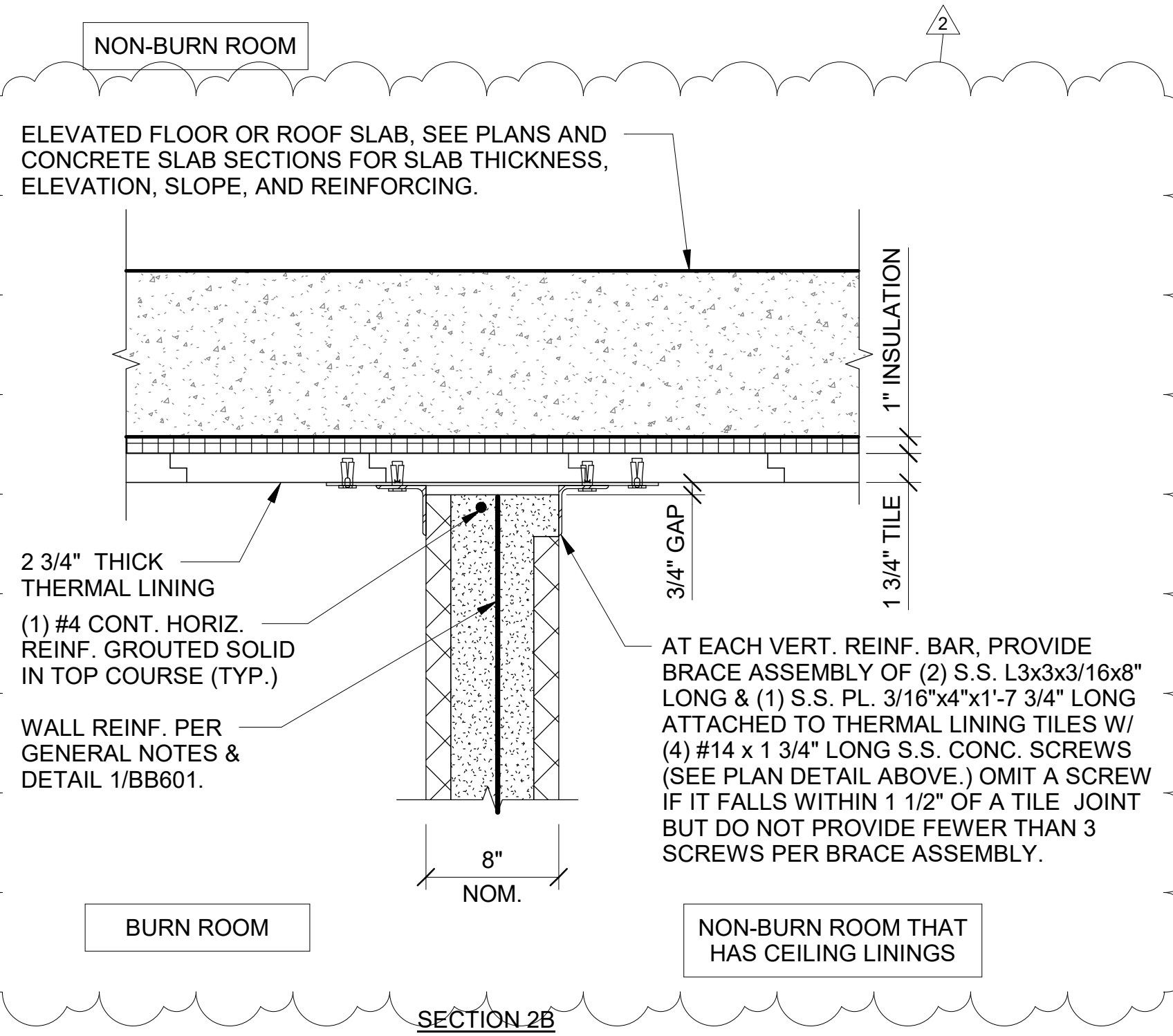
### 8' - 5" PARAPET WALL PLAN DETAIL

BB602 BB602 SCALE 3/4" = 1'-0"



### TYPICAL SECTION - TOP OF NON-BEARING MASONRY WALL, INTERIOR CONDITIONS

BB201 - BB602 BB206 BB602 BB206 BB201 - BB602 BB206 SCALE 1 1/2" = 1'-0"



**NOTE:**

1. THIS DETAIL APPLIES ONLY WHERE SHOWN IN ELEVATION.

### STRAIGHT PARAPET PLAN DETAIL

- NOTES FOR ALL CONDITIONS:**
- STOP HORIZONTAL JOINT REINF. 2" FROM JOINT AT EA. SIDE OF JOINT.
  - PLACE CONTROL JOINTS SO THEY ALTERNATE BETWEEN BEING IN A HEAD JOINT AND AT THE CENTER OF THE 16" LONG BLOCK FROM ONE COURSE TO THE NEXT. IGNORE THE DIAGRAMMATIC COURSE LINES ON THE ELEVATIONS BUT DO LOCATE THE JOINTS AT THE LOCATIONS SHOWN ON THOSE SHEETS. NOTIFY ENGINEER IF THERE IS ANY CONFLICT BETWEEN JOINT LOCATION AND REQUIREMENT FOR LOCATING JOINTS IN HEAD JOINTS.

### MASONRY PARAPET CONTROL JOINT PLAN DETAILS

BB301 - BB602 SCALE 1" = 1'-0"

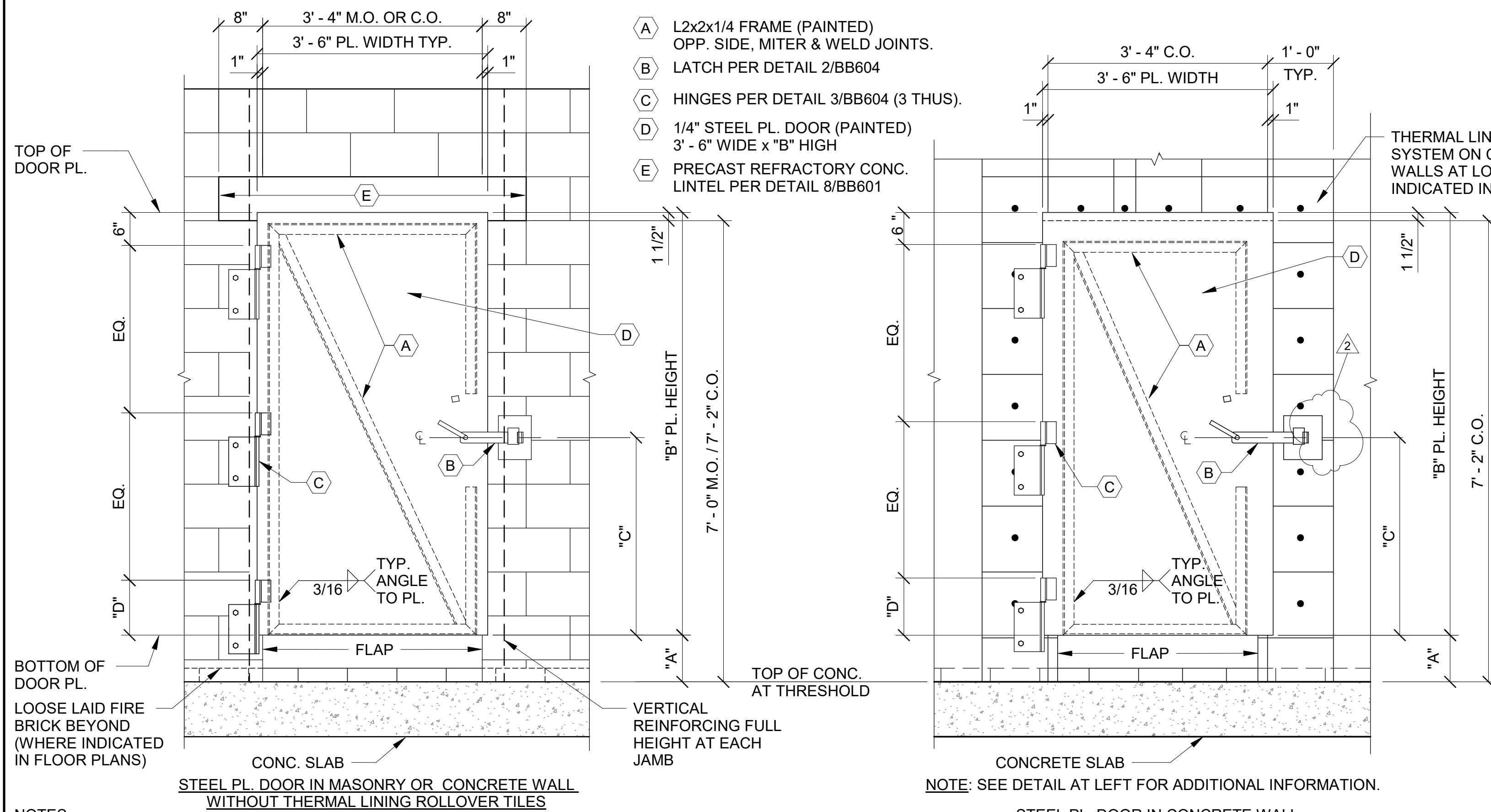
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**BURN BUILDING - THERMAL LINING AND CMU PARAPET DETAILS**

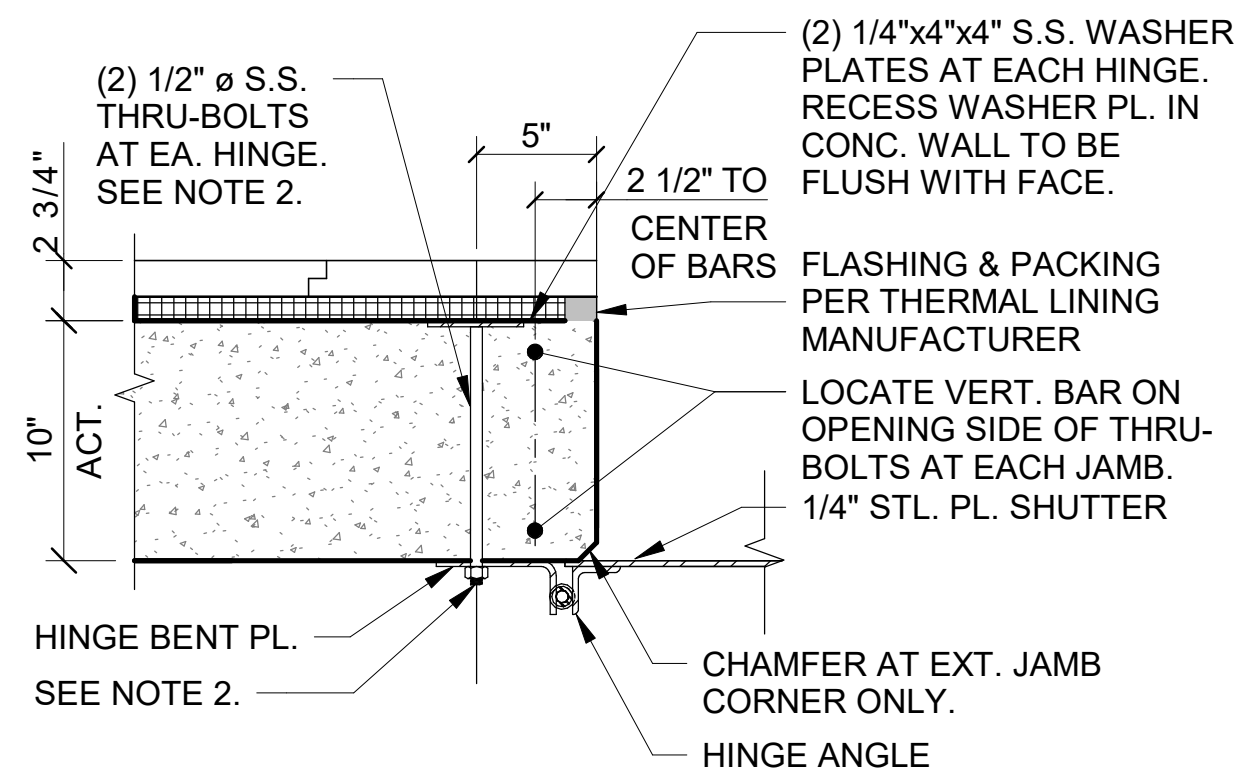




- NOTES:
- SEE FLOOR PLANS FOR DOOR SWING DIRECTION.
  - SEE DETAILS 4 & 5 ON THIS SHEET AND 3/BB606 FOR JAMB, SILL & HEAD DETAILS.
  - SEE DOOR SCHEDULE ON SHEET BB605 FOR DIMENSIONS "A", "B", "C" AND "D".
  - USE TOP OF CONCRETE FLOOR ELEVATION AT CENTER OF DOORWAY AS POINT OF REFERENCE FOR DOOR DIMENSIONS, INCLUDING OPENING HEIGHT, IF THERE IS A CONCRETE STEP IN THE FLOOR SLAB AT ONE FACE OF THE WALL AT DOORWAY, USE TOP OF CONCRETE BETWEEN JAMBS AS POINT OF REFERENCE.
  - FOR DOORS WITHOUT THERMAL LININGS AT THE DOORWAY, ALL DETAILS ON THIS SHEET SHOW THE CONDITIONS AT MASONRY WALLS. ALL DETAILS ARE THE SAME (RELATIONSHIPS OF DOOR COMPONENTS TO WALL) AT CONCRETE WALLS. NO PRECAST LINTEL REQUIRED AT CONCRETE WALLS. SEE DETAIL 6/BB501 FOR ADDED REINFORCING AT DOOR HEAD, AND JAMBS.

## ELEVATION - STANDARD STEEL PLATE DOOR

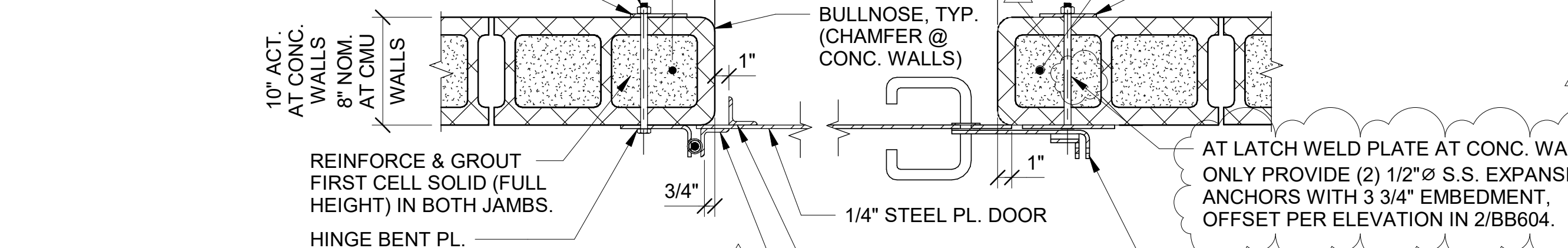
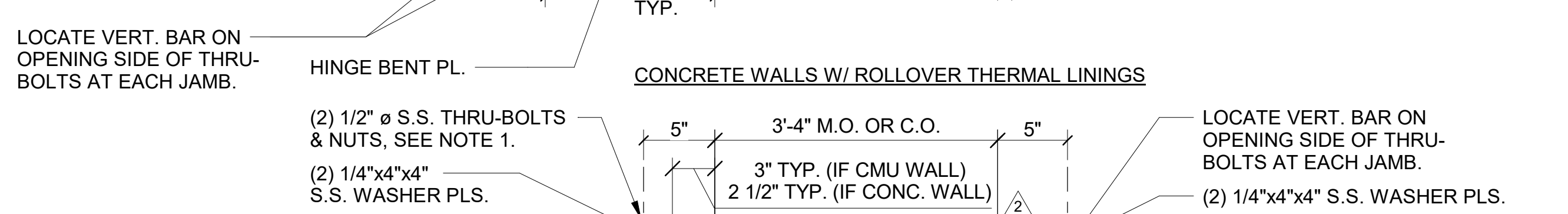
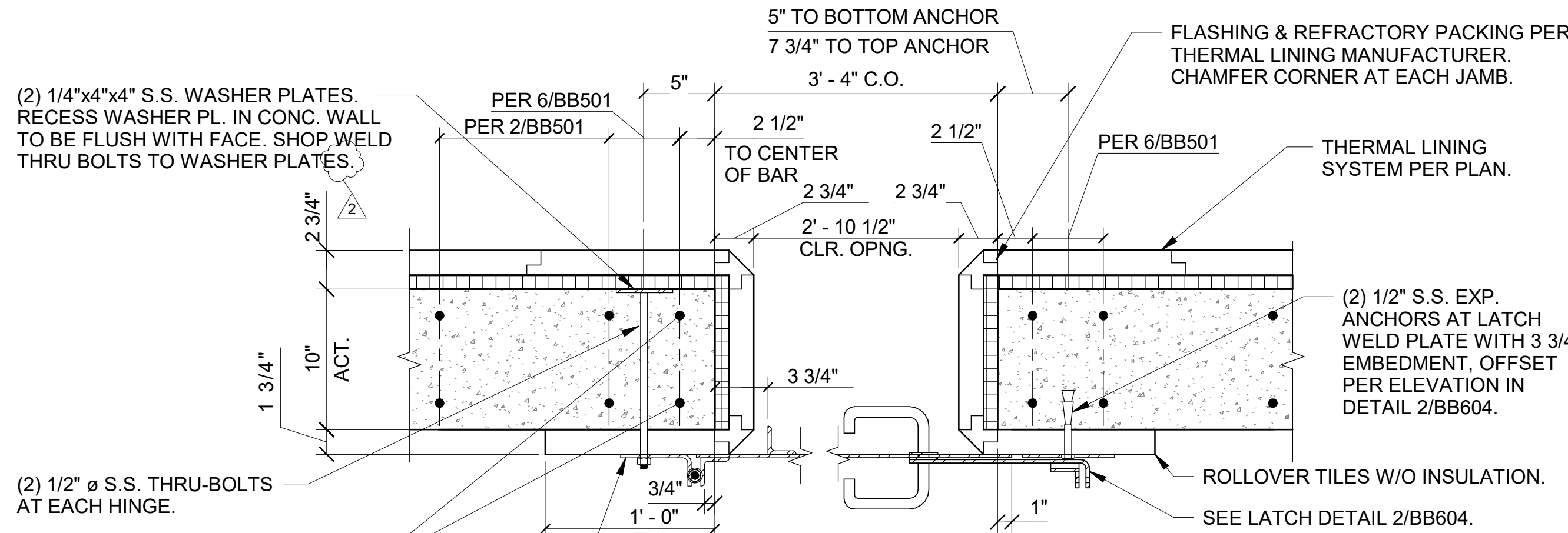
BB604 BB604 SCALE 3/4" = 1'-0"



### NOTES:

- SEE TYPICAL CONDITION FOR ADDITIONAL INFORMATION.
- AT NOTED LOCATIONS, SHOP WELD THRU BOLTS TO BACK OF WASHER PLATES AND PROVIDE S.S. NUTS AND LOCK WASHERS AT HINGE BENT PLATES. TRIM EXCESS THREAD LENGTH TO WITHIN 1/4" OF END OF NUT AND GRIND END OF BOLT SMOOTH.

### CONDITION WITH THERMAL LINING AT JAMB THAT DOESN'T WRAP JAMB

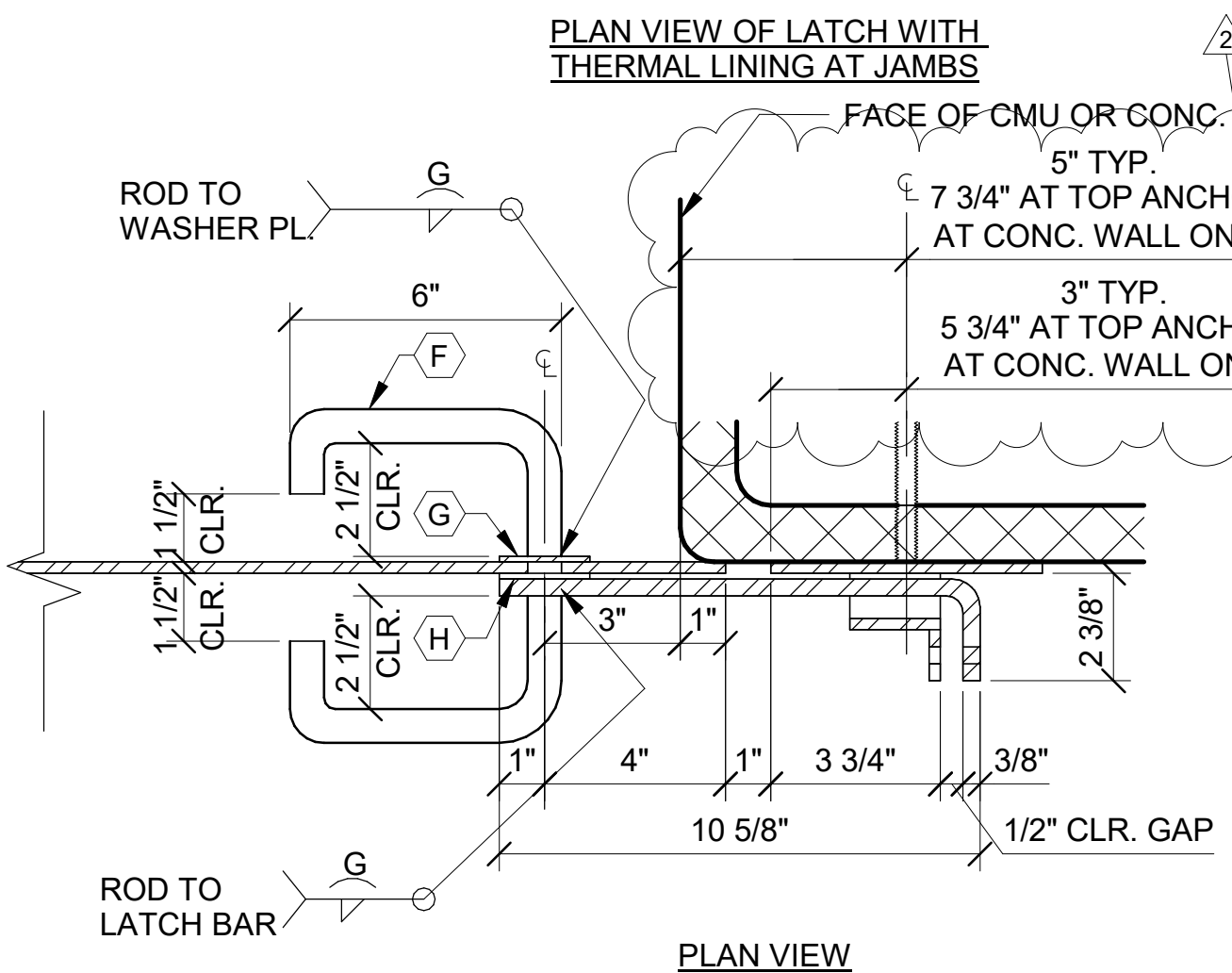
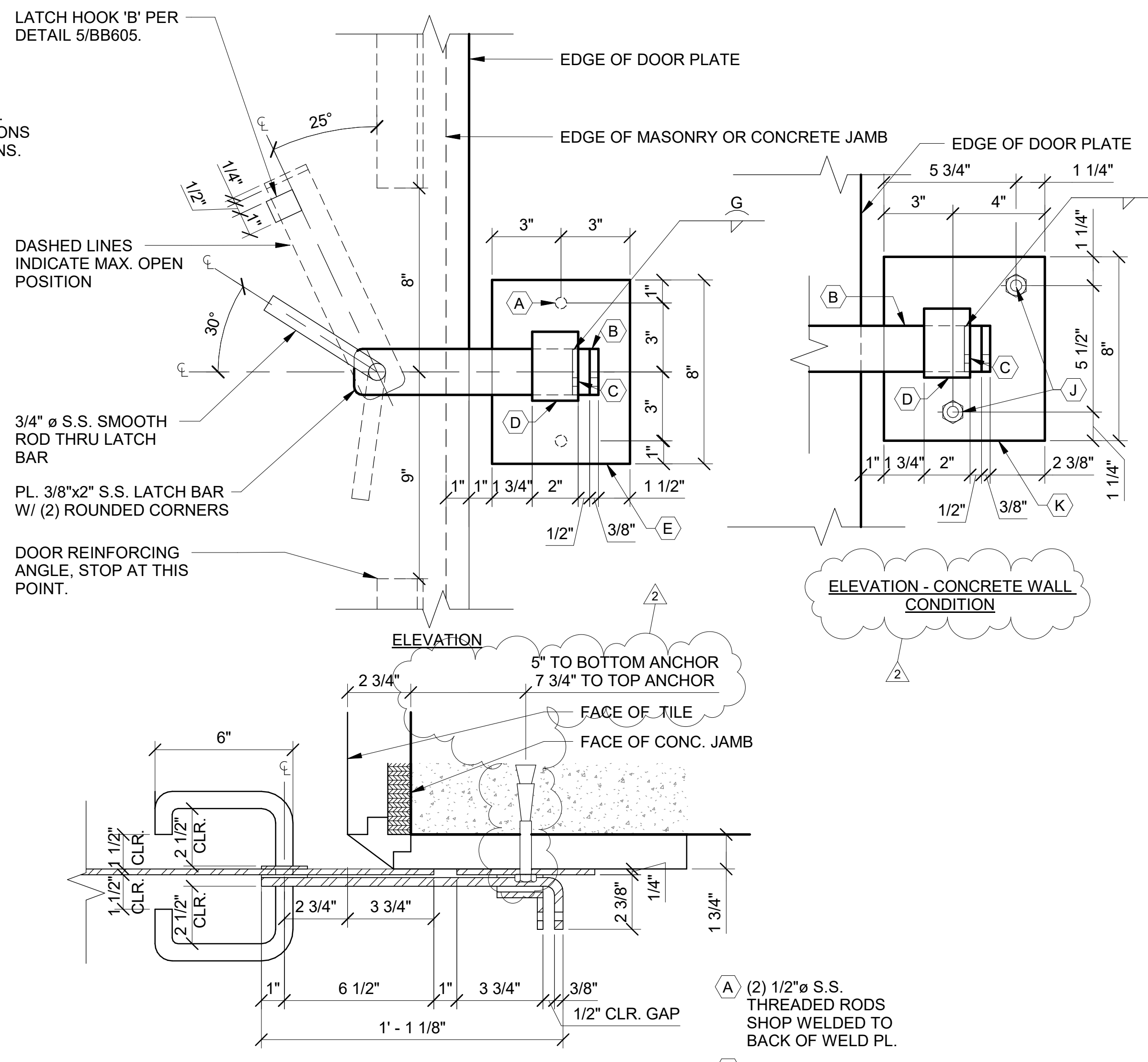


### NOTES:

- INSTALL THRU-BOLTS BEFORE PLACING VERTICAL REINFORCING BAR AND GROUT IN JAMB CELLS (IF CMU WALL) OR CAST IN WALL (IF CONC. WALL). TRIM EXCESS THREAD LENGTH TO WITHIN 1/4" OF END OF NUT AND GRIND END OF BOLT SMOOTH (CONC. & CMU WALLS).
- FOR CONDITION AT CONCRETE WALLS, PROVIDE DOOR OVERLAP PER THIS DETAIL AND JAMB REINFORCING PER DETAIL 6/BB501.
- SEE PLANS FOR DOOR SWING.

## STANDARD STEEL PLATE DOOR JAMB PLAN DETAILS

BB604 BB604 SCALE 1 1/2" = 1'-0"



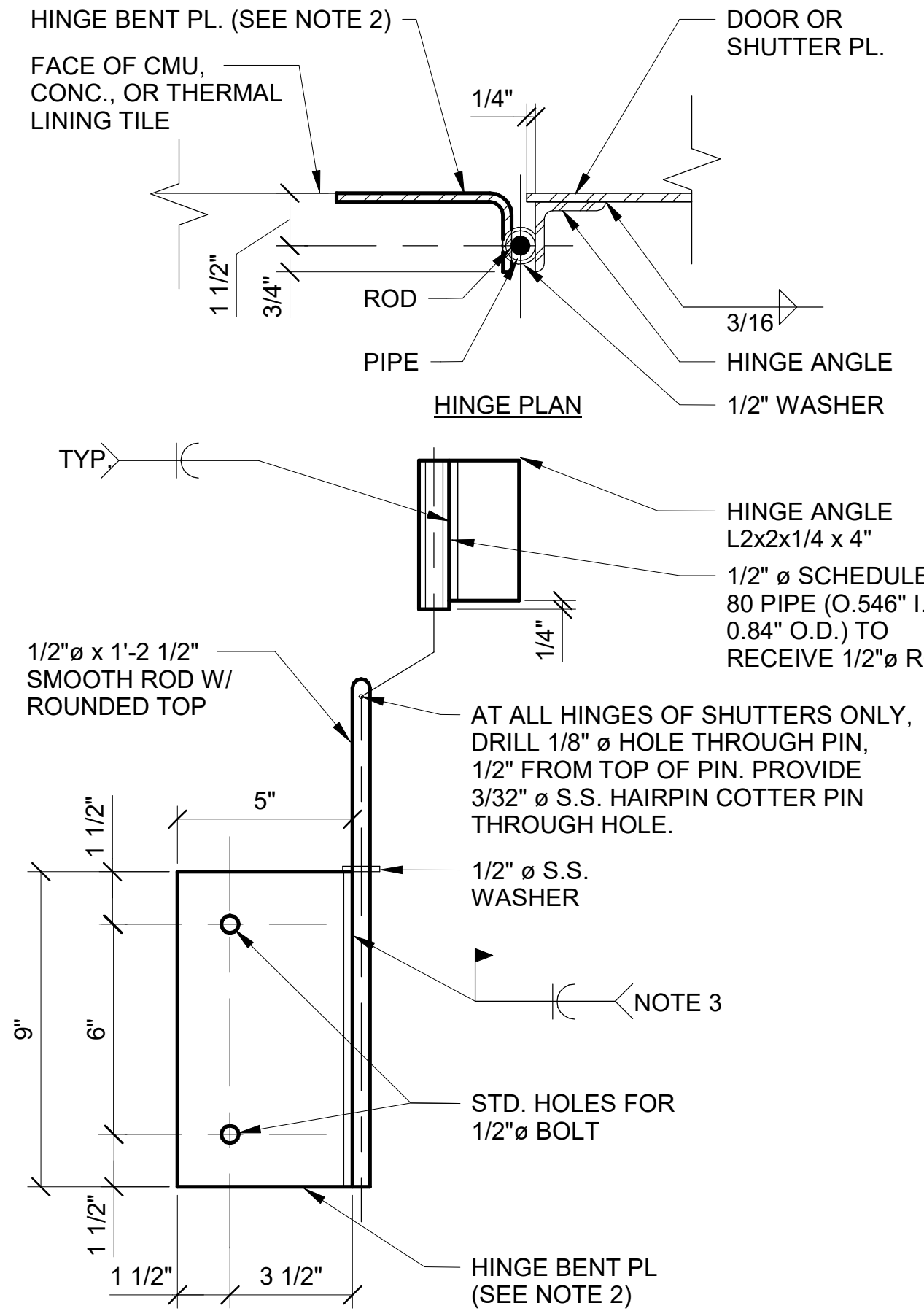
### SEQUENCE NOTES:

- PASS ROD THROUGH 7/8"Ø HOLE IN LATCH BAR.
- PASS ROD THROUGH 7/8"Ø HOLE IN DOOR PLATE WITH WASHER BETWEEN LATCH BAR AND DOOR PLATE.
- WELD ROD TO LATCH BAR.
- HOLD ASSEMBLY FIRMLY IN PLACE AND WELD ROD TO WASHER AT INTERIOR FACE OF DOOR. FINISHED ASSEMBLY SHALL NOT WOBBLE AND SHALL ROTATE EASILY WITHOUT SIGNIFICANT EFFORT.

## STANDARD STEEL PLATE DOOR LATCH DETAILS

BB604 BB604 SCALE 3" = 1'-0"

DO NOT PAINT STAINLESS STEEL ITEMS.

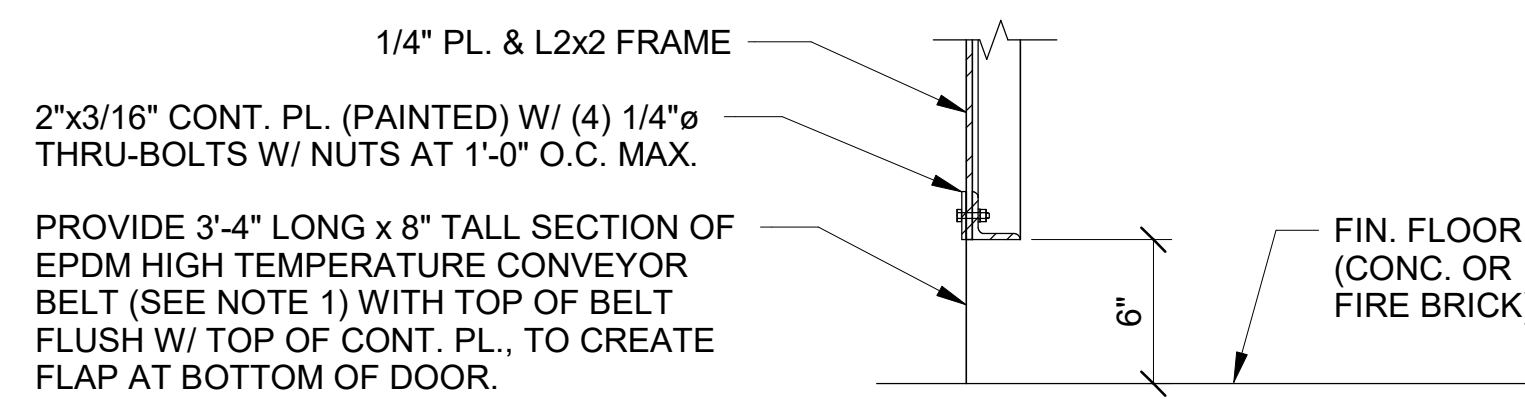


### NOTES:

- ALL PIECES SHALL BE S.S.
- BENT PL. 1/4x5x2 1/4x9 @ ALL STEEL PL. DOORS AND WINDOWS.
- HOLD SHUTTER OR DOOR IN PLACE WHILE FIELD WELDING ROD TO ASSURE PROPER FIT AND OPERATION OF HUNG SHUTTER OR DOOR.
- DRILL HOLES THROUGH WALLS FOR HINGE BOLTS W/ NON-IMPACT ROTARY DRILL. DO NOT DAMAGE FACES OF WALLS WHILE DRILLING HOLES.

## TYPICAL STEEL PL. DOOR & SHUTTER HINGE DETAILS

BB604 BB604 SCALE 3" = 1'-0"

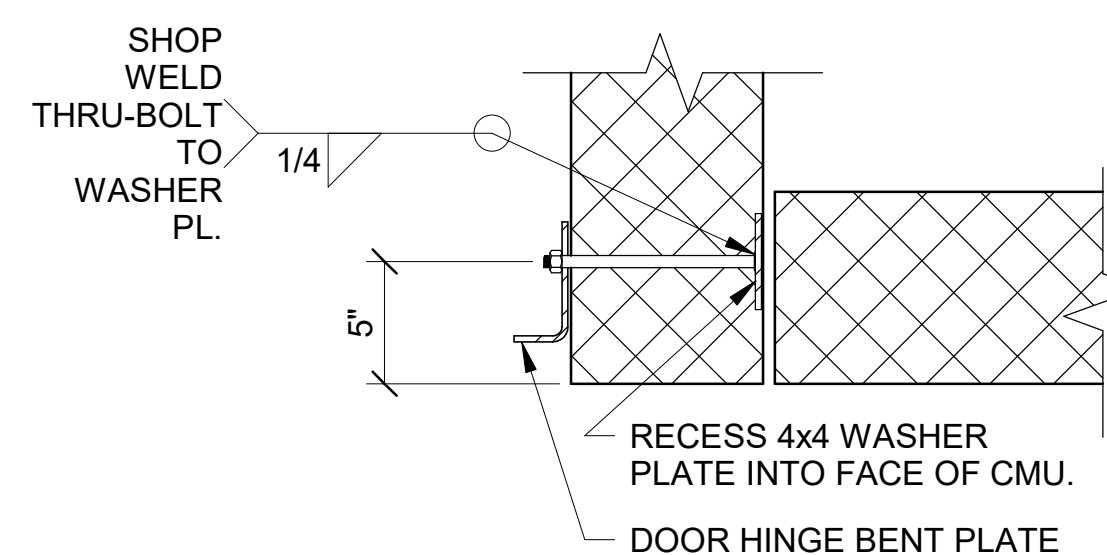


### NOTE:

- PROVIDE EPDM HIGH TEMPERATURE CONVEYOR BELT, 3/8" GAUGE WITH POLYNYLON FABRIC TYPE AND A WORKING TEMPERATURE OF 0°-600°, WITH A PEAK TEMPERATURE OF 750° (2/220 3/16x1/16 EPDM HIGH TEMP BELT BY CONVEYORBELT.COM OR AN APPROVED EQUIVALENT). INSTALL SO TOP COVER OF BELT FACES INSIDE FACE OF DOOR.

## STEEL PLATE DOOR SILL DETAIL

BB604 BB604 SCALE 1 1/2" = 1'-0"



NOTE: THIS DETAIL APPLIES TO DOORS, EXT-203, EXT-304, EXT-404, AND EXT-504.

## DOOR HINGE DETAIL

BB202 BB604 SCALE 1 1/2" = 1'-0"

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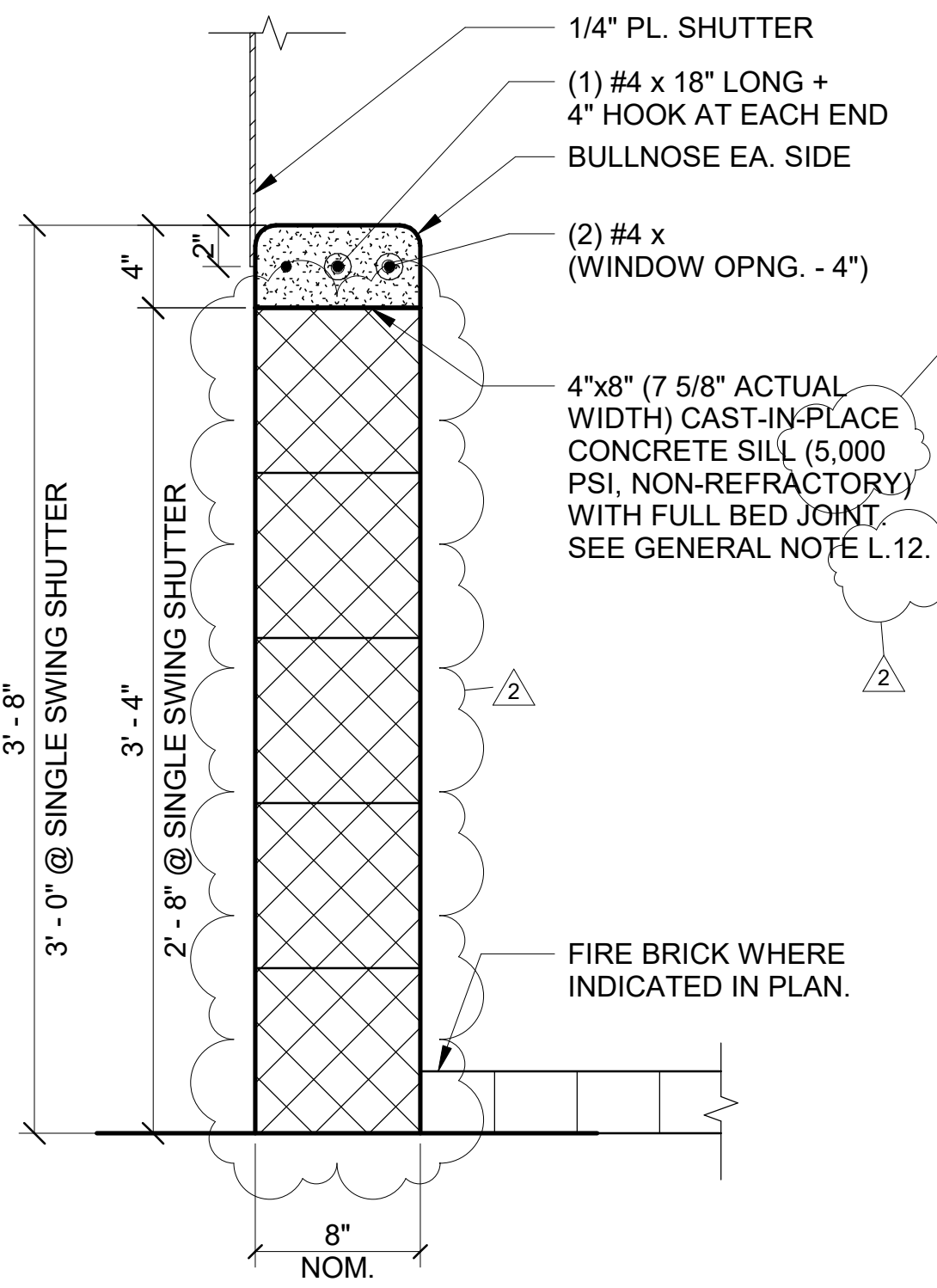
**BURN BUILDING - TYPICAL STEEL PLATE SHUTTER DETAILS**

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**DO NOT PAINT STAINLESS STEEL ITEMS.**

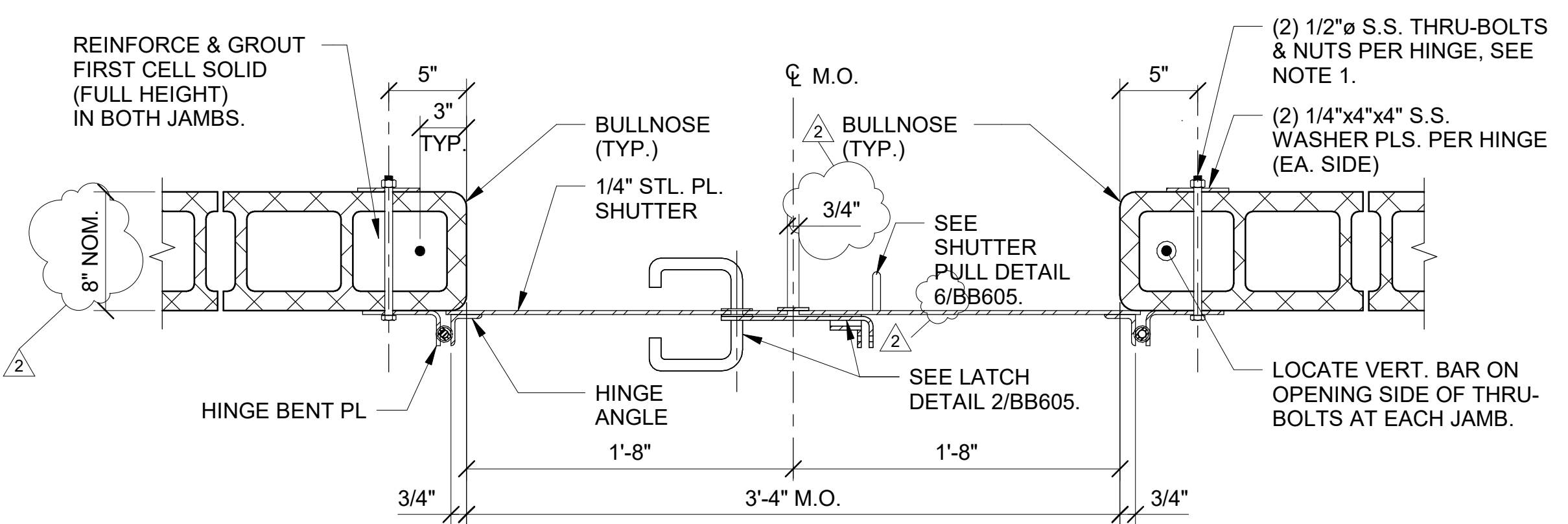
NOTE: (2) #4 NOT SHOWN FOR CLARITY.

**ELEVATION VIEW - SILL**



**WINDOW SILL SECTIONS**

BB606 BB606 SCALE 1 1/2" = 1'-0"

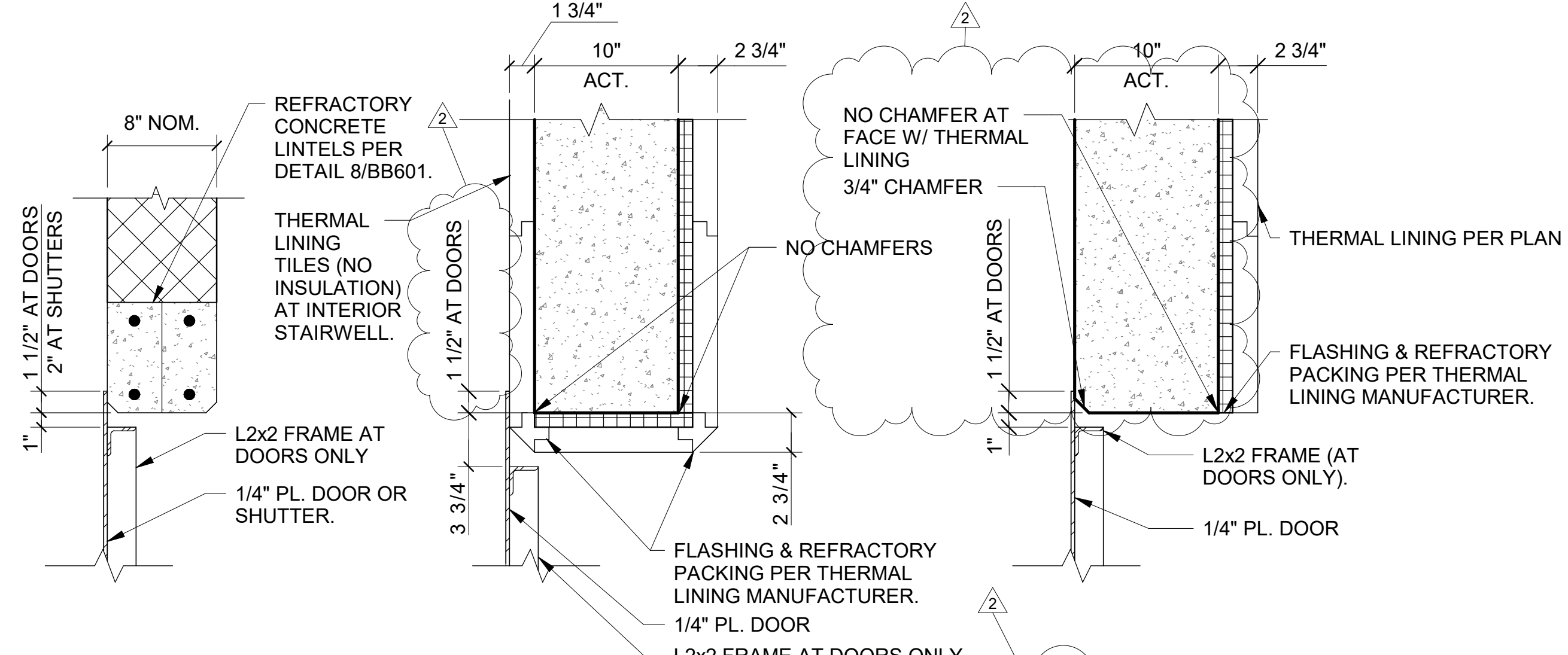


NOTES:

1. INSTALL THRU-BOLTS BEFORE PLACING VERTICAL REINFORCING BAR AND GROUT IN JAMB CELLS. TRIM EXCESS THREAD LENGTH TO WITHIN 1/4" OF ENDS OF NUTS. GRIND SMOOTH AFTER TIGHTENING.
2. SEE FLOOR PLANS FOR WINDOW SHUTTER SWING DIRECTION.

**WINDOW JAMB PLAN DETAILS**

BB606 BB606 SCALE 1 1/2" = 1'-0"



DOORS & SHUTTERS AT CMU WALLS

DOOR ST-1

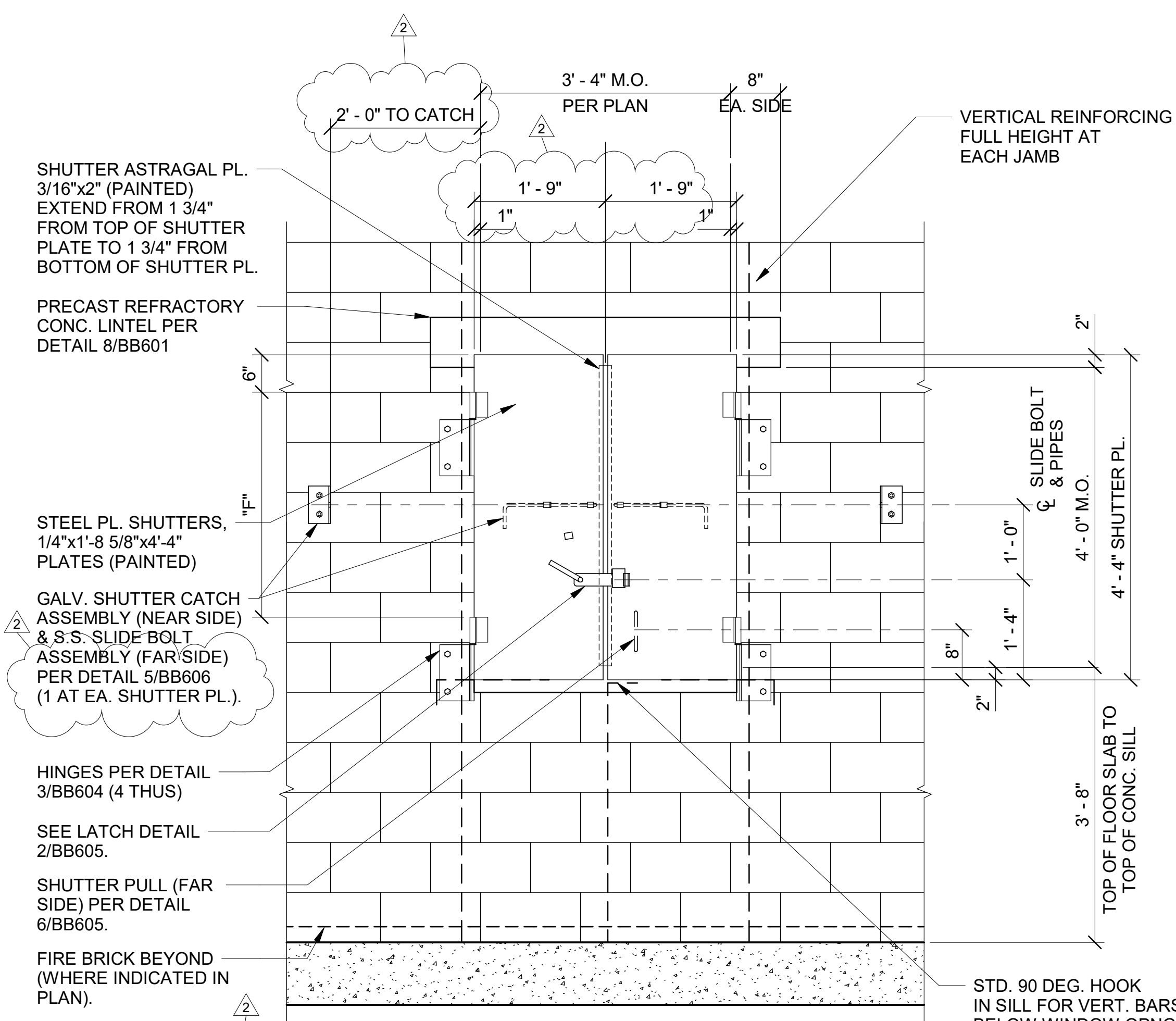
DOORS ST-2, ST-3, ST-4, ST-5, ST-6

**DOOR & WINDOW HEAD SECTIONS**

BB604 - BB606 BB606 SCALE 1 1/2" = 1'-0"

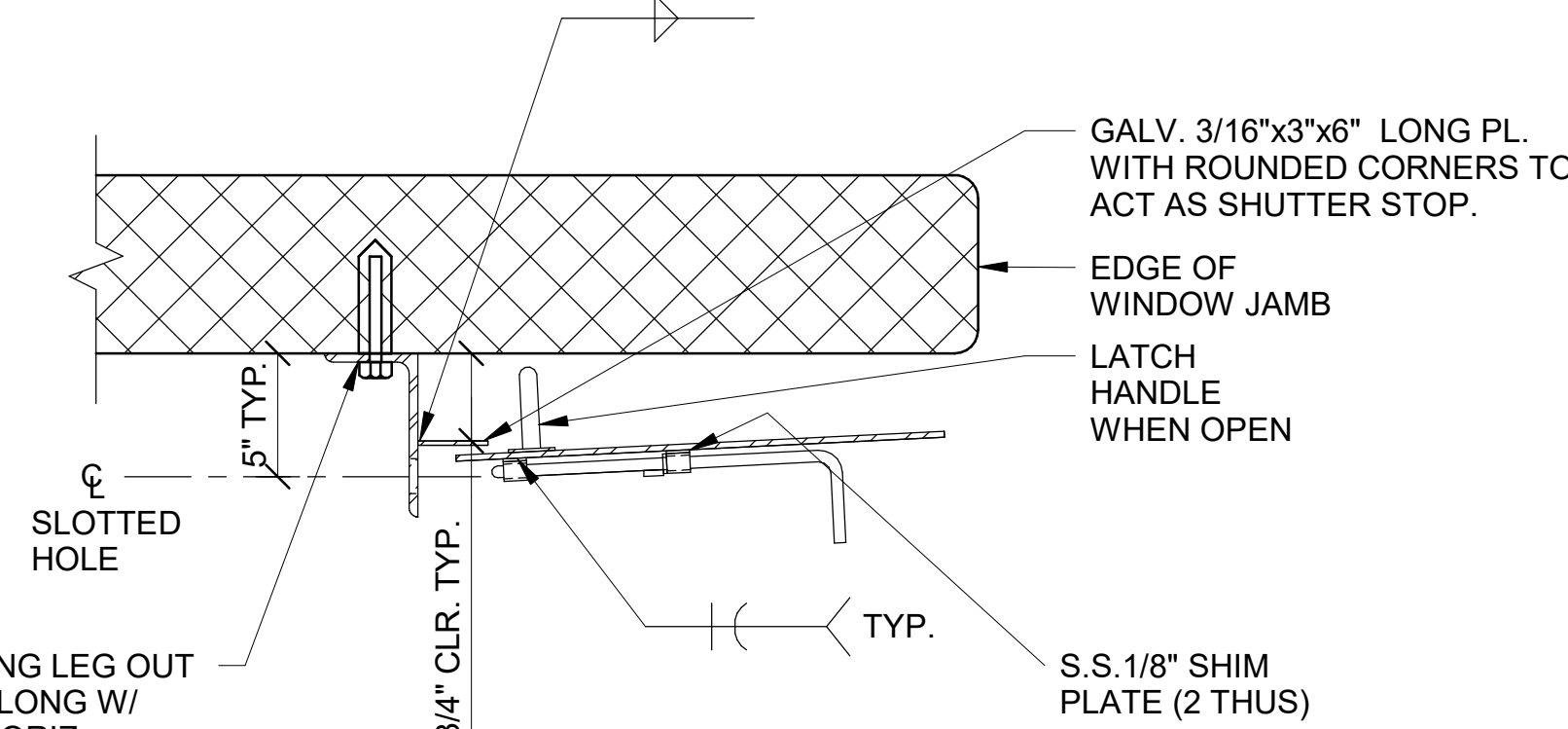
**TYPICAL WINDOW EXTERIOR ELEVATION FOR SHUTTERS**

BB606 BB606 SCALE 3/4" = 1'-0"



NOTES:

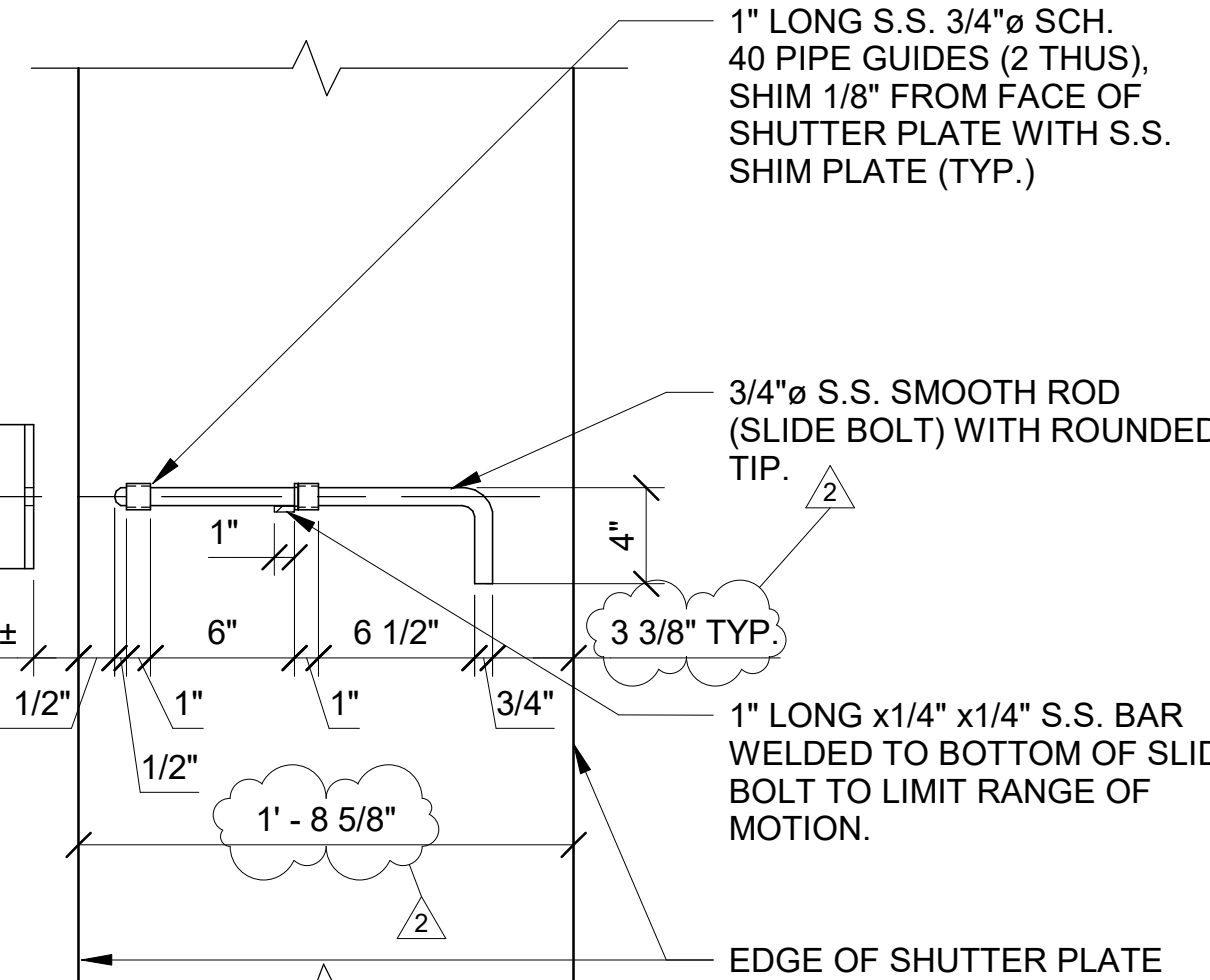
1. SEE DETAILS 2, 3, AND 4 ON THIS SHEET FOR JAMB, HEAD, AND SILL DETAILS. SEE DETAIL 5 ON THIS SHEET FOR WINDOW SHUTTER CATCH DETAIL.
2. USE TOP OF CONCRETE FLOOR ELEVATION AT CENTER OF WINDOW OPENING AS POINT OF REFERENCE FOR WINDOW DIMENSIONS, INCLUDING OPENING DIMENSIONS.
3. SEE FLOOR PLANS FOR WINDOW SHUTTER SWING DIRECTION.



NOTE: HINGES NOT SHOWN.

**PLAN VIEW**

GALV. L7x4x3/8" (LONG LEG OUT FROM WALL) x 0'-6" LONG W/ 1 1/8"x1 1/2" LONG HORIZ. SLOTTED HOLE CENTERED VERTICALLY AND (2) 1/2" S.S. ADHESIVE ANCHORS. ROUND ALL CORNERS AWAY FROM WALL TO ELIMINATE SHARP EDGES. SEE NOTE 2.



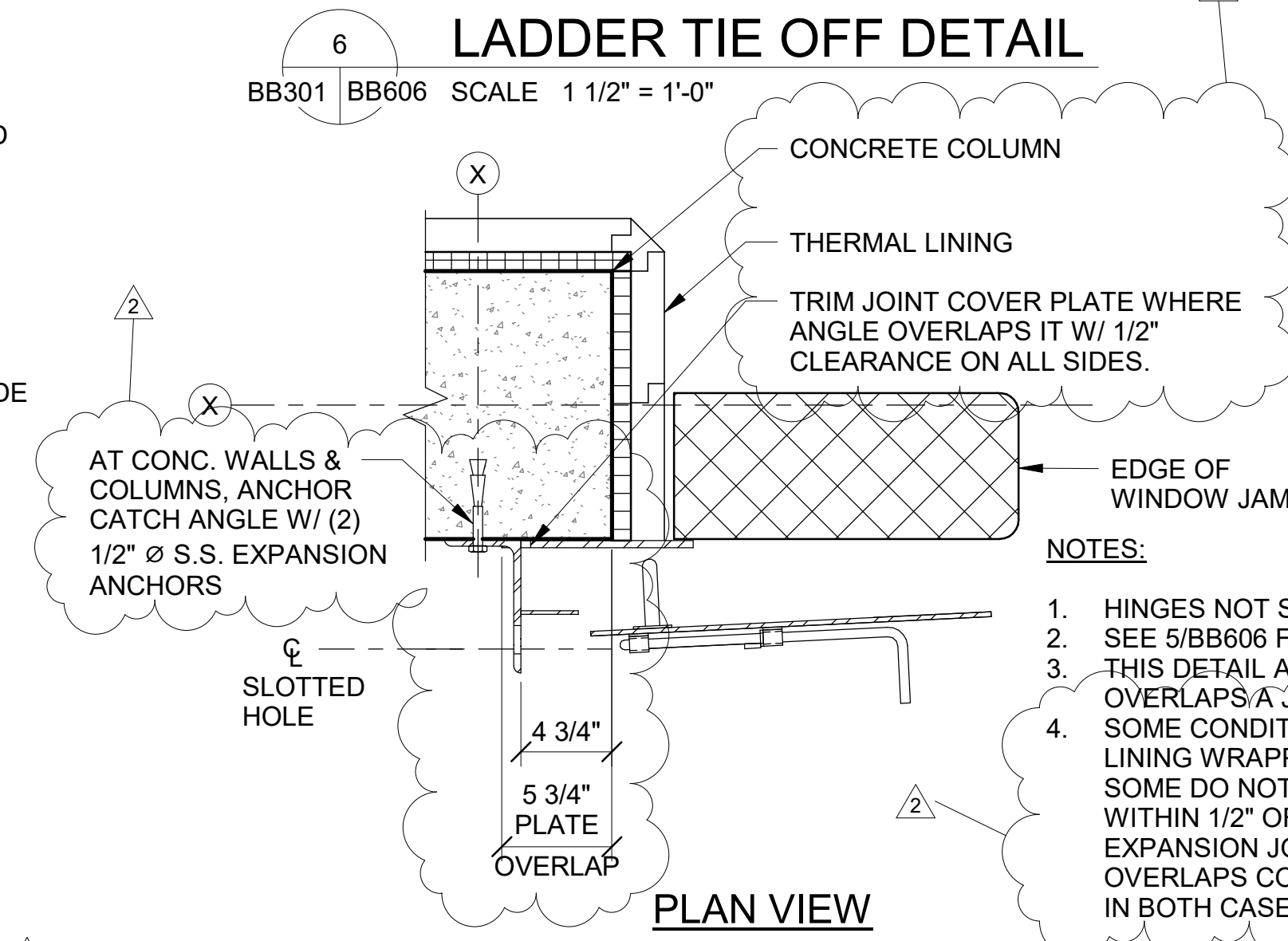
**ELEVATION VIEW**

NOTES:

1. SHUTTER PLATE IS SHOWN IN OPEN POSITION FROM EXTERIOR ELEVATION. LATCH BAR HAS BEEN OMITTED FROM THIS DETAIL.
2. AFTER HANGING SHUTTERS, OPEN SHUTTERS AND LAY BACK AGAINST WALL. FIELD LOCATE AND INSTALL CATCH ANGLES ON BOTH SIDES SO THAT SLIDE BOLTS ALIGN WITH SLOTTED HOLES AND OPERATE SMOOTHLY.

**WINDOW SHUTTER CATCH ASSEMBLY DETAILS - OUT-SWINGING WINDOWS**

BB606 BB606 SCALE 1 1/2" = 1'-0"

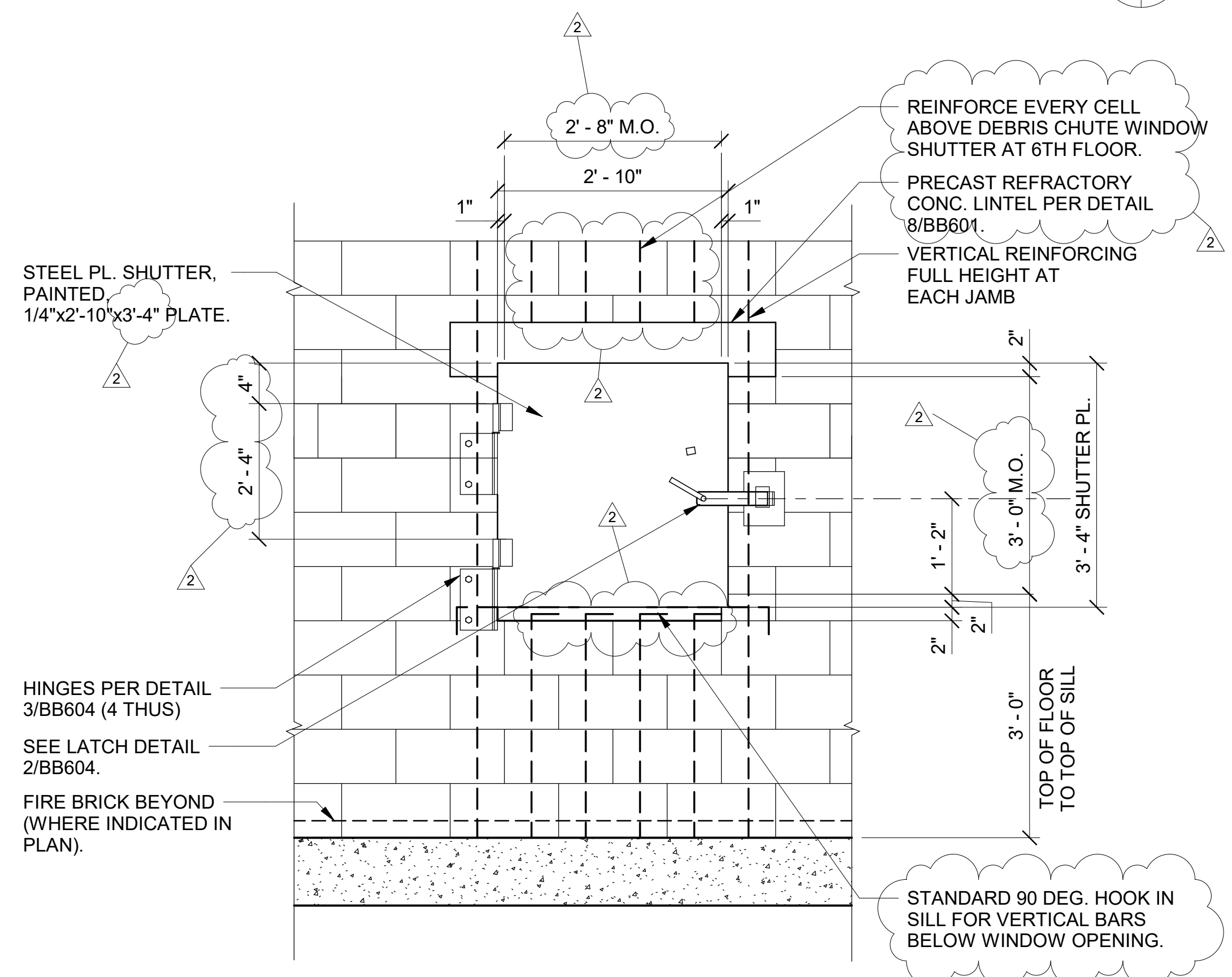


**LADDER TIE OFF DETAIL**

BB301 BB606 SCALE 1 1/2" = 1'-0"

**WINDOW SHUTTER CATCH ASSEMBLY DETAIL - ANGLE AT CONC. WALL/COLUMN**

BB606 BB606 SCALE 1 1/2" = 1'-0"



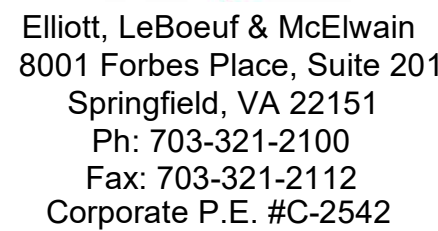
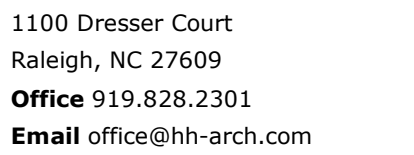
NOTES:

1. SEE DETAIL 4/BB606 FOR SILL, DETAIL 4/BB604 FOR JAMB, AND 3/BB606 FOR HEAD DETAILS.
2. USE TOP OF CONCRETE FLOOR ELEVATION AT CENTER OF WINDOW OPENING AS POINT OF REFERENCE FOR WINDOW DIMENSIONS.
3. SEE FLOOR PLANS FOR WINDOW SHUTTER SWING DIRECTION.

**SINGLE SWING WINDOW INTERIOR ELEVATION AT DEBRIS CHUTE**

BB202 - BB606 BB606 SCALE 3/4" = 1'-0"



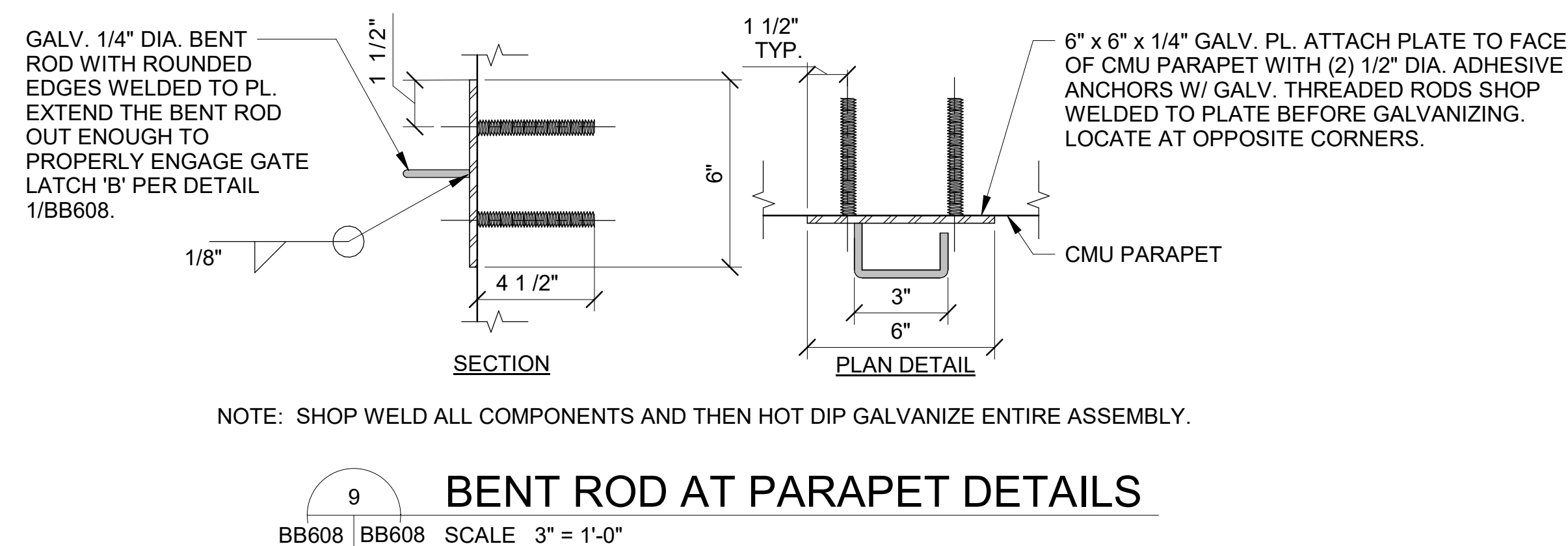
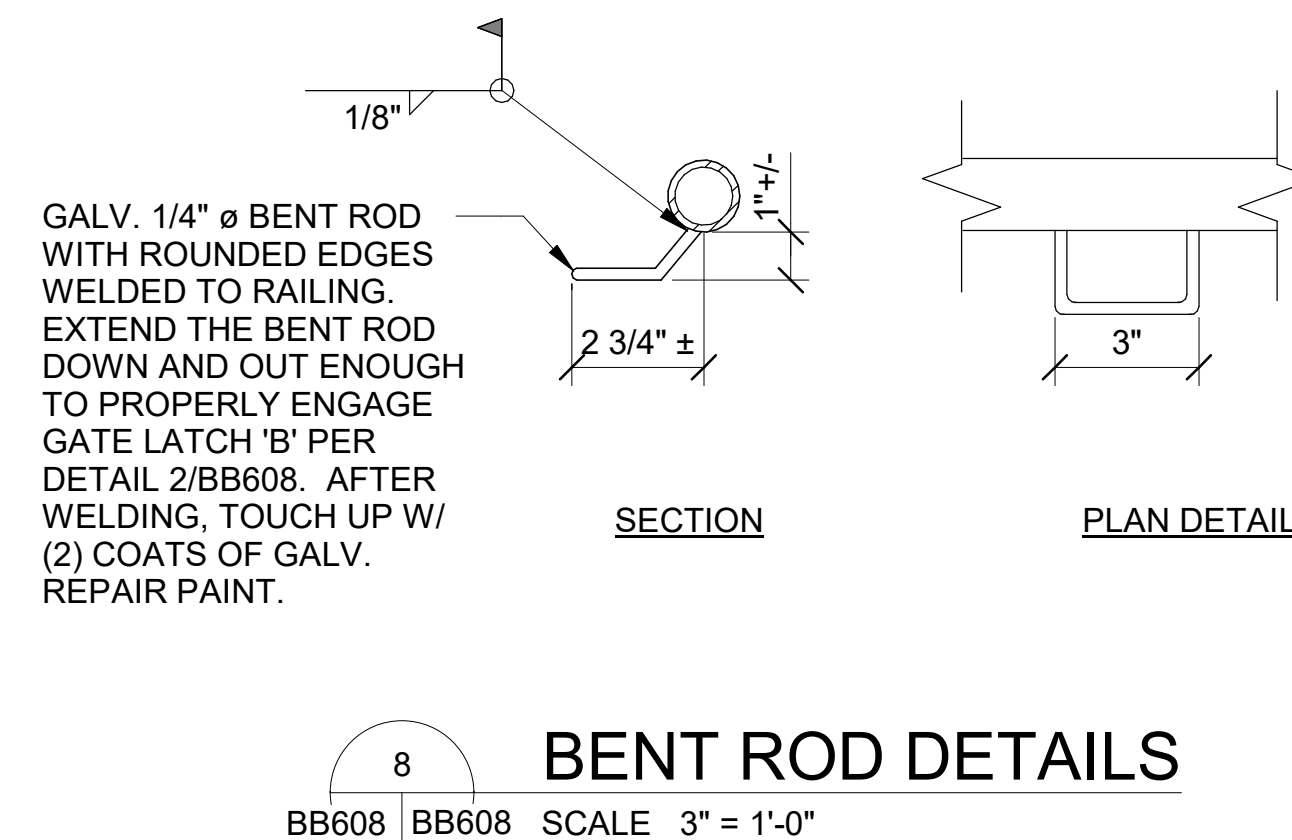
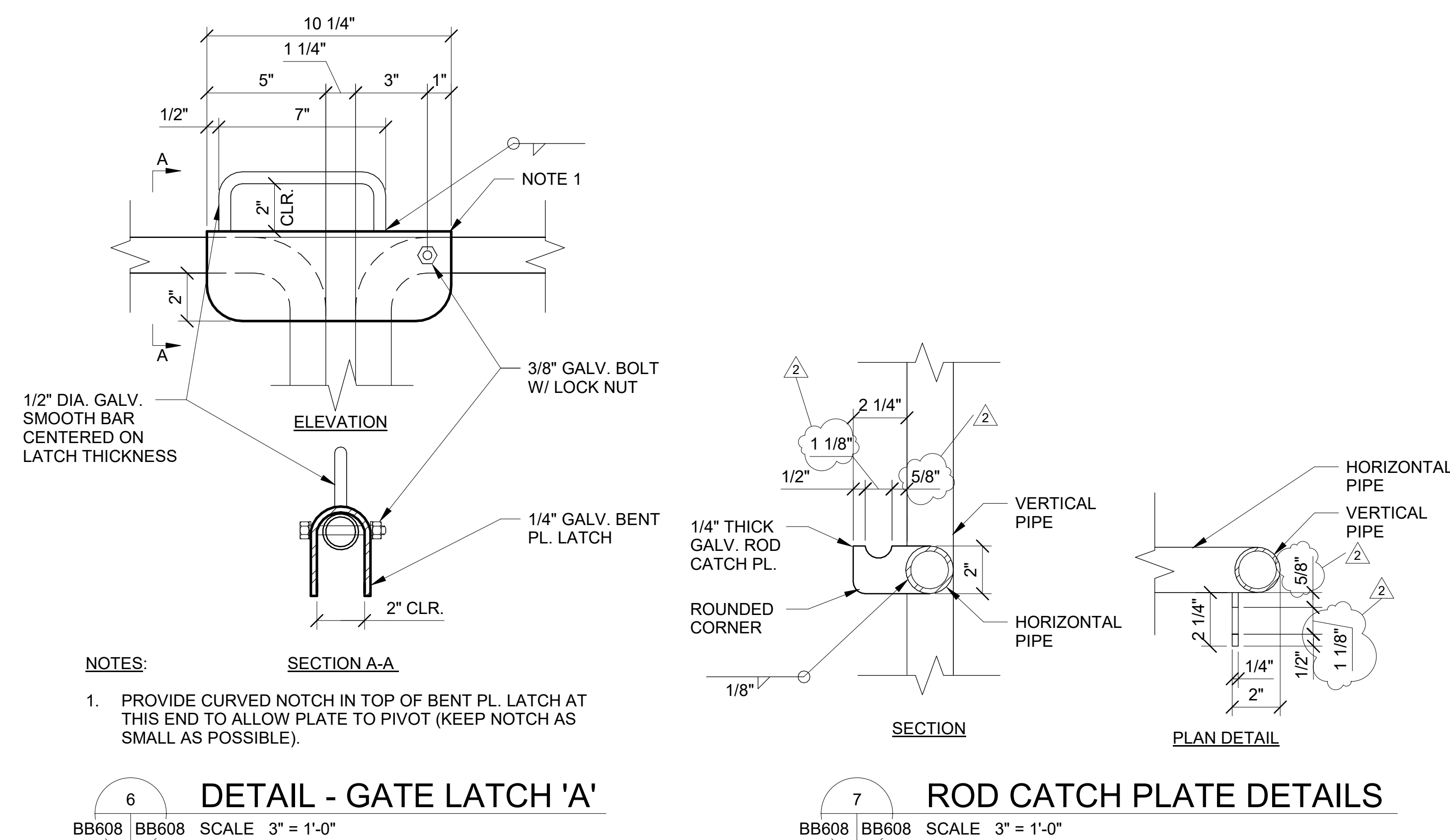
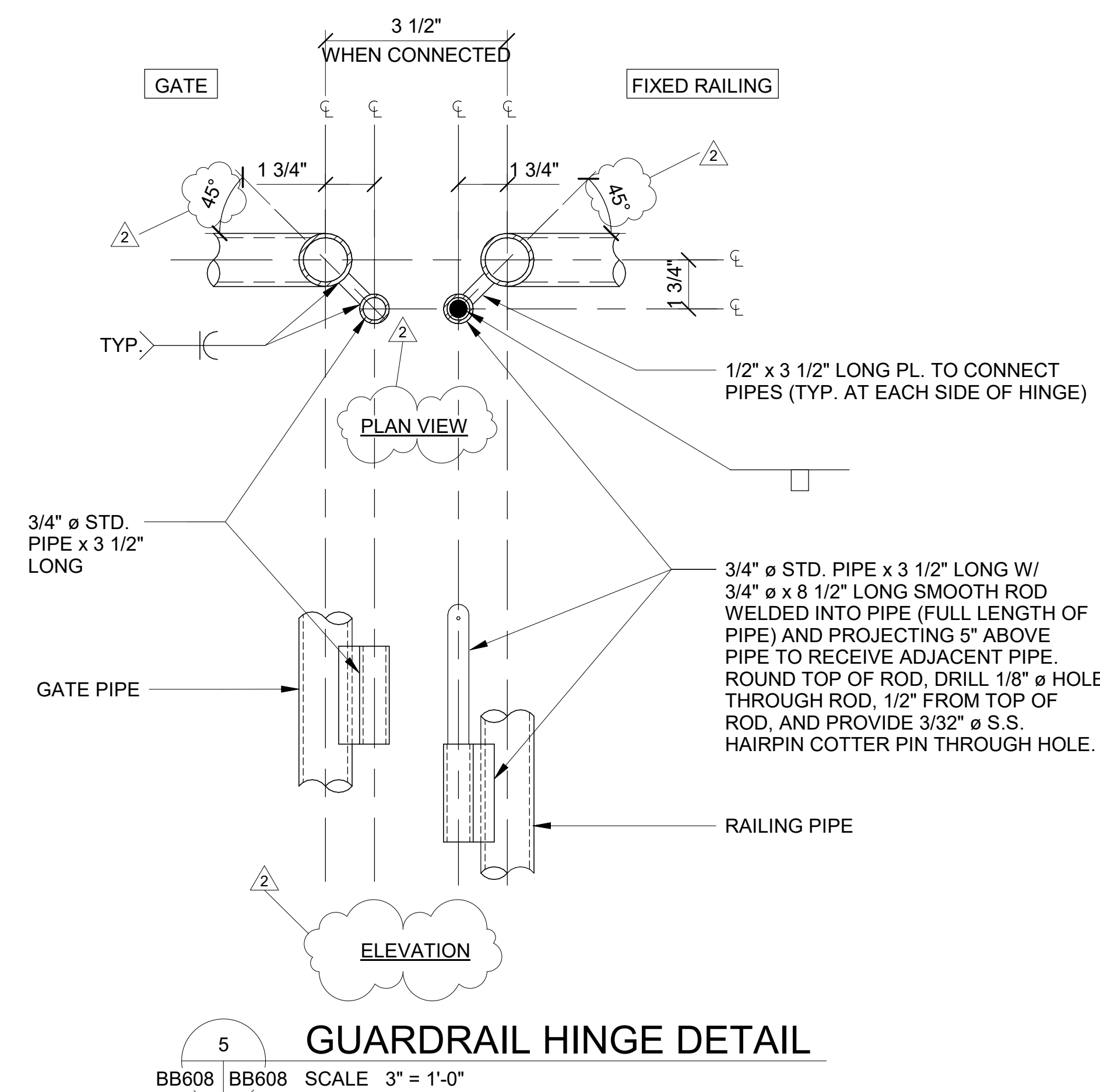
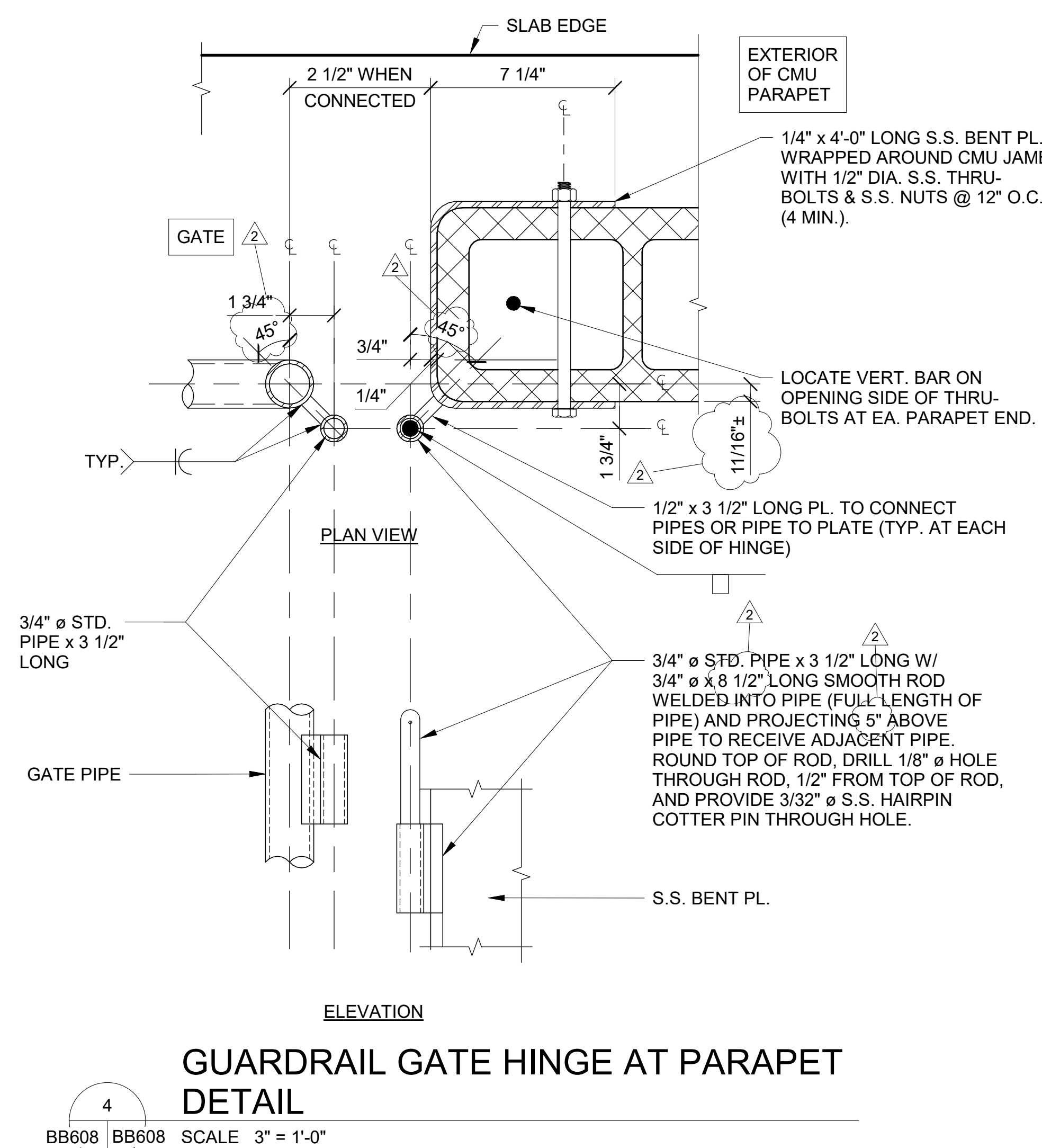
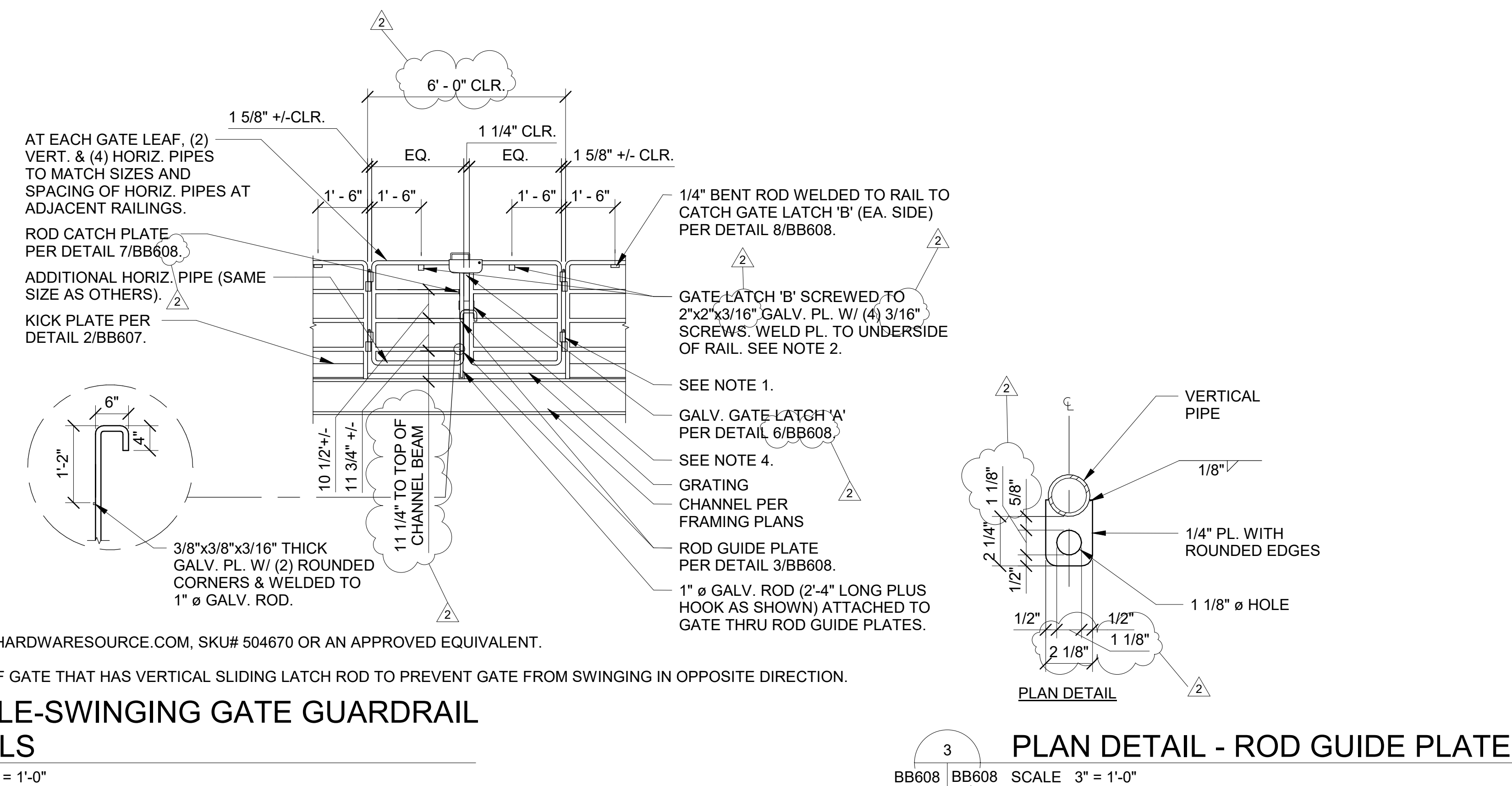
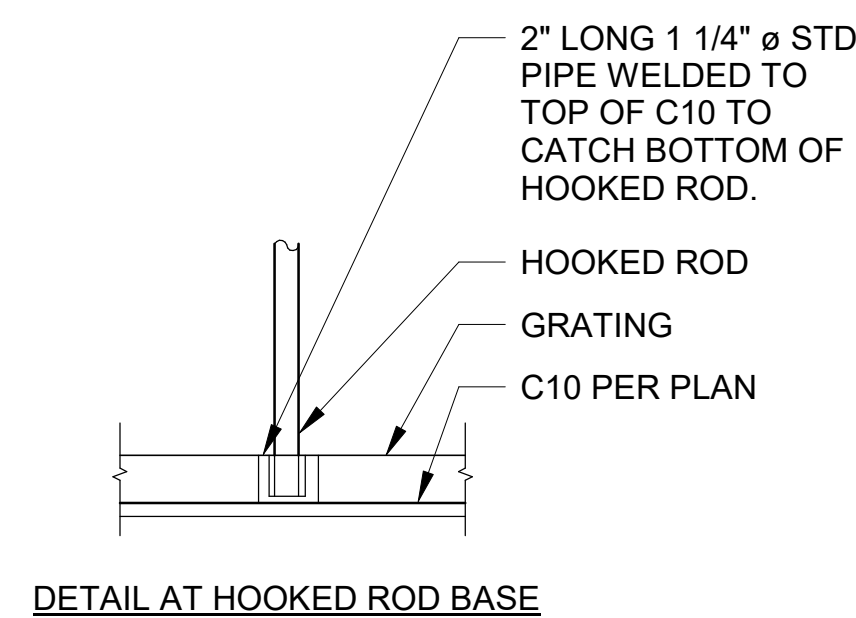
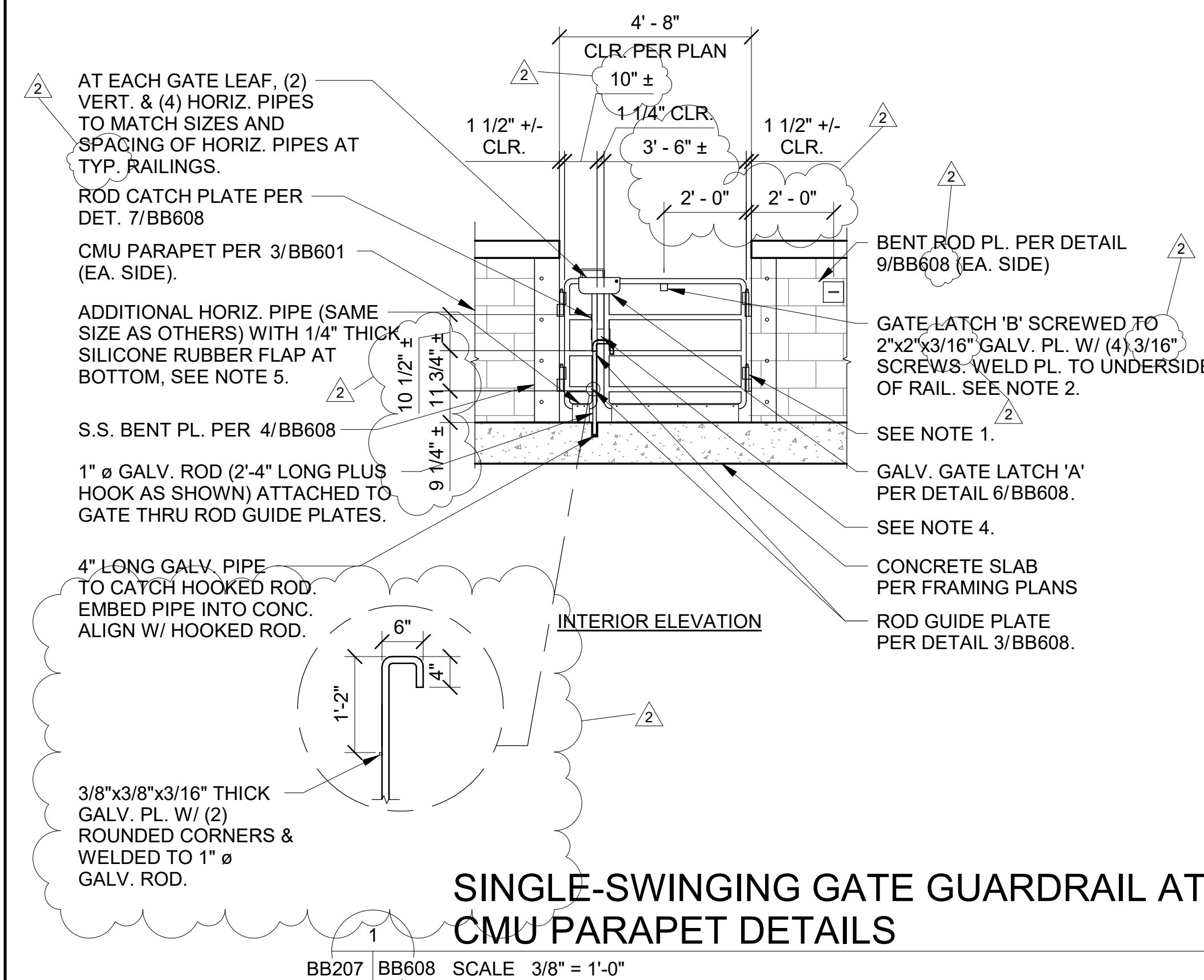


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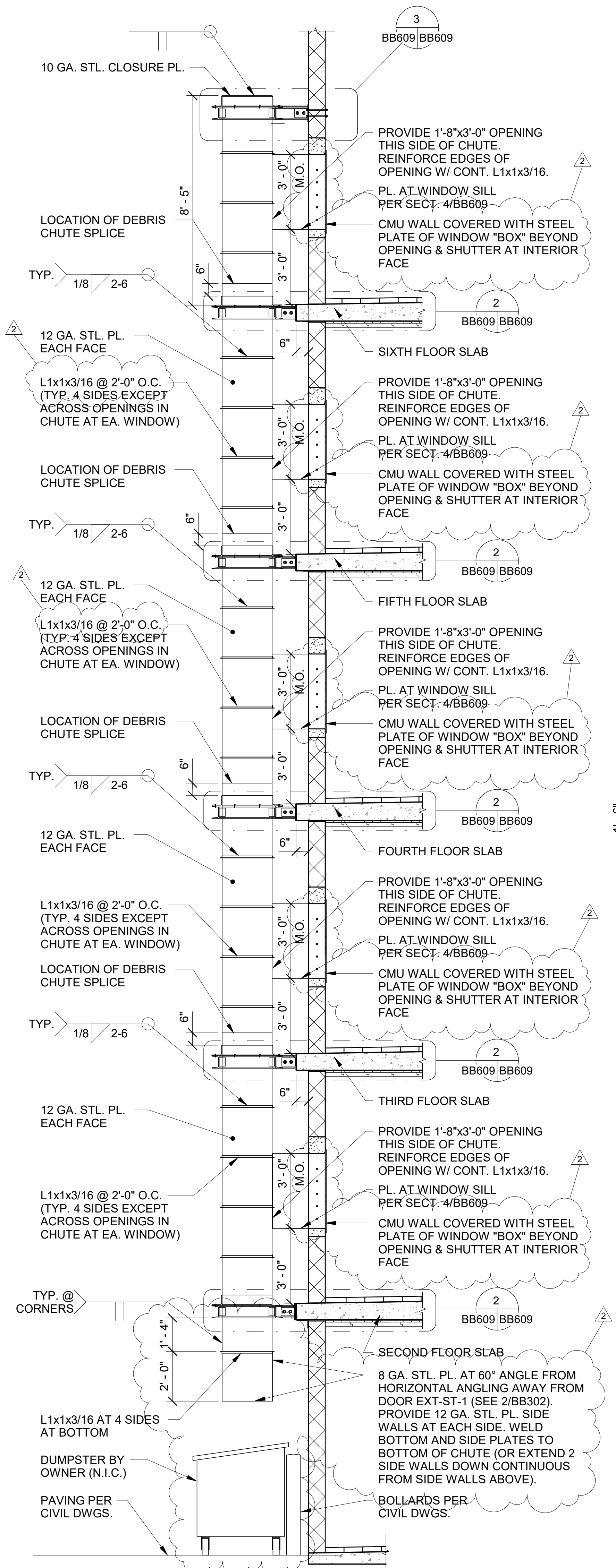




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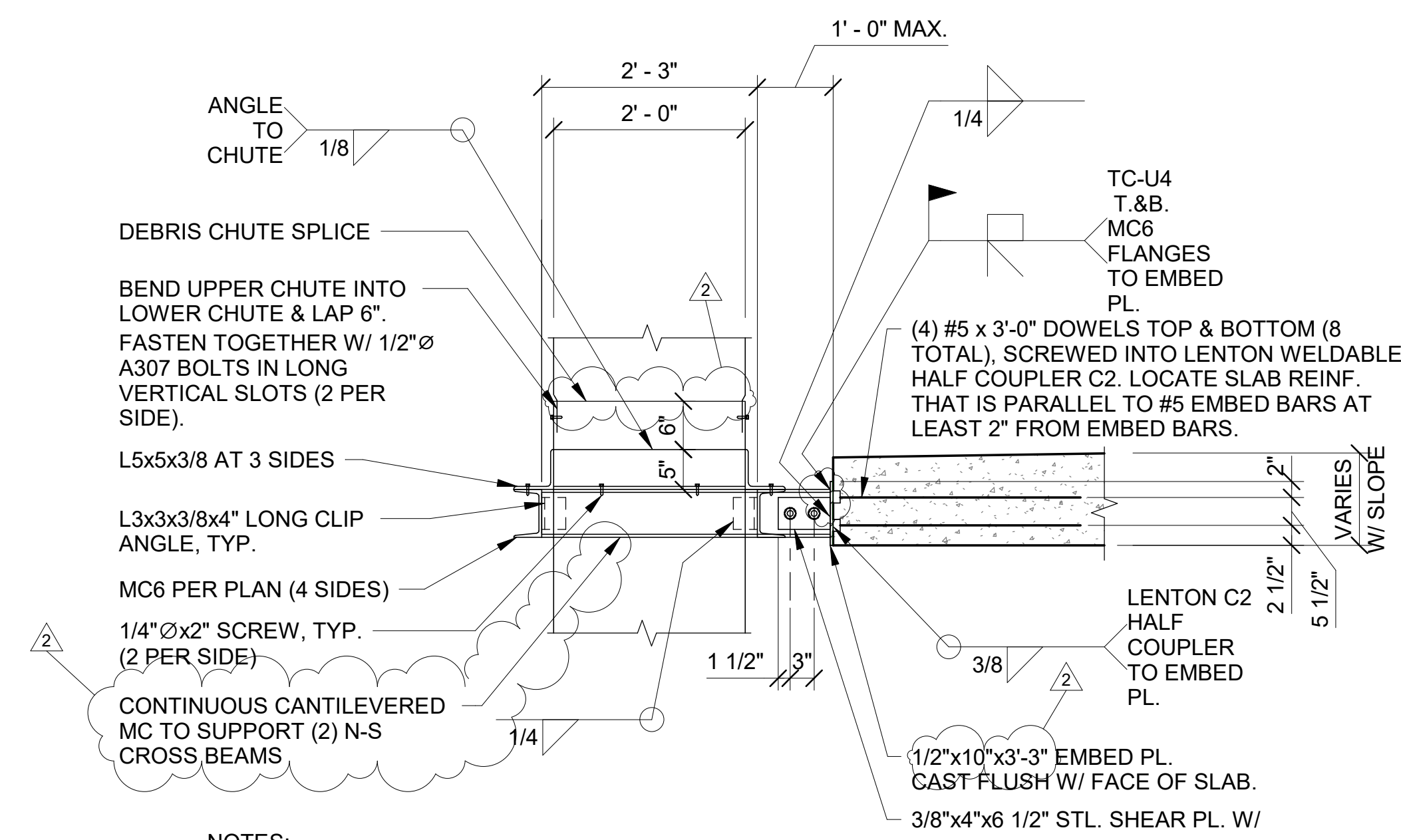
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**BURN BUILDING - DEBRIS CHUTE DETAILS**

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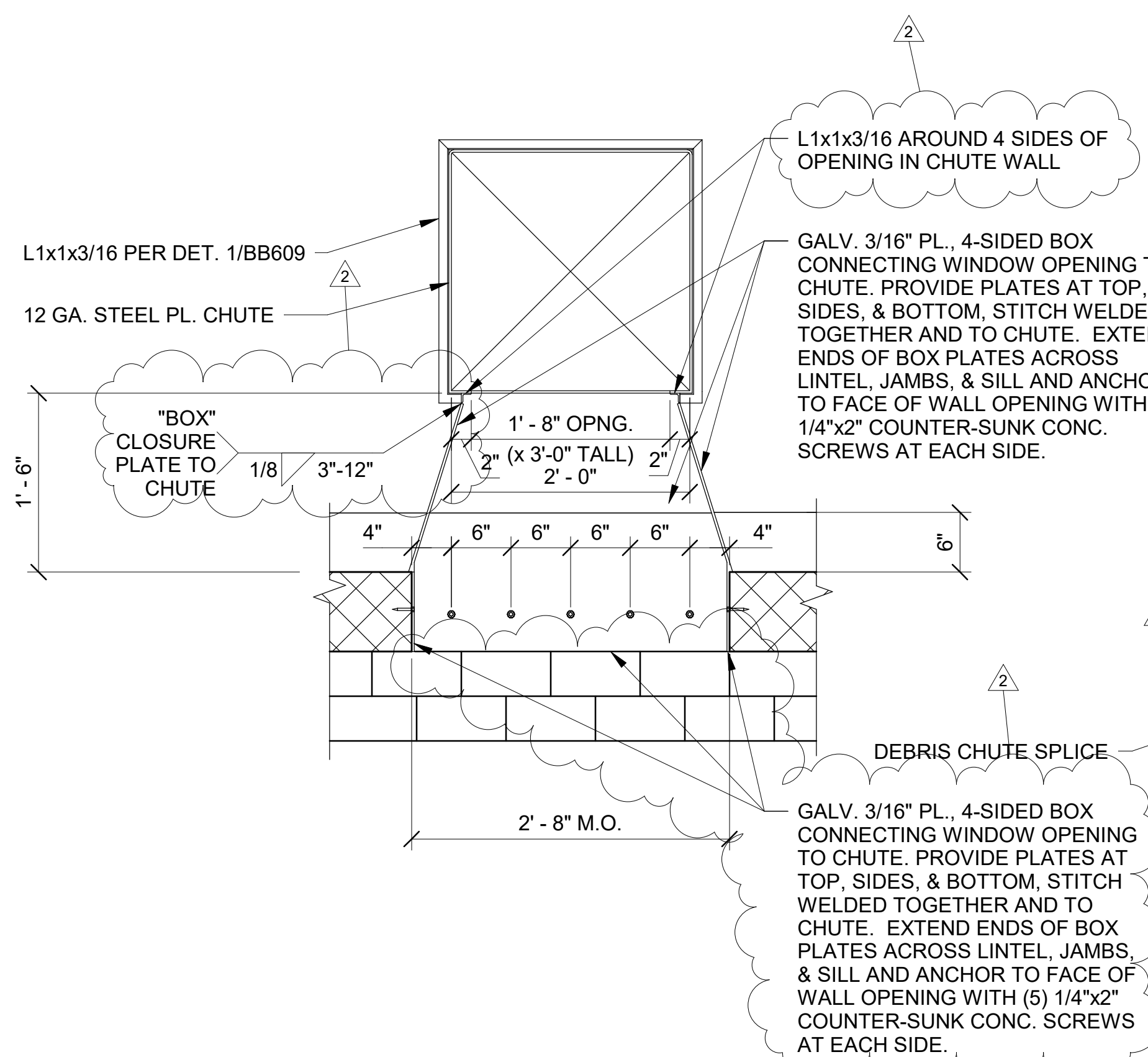
- NOTES:**
- ALL PIECES SHALL BE GALV. U.O.N.

**DEBRIS CHUTE SECTION**  
BB201 - BB609 SCALE 3/8" = 1'-0"  
BB206

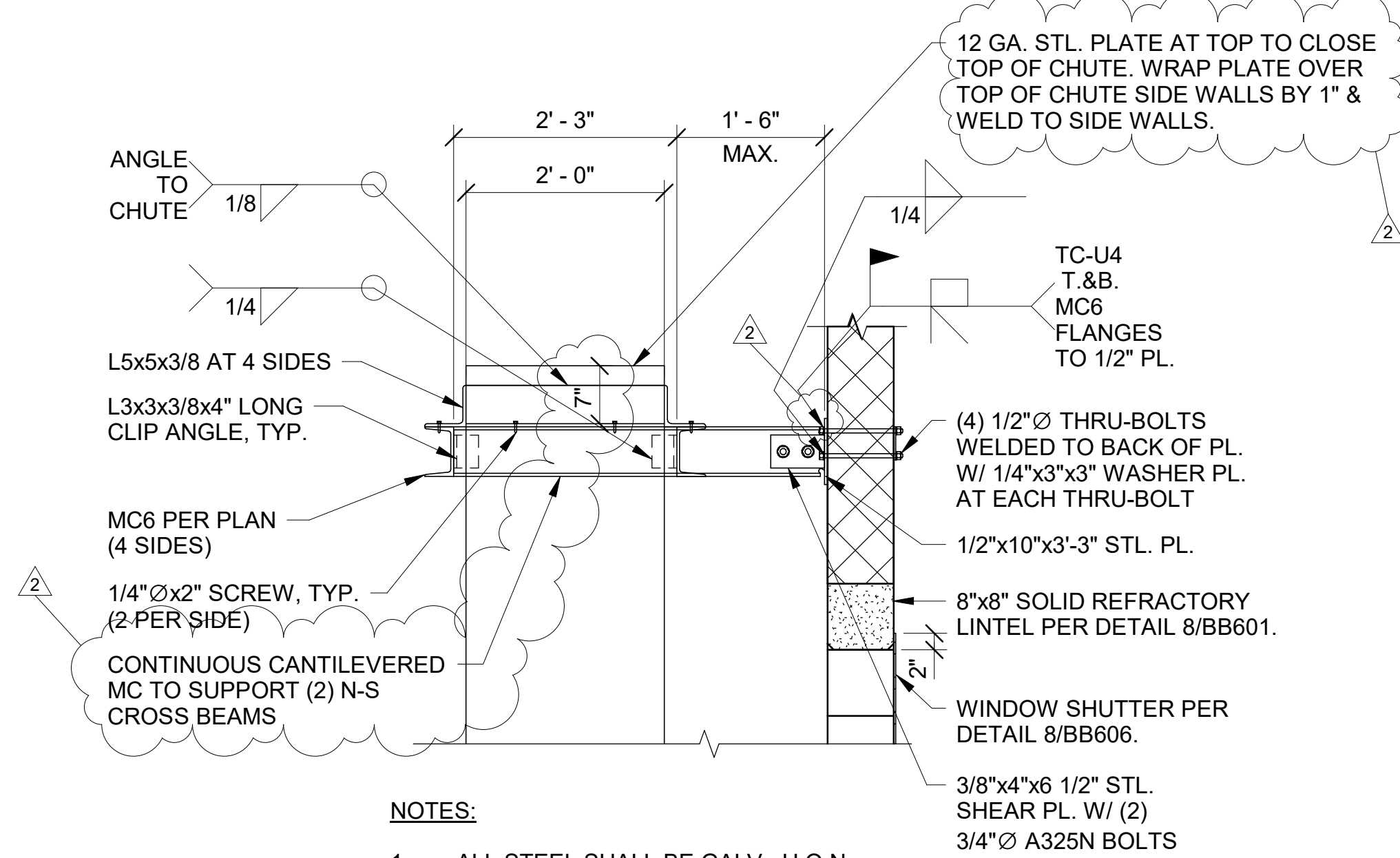


- NOTES:**
- ALL STEEL SHALL BE GALV., U.O.N.
  - PROVIDE LENTON WELDABLE HALF COUPLER C2 OR APPROVED EQUAL.
  - DIP EMBED PL., LENTON WELDABLE HALF COUPLER, AND ATTACHED #5 BARS AS AN ASSEMBLY.
  - WRAP SLAB REINFORCING IN HEAVY-DUTY ELECTRICAL TAPE AT ALL LOCATIONS WHERE THEY GET WITHIN 1/2" OF GALV #5 EMBED BAR.

**DEBRIS CHUTE SUPPORT DETAIL - 2ND THRU 5TH FLOORS**  
BB202 - BB609 SCALE 3/4" = 1'-0"  
BB206, BB609



**DEBRIS CHUTE WINDOW "BOX"**  
BB202 - BB609 SCALE 1" = 1'-0"  
BB206, BB609



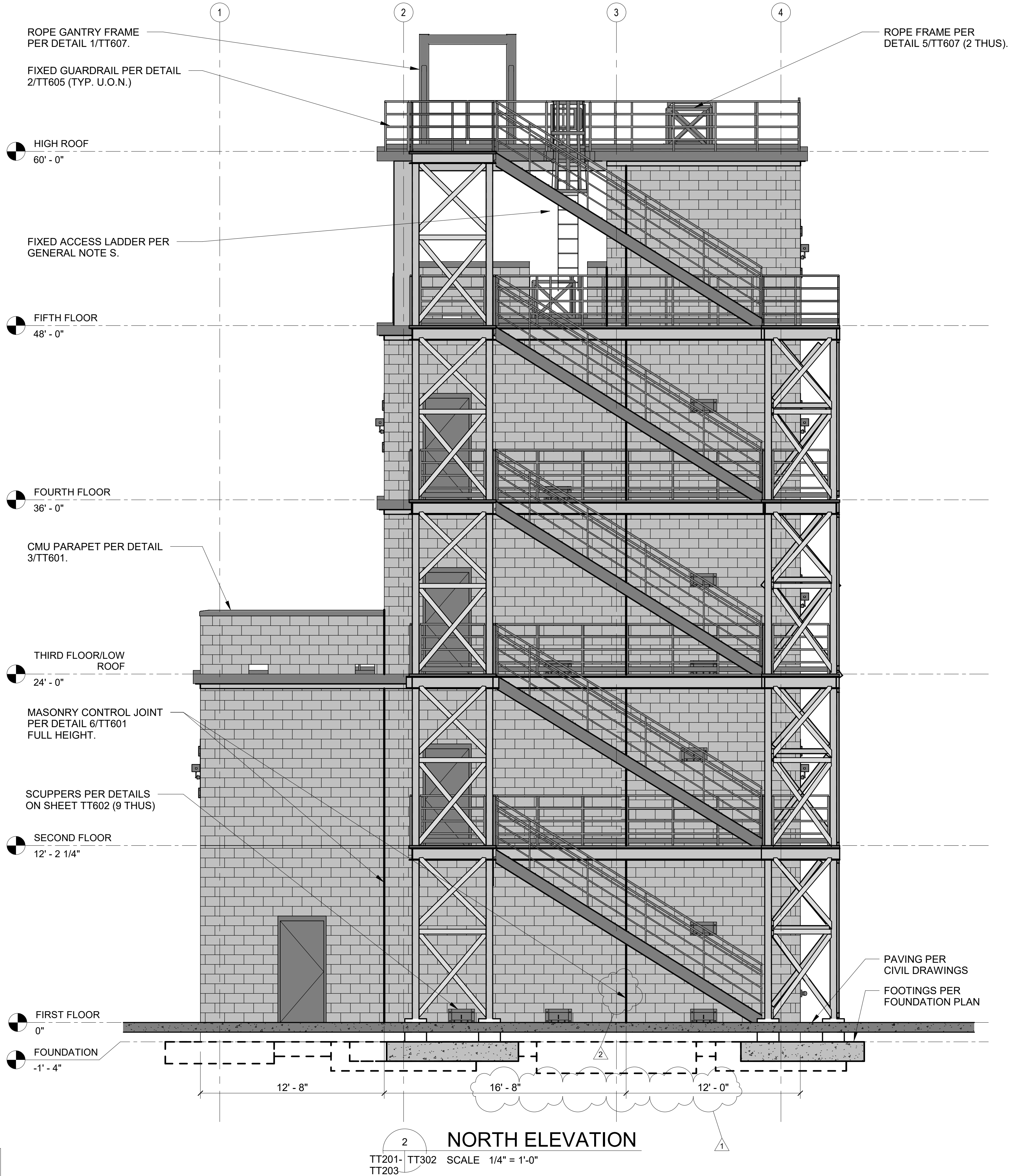
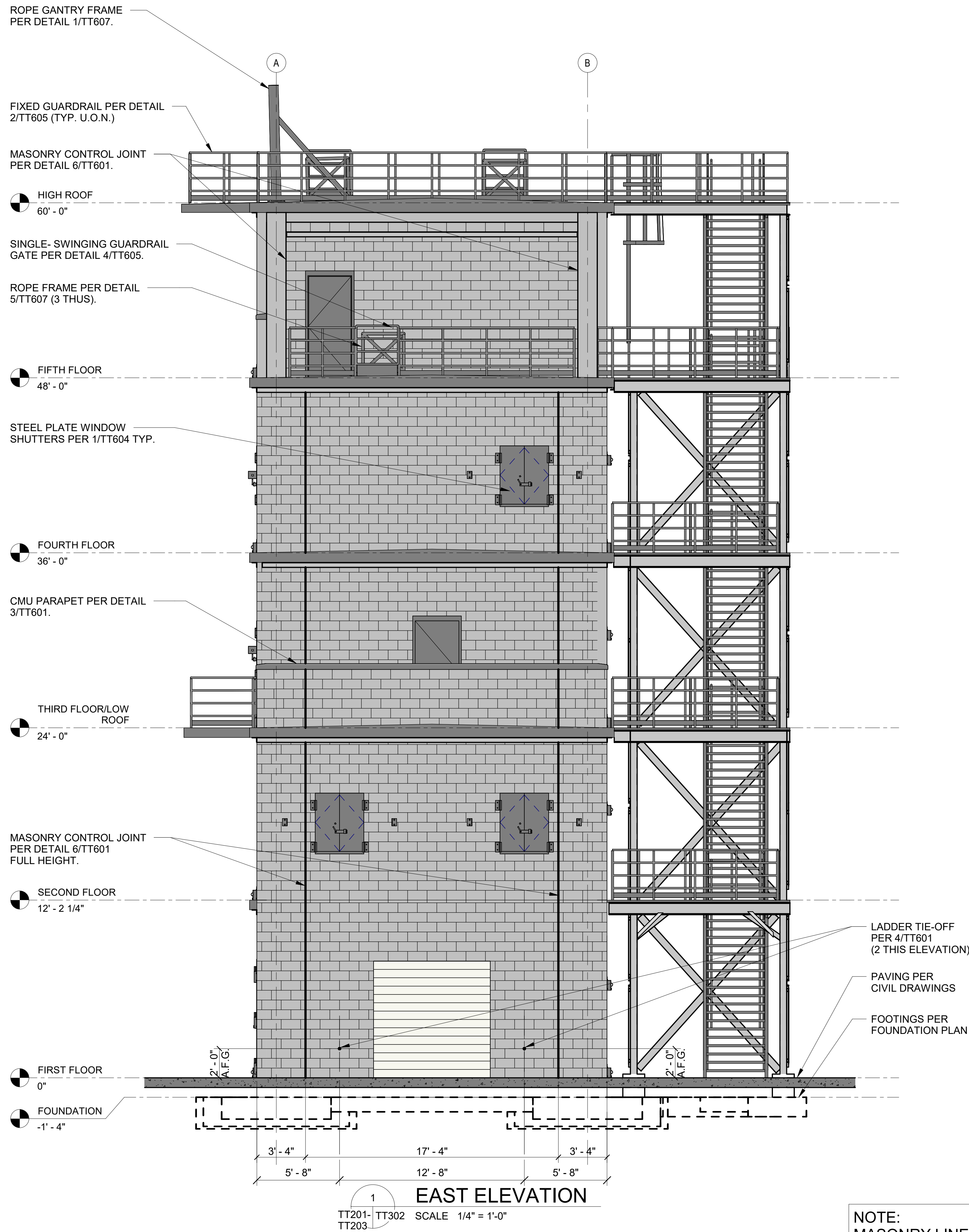
- NOTES:**
- ALL STEEL SHALL BE GALV., U.O.N.

**TOP OF DEBRIS CHUTE DETAIL**  
BB202 - BB609 SCALE 3/4" = 1'-0"  
BB206, BB609







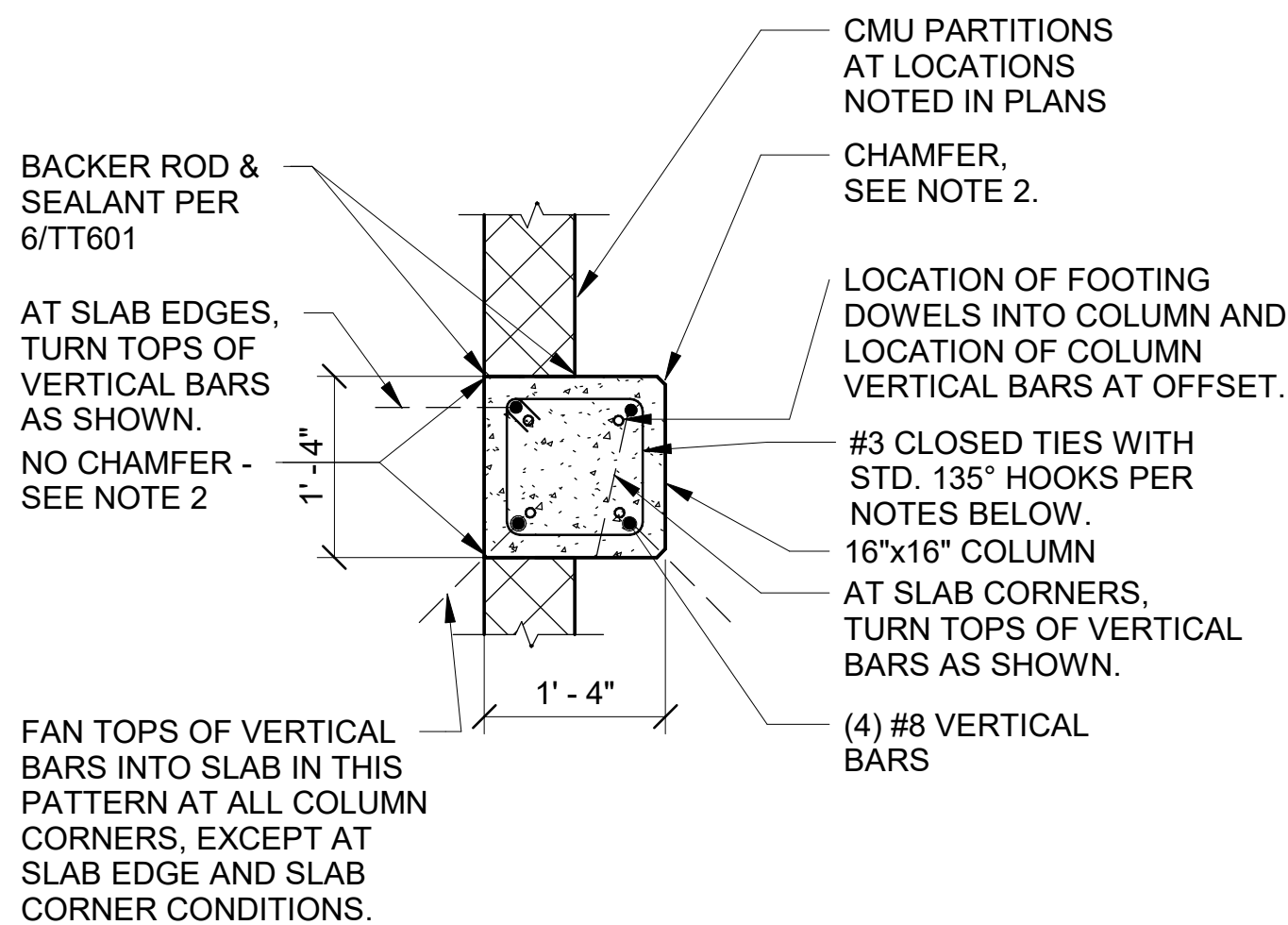


NO.	REVISION	DATE
1	Addendum #1	04/14/25
2	Addendum #2	05/01/25

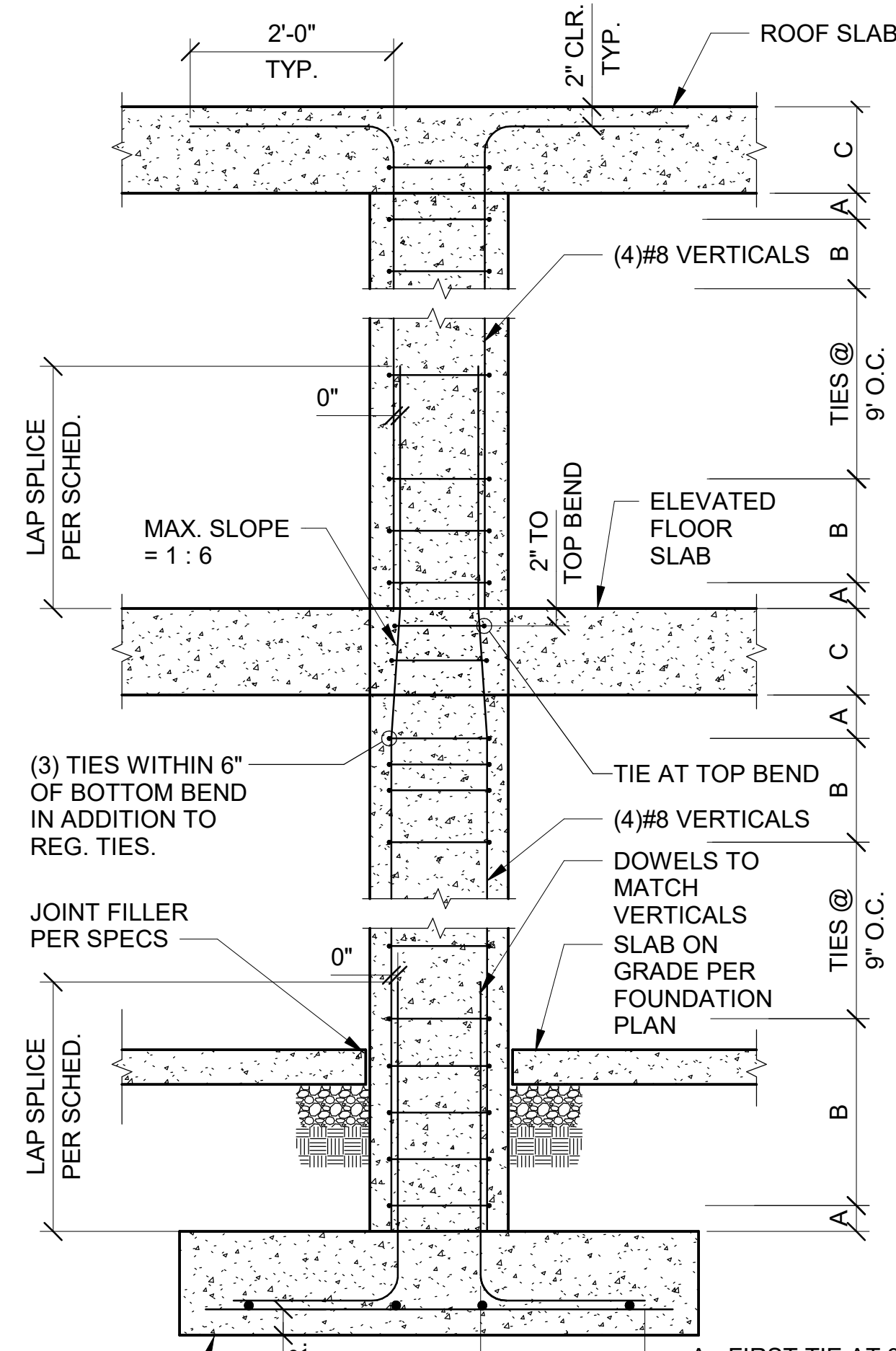
JOB NUMBER  
**22056**  
DATE ISSUED  
**03/14/2025**  
PROJECT STATUS  
**ISSUE FOR CONSTRUCTION**  
SHEET  
**TRAINING TOWER - EAST & NORTH ELEVATIONS**

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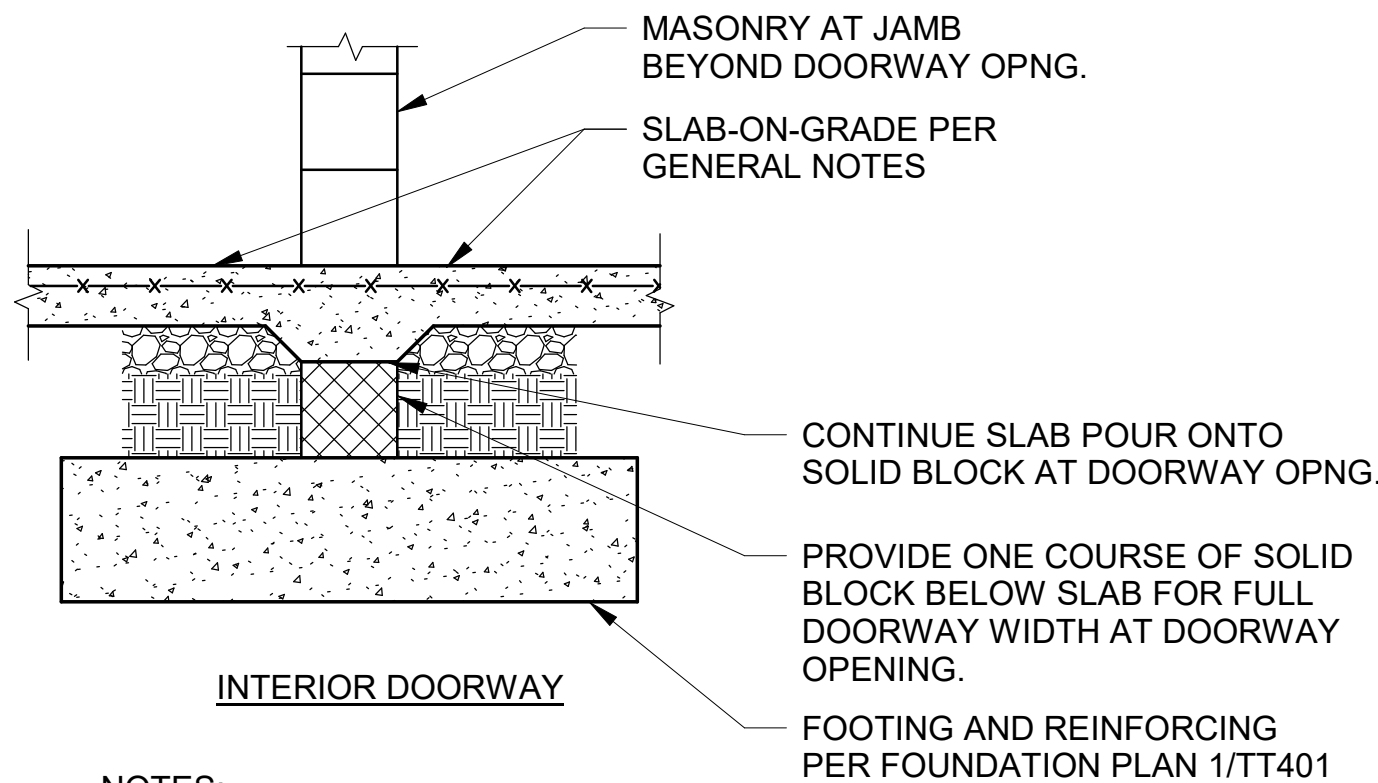
16X16 COLUMN PLAN DETAIL



FOOTING DIMENSIONS AND REINFORCING PER FOUNDATION PLAN

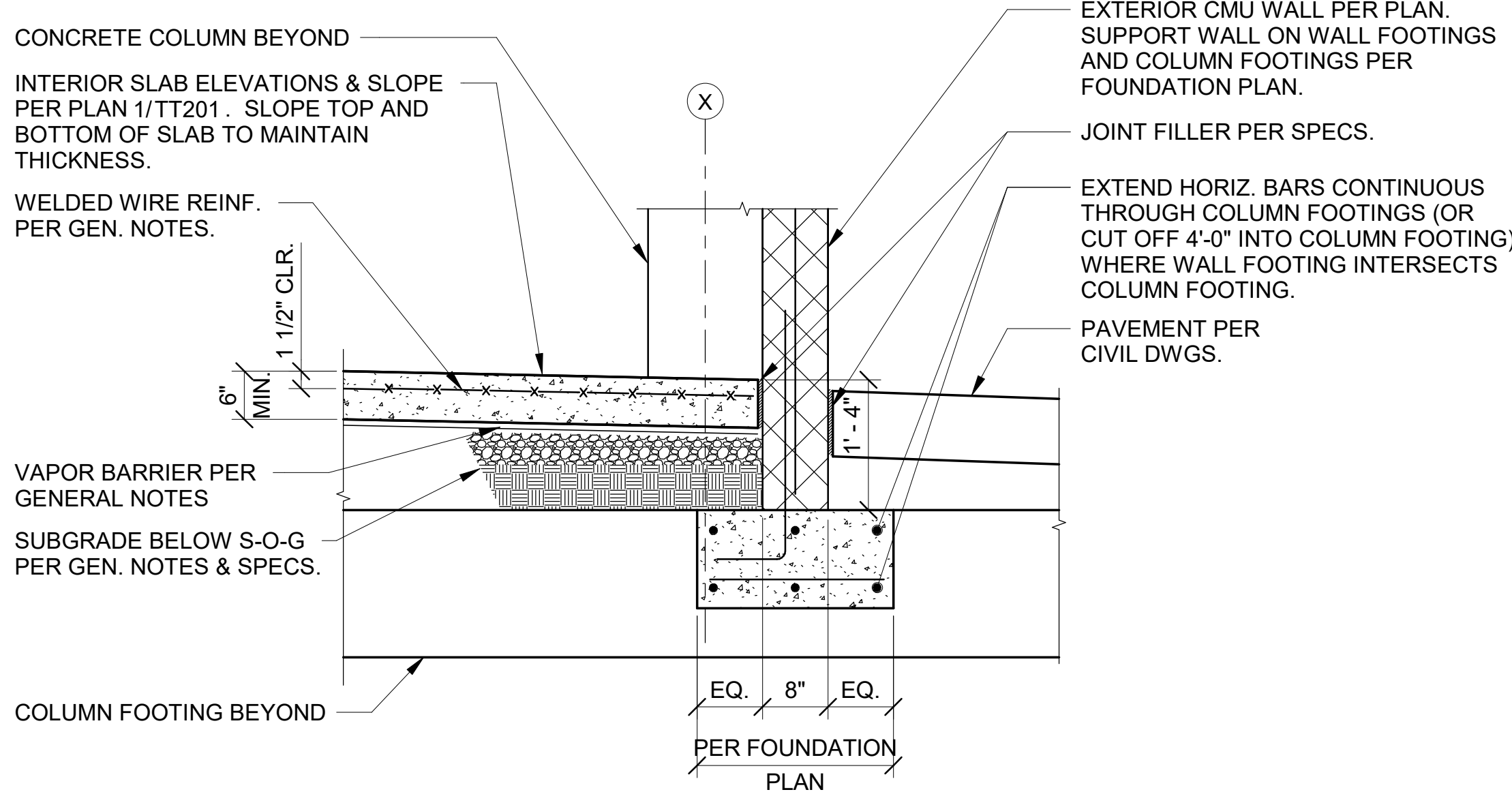
- NOTES:
- THIS DETAIL APPLIES TO ALL COLUMNS. ALL COLUMNS SHALL BE 16"x16".
  - AT COLUMN CORNERS WITH NO INTERSECTING CMU PARTITIONS, PROVIDE 3/4" CHAMFER. AT COLUMN CORNERS WITH INTERSECTING CMU PARTITIONS, PROVIDE NO CHAMFER.

1 TYPICAL COLUMN DETAIL

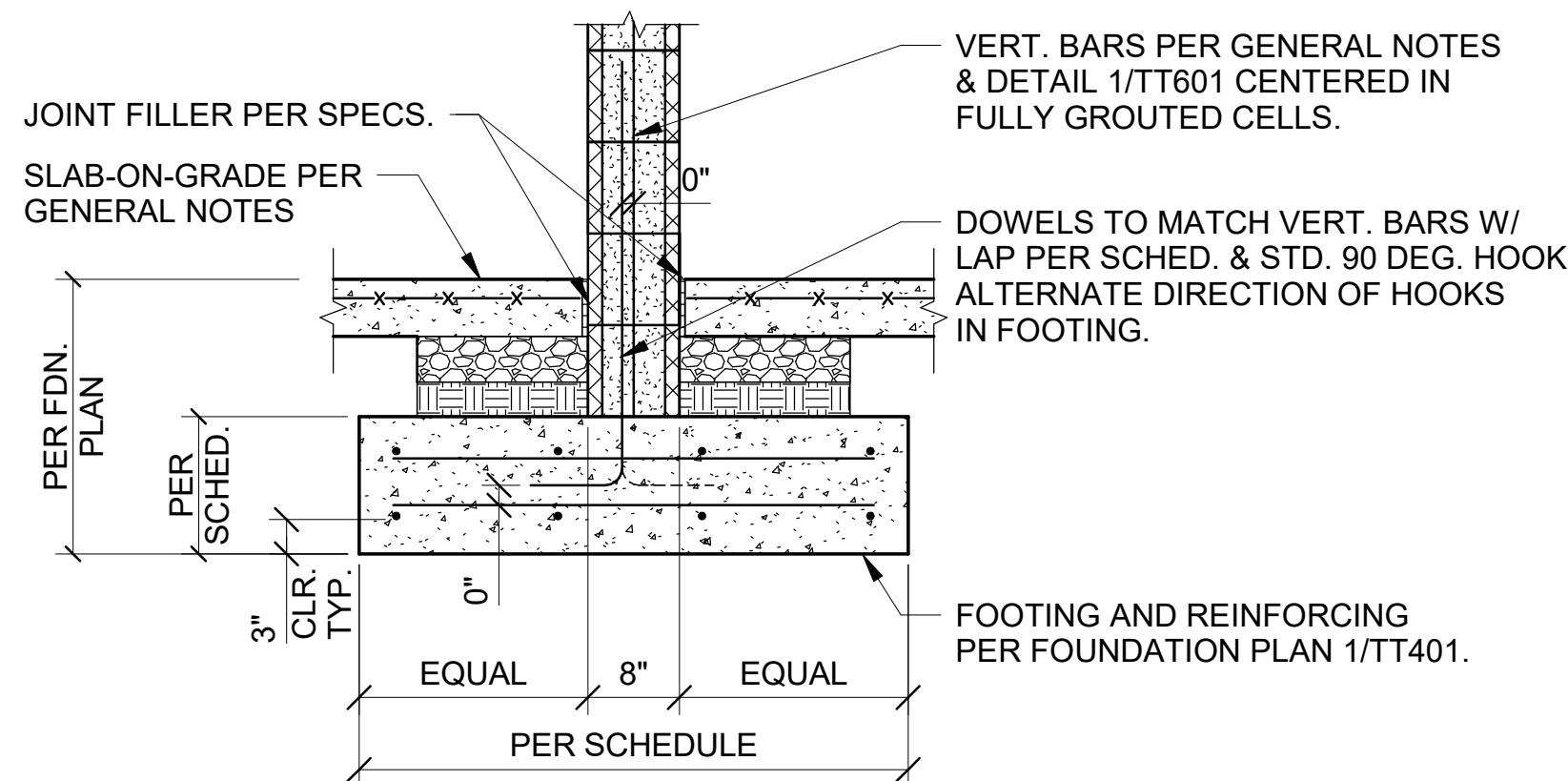


- NOTES:
- FOUNDATION AND WALL REINFORCING NOT SHOWN FOR CLARITY.

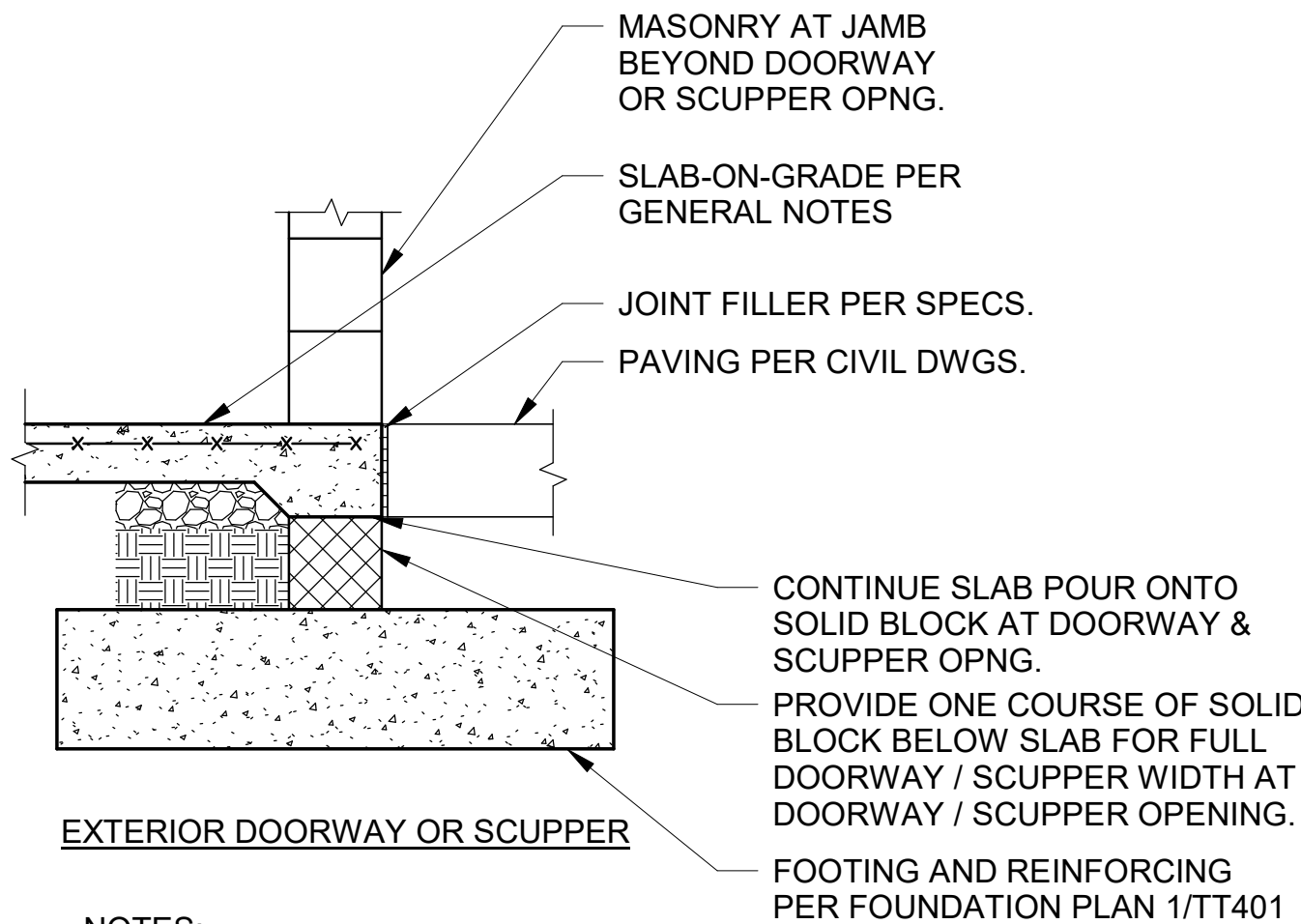
6 SECTION - DOOR & SCUPPER THRESHOLDS AT SLAB-ON-GRADE



2 TYPICAL EXTERIOR WALL FOOTING

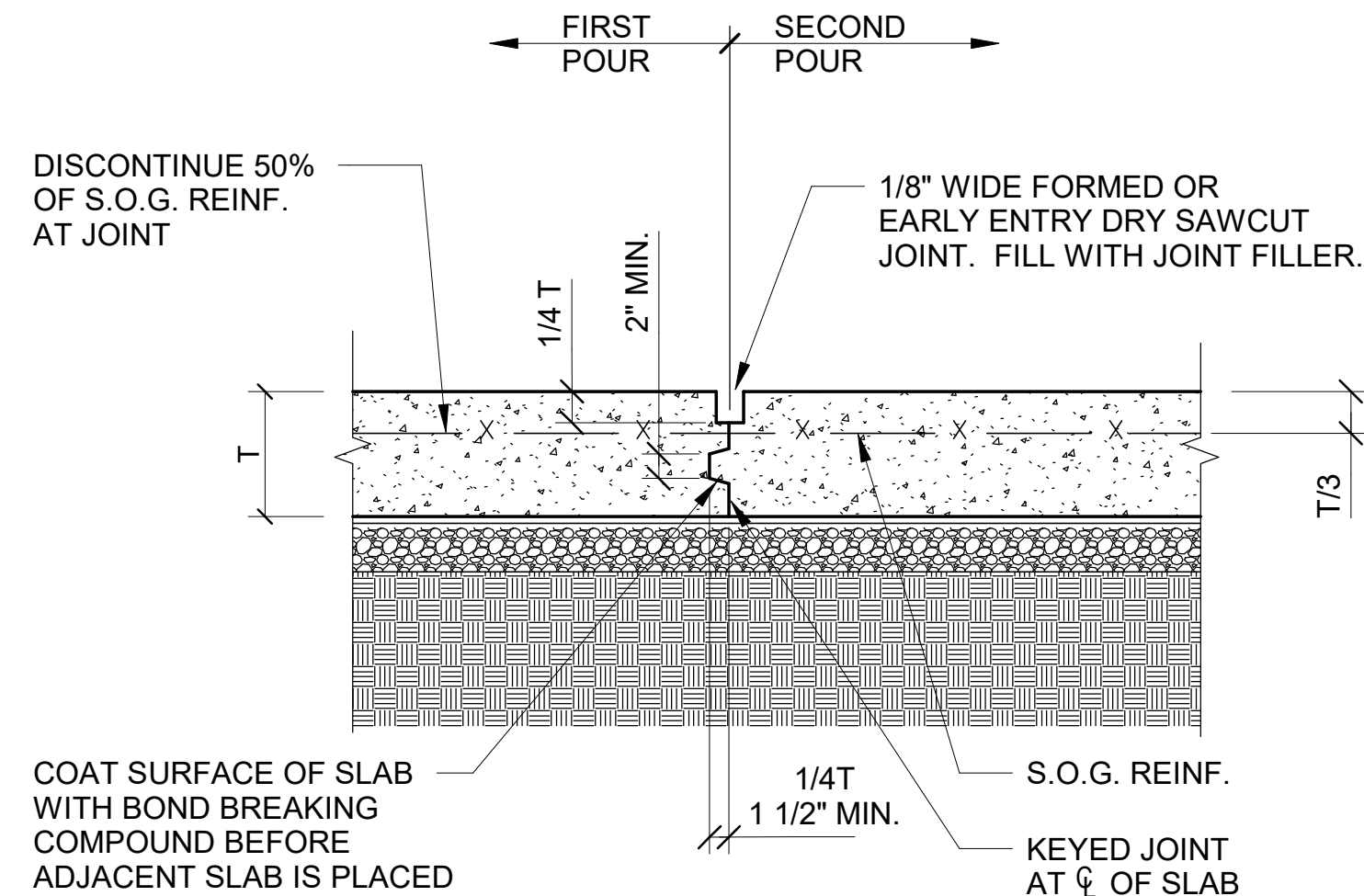


4 TYPICAL INTERIOR WALL FOOTING SECTION

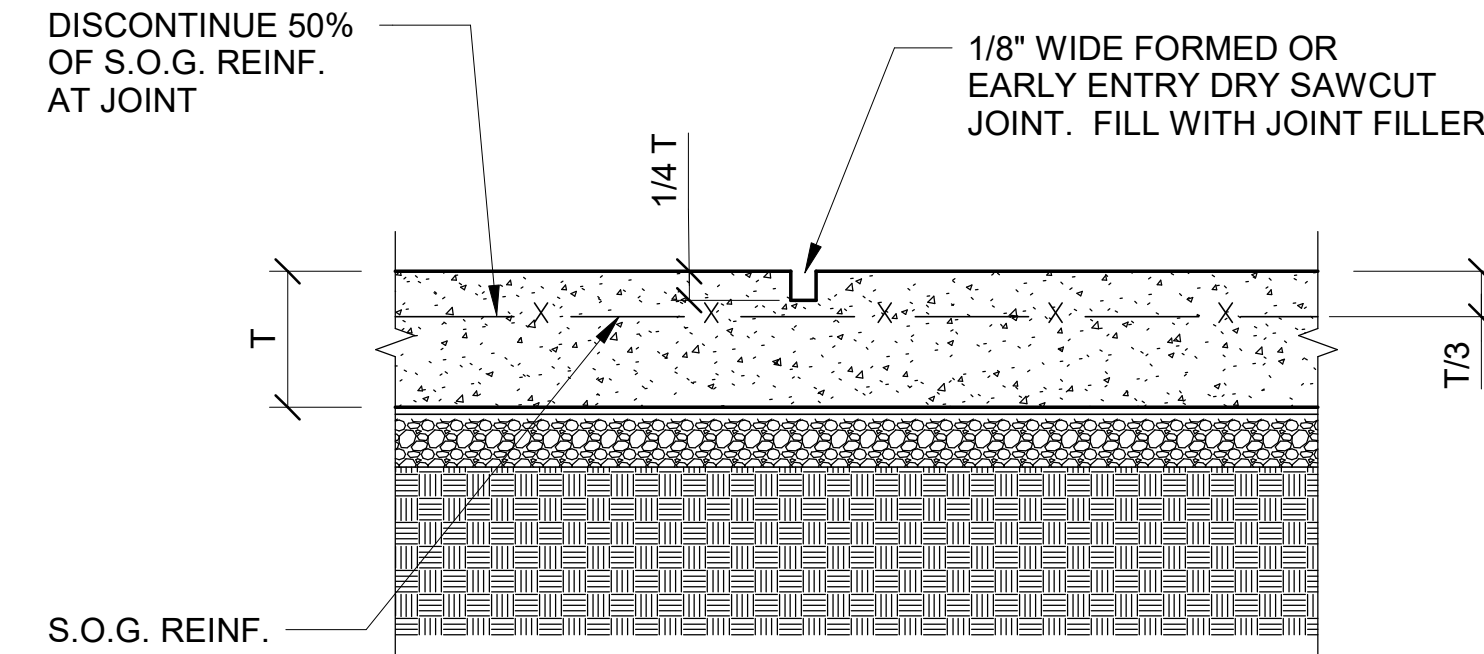


- NOTES:
- FOUNDATION AND WALL REINFORCING NOT SHOWN FOR CLARITY.

7 TYPICAL PLAN-REINF. IN S.O.G AT WALL OPENING DETAIL



3 TYPICAL S.O.G. CONSTRUCTION JOINT DETAIL



5 TYPICAL S.O.G. CONTROL JOINT DETAIL

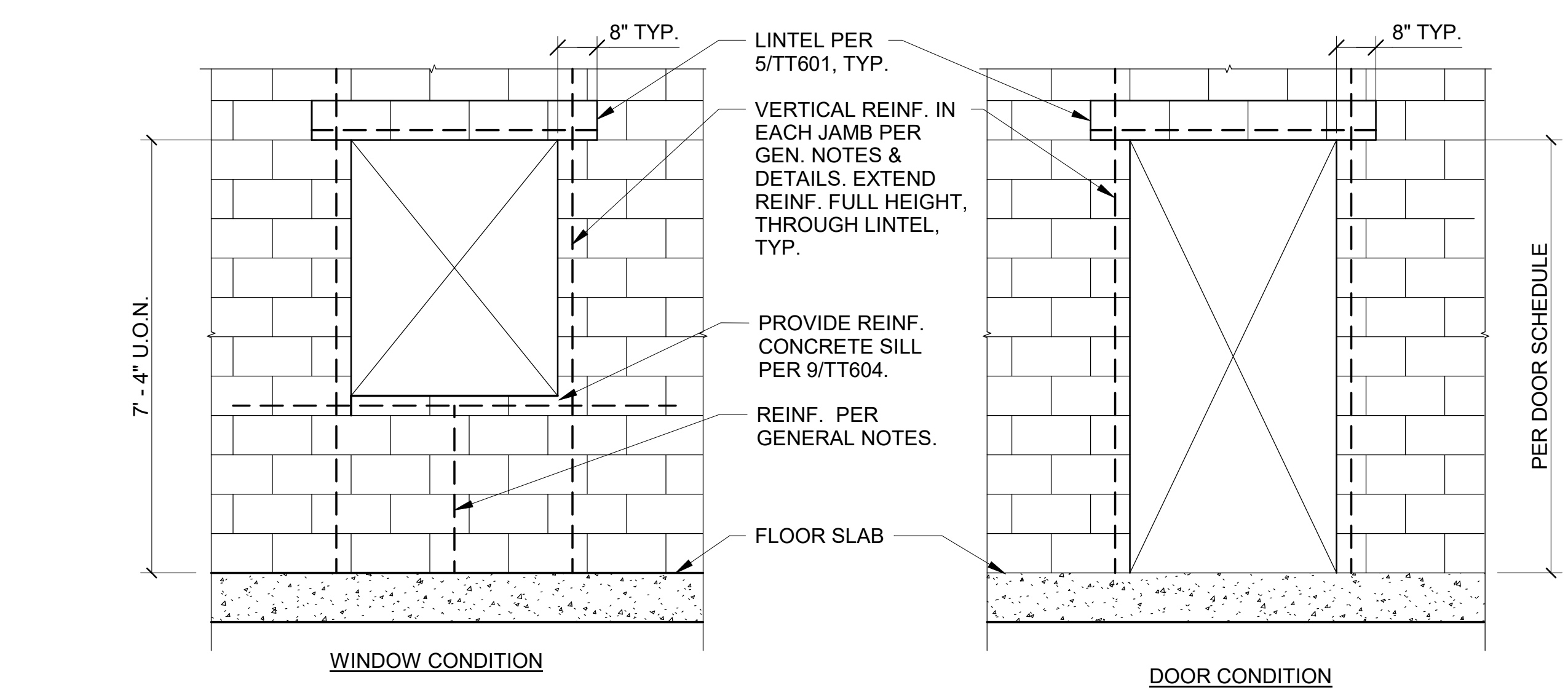
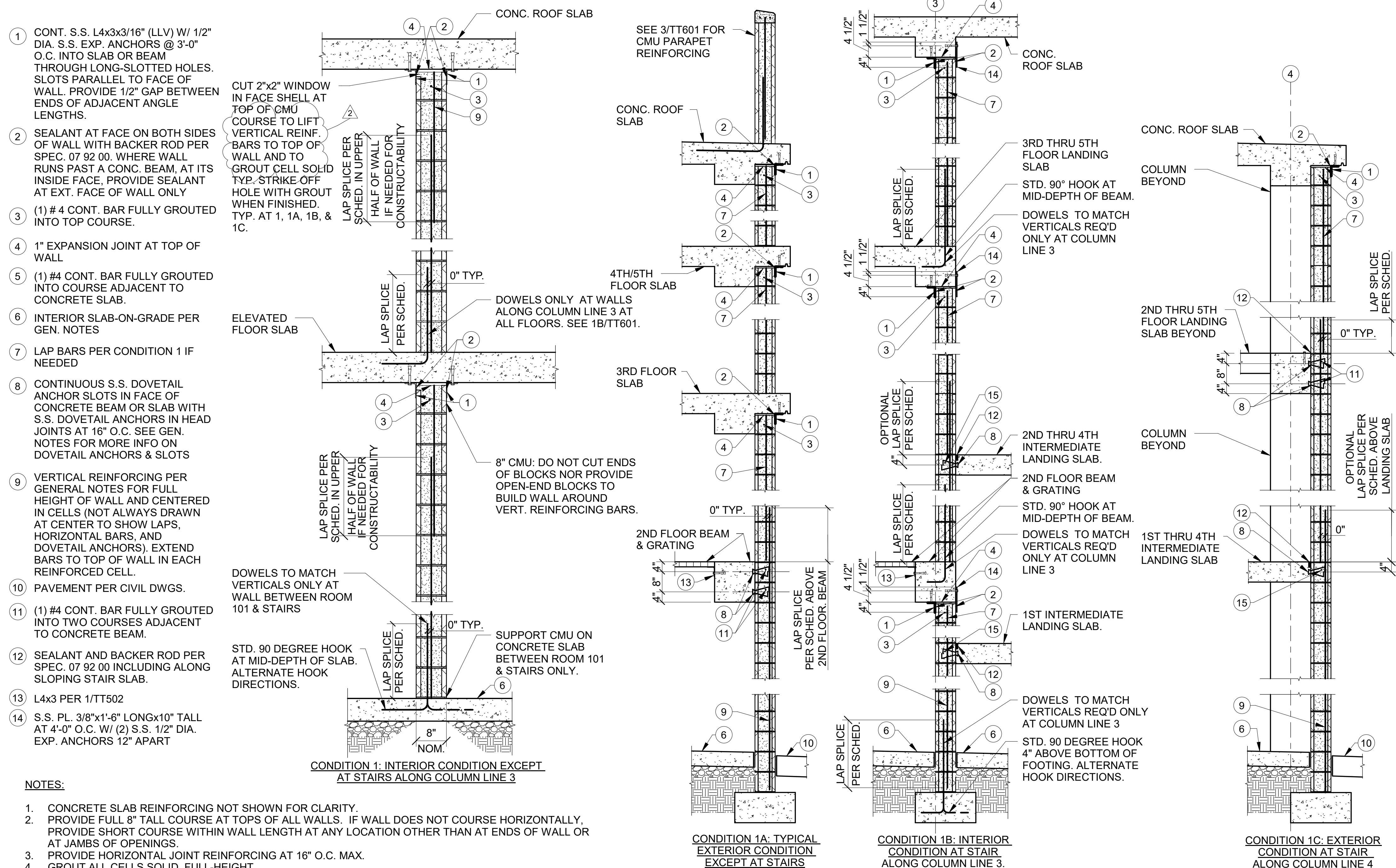
NO.	REVISION	DATE
2	Addendum #2	05/01/25

JOB NUMBER  
22056  
DATE ISSUED  
03/14/2025  
PROJECT STATUS  
ISSUE FOR CONSTRUCTION  
SHEET

TRAINING TOWER  
- TYPICAL  
CONCRETE  
DETAILS

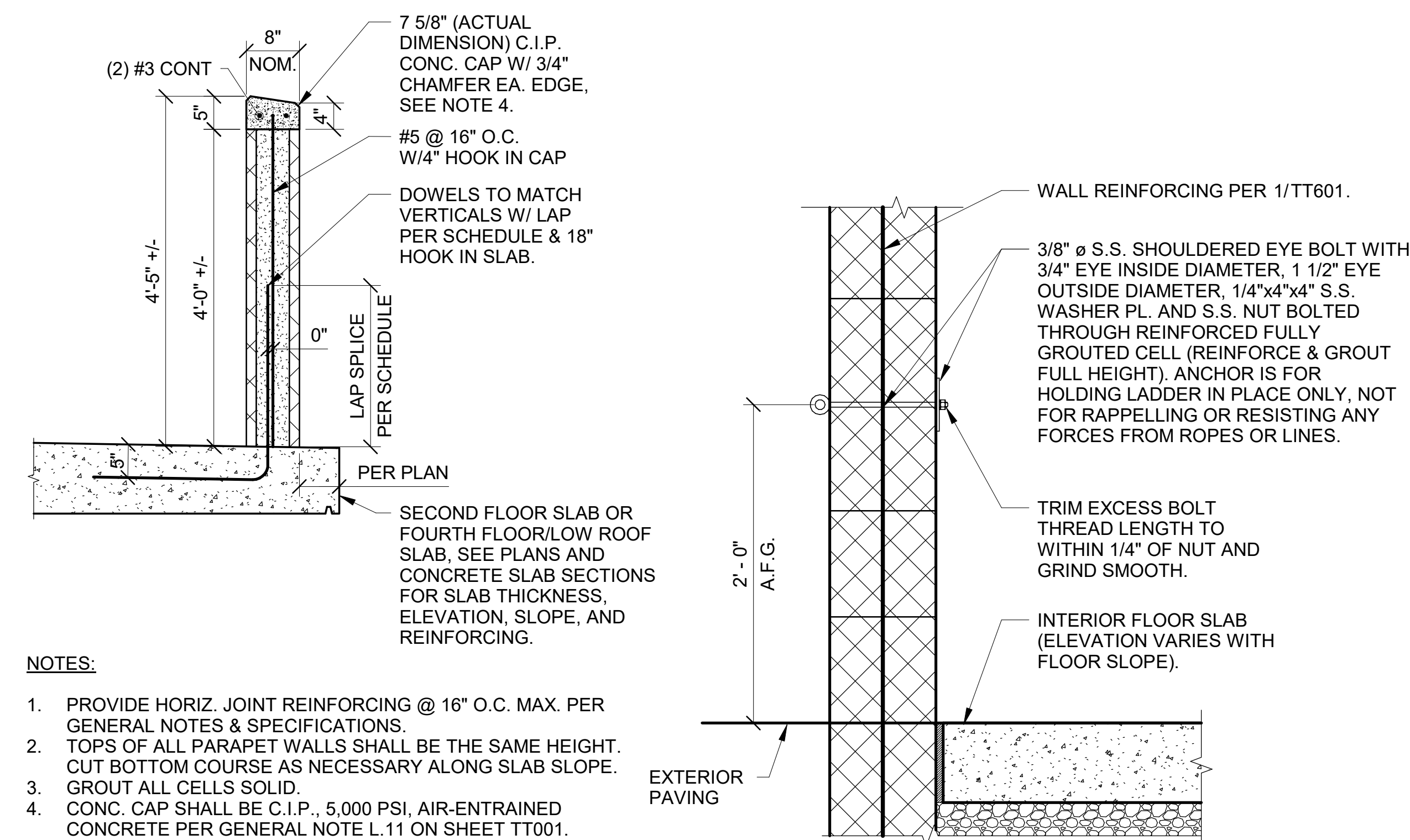
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## TYPICAL MASONRY WALL OPENING DETAILS

TT601 TT601 SCALE 1/2" = 1'-0"

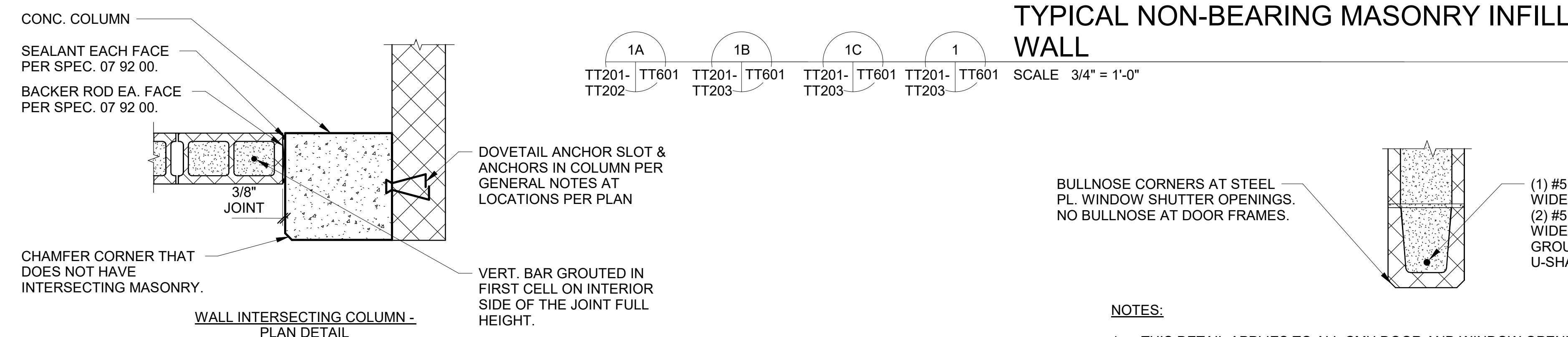


CMU PARAPET SECTION

TT202, TT601 SCALE 3/4" = 1'-0"

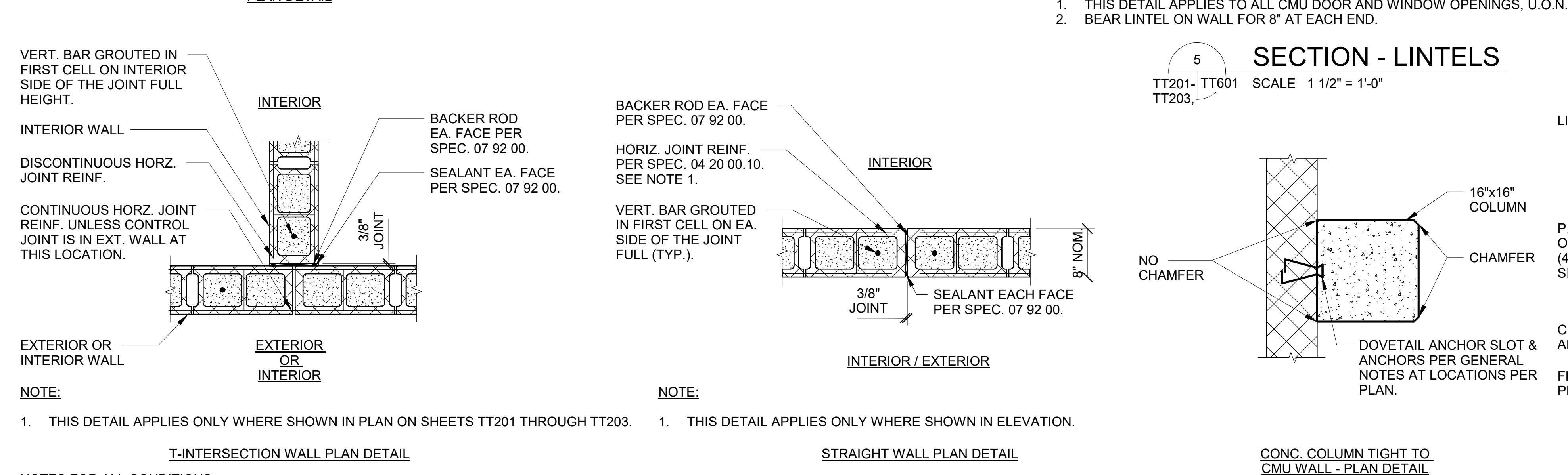
### LADDER TIE OFF DETAIL

TT301, TT601 SCALE 1 1/2" = 1'-0"



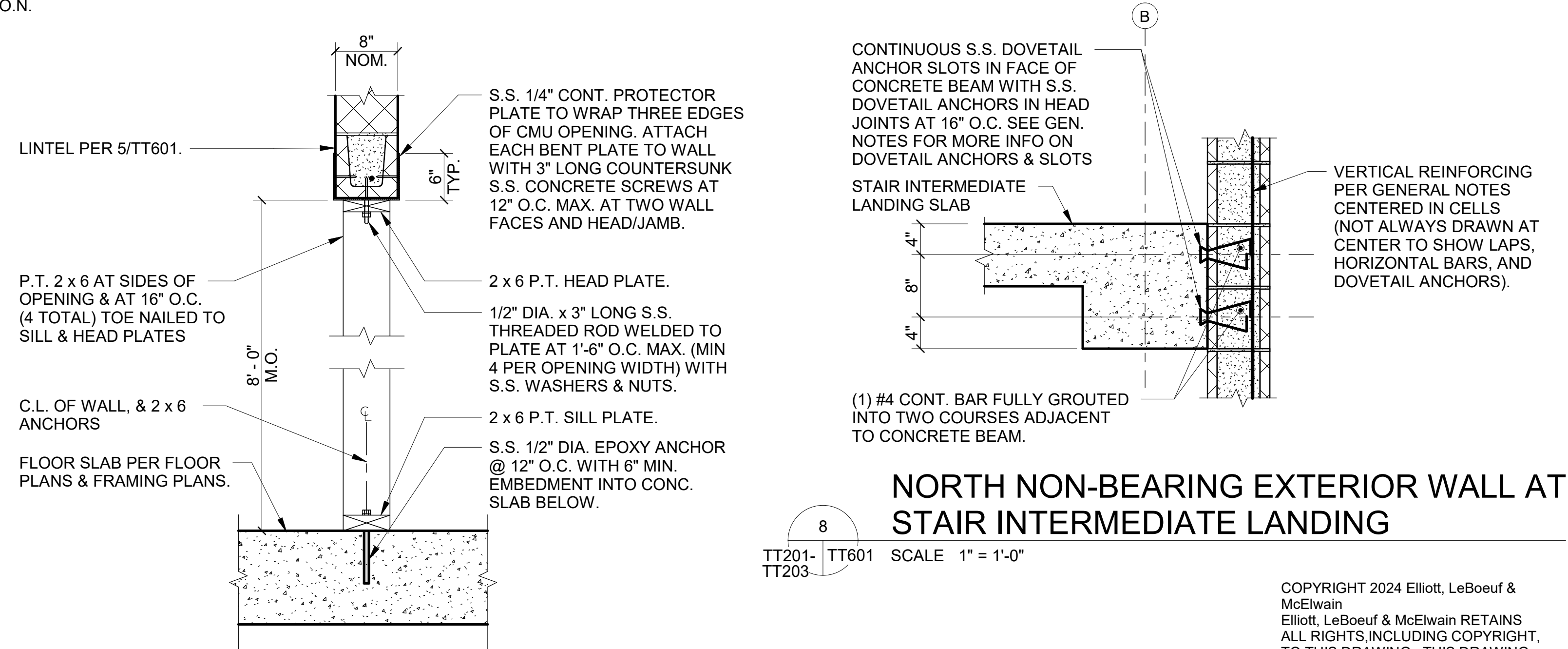
## TYPICAL NON-BEARING MASONRY INFILL WALL

SCALE 3/4" = 1'-0"



## SECTION - LINTELS

TT201- TT601 SCALE 1 1/2" = 1'-0"



## NORTH NON-BEARING EXTERIOR WALL AT STAIR INTERMEDIATE LANDING

TT201- TT601 SCALE 1" = 1'-0"

6 MASONRY CONTROL JOINT PLAN DETAILS

TT301- TT601 SCALE 1" = 1'-0"

## BREACH WALL MOCKUP DETAIL

TT202 TT601 SCALE 1" = 1'-0"





# Construction Manager General Requirements Manual

## Wake Technical Community College

### Fire and Rescue Training Center

CM Gen Reqs  
Manual thru  
Addendum #2  
5/2/2025



CONSTRUCTION MANAGER:  
Samet Corporation  
5430 Wade Park Blvd, Suite 110  
Raleigh, NC 27607



OWNER:  
Wake Technical Community College  
4723 Advantage Way  
Raleigh, NC 27603



ARCHITECT:  
HH Architecture  
1100 Dresser Court  
Raleigh, NC 27609



CIVIL ENGINEER:  
NV5  
3300 Regency Parkway  
Cary, NC 27518



## INDEX TO CONSTRUCTION MANAGER GENERAL REQUIREMENTS MANUAL

PREPARED BY: SAMET CORPORATION

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## NOTICE TO BIDDERS / ADVERTISEMENT FOR BIDS

### Wake Technical Community College – Fire and Rescue Training Center

- Samet Corporation as Construction Manager for Fire and Rescue Training Center will ~~open~~ **receive** sealed bid proposals from **Prequalified Bidders** at **2:00pm on May 8<sup>th</sup> 2025** **May 22<sup>nd</sup> 2025** for the Trade Packages enumerated below.
- On Bid Day - Sealed bids shall be addressed to Samet Corporation and will be received at the **Wake Tech Education & Innovation Center (building C) located at 1100 Innovation Inspiration Circle Wendell, NC** from 8 AM to 2 PM. **(An alternate address for the East Wake Tech Campus is 5401 Rolesville Rd, Wendell, NC 27591).** At the time enumerated above all sealed bids received will be opened publicly and read aloud. Please be early; any bids received after 2:00 PM EST on ~~5/8/2025~~ **5/22/2025** will be rejected and will not be opened. It is the responsibility of bidders to turn in their bid on time and at the correct location as per the instructions provided.
- Prior to Bid Day - Sealed bid proposals may be delivered to **Samet Corporation's Raleigh office located at 5430 Wade Park Blvd, Suite 110, Raleigh, NC.** "Early bird" sealed bid packages may be delivered during regular business hours, from 8 AM to 5 PM Monday through Friday.
- Regardless of when and where you deliver, all proposal packages must be in a sealed envelope clearly marked with your company name, address and contact person, the project name, and the bid package(s) included in your bid.
- Bidders are strongly encouraged to include opportunities for minority business participation wherever possible in their respective bid submission. Minority Business is a part of this contract and must comply with the State of North Carolina General Statutes. The CM and owner reserve the right to reject all proposals.
- Should you need additional information, contact Zach Anderson ([zanderson@sametcorp.com](mailto:zanderson@sametcorp.com)) or Corey Shearer ([cshearer@sametcorp.com](mailto:cshearer@sametcorp.com)).

### **BUILDING TRADE PACKAGES:**

01A Final Clean  
01B General Trades  
03A Cast-in-Place Concrete  
04A Masonry  
05A Structural Steel, Metal Fabrications  
07A Waterproofing  
07C Metal Roofing & Metal Panels



---

08A Doors, Frames, & Hardware  
08D Overhead Doors  
09A Drywall, Framing, Insulation  
09K Epoxy Flooring  
09M Painting and sealed Concrete  
10A Toilet Partitions & Accessories, Visual Display, FP Specialties  
10B Signage  
13A Special Construction (Fire Panels & Brick)  
21A Fire Protection  
22A Plumbing  
23A HVAC  
~~23B HVAC & Plumbing Combination~~  
26A Electrical & Fire Alarm  
31A Earthwork, Storm Drainage, Erosion Control, & Site Utilities  
31B Earthwork, Storm Drainage, Erosion Control, Site Utilities, Asphalt Paving, Curb & Gutter  
Combination  
32A Site Concrete  
32C Asphalt Paving, Curb & Gutter  
32D Fencing  
32E Landscaping

### **PRE-BID CONFERENCE MEETING**

A Pre-Bid Conference will be held virtually at 9:00am **on April 17<sup>th</sup> 2025.**

Questions from all interested bidders or their sub-subcontractors will be clarified during this meeting. The attendance at this Pre-bid Conference is not mandatory, but all attendance is encouraged by the Construction Manager.

The Pre-Bid Conference Meeting is also to identify preferred brand alternates and their performance standards that the Owner will consider for approval on this project.

In accordance with General Statute GS 133-3, Specifications may list one or more preferred brands as an alternate to the base bid in limited circumstances. Specifications containing a preferred brand alternate under this section must identify the performance standards that support the preference. Performance standards for the preference must be approved in advance by the owner in an open meeting. Any alternate approved by the owner shall be approved only where (i) the preferred alternate will provide cost savings, maintain or improve the functioning of any process or system affected by the preferred item or items, or both, and (ii) a justification identifying these criteria is made available in writing to the public.

Justification of any approvals will be made available to the public in writing no later than seven (7) days prior to bid date.

### **PROJECT LOCATION / SCOPE**

The aforementioned bid packages are part of the construction of the Fire and Rescue Training Center. Bid packages being solicited at this time consist of all packages/trades for the construction of the project.

### **BIDDER PREQUALIFICATION PROCESS**

In accordance with N.C. General Statute 143-129, all bidders must be prequalified by the Construction Manager in order to submit a sealed bid proposal for this project. All 1st tier subcontractors or suppliers are required regardless of current standing with Samet Corporation to complete this prequalification process. When requested by Samet Corporation, all trade subcontractors previously prequalified or not must submit updated financial statements, surety's letter of bondability, reference / bonding ability confirmation letter from surety agent (if applicable) and certificate(s) of insurance in order to remain prequalified by Samet Corporation. This prequalification process starts by completing the "Samet Standard Prequalification" via Trade Tapp / Building Connected here. Once completed, all Trade Partner's prequalification status will remain effective for 16 months after the date of the most recently submitted year-end financial documents.

Additional steps to the process are as follows:

- Each Trade Partner shall pay close attention to the Project Specific Prequalification Form, found on Building Connected under Bid Form, with respect to potential bonding, insurance and previous experience requirements, all of which may be a key component of becoming a prequalified Trade Partner.
- Samet's Standard Prequalification and the Project Specific Prequalification Form must be received by Samet **on or before 5:00pm on May 1<sup>st</sup> 2025** **May 16<sup>th</sup>, 2025**. Failure to submit this information on or before the aforementioned date and time may result in your company not being prequalified by Samet, thus not allowing the company to participate in the bid process.
- Bidders with questions regarding the prequalification process are encouraged to contact Andrew Gotschall via email at agotschall@sametcorp.com.
- Upon submission of all required documents via Trade Tapp / Building Connected, a Samet Prequalification Specialist will review for approval. Each Subcontractor / Supplier will be notified by Samet of its qualification status no later than three (3) business days following the expiration of the Prequalification Period.



## **SELECT TRADE PACKAGE BONDING REQUIREMENTS**

Prequalified bidders **for select bid packages** shall be **capable of providing** a Payment and a Performance Bond to the Construction Manager in the sum equal to 100% of their Subcontract Amount. The surety / bonding company must be licensed to do business in the State of North Carolina. **Trade packages requiring bonding are enumerated below and are further defined on the Subcontractor / Supplier Supplemental Qualification Form. Prior to Subcontract Award, the Construction Manager reserves the right to require a Performance and Payment Bond(s) on any Trade Package defined below. Additionally, the Construction Manager shall require a Performance and Payment Bond(s) of any prospective bidder who was informed of this requirement during the Subcontractor Prequalification Process as a condition for prequalification approval. Should a Performance and Payment Bond(s) be required, the Construction Manager shall request the cost of the Performance and Payment Bond(s) prior to Subcontract Award.**

~~01A Final Clean~~

~~01B General Trades~~

~~03A Cast-in-Place Concrete~~

~~04A Masonry~~

~~05A Structural Steel, Metal Fabrications~~

~~07A Waterproofing~~

~~07C Metal Roofing & Metal Panels~~

~~08A Doors, Frames, & Hardware~~

~~08D Overhead Doors~~

~~09A Drywall, Framing, Insulation~~

~~09K Epoxy Flooring~~

~~09M Painting and sealed Concrete~~

~~10A Toilet Partitions & Accessories, Visual Display, FP Specialties~~

~~10B Signage~~

~~13A Special Construction (Fire Panels & Brick)~~

~~21A Fire Protection~~

~~22A Plumbing~~

~~23A HVAC~~

~~23B HVAC & Plumbing Combination~~

~~26A Electrical & Fire Alarm~~

~~31A Earthwork, Storm Drainage, Erosion Control, & Site Utilities~~

~~31B Earthwork, Storm Drainage, Erosion Control, Site Utilities, Asphalt Paving, Curb & Gutter Combination~~

~~32A Site Concrete~~

~~32C Asphalt Paving, Curb & Gutter~~

~~32D Fencing~~

~~32E Landscaping~~

### **SELECT BID SECURITY / TIME LIMITATION**

A Bid Security of five percent (5%) of the bid in cash, cashier's check, certified check, or a fully executed Bid Bond is required to accompany each proposal **over the amount of \$300,000 \$500,000**. Bids may not be withdrawn within sixty (60) days after the scheduled bid date and time, except as provided by law.

### **DRAWING AND SPECIFICATION AVAILABILITY**

Complete plans, specifications and contract documents will be open for inspection through SAMET's Internet / Web Based Plan Room as powered by *Building Connected* via issuance of an Invitation to Bid by Samet to the prequalified bidder.

### **LICENSING**

All trade subcontractors must have proper license in accordance with state laws governing **their respective trades** in accordance with General Statutes of North Carolina Chapter 87. General Statutes of North Carolina Chapter 87 will be observed in receiving and awarding all Contracts.

### **EVALUATION OF BID AMOUNTS**

Following the opening of the bids on the pre-determined date(s), the Construction Manager's determination that the low bidder's bid is responsible and responsive and the Construction Manager's receipt of approval from the Owner, the Construction Manager will award each respective trade package to the lowest responsible and responsive bidder. The lowest bid amount will be determined by evaluating the best combination of the pricing received for each bid package with respect to evaluating individual bid package amounts submitted versus combined bid package amounts submitted. For example, if a combination bid package being solicited is submitted and is less than the sum of the individual bid package amounts received for this same work, then the combination package bidder will be named apparent low bidder. This same evaluation process will be employed by the Construction Manager when evaluating bid alternates and various combinations thereof which are accepted by the Owner.

### **BID PREPARATION**

All bids must be submitted on the standard forms provided by the Construction Manager and marked accordingly to identify the Trade Package name being bid. Bids must be submitted in a sealed opaque envelope with the following marked on the front of the envelope: (1) Bidder Name and Address, (2) Project Name - "Fire and Rescue Training



Center” and Trade Package Name (e.g. “32A Asphalt Paving, Curb & Gutter”). Bidders shall be required to review and use complete sets of bid documents to prepare bids. Neither the Construction Manager, Owner nor Designer assumes responsibility for errors or misinterpretations resulting from the use of incomplete bid document sets.

### **MINORITY OWNED AND WOMEN OWNED BUSINESS ENTERPRISES**

Minority owned and women owned businesses are encouraged to submit bids for this construction project. Samet Corporation and Wake technical Community College awards public contracts without regard to race, religion, color, creed, national origin, sex, age, or handicapping condition as defined by North Carolina General Statutes, Section 168A-3.

**In accordance with N.C. General Statute 143-128.2, Samet Corporation is specifically encouraging participation of Minority or Women Owned Business Enterprises / Historically Underutilized Businesses (MWBE / HUB) on this project. Each prequalified bidder shall make a good faith effort to recruit and select MWBE / HUB companies to participate in this project. As part of the requirements for submitting a bid, each prequalified bidder must submit the proper documentation substantiating their adherence to the requirements depicted within N.C. General Statute 143-128.2 and the bid documents. Bidders who fail to submit the required documents with their bid may result in their bid being rejected by the Construction Manager. Our goal for this project is 25%.**

**NOTE:** The bidder shall include with the bid proposal the form *Identification of Minority Business Participation* identifying the minority business participation it will use on the project and shall include either *Affidavit A* or *B* as applicable. Forms and instructions are included within the Proposal Form in the bid documents. Please reference the form of proposal for further direction on the exact items required to be included within your bid.

### **BIDDER QUESTIONS**

All bidders shall note that the Construction Manager and/or Designer shall answer only questions that are submitted in writing via e-mail to the Construction Manager’s office. All questions during the bid period shall be directed to the attention of Zach Anderson ([zanderson@sametcorp.com](mailto:zanderson@sametcorp.com)) or Corey Shearer ([cshearer@sametcorp.com](mailto:cshearer@sametcorp.com)).

Specific questions, when warranted by the Construction Manager will be addressed to all bidders in the form an addendum. **All questions must be received by Samet on or before April 24<sup>th</sup> 2025 May 8<sup>th</sup> 2025** All bidders shall note that no questions will be answered

regarding any aspect of the project after the expiration of the aforementioned ten (10) calendar day cut off period in order to enable the Construction Manager and/or Designer to issue a final addendum, if necessary, to equitably inform all bidders.

#### **MATERIAL AND EQUIPMENT SUBSTITUTION REQUEST FORMS**

**Material or equipment substitution requests must be received by Samet on or before April 24<sup>th</sup> 2025 May 8<sup>th</sup>, 2025.** Following review of the specifications or drawings, any prospective bidder or supplier thereof may submit a Material and Equipment Substitution Request Form directly to the Construction Manager for review prior to sending to the Designer for review and approval. A Material and Equipment Substitution Request Form will be available from Samet upon request and will also be included as part of the Construction Documents. Material and equipment requests shall be submitted on the aforementioned form only and shall be accompanied with any further information necessary to ascertain that the particular product, equipment, etc. is equal to the one(s) specified. Material and substitution request forms may be obtained from or submitted to the attention of Zach Anderson ([zanderson@sametcorp.com](mailto:zanderson@sametcorp.com)) or Corey Shearer ([cshearer@sametcorp.com](mailto:cshearer@sametcorp.com)). approved material and equipment substitutions will be addressed to all bidders in the form an Addendum.

#### **BID INFORMALITIES**

The Construction Manager and/or Owner reserves the rights to accept or reject any or all bids and waive any or all informalities or irregularities in the bid process in order to accept bids in the best interest of the Owner or Construction Manager.

**Notice: The above bids are being solicited under N.C.G.S. § 143-128 and 143-129 respectively.**



---

**PROJECT STATEMENT**

**NOTICE OF PROJECT STATEMENT**

- A. Name of Project:  
WTCC Fire & Rescue Training Center
- B. Physical Address of the Project:  
5345 Rolesville RD  
Wendell, NC 27591
- C. Contracting Body:  
Wake Technical Community College
- D. Name of Construction Manager:  
Samet  
309 Gallimore Dairy Road, Suite 102, Greensboro, NC 27409
- E. The name, phone number, and mailing address of an agent authorized by the Construction Manager to accept service of the requests for payment bond, the notice of public subcontract, and the notice of claim on payment bond referenced in subsection(b) of this section:

Douglas A Beane, CFO  
Samet Corporation  
P.O. Box 8050  
Greensboro, NC 27419  
(336) 544-2600

- F. The name and address of the principal place of business of the surety issuing the payment bond required by G.S. 44A—26(a) for the construction contract:

Liberty Mutual Insurance  
Attn: Surety Claims Department  
1001 4<sup>th</sup> Avenue  
Suite 1700  
Seattle, WA 98154

Project Name: WTCC Fire & Rescue Training Center  
Project #: 23-878



---

## SUBSTITUTION REQUEST FORM

Date: \_\_\_\_\_

Contractor:

Bid Package #:

Owner: Wake Technical Community College  
4723 Advantage way  
Raleigh, NC 27603

Architect: HH Architecture  
1100 Dresser Court  
Raleigh, NC 27609

CM@R: Samet  
5430 Wade Park Blvd, Suite 110  
Raleigh, NC 27607



## Substitution Request Form

### CONTRACTOR'S REQUEST, WITH SUPPORTING DATA:

1. Section of the Specifications to which this request applies:
  - I. Product data for proposed substitution is attached  
(description of product, reference standards,  
performance, and test data).
  - II. Sample is attached.
  - III. Sample will be sent if requested by Architect.
2. Itemized comparison of proposed substitution with specified product is clearly defined, items that do not fully conform to the specification need to be specifically highlighted or approval may later be rejected due to non-conformance.

	Original Product	Substitution
Name, Brand:	_____	_____
Catalog Number:	_____	_____
Manufacturer:	_____	_____
Significant Variations:	_____	
	_____	

3. Unit costs of the original product and proposed substitution

\$ \_\_\_\_\_ per \_\_\_\_\_ Substitution: \$ \_\_\_\_\_ per \_\_\_\_\_

4. State whether cost is for: \_\_\_\_\_ Material Only or \_\_\_\_\_ Material Installed

Credit to Owner: \$ \_\_\_\_\_

Additional Cost to Owner: \$ \_\_\_\_\_

5. Proposed Change in Contract Time:

Reduce/Increase Contract Time by \_\_\_\_\_ days.

6. Effect of the proposed substitution on other parts of the Work, or on other contracts:

---

---

---

7. Reason for requesting substitution:

---

---

---

**CONTRACTOR'S STATEMENT OF CONFORMANCE OF PROPOSED SUBSTITUTION  
TO CONTRACT REQUIREMENTS:**

We have investigated the proposed substitution and:

1. Believe that it is equal or superior in all respects to the originally specified product, except as stated in #2 above.
2. Shall provide the same warranty as required in General Conditions.
3. Shall provide the same special warranty or guaranty as specified.
4. Have included all cost data and cost implications of the proposed substitutions.
5. Shall pay review, redesign and special inspection costs caused by the use of this product.
6. Shall pay additional costs to other contractors caused by the substitution.
7. Shall coordinate the incorporation of the proposed substitution in the Work.
8. Shall modify other parts of the Work as may be needed to make all parts of the Work complete and functioning.
9. Waive future claims for added cost to Contractor caused by the proposed substitution.

Contractor (Signature): \_\_\_\_\_ Date: \_\_\_\_\_



Project Name: WTCC Fire & Rescue Training Center  
Project #: 23-878



**ARCHITECT'S REVIEW AND ACTION:**

\_\_\_\_\_ Rejected

\_\_\_\_\_ Provide more information in the following categories. Resubmit.

\_\_\_\_\_ Sign contractor's Statement of Conformance. Resubmit.

\_\_\_\_\_ The Proposed substitution is approved, with the following conditions:

---

---

---

The following changes will be made by Change Order number: \_\_\_\_\_

Addition/Deduction from the Contract Sum: \$ \_

---

Addition/Deduction from the Contract Time: \_\_\_\_\_ Days

---

---

---

Date

---

**BID BOND FORM**

KNOW ALL MEN BY THESE PRESENTS, That we,

\_\_\_\_\_

(Bidder's Name)

\_\_\_\_\_, of \_\_\_\_\_ (Street Address)  
(City, State, Zip)

Hereinafter called the principal, and

\_\_\_\_\_

(Surety's Name)

A corporation organized and existing under the Laws of the State of \_\_\_\_\_,  
and authorized to transact business in the State of \_\_\_\_\_, as Surety, hereinafter  
called Surety, are held and firmly bound unto the **Samet and Wake Technical Community college.**

Hereinafter called Oblige, in the Penal sum of five percent (5%) of the amount bid, good and lawful  
money of the United States of America, for the payment of which the Principal and Surety bind  
themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly  
by these presents.

The Condition of this Obligation is such, that, WHEREAS the Principal has submitted a proposal to  
the Oblige on a contract for the construction.

NOW THEREFORE, if the Oblige shall accept the bid of the Principal and the Principal shall enter  
into a contract with the Oblige in accordance with the terms of such bid, and give such bond or  
bonds as may be specified in the Bidding or Contract Documents with good and sufficient surety for  
the faithful performance of such construction for the prompt payment of labor and material furnished  
in the prosecution thereof, or in the event of the failure of the Principal to enter such contract and  
give such bond or bonds, if the Principal shall pay to the Oblige the difference not to exceed the  
penalty hereof between the amount specified in said bid and such larger amount for which the Oblige  
may in good faith contract with another party to perform the Work covered by said bid, then this  
obligation shall be null and void; otherwise to remain in full force and effect.



In witness whereof, we have hereunto set our signatures and seal this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_\_\_\_, all pursuant to due authorization.

\_\_\_\_\_  
Principal (Seal)

\_\_\_\_\_  
By Surety

\_\_\_\_\_  
By  
Attorney-in-Fact in accordance with the attached Power of Attorney

STATE OF \_\_\_\_\_)

ss:

COUNTY OF \_\_\_\_\_)

I, \_\_\_\_\_, a Notary Public in and for the State and County  
aforesaid, do hereby certify that \_\_\_\_\_, and  
\_\_\_\_\_, whose names are signed to the foregoing bond, this day  
personally appeared before me in my State and County aforesaid and acknowledged the  
same.

Given under my hand seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

\_\_\_\_\_  
Notary Public (Seal)

My Commission expires:



**THIS AGREEMENT IS SUBJECT TO ARBITRATION PER APPLICABLE LAW  
SUBCONTRACT AGREEMENT**

**Contractor:**  
Samet Corporation

**Subcontractor:**

Phone:

**Designated Representative:**

Title:  
Phone:  
Email:

**Designated Representative:**

Title:  
Phone:  
Email:

**Subcontract #:**  
**Samet Phase Code:**  
**Samet Job #:**

**Subcontract Date:**  
**Subcontract For:**

**Project Name:**  
**Job Site Address:**

**Subcontract Amount:** \$0.00

**Project Owner:**  
**Project Architect:**  
**Lien Agent:**

**Submit Pay Requests to:** [accts@sametcorp.com](mailto:accts@sametcorp.com)

**Subcontract Addenda:**

Addendum 1 Insurance and Bonds  
Addendum 2 Work Rules and Safety Policy  
Addendum 3 Application for Payment  
Addendum 4 Affidavit of Capital Improvement

**Subcontract Exhibits:**

Exhibit A Detailed Scope of Work  
Exhibit B List of Contract Documents  
Exhibit C Project Schedule  
Exhibit D MWBE Documentation  
Exhibit E Pre-Award Meeting Minutes  
Exhibit F Notice of Project Statement

THIS SUBCONTRACT AGREEMENT (hereinafter "Agreement") is made and entered as of the Subcontract Date above, by and between Samet Corporation (hereinafter "Contractor") and the above-named Subcontractor (hereinafter "Subcontractor") and, together Contractor and Subcontractor are hereinafter the "Parties". This Agreement is contingent upon the Contractor entering into a Prime Contract with the Owner and the Owner's approval of the Subcontractor. Subcontractor is not authorized to perform any Work hereunder until this Agreement is signed and returned to the Contractor, along with a current Certificate of Insurance and any required bonds. If Subcontractor begins Work prior to signing this Agreement, such action shall constitute acceptance of all terms and conditions tendered herein. Contractor, however, shall have no obligation to make payment for work performed by Subcontractor without a signed Agreement.





Samet Corporation

By: Sample - Do Not Sign

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

By: Sample - Do Not Sign

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

EXAMPLE

## **TABLE OF ARTICLES**

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  - 20 MISCELLANEOUS**
- 

The Contractor and Subcontractor hereby agree as follows:

### **ARTICLE 1. CONTRACT DOCUMENTS**

#### **1.1 The Contract Documents consist of:**

- (1) this Agreement, including the Exhibits and Addenda identified on page 1 of this Agreement, and
- (2) the Prime Contract between the Owner and Contractor, including all exhibits, attachments, drawings, plans and specifications, and other contract documents enumerated or incorporated therein, along with all Addenda and Modifications to the Prime Contract, which Prime Contract (excluding Contractor's compensation and confidential business terms) shall be kept on file in the office of the Contractor and made available to the Subcontractor for inspection upon reasonable request.

Together, these Contract Documents form this Subcontract. Subcontractor agrees to all terms of this Subcontract. This Subcontract represents the entire and integrated agreement between the Parties hereto and supersedes all prior agreements and representations, written or oral. The Contract Documents are complementary and what is required by one shall be as binding as if required by all. In the event of a conflict between any of the provisions of the Contract Documents, the Subcontractor shall be deemed to have agreed to provide the greater quantity and better quality of work called for in any of the conflicting provisions.

**1.2** Contractor and Subcontractor shall be mutually bound by the terms of this Subcontract. To the extent that the provisions of the Prime Contract apply to the Subcontractor's Work, the Subcontractor shall assume toward the Contractor all obligations that the Contractor assumes toward the Owner and any design professionals under the Prime Contract.

### **ARTICLE 2. SCOPE OF WORK**

**2.1** Subcontractor agrees to furnish all labor, materials, equipment, and supervision required by **Exhibit A** or reasonably inferable therefrom in order to provide a complete and functioning installation, except to the extent specifically indicated in this Subcontract to be the responsibility of others ("Work"). Subcontractor shall secure and pay for all permits, fees, licenses, and inspections by government agencies necessary for proper execution and completion of the Work. Subcontractor shall comply with the requirements of all governmental or quasi-governmental authorities having jurisdiction over the Work, including Building Departments, and shall give these authorities requisite notices relating to its Work.

**2.2** Subcontractor's Work shall conform to the Plans, Specifications, Drawings and Addenda included in the Contract Documents defined in ARTICLE 1, subject to Modifications, as set forth in **Exhibit B**.

### **ARTICLE 3. EXECUTION AND PROGRESS OF SUBCONTRACTOR'S WORK, DELAYS**

**3.1** Time is of the essence of this Subcontract, and any time specified for completion of the Subcontractor's Work or any portion thereof is a material provision of this Subcontract.

**3.2** The Schedule is attached to this Agreement as **Exhibit C**. By executing this Agreement, Subcontractor agrees that the sequences and durations reflected in the Schedule are reasonable and appropriate for the completion of its Work and that Subcontractor has taken into consideration all reasonably foreseeable delays and disruptions incident to its Work, including weather conditions, the availability and cost of labor, materials, tools, and equipment, Owner's and Contractor's scheduling requirements, and potential Project congestion caused by simultaneous work of Subcontractor and others.

**3.3** Unless otherwise expressly provided in this Subcontract, Subcontractor shall begin its Work in accordance with the Schedule or as otherwise directed in any written notice by Contractor. Subcontractor shall furnish at its own expense sufficient labor, materials, equipment, and supervision to assure proper performance of its Work in strict compliance with



the Schedule. Subcontractor shall diligently and continuously prosecute its Work in an efficient fashion and take all necessary actions to assure completion of the Project within the time specified in the Schedule.

**3.4** Subcontractor shall at all times give due consideration to the fact that other work is dependent upon Subcontractor's proper and timely completion of its Work. Subcontractor shall perform and coordinate its Work with that of Contractor and all other subcontractors for the most efficient construction of the Project and at a rate that will not cause delay or disruption to the completion of the Project, or any portions thereof, including portions performed by Contractor or others.

**3.5** Subcontractor shall continuously monitor the Schedule and advise Contractor of the status of its progress, including providing updates on its Submittals, and any materials or equipment that may be in preparation or manufacture. Subcontractor shall comply with any schedule and reporting requirements imposed upon Contractor in the Prime Contract and shall furnish Contractor any additional information reasonably required by Contractor during the performance of Subcontractor's Work.

**3.6** Subcontractor shall immediately notify Contractor of any circumstances known or reasonably foreseeable which may impact the times and sequences in the Schedule and shall make all requests for time extensions in writing pursuant to the provisions of ARTICLE 15 so as to allow Contractor sufficient time to forward the request to Owner as required by the Prime Contract.

**3.7** Subcontractor recognizes that revisions in the Schedule are inherent in the nature of construction. Contractor shall have the right, in its sole discretion, to decide the time, order, priority and other matters relative to the performance and orderly conduct of Subcontractor's Work and to modify the Schedule so as to suspend, delay, resequence or accelerate, in whole or in part, the commencement or execution of Subcontractor's Work, all without additional compensation to Subcontractor. No Schedule modification, suspension, delay, resequencing, acceleration, interference, or inefficiency shall relieve Subcontractor of its duty to perform hereunder.

**3.8** Should the Subcontractor's Work be delayed, re-sequenced, accelerated, or otherwise disrupted in any way by the act or omission of the Contractor or other subcontractor, or by any cause beyond the Subcontractor's control and not due to any fault, act or neglect on its part, then the time for completion of Subcontractor's Work ("Subcontract Time") shall be extended for a period equivalent to the time lost by any of the aforesaid causes, as determined by Contractor, provided that Subcontractor provides written notice of the same to Contractor in strict accordance with ARTICLE 15. Such extension of time shall be Subcontractor's sole and exclusive remedy for any such occurrence or occurrences, and Subcontractor shall have no claim for damages against Contractor for any such occurrence or occurrences or the cumulative impact of the same.

**3.9** Should Contractor's, or any other subcontractor's, work be stopped or delayed due to Subcontractor's failure to provide sufficient and properly skilled labor, materials, or equipment, or should Subcontractor fail to properly perform its Work in a timely manner resulting in a delay in the Schedule, Contractor shall have the right, in addition to any and all other rights hereunder, upon seventy-two (72) hours' written notice and opportunity to cure to Subcontractor, to (a) employ whatever labor, materials and equipment as Contractor deems appropriate to complete the requirements of this Subcontract, and/or (b) direct Subcontractor to promptly increase its labor force, accelerate its performance, re-sequence Work, increase the number of shifts, work overtime operations, and submit for Contractor's approval a schedule demonstrating the method under which Subcontractor will regain the required rate of progress, and/or (c) take other steps Contractor deems necessary to improve the Subcontractor's rate of progress. Subcontractor shall be responsible for all costs incurred by Contractor in completing the Subcontractor's Work and/or regaining the proper rate of progress of the Subcontractor's Work.

**3.10** Subcontractor shall be responsible for and shall reimburse Contractor for all damages suffered by Contractor resulting from delays caused by or contributed to by Subcontractor, including any liquidated damages and other delay damages recovered by the Owner from Contractor, and Contractor's own costs. Contractor shall have the right to reasonably apportion such damages among Subcontractor and any other subcontractor or other party responsible for such damages, and such apportionment shall be binding upon Subcontractor.

#### **ARTICLE 4. SUBCONTRACT AMOUNT**

**4.1** Contractor shall pay Subcontractor the Subcontract Amount set forth on page 1 of this Agreement, subject to additions and deletions as provided for in ARTICLE 12. The Subcontract Amount includes all transportation tax, sales and use taxes, tariffs, duties, licenses, permits, bonds and inspections, royalties, other taxes or escalation that might accrue through the purchase of materials, and other fees required for the Work, to the extent legally enacted as of the Subcontract Date, whether or not yet effective or merely scheduled to go into effect, and any amounts paid for labor or services by Subcontractor and any employment or other taxes or fringe benefits related thereto.

**4.2** To the extent that any materials or equipment to be provided by Subcontractor as part of its Work require an advanced payment prior to fabrication or shipment of materials ("Deposit"), Subcontractor shall advise Contractor in writing of such Deposit prior to execution of this Agreement to allow Contractor to seek Owner's prior approval for payment of such Deposit.

**4.3** To the extent that some or all of the Subcontractor's Work is to be performed on a unit price basis, the Subcontract Amount shall be computed in accordance with the unit prices set forth on **Exhibit A**. Unit prices are deemed to include all costs related to Subcontractor's performance of the Work, including, but not limited to, costs of labor,

supervision, services, materials, equipment, tools, scaffolds, hoisting, transportation, storage, insurance and taxes, and all overhead and profit. Quantities shall be measured by means acceptable to Owner, Contractor and Subcontractor, and if applicable, an independent testing firm hired by Owner.

**4.4** To the extent that the Subcontract Amount includes allowances, the allowances shall be as set forth on **Exhibit A**. Allowances shall cover the cost of all materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses associated with stated allowance amounts shall be included in the Subcontract Amount but not in the allowances. Whenever costs are more than or less than an allowance amount, the Subcontract Amount shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual costs and the allowances.

#### **ARTICLE 5. SUBMITTALS, AS-BUILT DRAWINGS, ELECTRONIC DATA**

**5.1** Subcontractor shall prepare and submit to Contractor all shop drawings, product data, samples, test results, installer's instructions, certificates, and other required documents ("Submittals"), and obtain all required approvals, permits, and licenses necessary or required related to the Work with reasonable promptness and in such sequence so as not to cause a delay in the Subcontractor's Work or in the activities of the Contractor or other subcontractors unless agreed to otherwise by Contractor in writing. In no event shall said items be submitted to Contractor later than thirty (30) days following Subcontractor's receipt of the Notice to Proceed or Subcontract Date, whichever occurs first.

**5.2** All Submittals shall be made in an electronic media and format acceptable to Contractor with the exception of samples. Contractor's written review and/or approval of Submittals is required prior to fabrication of any items to be furnished under this Subcontract. All deviations by this Subcontractor from the Contract Documents shall be explicitly noted on the reviewed Submittal. Contractor's review and/or approval of any of Subcontractor's Submittals shall not relieve the Subcontractor of any of its duties under the Subcontract nor relieve the Subcontractor of any liability for any deviations from the requirements of the Subcontract. Subcontractor shall provide final "field use" shop drawings incorporating all Submittal comments in electronic and hard copy.

**5.3** Subcontractor shall maintain as-built drawings weekly depicting any deviations between its installed Work and the Subcontract and deliver the final as-built drawings to Contractor within fifteen (15) days of completion of Subcontractor's Work. Updates to the Contractor's as-built drawings within the Contractor's field office shall also be maintained by Subcontractor on a weekly or other consistent basis as agreed to by the Contractor.

**5.4** In the event the Parties intend to (1) develop, use, transmit and exchange Digital Data on the Project, (2) utilize a centralized electronic document management system on the Project, and/or (3) develop, share, use and rely upon three-dimensional Building Information Modeling ("BIM"), the Parties shall agree in writing upon protocols governing the development, use, management, maintenance, storage, transmission, reliance upon and exchange of such information, which writing shall be known as the "BIM Exhibit" and shall become a part of this Subcontract.

#### **ARTICLE 6. DESIGN WORK AND PROFESSIONAL SERVICES**

**6.1** Subcontractor shall not be required to provide professional services that constitute the practice of architecture or engineering unless such services are specifically required by the Subcontract or unless required for Subcontractor to provide the services necessary to carry out Subcontractor's responsibilities for its own construction means, methods, techniques, sequences or procedures.

**6.2** All designs, calculations, models, schedules or specifications or other design information created for the Project that were created by, for or on behalf of the Subcontractor (collectively, "Subcontractor Design Material") shall be deemed owned by Contractor. Subcontractor hereby assigns all intellectual property rights, including copyrights and rights related thereto, in the Subcontractor Design Material to Contractor. Subcontractor shall obtain similar assignments from its sub-consultants. The Subcontractor Design Material is created for the specific use of Contractor, and any re-use or adaptation of the same for any other project or client of Subcontractor is expressly prohibited without Contractor's prior written approval.

**6.3** In the performance of any design work, Subcontractor shall:

**6.3.1** perform its services consistent with the professional skill and care ordinarily provided by design professionals practicing in the same or similar locality under the same or similar circumstances;

**6.3.2** cause any design or engineering services to be performed as part of Subcontractor's Work to be provided by a properly licensed, qualified and independent design professional for the State in which the Project is located, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, shop drawings and other submittals prepared by such professional and shall bear the professional's written approval when submitted to Contractor.

**6.3.3** give all notices and comply with all Applicable Law;

**6.3.4** submit for Contractor's and Owner's approval in accordance with the Schedule, design development documents, working drawings, specified shop drawings and samples, and data and specifications of materials proposed to be incorporated in the Work.

**6.4** Subcontractor's design work performed under this Subcontract shall be coordinated by Subcontractor with the design and construction work performed by others outside of this Subcontract. Sufficient plans and specifications prepared by Subcontractor under this Subcontract will be furnished for coordination, construction, and permit purposes. Subcontractor shall provide copies of approved drawings in the form and quality specified by Contractor. Subcontractor



shall notify Contractor and other affected trades of all design development changes in sufficient time to preclude additional costs and conflicts with work of others on the Project. Subcontractor may be liable for the extra costs incurred for its failure to provide such timely notice.

**6.5** Subcontractor shall maintain professional liability insurance covering negligent acts, errors and omissions in the performance of professional design or engineering services as set forth on **Addendum 1**.

**6.6** The Subcontractor shall include all of the provisions of this ARTICLE 6 into its agreement with any design professional it engages as set forth herein.

## **ARTICLE 7. WARRANTY**

Subcontractor warrants to the Owner and Contractor that the materials and equipment furnished under this Subcontract will be of good quality and new. Subcontractor further warrants that the Work will be executed in strict conformance with the Subcontract, and all Federal, state and local laws, ordinances, rules, regulations, codes and orders of any public authority bearing on the performance of the Work of this Subcontract in effect as of the Subcontract Date ("Applicable Law"), and in the most sound and workmanlike manner and will otherwise be free from defects. Work, materials and or equipment not conforming to these requirements may be considered defective. Subcontractor's warranty obligations shall survive completion of the Project, Owner's acceptance and the making of final payment. These warranties shall be in addition to, and not a limitation of, all other warranties, implied or express, allowed, required or granted by law, the Prime Contract, or other provisions of this Subcontract.

## **ARTICLE 8. QUALITY, MATERIALS, EQUIPMENT AND CLEANUP**

**8.1** Subcontractor is responsible for continuously monitoring, planning, establishing, and executing the quality of its Work and that of its employees, lower tier subcontractors and suppliers and shall immediately report any quality issues to Contractor. All Work shall be done to the final approval of Contractor, Architect and/or Owner, and to their decision as to the performance of the Work in accordance with the Subcontract and manufacturer's recommendations. Subcontractor agrees that Contractor, Architect and/or Owner each have the authority to reject Subcontractor's Work that does not conform to the Subcontract. The Owner's or Architect's final decision on matters relating to aesthetic effect shall be binding on Subcontractor.

**8.2** Should any of Subcontractor's Work and/or materials furnished be rejected, defective, or deemed nonconforming by Contractor, Architect and/or Owner (the "Rejected Work"), Subcontractor shall, within seventy-two (72) hours of receipt of written notice from Contractor of such rejection and opportunity to cure, proceed to remove and replace all Rejected Work and any other work damaged or destroyed in removing and replacing the Rejected Work. All costs associated with correcting, removing or replacing Rejected Work, including additional testing and inspections, shall be borne by Subcontractor without any increase in the Subcontract Amount. If Subcontractor fails to promptly correct or remove and replace the Rejected Work, Contractor may at its option do so on Subcontractor's behalf and at Subcontractor's expense.

**8.3** Contractor's failure to discover or notify Subcontractor of defective or nonconforming Work, or any portion thereof, at the time the Work is performed shall not relieve Subcontractor of its full responsibility for correction or replacement of the defective or non-conforming Work and all damages resulting therefrom.

**8.4** If Owner elects to accept any defective or nonconforming Work performed by Subcontractor, rather than requiring removal or correction, the Subcontract Amount shall be reduced to compensate Owner for the diminished value of Subcontractor's defective or nonconforming work.

**8.5** Subcontractor shall be responsible for the proper receipt, delivery, unloading, handling, hoisting, storage, protection, installation, and all risk of loss associated with any materials or equipment it is to furnish, install, utilize, or provide, or have provided to it for the performance of Subcontractor's Work. Materials or equipment which become damaged in any way through no fault of Contractor during storage, delivery or installation shall not be used and shall be replaced by Subcontractor at its expense.

**8.6** Subcontractor agrees that any materials or equipment of Contractor or Owner, which are not to be incorporated into Subcontractor's Work, and any labor of Contractor or Owner, will be available to Subcontractor only with the express prior written permission of Contractor and in accordance with Contractor's terms and conditions of use. By using such labor, materials, or equipment, including tools, scaffolding, hoists, lifts or other similar items owned, leased or under the control of Contractor, Subcontractor shall, to the maximum extent allowed by law, indemnify, defend and be liable to Contractor for any loss or damage, including bodily injury or death, arising, or alleged to arise, from such use.

**8.7** No substitutions shall be made in Subcontractor's Work unless permitted by the Subcontract and only then upon receiving all prior approvals required under the Subcontract. Subcontractor shall indemnify Contractor for any increased costs incurred by Contractor resulting from any unauthorized substitutions.

**8.8** Cleanup of the Work and daily removal of debris from Work areas are mandatory. Subcontractor shall during the performance of its Work keep the Project site clean and free from debris resulting from Subcontractor's Work. Before discontinuing Work in an area, Subcontractor shall clean the area and remove all rubbish and its construction equipment, tools, machinery, waste, and surplus materials. Subcontractor shall make provisions to minimize and confine dust and debris resulting from its construction activities. Subcontractor is required to participate in the clean-up of any common areas in the building or Project site jointly used by Subcontractor, Contractor, and other subcontractors. Fire exits, corridors, ladderways, doorways, and exit paths in general shall be clear of all debris and always open to pedestrian and wheelchair traffic, including nights and weekends. If Subcontractor fails to comply with cleanup duties within twenty-four

(24) hours after receipt of written notice from Contractor of non-compliance, which notice may be delivered to Subcontractor's field supervisor, Contractor shall have the right, at its option, to perform appropriate cleanup measures without further notice to Subcontractor. Subcontractor shall pay Contractor all costs incurred by Contractor in performing the cleanup measures or Contractor may deduct the costs incurred from any amounts due or to become due Subcontractor. In the event a dispute arises among the Subcontractor and any others as to the responsibility for such cleanup, the Contractor may allocate reasonably the cost among the responsible parties and the allocation thus made shall be binding on the Subcontractor.

#### **ARTICLE 9. VERIFICATION OF PROJECT CONDITIONS, APPLICABLE LAW AND CONTRACT DOCUMENTS**

**9.1** Subcontractor represents it has visited the Project site and adjoining premises as applicable to its Work, is familiar with the conditions under which the Work is to be performed, is familiar with all Applicable Law, has correlated its personal observations with the requirements of the Subcontract, is capable of performance by reason of experience and expertise, is duly licensed to perform the Work, and is able to perform and staff the Work with an appropriate number of qualified personnel.

**9.2** Subcontractor agrees that Contractor has made no representations of any kind or nature as to the conditions or limitations of the Project site and/or Subcontractor's Work other than those contained in the Subcontract. If the Subcontractor discovers or should have discovered any defect in any work or materials provided by others that would make it unsuitable for the installation of its Work, then Subcontractor shall promptly, and before executing the Work, notify Contractor of the same in writing. Subcontractor shall be solely responsible for all costs, including the cost of changing the subsequent work of others, necessitated by Subcontractor's failure to report any error, omission, or defect which Subcontractor discovered or reasonably should have discovered before executing the Work.

**9.3** If Subcontractor discovers or reasonably should have discovered any error, omission or variance between the Contract Documents and any Applicable Law, Subcontractor shall notify Contractor promptly in writing prior to proceeding with said Work. In the event Subcontractor fails to so notify Contractor, Subcontractor shall be solely responsible for all resulting costs and damages.

**9.4** If Subcontractor determines the Contract Documents do not contain sufficient detail on any matters relating to its Work, Subcontractor shall request Contractor to furnish such other and further drawings and explanations as may be necessary, and Subcontractor shall conform to the same without additional compensation provided such information does not materially change the Subcontractor's Scope of Work.

**9.5** Contractor shall establish principal axis lines of the building and site and benchmarks. Subcontractor is solely responsible for the proper layout of its Work and responsible for any loss to Contractor or others due to Subcontractor's failure to lay out its Work correctly. Subcontractor shall exercise prudence so that actual final conditions and details shall result in proper alignment of finished surfaces. Prior to the commencing its Work, Subcontractor shall thoroughly and accurately: (a) review all Submittals and Contract Documents referring to items requiring integration, coordination and compatibility with Subcontractor's Work; (b) observe and verify all previous and surrounding work performed and surfaces provided by others and determine the location, condition, and correctness of the same, to the extent necessary to assure that the Work can be performed as intended; and (c) measure all field conditions relating to its Work.

**9.6** The exactness of grades, elevations, dimensions, clearances or locations given on any Contract Documents, or the work installed by other contractors, is not guaranteed by the Contractor. Subcontractor shall be responsible to field verify all existing conditions and perform all necessary field dimensioning as required to ensure that all materials are fabricated to fit properly and to ensure the proper fitting of Subcontractor's Work with the work of Contractor and others. All field dimensions should be verified prior to Subcontractor's Submittals or at the earliest possible time after field conditions allow the dimensions to be taken. "Long lead" items may be released for fabrication prior to field dimensioning only when authorized by Contractor in writing and only after all critical dimensions have been agreed to in writing by all involved Parties. Subcontractor shall be fully responsible for all fabrication errors, including costs to rebuild or modify completed Work, resulting from Subcontractor's failure to obtain precise field dimensioning where required.

**9.7** If a condition encountered is (a) a subsurface or other physical condition materially different from those indicated in the Contract Documents, or (b) an unusual or unknown physical condition materially different from conditions ordinarily encountered and generally recognized as inherent in Subcontractor's Work, Subcontractor shall stop the affected Work as soon as the condition is first observed, immediately notify the Contractor, and subsequently give written notice to Contractor of the condition no later than seventy-two (72) hours after discovery and prior to any disturbance of the condition. Subcontractor shall be responsible for all costs to change subsequent work of others, or for any damages arising out of Subcontractor's failure to give prompt notice to Contractor.

#### **ARTICLE 10. SUPERINTENDENCE, COOPERATION, SUBCONTRACTING, PROJECT MEETINGS**

**10.1** Subcontractor shall supervise and direct Subcontractor's Work and provide continuous, adequate and competent fulltime on-site supervision during the performance of its Work.

**10.2** Subcontractors' Designated Representative shall be satisfactory to Contractor and shall have the authority to carry out direction from Contractor relating to Subcontractor's Work or responsibilities. Subcontractor's Designated Representative shall be a fulltime employee on-site who can speak the English language fluently and translate and communicate with all on-site employees who cannot speak the English language fluently so that all field personnel are able to receive immediate verbal direction from Subcontractor or Contractor. If Subcontractor does not have a translator



on-site, any employees on-site who are incapable of speaking the English language fluently shall, upon request of Contractor, be immediately removed from the Project site.

**10.3** Subcontractor shall provide technical services as required to effect the operation of any equipment and/or material furnished under this Subcontract, including performance of specific testing, if any, and shall instruct the Owner's personnel on the operation, maintenance, and control of such equipment.

**10.4** Subcontractor shall enter into written agreements with sub-subcontractors performing any portions of the Work of this Subcontract, wherein Subcontractor and sub-subcontractor are mutually bound, to the extent of the Work to be performed by the sub-subcontractor, assuming toward each other all obligations and responsibilities that Contractor and Subcontractor assume toward each other, and having all rights, remedies and redress against each other that the Contractor and Subcontractor have under this Subcontract. Prior to Contractor's payment of Subcontractor's first requisition, Subcontractor shall provide Contractor a sworn statement of all lower tier subcontractors and suppliers/vendors that it intends to use to perform or provide any portion of its Work.

**10.5** Subcontractor will be required to attend a pre-construction meeting which shall be scheduled and conducted by the Contractor. Subcontractor's Designated Representative is required to attend all jobsite meetings as scheduled by the Project Superintendent during the time that Subcontractor is actively working on the Project. Subcontractor shall comply with any Project-specific meeting requirements set forth in **Exhibit A**.

#### **ARTICLE 11. MEANS, METHODS AND SAFETY**

**11.1** Contractor shall not have control over or charge of and shall not be responsible for the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs relating to Subcontractor's Work. Subcontractor shall be solely responsible for the safety of its employees, sub-subcontractors, suppliers and any other person or entity for whom Subcontractor is responsible. Subcontractor shall perform its Work in a safe and reasonable manner and shall continuously maintain its Work area in such a manner to provide a safe working environment. Subcontractor shall, at its own expense, implement appropriate safety programs pertaining to its Work, including establishing safety rules, posting appropriate warnings and notices, and establishing proper notice procedures to protect persons and property at the Project site and adjacent to the Project from injury, loss or damage. Subcontractor shall review and comply with Contractor's Work Rules and Safety Policy, attached to this Agreement as **Addendum 2**.

**11.2** Subcontractor shall conform with all safety and record keeping requirements imposed by the Prime Contract or Applicable Law, including the Occupational Safety and Health Act of 1970 and industry specific regulations. Subcontractor shall directly receive, respond to, defend and be solely responsible for all citations, assessments, fines or penalties which may be received or incurred by either Party by reason of Subcontractor's failure, or the failure on the part of its agents, employees, suppliers or sub-subcontractors, to comply with any Law and further shall indemnify and hold harmless Contractor and Owner from and against any such claims, damages, loss, cost or expense, including reasonable attorneys' fees, relating thereto.

**11.3** Subcontractor shall notify Contractor immediately and in no event later than twenty-four (24) hours following any injury to an employee or anyone for whom Subcontractor is responsible which occurred at the Project or of any damage to the Project, Work or other property damage at the Project. Subcontractor shall reasonably cooperate with Contractor in the event of any accident or other event that may give rise to a claim against Contractor or Owner. To the fullest extent possible, Subcontractor shall preserve all evidence related to any accident or event until Contractor, and/or the Owner and/or any insurance carrier providing coverage for such accident or event, has had the opportunity to investigate and to inspect the evidence.

**11.4** To the fullest extent permitted by law, Subcontractor shall indemnify and hold harmless Contractor and Owner, their affiliates, parents, subsidiaries, officers, directors, employees, success and assigns (all collectively "Indemnitees"), from and against all claims, damages, losses, costs and expenses, including without limitation reasonable attorney's fees, fines and/or penalties incurred by the Indemnitees arising out of or resulting from the performance of the Subcontractor's Work under this Subcontract.

#### **ARTICLE 12. CHANGES**

**12.1** If the Owner makes changes in the Work by issuing modifications to the Prime Contract, Contractor shall notify the Subcontractor of any such modifications. Unless otherwise directed by Contractor, Subcontractor shall not thereafter order materials or perform Work that would be inconsistent with the changes made by any modification to the Prime Contract.

**12.2** In the event Contractor requests Subcontractor to review a proposed modification to the Prime Contract which may affect Subcontractor's Work, Subcontractor shall respond in writing prior to commencing any modified work and within seven (7) days after receipt of such request, or other reasonable time as the Parties may agree, stating the effect of the proposed modification upon its performance, including details of costs and time thereof. If Subcontractor fails to properly or timely respond to Contractor's request, Subcontractor shall accept the determination of Contractor as to the effect of the proposed modification. To the extent the Prime Contract provides for changes to be computed based on mutually agreed lump sum, unit price, cost plus fee basis, or otherwise, these obligations are hereby imposed upon Subcontractor.

**12.3** Subcontractor may be ordered in writing by Contractor, without notice to Subcontractor's Surety and without invalidating this Subcontract or any bond hereunder, to make changes in the Work consisting of additions, deletions or

other revisions, with the Subcontract Amount and the Subcontract Time adjusted accordingly by written directive which shall be promptly enacted upon by Subcontractor and shall be followed by a formal written change order representing the changes to the Work ("Change Order"). At Contractor's option, the amount of any increase in the Subcontract Amount shall be calculated based on: (a) an agreed upon lump sum; (b) any Unit Prices set forth in **Exhibit A** to this Agreement or otherwise agreed to by the Parties; or (c) the documented direct costs of labor, materials, and equipment actually and reasonably incurred by the Subcontractor in the performance of the changed Work ("Direct Costs") plus the maximum Overhead and Profit Rate set forth in the Prime Contract.

**12.4** If the Parties are unable to agree as to whether any work directed by the Contractor entitles Subcontractor to a Change Order, or as to the value of such changed Work, Subcontractor shall proceed under the written directive from Contractor, from which the adjustment of the Subcontract Amount and/or the Subcontract Time shall be omitted, and shall keep accurate, detailed and itemized records of the Direct Costs incurred in completing the work directed including without limitation, timesheets, payrolls, inspection records, invoices, vouchers and other records to substantiate the cost of changed Work, and shall submit a Claim for resolution pursuant to the provisions of ARTICLE 15.

**12.5** Subcontractor shall be entitled to an adjustment of the Subcontract Amount or Subcontract Time only to the same extent and according to the same provisions as Contractor's adjustment from Owner. Subcontractor's allocable share of Contractor's adjustment shall be fairly and reasonably determined by Contractor after allowance for Contractor's cost of presenting and recovering the Claim, including legal fees, normal overhead and profit and apportionments to other affected subcontractors. Under no circumstance shall Subcontractor's entitlement exceed Contractor's entitlement after deduction of the expenses and costs described herein.

**12.6** Contractor's, or Owner's, receipt or acknowledgement of Subcontractor's Change Order request, or any other Claim, notice or report, including reports of cost and time, or any payments made, shall not be construed as Contractor's, or Owner's, acceptance of the accuracy or validity thereof until such time as a Change Order is signed by Contractor.

**12.7** No Change Order shall be valid unless Contractor's Designated Representative, or higher-level representative, has signed the same. Contractor's Superintendent(s) are not authorized to approve any additional Work and may not sign any field or office work order authorizing or approving any additional Work for which Subcontractor expects payment. No course of conduct or dealings between the Parties, nor express or implied acceptance of alterations or additions to the Work, and no claim that Owner or Contractor have been unjustly enriched by any alteration of or addition to the Work, whether or not there is, in fact, any unjust enrichment, shall be the basis of any claim to a change in the Subcontract Amount or the Subcontract Time.

**12.8** Agreement on any Change Order shall constitute a final settlement of all matters relating to the change in the Work that is the subject of the Change Order, including, but not limited to, all direct and indirect costs and consequential damages or cumulative impact associated with such change and any and all adjustments to the Subcontract Amount and Contract Time.

### **ARTICLE 13. PROGRESS PAYMENTS, RETAINAGE, FINAL PAYMENT**

**13.1** Subcontractor shall be entitled to apply for progress payments for that portion of its Work performed during the payment periods established in the Prime Contract, but not more frequently than monthly. Contractor shall make progress payments on the Subcontract Amount to Subcontractor as provided below and elsewhere in the Subcontract.

**13.2** As a condition precedent to payment of the first requisition, Subcontractor shall submit to Contractor: (i) a sworn statement of all subcontractors and suppliers as set forth in Section 10.4 herein; (ii) if not previously provided to Contractor, a schedule of values allocating the entire Subcontract Amount among the various portions of Subcontractor's Work, in a form acceptable to Contractor; (iii) if not previously provided to Contractor, a current financial statement or other evidence of financial stability, and (iv) a fully executed Agreement with a current Certificate of Insurance meeting or exceeding the requirements of **Addendum 1** and any required bonds. Contractor shall have no obligation to make payment for Work performed by Subcontractor unless and until these items are submitted to Contractor.

**13.3** As a further condition precedent to receiving any progress payments from Contractor, Subcontractor agrees that it shall execute and deliver to Contractor with each of Subcontractor's payment requisitions, a full and complete partial lien waiver and release of all claims and causes of action which Subcontractor may have or claims to have against Contractor, Owner or the Project ("Partial Waiver") through the date of the Partial Waiver, excepting only those claims for which Subcontractor has previously notified Contractor and which Subcontractor has specifically listed on the Payment Application, and conditioned only upon receipt of the payment identified therein. The Partial Waiver shall be on a form approved by Contractor and shall cover all work for which payment is requested. If requested by Contractor, as a further condition precedent to receiving any progress payment, Subcontractor shall also provide fully executed Partial Waivers from Subcontractor's lower tier subcontractors and suppliers.

**13.4** Unless the Prime Contract provides for a different schedule, by the 20th day of each month Subcontractor shall submit to Contractor a written application, on Contractor's form (see **Addendum 3**), or other form approved in advance by Contractor, showing the value of Work performed and completed since the preceding pay period ("Payment Application"), along with all substantiating information required by the Subcontract. Provided the Payment Application is timely received, Contractor shall include the Subcontractor's Work covered by that Payment Application in its application for payment to Owner for the same period. If the Subcontractor's Payment Application is received after the application date fixed above, Subcontractor's Work shall be included by Contractor in its next application for payment to Owner. Contractor shall have



no obligation to delay its monthly application for payment to Owner due to Subcontractor's delay in submission of its Payment Application to Contractor.

**13.5** The amount of each progress payment shall be calculated as follows:

- (1) Take that portion of the Subcontract Amount properly allocable to completed Work; and
- (2) Reduce that amount by: (i) the aggregate of all previous payments made by Contractor; (ii) the amount, if any, for Work that remains uncorrected and for which Contractor has previously withheld payment for a cause that is the fault of Subcontractor; (iii) all charges for materials and services furnished by Contractor to Subcontractor; (iv) any other charges or deductions as provided for in Section 13.10 below or elsewhere in the Subcontract, including for Work not performed or defects discovered since Subcontractor's last Payment Application for a cause that is the fault of Subcontractor; and (v) retainage withheld pursuant to this Agreement.

**13.6** If allowed by the Contract Documents, Subcontractor's Payment Application may include materials and equipment not yet incorporated in the Work but delivered to, adequately protected, insured, and suitably stored at the Project site or at an offsite storage facility. Approval for payment of such stored items, on or offsite, shall be conditioned upon submission by Subcontractor of bills of sale, evidence of insurance, and such other documents and procedures satisfactory to Owner and Contractor to establish Owner's unencumbered title to such materials and equipment and to otherwise protect Owner's and Contractor's interest, including transportation from an offsite facility to the Project site. Materials stored on the Project site, and for which payment is requested, shall remain in the care and custody of the Subcontractor and shall not be removed from the Project site without the written consent of the Contractor.

**13.7** For each progress payment made prior to Substantial Completion of the Work, Contractor shall withhold retainage at the rate equal to the percentage retained from Contractor's payment by Owner for Subcontractor's Work, at the rate defined in the Prime Contract. If the Subcontractor's Work is satisfactory and the Prime Contract provides for a reduction of retainage, Subcontractor's retainage shall also be reduced when Contractor's retainage for Subcontractor's Work has been so reduced by Owner. Early release of retainage, if any, shall be at Contractor's discretion and in compliance with the early release of retainage provisions of the Prime Contract.

**13.8** The timing and frequency of Contractor's progress and final payments to Subcontractor shall be the same as the timing and frequency of Owner's payments to Contractor pursuant to the terms of the Prime Contract. Provided the Subcontractor is not in default, Contractor shall pay Subcontractor each progress payment no later than seven (7) days after Contractor receives payment from the Owner, or per applicable State law. If Owner does not make payment to Contractor within the time prescribed in the Prime Contract, through no fault of Subcontractor, Contractor will make payment to Subcontractor within sixty (60) days of the Subcontractor's Payment Application for the Work satisfactorily performed, computed pursuant to Section 13.5 herein.

**13.9** Subcontractor shall promptly, and no later than seven (7) days after receipt of payment from Contractor, or per applicable State law, pay its lower tier subcontractors, suppliers, and any other bills or obligations for labor, materials, equipment, suppliers and other items for the Project. Upon Contractor's receipt of notice of any unpaid bills or obligations of Subcontractor on this Project, Contractor, in its sole discretion and in addition to any other remedies it may have hereunder, may pay Subcontractor's lower tier subcontractors or suppliers (either directly or by joint check) and recover these payments from the Subcontractor. Notwithstanding anything to the contrary herein, Subcontractor acknowledges and agrees that regardless of whether Contractor paid Subcontractor, Subcontractor has an obligation to pay its lower tier subcontractor and suppliers the amounts owed by Subcontractor to them for labor and materials furnished to Subcontractor in connection with its Work on the Project. Upon Contractor's request, Subcontractor shall furnish evidence of the payment of all bills and expenses incurred by Subcontractor for labor, services, equipment and materials used by Subcontractor, or any other liability incurred by Subcontractor, in performance of its Work on the Project.

**13.10** Contractor may reject a Subcontractor's Payment Application in whole or in part or withhold amounts from a previously approved Payment Application for any reason set forth in the Prime Contract or as may be reasonably necessary to protect Contractor from loss, including but not limited to, the following:

- (1) Subcontractor's failure to perform the Subcontract Work as required by this Subcontract;
- (2) Loss or damage arising out of or relating to this Subcontract and caused by Subcontractor or those for whom Subcontractor is responsible;
- (3) Rejected, nonconforming, or defective Work which has not been corrected in a timely fashion;
- (4) Reasonable evidence of delay in the Subcontractor's performance of the Work;
- (5) Reasonable evidence demonstrating that the unpaid balance of the Subcontract Amount is insufficient to cover the cost to complete the Subcontractor's Work; and
- (6) Third-party claims involving Subcontractor or reasonable evidence demonstrating that third-party claims are likely to be filed.

**13.11** To the extent permitted by Applicable Law, acceptance of periodic progress payments by Subcontractor shall constitute a waiver of any and all claims, by the Subcontractor against the Contractor, the Owner, the Project, or Contractor's payment bond through the date of the pay period for which payment is made, unless such claims are expressly reserved on the Payment Application.

**13.12** When the Work is Substantially Complete, Subcontractor shall promptly submit its Payment Application for such Work. Within thirty (30) days of acceptance of the Payment Application covering such substantially completed Work, Contractor shall make payment to Subcontractor, less final retainage, and deducting any amounts as may be necessary to cover the cost of items to be completed or corrected by the Subcontractor. Acceptance of Subcontractor's substantially completed Work shall not result in commencement of the warranty period or the statutes of limitations or repose for the Subcontractor's Work which shall instead commence upon achievement of Substantial Completion of the Project under the terms of the Prime Contract.

**13.13** Final payment, constituting the entire unpaid balance of the Subcontract Amount, shall be made by Contractor to Subcontractor when the Subcontract Work is fully performed in accordance with the requirements of the Contract Documents.

**13.13.1** Subcontractor shall submit its final Payment Application in such time to allow Contractor to incorporate Subcontractor's Payment Application into Contractor's application for final payment to Owner without delay. **ANY INVOICE NOT SUBMITTED WITHIN SIXTY (60) DAYS OF THE ISSUANCE OF THE FINAL CERTIFICATE OF OCCUPANCY WILL NOT BE PAID**, except as related to Work completed after Substantial Completion.

**13.13.2** Issuance of the final payment to Subcontractor is contingent upon: (a) final completion of Subcontractor's Work in accordance with the Contract Documents; (b) acceptance of Subcontractor's Work by Contractor and Owner; (c) furnishing of a Final Release and Waiver of Liens and Claims, in such form as required by Contractor, from Subcontractor and all persons or entities claiming under or through Subcontractor, (d) furnishing an Affidavit that all payrolls, bills for materials and equipment, and all known indebtedness connected with Subcontractor's Work, including any taxes and governmental charges, have been satisfied or will be paid with the proceeds of final payment so not to encumber the Owner, Project, Contractor or Contractor's surety; (e) consent of surety to final payment, if required; (f) furnishing a report of any outstanding known and unreported accidents or injuries experienced by Subcontractor, or anyone for whom Subcontractor is responsible, at the Project site; (g) receipt by Contractor of all close-out documents required by the Subcontract; and (h) compliance with any other conditions precedent to Subcontractor's receipt of final payment as set forth in the Prime Contract or elsewhere in the Subcontract.

**13.13.3** If the above conditions have been satisfied, final payment shall be made to Subcontractor within seven (7) days after receipt by Contractor of final payment from Owner for the Subcontractor's Work, or per applicable State law. If Owner does not make final payment to Contractor within the time prescribed in the Prime Contract, through no fault of Subcontractor, Contractor will make payment to Subcontractor within sixty (60) days of Subcontractor's compliance with the conditions precedent to final payment as set forth herein.

**13.14** No payment, including final payment, shall be construed as an acceptance of defective, rejected, nonconforming or incomplete Work, and Subcontractor shall remain responsible for its performance conforming to the requirements of the Contract Documents.

**13.15** Acceptance of final payment by Subcontractor shall constitute a waiver of all claims by Subcontractor against Contractor, the Owner, the Project, or any surety or bond, arising out of or relating to Subcontractor's Work.

#### **ARTICLE 14. SUSPENSION, DEFAULT AND TERMINATION**

**14.1** Should Owner suspend the Contractor's Work, or any part which includes the Subcontractor's Work, for the convenience of Owner and such suspension is not due to any act or omission of Subcontractor, Contractor shall notify Subcontractor in writing and, upon receipt of notification, Subcontractor shall immediately suspend its Work. To the extent provided for under the Prime Contract, and to the extent Contractor recovers such on Subcontractor's behalf, the Subcontract Amount and the Subcontract Time shall be adjusted by Change Order for the cost and delay resulting for any Owner directed suspension. Contractor agrees to cooperate with Subcontractor, at Subcontractor's expense, in the prosecution of any claim by Subcontractor arising out of an Owner's suspension.

**14.2** Contractor may order Subcontractor in writing to suspend all or any part of the Work for such time as may be determined by Contractor. Phased Work or interruptions of the Subcontractor's Work for short periods of time which do not directly affect the critical path of the Work shall not be considered a suspension. Subcontractor shall promptly notify Contractor if Subcontractor believes such suspension will cause an increase in the time for performance of its Work. The Subcontract Time shall be adjusted for delays caused by the suspension; however, no adjustment shall be made to the extent that Subcontractor's performance is, was or would have been so suspended, delayed or interrupted by another cause for which Subcontractor is responsible.

**14.3** If the Subcontractor:

- (1) repeatedly performs Work in an untimely, defective, or nonconforming fashion;
- (2) provides any false information or documents to the Contractor, Owner or Architect;
- (3) damages work of others or any other property in connection with performance of Subcontractor's Work and fails to repair promptly said damage;
- (4) fails to make payment to its employees, subcontractors or suppliers for labor, materials or equipment, relating to Subcontractor's Work on the Project;
- (5) fails to deliver current insurance certificates, licenses, required bonds, as-built drawings, warranties or the approvals required of Subcontractor's Work;



- (6) fails to promptly provide adequate assurances of its ability to perform under this Subcontract when reasonably requested to do so by Contractor;
- (7) fails to comply with all Applicable Law; or
- (8) has otherwise committed a material breach of this Subcontract,

Contractor may terminate the Subcontract upon seventy-two (72) hours' written notice to Subcontractor unless Subcontractor, within those 72 hours, commences and continues satisfactory correction of the default with diligence and promptness. In the event of emergency affecting the safety of persons or property, Contractor may proceed as above without prior notice to Subcontractor.

**14.4** When Contractor terminates Subcontractor for any of the reasons stated above, Contractor may take possession of the Work, and materials and equipment to be incorporated into the Work of Subcontractor at the Project site, accept assignment of agreements or subcontracts executed by the Subcontractor related to its Work hereunder, and through itself or others prosecute the Subcontractor's Work in the manner Contractor reasonably determines is most expeditious for completion of the Work. Subcontractor shall not be entitled to any further payments until Subcontractor's Work has been completed and fully accepted by Owner. If the unpaid balance of the Subcontract Amount exceeds Contractor's costs of completion, the difference shall be paid to Subcontractor. If such expenses exceed the unpaid balance due, Subcontractor shall pay the difference to Contractor within ten (10) days of written demand for payment of the same.

**14.5** Subcontractor shall be liable to Contractor for all costs incurred as a result of Subcontractor's failure to perform under this Subcontract, including all charges, expenses, losses, costs, damages and reasonable attorney's fees incurred in enforcing any provision hereunder and/or in correcting or completing the Work, and including all costs and expenses associated with Contractor's prosecution or defense of any bankruptcy or insolvency proceeding relating to Subcontractor, and any subsequent proceeding or appeal from any order or judgment entered therein.

**14.6** Contractor shall have the right to terminate this Subcontract, or any part thereof, without Subcontractor being at fault, for any cause or for Contractor's or the Owner's convenience, upon seventy-two (72) hours' written notice to Subcontractor. Upon Subcontractor's receipt of such written notice, this Subcontract shall be terminated, and Subcontractor shall: (a) cease operations as directed by Contractor's notice; (b) take actions necessary, or as directed by Contractor, for the protection and preservation of the Work; and (c) except for Work directed to be performed prior to the effective date of termination stated in the notice, terminate all existing subcontracts and purchase orders and enter into no further subcontracts or purchase orders. In the event Contractor terminates this Subcontract for its own convenience, Contractor shall pay Subcontractor for all Work properly performed through the date of termination, including reasonable overhead and profit on such Work, and reasonable costs incurred by Subcontractor related to termination. Contractor shall not be liable to Subcontractor for any other costs, including overhead and profit on the Work not executed. A termination for Subcontractor's default shall, if determined to have been wrongfully made, be treated as a termination for convenience under this subparagraph.

**14.7** The rights and remedies provided Contractor in this Article are not exclusive but are in addition to any rights and remedies afforded by this Subcontract or by law.

**14.8** Any amounts due Contractor as a result of Subcontractor's failure to perform hereunder may be recovered from the surety issuing any bonds required under this Subcontract, and both Subcontractor and its surety agree to pay Contractor such losses, damages, expenses and Contractor's reasonable attorney's fees.

## **ARTICLE 15. SUBCONTRACTOR CLAIMS AND DISPUTES**

**15.1** Any claim by Subcontractor seeking an adjustment in the Subcontract Amount and/or Subcontract Time, an adjustment or interpretation of the Subcontract terms, or other relief arising out of or relating to this Subcontract ("Claim"), must be made by written notice to the Contractor: (a) at least seventy-two (72) hours prior to the beginning of Subcontractor's affected or additional Work, (b) within seventy-two (72) hours of Subcontractor's first knowledge of the event giving rise to the Claim, or (c) at least two (2) business days prior to the date by which Contractor is obligated to give notice to the Owner with respect to such Claim, whichever shall first occur; otherwise, such Claims shall be deemed waived.

**15.2** Should any timely submitted Claim or other dispute between Contractor and Subcontractor remain unresolved, the Parties agree that:

- (1) The Parties shall endeavor to reach resolution of such Claim or other dispute between them through good faith direct discussions between the Parties' Designated Representatives.
- (2) If such Claim or other dispute cannot be resolved between the Parties' Designated Representatives, then Contractor shall issue a written directive to Subcontractor which shall be followed by Subcontractor without waiver of Subcontractor's Claims ("Contractor's Directive").
- (3) Contractor's Directive shall be final and conclusive unless, within seventy-two (72) hours of receipt of such directive, Subcontractor provides a written notice to Contractor contesting Contractor's Directive. If Subcontractor does not timely contest Contractor's Directive, Subcontractor shall be deemed to have waived any right to contest that directive.
- (4) If Subcontractor timely contests Contractor's Directive, the Parties shall proceed as set forth in Section 15.5, below.

- (5) Unless otherwise agreed to by the Parties in writing, Subcontractor shall continue its Work and maintain the Schedule during any dispute resolution procedure. If Subcontractor continues to perform, Contractor shall continue to make any undisputed payments owed to Subcontractor in accordance with this Subcontract.

**15.3** If Subcontractor asserts a Claim for which Owner is or may be responsible ("Pass-Through Claim"), Subcontractor's sole remedy shall be to pursue it at its expense against Owner in its own name. Contractor, in its sole discretion, may choose to, but is not required to, prosecute the Pass-Through Claim for Subcontractor and where applicable charge Subcontractor for a pro-rata share, based on the percentage which Subcontractor's claim bears to the total claim asserted by Contractor, of the total expenses, including reasonable attorney's fees, incurred in pursuing the claim. Subcontractor shall comply with all claim notice requirements and dispute resolution procedures in the Prime Contract, or which otherwise apply to any Pass-Through Claim. Contractor shall have no responsibility or liability in relation to a Pass-Through Claim or its outcome, except to pay Subcontractor any sums received by Contractor from Owner or any other party, less expenses incurred by Contractor in connection with the Pass-Through Claim, as noted herein.

**15.4** If Subcontractor chooses to appeal an adverse final decision rendered with respect to a Pass-Through Claim, Subcontractor may do so provided the Contractor's interests are not materially affected, and the Subcontractor agrees to bear the full cost thereof and be solely responsible for prosecuting such appeal.

**15.5** Contractor and Subcontractor shall endeavor to resolve any Claim or other dispute between them by mediation which, unless the Parties' agree otherwise, shall be conducted in accordance with the then current American Arbitration Association Construction Industry Mediation Procedures. A request for mediation shall be made in writing delivered to the other party to this Subcontract. This request may be made concurrently with the filing of a demand for arbitration as set forth in Section 15.6, which shall be stayed for a period of 30 days following completion of said mediation. The Parties shall share the mediator's fee equally unless otherwise agreed. The mediation shall be held in the County where the Project is located unless otherwise agreed. Agreements reached in mediation shall be enforceable in any court having jurisdiction thereof.

**15.6** Any Claim or other dispute between Contractor and Subcontractor that has not been waived per Section 15.2 and was not resolved through mediation shall be subject to arbitration which, unless the Parties mutually agree otherwise, shall be administered by the American Arbitration Association in accordance with its Construction Industry Arbitration Rules in effect on the Subcontract Date. The arbitration shall be conducted in the County where the Project is located, unless another location is mutually agreed upon by the Parties. A demand for arbitration shall be made in writing, delivered to the other party of the Subcontract and filed with the person or entity administering the arbitration. Unless otherwise mutually agreed to by the Parties, the party filing a notice of demand for arbitration must assert in the demand all Claims and other disputes between the Parties arising from the Project then known to that party. In no event shall a demand for arbitration be made after the date when the institution of legal or equitable proceedings based upon the Claim or other dispute would be barred by the applicable statute of limitations. For statute of limitations purposes, receipt of a written demand for arbitration by the person or entity administering the arbitration shall constitute the initiation of legal or equitable proceedings based on the Claim or other dispute. The award rendered by the arbitrator or arbitrators shall be final, and judgment may be entered upon it in accordance with Applicable Law in any court having jurisdiction thereof. Subcontractor agrees to require its sureties to participate in said arbitration proceedings and to be bound by any award rendered against Subcontractor. The foregoing agreement to arbitrate, and any other agreements to arbitrate with an additional person or entity duly consented to by the Parties, shall be specifically enforceable under Applicable Law in any court having jurisdiction thereof. The Parties agree to share equally all arbitration fees and costs. Each party agrees to bear its own attorney's fees associated with any arbitration.

**15.7** Contractor may, in its discretion and as may be required by the Prime Contract, join Subcontractor in any dispute resolution proceeding to which Contractor is or becomes a party and which, in Contractor's reasonable judgment, relates to or affects Subcontractor's performance of the Work, including: (a) any dispute resolution procedure provided in the Prime Contract for disputes arising between Contractor, Owner and/or others, including arbitration and submission to Architect or Engineer; (b) litigation, (c) administrative proceedings, and (d) any other dispute resolution proceeding applicable under the Applicable Law. If so joined or consolidated, Subcontractor shall participate at its own expenses in said proceeding, shall be bound by its outcome, and shall dismiss any mediation, arbitration or litigation proceedings instituted against Contractor related to the same claims and disputes.

**15.8** The validity, interpretation and performance of this Subcontract shall be governed by the laws of the State in which the Project is located. If Contractor is required to employ an attorney to enforce any of the provisions of this Subcontract, or to protect its interest in any matter arising hereunder, or to collect damages for the breach of this Subcontract or to prosecute or defend any suit resulting therefrom, or to recover on any bond given by Subcontractor hereunder, Subcontractor and its surety, jointly and severally, agree to pay Contractor for all reasonable costs, charges, expenses, expert fees and attorney's fees expended or incurred in connection therewith.

#### **ARTICLE 16. PROTECTION AND CORRECTION OF WORK**

**16.1** Subcontractor shall take necessary precautions to properly protect its Work and the work of others from theft or damage caused by Subcontractor's performance of its Work, including the cleaning of surfaces. Should Subcontractor cause damage to its Work or the work or property of Contractor, Owner, or others, Subcontractor shall promptly remedy



such damage to the satisfaction of the Contractor, or Contractor may, in addition to all other rights hereunder, upon seventy-two (72) hours' written notice and opportunity to cure, remedy such damage and recover the cost from Subcontractor.

**16.2** In addition to its obligations under ARTICLE 7, Subcontractor agrees to promptly correct, after receipt of written notice from Contractor, all Work which is found to not be in accordance with the requirements of the Contract Documents within a period of one year from the date of Substantial Completion of the Project, or for a longer period of time as may be required by Prime Contract. Should Subcontractor, within seventy-two (72) hours' of receipt of notice, fail or refuse to commence and continue satisfactory correction of the nonconforming Work, Contractor may have the nonconforming Work corrected at the sole expense of Subcontractor, and may recover from Subcontractor an amount sufficient to cover such repair costs. Nothing contained in this Section shall be construed to establish a period of limitation with respect to the obligations Subcontractor has under the Subcontract. Establishment of the one-year period for correction of Work described in this Section relates only to the specific obligations of Subcontractor to correct its Work, and has no relationship to the time within which the obligation to comply with the Subcontract may be sought to be enforced, nor to the time within which proceedings may be commenced to establish the Subcontractor's liability with respect to the Subcontractor's obligations other than to specifically correct its Work. Contractor's remedies described in this Section shall not be exclusive but shall be in addition to all others provided by this Subcontract and Applicable Law.

#### **ARTICLE 17. DEFENSE AND INDEMNITY**

**17.1** To the fullest extent permitted by law, Subcontractor shall indemnify and hold harmless the Owner and Contractor, and all agents and employees of either of them, from and against all claims, damages, losses and expenses, including but not limited to reasonable attorney's fees, arising out of or resulting from performance of Subcontractor's Work, provided that any such claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of real or personal property, but only to the extent caused by the negligent acts or omissions of Subcontractor, its sub-subcontractors, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable. Such obligation shall not be construed to negate, abridge or otherwise reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this ARTICLE 17. In claims against any person or entity indemnified under this ARTICLE 17 by an employee of the Subcontractor, its sub-subcontractors, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, the indemnification obligation under this ARTICLE 17 shall not be limited by a limitation on the amount or type of damages, compensation or benefits payable by or for Subcontractor, or its sub-subcontractors, under workers' compensation acts, disability benefits acts or other employee benefits acts. The defense and indemnity obligations hereunder apply without regard to when the claims occur or who makes them and applies to claims made while this Subcontract is in force as well as to claim made after it is terminated or the Work is complete. In addition, Subcontractor shall indemnify, defend and hold harmless Contractor to the same extent that Contractor is required to indemnify, defend and hold harmless Owner and others under the Prime Contract, to the extent of Subcontractor's Work.

**17.2** Subcontractor shall turn the Work over to Contractor in good condition and free and clear of all claims, security interest, encumbrances or liens arising out of the performance of the Work. Subcontractor shall defend, hold harmless and indemnify Contractor and Owner from all loss, liability, damage, or expense, including reasonable attorney's fees and expenses, arising out of any lien claim or other claim for payment by any of Subcontractor's subcontractors or suppliers of any tier. If at any time there is evidence of a lien or claim for which, if established, Contractor or Owner might become liable, and which is chargeable to Subcontractor, including any liens by lower tier subcontractors or suppliers, and Subcontractor has not promptly satisfied, or if Subcontractor shall incur any liability to Contractor, or Contractor shall have a claim or demand against Subcontractor of any kind or for any reason, whether or not reduced to judgment or award, Contractor shall have the right to retain out of any payment due or to become due under this Subcontract, an amount sufficient to indemnify Contractor and Owner against such lien or claim, or to fully satisfy such liability, claim or demand, including reasonable attorney's fees and costs. Upon receipt of notice of such lien claim or other claim for payment, Contractor shall notify Subcontractor, who shall immediately satisfy such lien or claim by filing a bond or in such other manner as may be authorized by Applicable Law or Contractor. Should any claim or lien develop after all payments have been made to Subcontractor under this Subcontract, Subcontractor shall pay to Contractor, within ten (10) days of demand, all monies that Contractor was compelled to pay in discharging such claims or liens, including reasonable attorney's fees and costs incurred in collecting said monies from Subcontractor.

#### **ARTICLE 18. INSURANCE AND BONDS**

**18.1** Subcontractor agrees to provide and maintain the coverage and limits of insurance outlined on **Addendum 1** hereto which are minimum requirements for all projects unless the Contract Documents applicable to a specific project (a) require higher limits, at which point Contractor shall so notify Subcontractor, and Subcontractor shall be required to provide the higher limit or (b) a Controlled Insurance Program (CIP) provided by Owner or Contractor requires Subcontractor to provide different coverage for offsite inspections, warranty period, or other risks not covered by the CIP, at which point Subcontractor is required to strictly comply with the applicable CIP program manual. If a project is covered by a CIP, it will be so indicated on **Addendum 1**. Subcontractor shall require its subcontractor(s) and suppliers to furnish the same coverage, limits of insurance and additional insured status as required of Subcontractor under **Addendum 1** of this Agreement. Subcontractor shall provide certificates of insurance evidencing insurance coverage as required herein prior to commencement of Subcontractor's Work.

**18.2** Should Subcontractor be required to provide Payment and Performance Bonds, the requirement for, and the amounts and terms for, such bonds are set forth on **Addendum 1**.

## **ARTICLE 19. LABOR**

**19.1** Only workers with a legal right to work in the United States shall be employed or used by Subcontractor or any of its lower tier subcontractors or suppliers. Subcontractor certifies that it has completed all work authorizations required by law, including without limitation, the requirements for the use of E-Verify for employment eligibility verification for all new hires where such usage is required by Law or required by the Prime Contract, and retention of Forms I-9 Employment Eligibility Verification, for itself and its lower tier subcontractors and suppliers. Subcontractor agrees that Contractor is entitled, but not required, to monitor compliance with this policy, and that any false certifications or failure to comply may result in termination and/or other penalties.

**19.2** Subcontractor shall give notices and comply with all employment requirements of the Prime Contract and Applicable Law, including: equal opportunity employment requirements, the Fair Labor Standards Act; building codes; federal, state and local tax laws; Workers' Compensation Acts, and such other labor, non-discrimination, employment, Social Security and tax laws to the extent applicable to performance of the Work under this Subcontract. Subcontractor shall also review and comply with the Employment policies and requirements of Contractor outlined in **Addendum 2** to this Agreement.

**19.3** To the fullest extent permitted by law, Subcontractor shall indemnify and hold harmless the Indemnitees from and against all claims, damages, losses, costs and expenses, including without limitation reasonable attorney's fees, public relations costs, fines and/or penalties incurred by the Indemnitees, and work stoppages arising out of or resulting from the failure of Subcontractor, or its employees, agents, lower tier subcontractors or suppliers, to properly verify employment eligibility of any workers or otherwise to fully comply with all applicable immigration and employment laws, and all other applicable wage and benefits Laws.

## **ARTICLE 20. MISCELLANEOUS**

**20.1** Severability. If any provision, or portion thereof, of this Subcontract is found to be void, unenforceable or invalid, the remaining provisions, or portions thereof, shall survive and remain effective and binding.

**20.2** Titles. Title given to articles and sections of this Agreement are for ease of reference only and shall not be relied upon or cited for any other purpose.

**20.3** Electronic Exchange. The Parties may execute and exchange records in electronic form, including the signing of this Agreement, and including written notices in accordance with the terms of Section 20.14 herein. The Contractor may use DocuSign for the transmission and electronic execution of certain Contract Documents, including Change Orders, or may transmit and exchange Contract Documents by email as set forth in Section 20.14 herein. By execution of this Agreement, the parties agree that any electronic record or electronic signature, including a scanned and emailed copy of an original signature, shall be attributable to the person whose signature appears on the electronic record/electronic signature, shall have full legal effect and enforceability to bind the party causing the electronic signature to be made, and shall satisfy any provision of this Agreement or of any Law that requires a record be in writing.

**20.4** Sustainability Objective. Subcontractor shall take all steps necessary to ensure that its Work, including the work of its lower tier subcontractors and suppliers, complies with any sustainability objective, including LEED or other industry-related certification program, required under the Prime Contract.

**20.5** Assignment. Subcontractor shall not assign, transfer or otherwise dispose of this Subcontract, or any part thereof, nor assign any monies due or to become due hereunder, except with the prior written consent of Contractor. Any assignment consented to by Contractor shall not operate to relieve Subcontractor of its primary responsibility to Contractor for the full performance of this Subcontract, nor shall it create any contractual relationship between Contractor and such assignee, and Subcontractor shall continue to be liable to Contractor for all acts and omissions of its subcontractors and assignees. In the event Owner terminates the Prime Contract for cause, this Subcontract is assigned to the Owner pursuant to the Prime Contract provided the Owner accepts the assignment by notifying the Contractor and Subcontractor.

**20.6** Non-Solicitation. Until final completion of the Project, Subcontractor agrees not to perform any work directly for the Owner or any tenants thereof or deal directly with the Owner's representatives in connection with the Project unless otherwise directed and/or consented to in writing by Contractor. All Work for the Project performed by Subcontractor shall be processed and handled exclusively by Contractor.

**20.7** Independent Contractor. All of Subcontractor's services provided under this Subcontract are performed as an independent contractor. Nothing in this Subcontract shall change or modify the independent contractor status or be construed as a partnership arrangement, employer-employee relationship, limited liability relationship or otherwise. Subcontractor shall be solely responsible to its own employees and agents for any compensation due them and for compliance with all Laws including without limitation worker's compensation, employer taxes including FICA and self-employment taxes, and unemployment compensation payments. Subcontractor shall have no authority or right under any circumstance to employ any person for or on behalf of Contractor, or to incur any indebtedness in the name of Contractor, or otherwise to bind or purport to bind Contractor in any manner. Subcontractor agrees, represents and acknowledges that it is an independent contractor and is not an employee of Contractor, the Owner, or any other party on the Project.



**20.8 Confidentiality.** To the extent the Contract Documents provide for the confidentiality of any of the Owner's proprietary or otherwise confidential information disclosed in connection with the performance of this Subcontract, Subcontractor is equally bound by the Owner's confidentiality requirements. As used herein, "Confidential Information" means all information, documentation or records of one party that are disclosed to the other party that are marked or stated to be "Confidential" at the time of disclosure or that a reasonably prudent businessperson would consider to be confidential or proprietary in nature. Subcontractor will hold in confidence any Confidential Information (whether of Owner or Contractor) disclosed to it by Contractor to be used only the purpose for which such Confidential Information was disclosed. The obligations of Subcontractor pursuant to this Section 20.8 are in addition to any confidentiality obligations under the Prime Contract that are incorporated into this Subcontract. All obligations of the Subcontractor and Contractor pursuant to this Article shall survive termination of this Subcontract for any reason.

**20.9 Subordination of Lien.** Subcontractor agrees to subordinate its lien rights to Owner's lender if reasonably requested to do so and execute all necessary documents provided by Owner to affect the subordination of lien.

**20.10 Photographs and Social Media.** Subcontractor may not post, on personal or corporate accounts, any photographs or videos of the Project on any social media forum, including online communities, blogs, social networks, or chat rooms, without the prior written consent of Contractor. Subcontractor shall not disclose any Confidential Information related to the Project on personal or corporate accounts.

**20.11 Setoff.** Subcontractor acknowledges that Contractor shall have the right to set off against funds owed to Subcontractor any amounts due to Contractor by Subcontractor under this Subcontract or any other agreement between the Parties.

**20.12 Temporary Facilities.** Subcontractor shall provide, maintain and remove from the Project site upon completion of its Work, at its sole expense, all temporary office structures for the use of its employees, sheds and storage facilities, complete with all related utilities. Storage areas for the use of Subcontractor shall be designated by Contractor and no materials or equipment shall be stored by Subcontractor except in areas approved by Contractor. Such storage areas shall be maintained in an orderly condition by Subcontractor. Subcontractor shall move material and/or temporary trailers as directed by Contractor with all costs of same borne by Subcontractor.

**20.13 Cutting and Patching.** Subcontractor shall perform all cutting, fitting, patching, sleeving, grouting and sealing of its Work that may be required to fit it to receive, or be received by, the work of others as shown or reasonably implied by the Contract Documents; or as required or reasonably implied by the rules and regulations, codes and requirements of any regulatory or governmental agency having jurisdiction over the project; or as required or reasonably implied to achieve consistency and compatibility with attendant design elements. Poor fit or oversized openings will not be acceptable. Cutting, drilling or other alterations of prefabricated members such as floor trusses, roof trusses, beams, etc. will NOT be allowed without prior approval from the Architect/Engineer of record. The integrity of all structural members must be maintained.

**20.14 Notices.** Where the Contract Documents require one party to notify the other party, such notice shall be provided in a written communication to the Designated Representative of said party and shall be deemed to have been duly made if delivered in person, by mail, by overnight courier, by facsimile, or by email.

**20.15 No Waiver of Performance.** The failure of Contractor to enforce one or more provisions of this Subcontract shall not be construed to be and shall not be a waiver of any such provision(s), and Contractor shall thereafter be entitled to enforce each and every such provision(s) without any requirement that Contractor provide notification to Subcontractor of its intention to thereafter enforce such provision(s).

**20.16 Third-Party Beneficiary.** The Subcontractor agrees that the Owner is a third-party beneficiary of this Agreement.

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## **ADDENDUM 1**

### **INSURANCE AND BONDS**

Subcontractor:

Project Name: Sandbox Test Project - Charlotte Region

Samet Job #:

Subcontract #: 20039003

#### **ARTICLE A1.1 GENERAL**

**A1.1.1** Subcontractor shall purchase and maintain insurance, and if required, provide bonds as set forth in this Addendum 1. Unless otherwise specifically defined in this Addendum 1, any capitalized terms herein shall have the same meaning as set forth in the Subcontract Agreement.

**A1.1.2** The coverage limits set forth in this Addendum 1 are minimum limits. If the Prime Contract or other Contract Documents require higher limits, then the Subcontractor shall provide such higher limits. Subcontractor acknowledges receipt of a copy of the insurance requirement in the Prime Contract.

**A1.1.3** The Contractor makes no representation as to the adequacy or sufficiency of the coverages set forth herein. The following requirements shall in no way be construed to limit or eliminate liability of the Subcontractor, which arises from performance of the Work under the Subcontract Agreement. Subcontractor is responsible for any losses, claims, and costs of any kind which exceed the Subcontractor's limits of liability, or which may be outside the coverage scope of the policies, and which are caused by the negligence of Subcontractor or its representatives, employees, consultants, agents and lower tier subcontractors.

**A1.1.4** In no event shall the failure to provide proof of insurance as set forth herein, prior to the commencement of the Work, be deemed a waiver by the Contractor of Subcontractor's, or its lower tier subcontractor's, insurance obligation set forth herein.

#### **ARTICLE A1.2 PAYMENT AND PERFORMANCE BONDS (P&P Bonds)**

**A1.2.1** As related to the Project of this Agreement, Subcontractor ☐ is or ☒ is not required to provide P&P Bonds at the time of execution of this Agreement.

**A1.2.2** If P&P Bonds are required per Article A.2.1, Subcontractor shall obtain P&P Bonds, each with a penal amount equal to 100% of the Subcontract Amount, on forms acceptable to Contractor. The premium for these bonds shall be paid by Subcontractor and the cost thereof shall be included in the Subcontract Amount.

**A1.2.2.1** If required per Article A.2.1, Subcontractor shall provide P&P Bonds prior to commencement of Subcontractor's Work under this Agreement. The commencement of Work by Subcontractor without having provided said P&P Bonds shall not be considered a waiver or release by Contractor of the requirement for P&P Bonds, and Subcontractor shall have proceeded with the Work at its own risk and shall not be entitled to payment under the Agreement until such P&P Bonds are delivered to Contractor.

**A1.2.3** Subsequent to the execution of this Agreement, if a bond is later required for the Project, upon Contractor's written request, Subcontractor shall obtain P&P Bonds, each with a penal amount equal to 100% of the then current Subcontract Amount, including all adjustments thereto, on forms acceptable to Contractor. The cost of any subsequently required P&P Bonds shall be charged to the Project outside of the scope of Subcontractor's Work. Subcontractor shall submit for reimbursement a separate invoice for the cost of the P&P Bonds without profit and/or overhead.

#### **ARTICLE A1.3 CONTROLLED INSURANCE PROGRAM**

**A1.3.1** This Project ☐ shall or ☒ shall not be enrolled in a Controlled Insurance Program (CIP).

#### **ARTICLE A1.4 SUBCONTRACTOR INSURANCE**

**A1.4.1** Subcontractor shall secure, pay for, and maintain insurance as enumerated below, and such insurance shall be from an insurer lawfully authorized to transact business in the State of North Carolina and in the state wherein the Project is located, and have a minimum A.M. Best Rating of "A". The insurance must be issued by an insurer(s) acceptable to the Contractor, and in such amounts as required by the Contract Documents. Subcontractor shall furnish such other insurance coverages as may be applicable to its Work and as required under this Agreement, all prior to commencing its Work. All insurance policies shall contain a provision that the coverages afforded thereunder shall not be cancelled, allowed to expire, or not renewed, nor restricted modifications added unless at least thirty (30) days prior written notice has been given to Contractor. Coverages shall be maintained without interruption from the date of commencement of Subcontractor's Work and thereafter remain in full force and effect for the longer of (a) the expiration of the applicable Statutes of Limitations and Repose in the State where the Project is located for any claims arising out of or in any way related to the Subcontractor's Work or (b) such longer period as may be required by the Contract Documents or any applicable laws and regulations, but in no event less than 6 years. Certificates of Insurance acceptable to the Contractor shall be filed with the Contractor prior to the commencement of Subcontractor's Work. Additionally, and prior to commencement of the Work, the Subcontractor shall provide the Contractor with a Certificate of Insurance showing coverage for any sub-subcontractors of the Subcontractor for CGL liability insurance, Worker's Compensation and



Employer's Liability Insurance, and Automobile Liability Insurance, as described herein. **If Subcontractor begins Work prior to providing Contractor with acceptable Certificates of Insurance, Contractor may withhold all payments to Subcontractor until Contractor receives acceptable Certificates of Insurance.** In the event Subcontractor fails to obtain or maintain any insurance coverage required by this Agreement, or the Contract Documents, Contractor may at its option: (i) terminate the Subcontractor or (ii) purchase such coverage and charge the expense thereof to the Subcontractor. The coverage and limits of said insurance are as outlined below.

**A1.4.2 Worker's Compensation and Employer's Liability** meeting statutory limits mandated by state and federal laws or no less than:

- \$1,000,000 Each Accident
- \$1,000,000 Policy Limit
- \$1,000,000 Each Employee

**A1.4.3 Commercial General Liability ("CGL")** including coverage for Premises-Operations, Products-Completed Operations, Contractual Liability, Personal Injury, Bodily injury and Property Damage (including coverage for Explosion, Collapse, Soil subsistence and Underground hazards):

- \$1,000,000 Each Occurrence other than Completed Operations claims
- \$2,000,000 General Aggregate
- \$1,000,000 Personal and Advertising Injury
- \$2,000,000 Products –Completed Operations Aggregate

The General Aggregate Limits and the Completed Operations limits shall be separate limits and shall be administered as separate limits. Only Completed Operations claims shall be applied to the Completed Operations limits. All other claims shall be applied to the General Aggregate. The Subcontractors policy shall be endorsed to provide these separate limits.

**A1.4.3.1** CGL coverage shall be written on ISO coverage form CG 00 01 04 13, or a current version providing equivalent coverage. The CGL provided by subcontractor for this project shall provide ongoing operations, independent contractors, products-completed operations, bodily injury and property damage, and personal and advertising injury and liability assumed under an insured contract (including the tort liability of another assumed in an insured contract). There shall not be any reduction or limitation in the coverage required herein and offered by the policy forms insuring Subcontractor, including but not limited to, the exception to the "your work" exclusion for subcontracted work for completed operations claims.

**A1.4.3.2** Subcontractor shall provide coverage for pollution, explosion, collapse and soil subsistence and underground property damage by endorsement or additional policy if such risks are not covered by Subcontractor's policy.

**A1.4.3.3 EIFS Coverage.** As related to the Project of this Agreement, Subcontractor's Work ☒ involves or ☐ does not involve the installation and/or application, or any part thereof, of exterior insulation and finish systems, synthetic stucco or similar exterior coatings or surfaces (collectively, "EIFS"). If the Subcontractor's Work involves EIFS as set forth in this Article, Subcontractor's CGL policy under Article A1.4.3 shall not contain an exclusion or restriction of coverage for claims related to any EIFS. Subcontractor's Certificate of Insurance shall indicate EIFS coverage. Upon request of Contractor or Owner, Subcontractor shall provide a copy of the policy providing EIFS coverage.

**A1.4.4 Automobile Liability** providing (i) At least \$1,000,000 Combined Single Limit for bodily injury and property damage, including all owned, leased, non-owned and hired motor vehicles and (ii) Endorsement naming Contractor as an Additional Insured.

**A1.4.5 Additional Insureds.** Contractor, Owner and all other parties required of Contractor by the Prime Contract shall be included as Additional Insureds on the Subcontractor's CGL, and including ongoing and completed operations coverage for the Additional Insured on Subcontractor's policy, using both ISO Additional Insured Endorsements CG 20 38 04 13 and CG 20 37 04 13 or an equivalent coverage for an Additional Insured. If equivalent forms are used the coverage afforded shall include ongoing and completed operations and shall afford coverage equal to or greater than the ISO forms cited.

**A1.4.5.1** Attached to all Certificates of Insurance provided by Subcontractor shall be a copy of the Additional Insured Endorsement that is part of the Subcontractor's CGL policy that, to the fullest extent permitted by law, names Contractor, Owner and all others as may be required by the Prime Contract, as Additional Insureds ("Additional Insureds"). Insurance for the Additional Insureds shall be at least as broad as the coverage provided for the Named Insured Subcontractor. It shall apply as primary insurance on a non-contributing basis before any other insurance or self-insurance, including any deductible, maintained by or provided by Owner, Contractor or any other Additional Insureds. During the period insurance is required to be provided as described herein there shall be no modification, reduction or cancellation in insurance provided to Contractor, or any other Additional Insureds, by endorsement or otherwise including but not limited to the ISO standard CGL policy exclusion relating to the "your work" exception for subcontracted work during completed operations. Subcontractor shall maintain CGL coverage for itself and all Additional Insureds for the duration of the project and maintain completed operations coverage for itself and each Additional Insured, including Contractor, for the longer of (a) the expiration of the applicable Statutes of Limitations and Repose in the State where the Project is located, for any claims arising out of or in any way related to the Subcontractor's Work or (b) such longer period as may be required by the Contract Documents or any applicable laws and regulations but in no event less than 6 years.

Subcontractor is solely responsible to ensure that all Subcontractor's subcontractors, sub-subcontractors (of any tier), vendors and suppliers ("Lower Tier Party") provide the necessary insurance coverage required by the Contract Documents and in no case less than the limits provided in this Agreement. Subcontractor is responsible for obtaining prior to the start of any Lower Tier Party's work, and maintaining on file, Certificates of Insurance for each Lower Tier Party and shall provide a copy of all Certificates to Contractor upon request.

**A1.4.5.2** Additional Insured endorsement(s) shall not limit Additional Insured coverage to less than those insurance limits required by the Contract Documents.

**A1.4.5.3** Subcontractor's CGL under which Contractor, Owner and all other Additional Insureds are made Additional Insureds shall provide coverage at least as broad as described herein.

**A1.4.6 Excess Liability/Umbrella** providing (i) At least \$1,000,000 for any one occurrence and (ii) at least \$1,000,000 aggregate per Project. Umbrella policy must provide coverage excess of policies noted above. The Umbrella policy coverage shall be at least as broad as the coverages required above and shall include as Additional Insureds all entities required to be named as Additional Insureds on the Subcontractor's CGL policy above. The excess/umbrella shall be written on a follow form basis. Such Umbrella coverage shall be primary and non-contributory, including any deductible, to any other insurance or self-insurance maintained by or provided to the Additional Insureds, and shall apply to both On-Going and Completed Operations. There shall be no endorsement or modification to the Umbrella coverage excluding any claims arising from pollution, explosion, collapse, underground property damage or work performed by Subcontractor or any Lower Tier Party.

**A1.4.7 Pollution Liability Insurance.** As related to the Project of this Agreement, Subcontractor ☒ is or ☐ is not required to provide Contractor's Pollution Liability Insurance ("CPL").

**A1.4.7.1** If not provided under the Subcontractor's CGL policy, Subcontractor shall provide CPL, with a minimum limit of \$1,000,000 per claim and \$2,000,000 in the aggregate, providing coverage for, but not limited to, claims for bodily injury (including death) or property damage (including loss of use of the damaged property), arising from the discharge, dispersal, release or escape of any irritant or contaminant into or upon land, any structure, the atmosphere, watercourse or body of water (including ground water), including claims arising from above ground and below ground storage tanks used by and/or damaged by Subcontractor in performance of its Work, mold, and other pollution conditions caused by Subcontractor while working at the Project site, including sudden and gradual pollution (collectively a "Pollution Condition"). Such coverage shall include on-site and off-site cleanup and emergency response costs, including costs and expenses incurred in the investigation and settlement of claims, transit, disposal, operation of a motor vehicle and completed operations. To the fullest extent permitted by law, Contractor and Owner, and all other parties required of Contractor by the Contract Documents, shall be included as Additional Insureds on the CPL by attachment of endorsement ISO CG 2038 (or equivalent), "Automatic Status for Other Parties When Required in Written Construction Agreement", and the policy shall contain a cross liability clause. The retroactive insurance date of such CPL insurance shall be no later than the commencement date of this Agreement. The CPL insurance shall be provided for the duration of the Project and shall continue for the longer of (a) the expiration of the applicable Statutes of Limitations and Repose in the State where the Project is located for any claims arising out of or in any way related to Subcontractor's Work or (b) such longer period as may be required by the Contract Documents or applicable laws and regulations. To the extent not covered by any insurance hereunder, Subcontractor shall indemnify, defend and hold harmless Contractor, Owner, and all other Additional Insureds, from and against all claims for any Pollution Condition arising out of Subcontractor's performance of its Work, including without limitation cleanup, control, removal, restoration, remediation, and emergency response costs, investigation and settlement of claims, and reasonable attorney's fees.

**A1.4.8 Professional Liability Insurance (Errors and Omissions Coverage).** As related to the Project of this Agreement, Subcontractor ☒ is or ☐ is not required to provide Professional Liability Insurance (Errors and Omissions Coverage) ("E&O Insurance").

**A1.4.8.1** If the scope of the Subcontractor's work requires it to provide design services for any component of the Work required by the Contract Documents, Subcontractor shall provide and maintain throughout the period of the Project, and for a period of six (6) years thereafter as measured from the date of Substantial Completion of the Project, or as required by law, whichever is more stringent, standard E&O Insurance in accordance with the following requirements and limits of coverage: (i) per claim limit of at least \$1,000,000; and (ii) Aggregate of at least \$2,000,000 per policy year. If the Subcontractor does not currently have E&O Insurance and professional design services are being provided through a third-party design professional, then Subcontractor shall obtain from the said third party design professional of record and shall provide Contractor with a Certificate of Insurance noting the coverage limits for E&O Insurance. The retroactive insurance date of such E&O insurance shall be no later than the commencement date of this Agreement.

**A1.4.8.2** Subcontractor shall indemnify and hold harmless Contractor, Owner, and all other Additional Insureds from and against (i) all claims, demands, and causes of action arising out of Subcontractor's negligence, errors, omissions, or other fault of the Subcontractor or any persons for whom it is responsible; (ii) bodily injury or death to the Subcontractor or any persons for whom it is responsible; and (iii) infringement of intellectual property rights resulting from an item or process furnished, designed or specified by the Subcontractor or any persons for whom it is responsible. Failure of the Subcontractor's insurance to respond to a professional liability claim shall in no way negate the Subcontractor's contractual obligations to respond.



**A1.4.9 Waiver of Subrogation.** To the fullest extent permitted by law, Subcontractor waives all rights against (i) the Contractor and any of its other subcontractors, sub-subcontractors, agents and employees; and (ii) the Owner, the Architect, the Architect's consultants, separate contractors, and any of their subcontractors, sub-subcontractors, agents and employees for damages to the extent covered by property insurance applicable to Subcontractor's Work, except such rights as Subcontractor may have to proceeds of such insurance. Subcontractor shall require of its sub-subcontractors, agents and employees their own CGL and/or Worker's Compensation insurance or by appropriate agreements, written where legally required for validity, similar waivers in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged. Subcontractor further waives all claims and all rights of subrogation against Contractor and Owner for loss of, or damage to, Subcontractor's Work, tools, machinery, equipment, materials or supplies.

**A1.4.10 Deductibles/Self-Retention.** To the extent any of the insurance coverages to be provided by Subcontractor in this Addendum 1 are subject to any deductibles or self-insurance retentions, Subcontractor shall be solely responsible for the payment of such deductibles or retentions and any costs not covered by such deductibles or retentions. To the extent any claims are made against any insurance, including any Builder's Risk insurance, provided by the Contractor or Owner on the Project, due to Subcontractor's negligent acts or omissions, Subcontractor shall be responsible for the payment of any deductibles or self-insurance retentions and any costs not covered by such deductibles or retentions under said insurance policies of Contractor or Owner.

**A1.4.11 Sample Certificate.** A sample Certificate of Insurance is attached to this Agreement as **Addendum 1-1**. Subcontractor is required to use this form or another form providing equivalent information.

**A1.4.11.1** Subcontractor shall provide Contractor with an acceptable Certificate of Insurance prior to commencing Work.

**ARTICLE A1.5 BUILDER'S RISK INSURANCE.** Contractor is not obligated to carry Builder's Risk insurance for the benefit of Subcontractor. Subcontractor agrees that it will assume responsibility to determine whether Builder's Risk Insurance is in force. Upon request of Subcontractor, Contractor shall provide Subcontractor with satisfactory evidence of Builder's Risk insurance, if any, or any other property or equipment insurance in force for the Project and procured by Contractor or Owner. Subcontractor shall be responsible for any desired coverage against damage or loss to its own materials, facilities, equipment or other property or similar items not covered by Owner's or Contractor's insurance on the Project.

**ARTICLE A1.6 ACKNOWLEDGEMENT OF REVIEW.** The Subcontractor represents that it has reviewed this Addendum 1, that all appropriate boxes are checked at the time of execution of this Addendum 1, that it has or will provide a copy of these insurance requirements to its insurance agent and/or broker, and that the Subcontractor will provide insurance in full compliance with the terms and conditions herein. The Subcontractor hereby acknowledges that this Addendum 1 is a material component of the Subcontract Agreement.

(Subcontractor)

By: Sample - Do Not Sign

Printed Name: \_\_\_\_\_

Printed Title: \_\_\_\_\_

Date: \_\_\_\_\_

This is a Sample Certificate that is required by Samet (and all of its subsidiaries).

**NOTE:** It is only a sample. The Minimum Coverages shown below are just that. You must verify against and meet any Project Specific requirements. All other below Check boxes are required unless otherwise noted.



## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
Current Date

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Subcontractor's Insurance Agency Name and Address	<b>CONTACT NAME:</b>	
	<b>PHONE (A/C No. Ext):</b>	<b>FAX (A/C No):</b>
<b>INSURED</b> Subcontractor's Name Address City, State, Zip <b>NOTE: Must match the name on Subcontract/PO</b>	<b>E-MAIL ADDRESS:</b>	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
	<b>INSURER A:</b> Insurance Company's Name(s)	
	<b>INSURER B:</b> "	
	<b>INSURER C:</b> "	
	<b>INSURER D:</b> "	
<b>INSURER E:</b> "		
<b>INSURER F:</b> "		
<b>NAIC #</b>		

### COVERAGES

### CERTIFICATE NUMBER:

### REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR VVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	COMMERCIAL GENERAL LIABILITY			Policy Numbers Required for each type of Insurance Coverage "Occur" box Must be Checked "Project" box Must be Checked If Project includes EIFS, subcontractor performing EIFS application must have EIFS Coverage as part of CGL Must include Hired and Non-Owned OR Any Auto	Current Policy Date	Current Policy Date	EACH OCCURRENCE	\$ 1,000,000	
	CLAIMS-MADE	<input checked="" type="checkbox"/>	OCUR				DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 300,000	
							MED EXP (Any one person)	\$ 10,000	
							PERSONAL & ADV INJURY	\$ 1,000,000	
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$ 2,000,000	
	POLICY	<input checked="" type="checkbox"/>	PRO-JECT				PRODUCTS - COMP/OP AGG	\$ 2,000,000	
	OTHER:	EIFS							\$
A	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000	
	ANY AUTO						BODILY INJURY (Per person)	\$	
	ALL OWNED AUTOS						BODILY INJURY (Per accident)	\$	
	HIRE AUTOS	<input checked="" type="checkbox"/>	SCHEDULED AUTOS NON-OWNED AUTOS	<input checked="" type="checkbox"/>			PROPERTY DAMAGE (Per accident)	\$	
A	UMBRELLA LIAB	<input checked="" type="checkbox"/>	OCUR				EACH OCCURRENCE	\$ 1,000,000	
	EXCESS LIAB		CLAIMS-MADE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		AGGREGATE	\$ 1,000,000	
	DED		RETENTION \$					\$	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			You MUST enter a "Y" or "N" in this box based on your policy. As noted, ONLY Proprietor/Partner/Officer/Members are permitted exclusions.			PER STATUTE	OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N					E.L. EACH ACCIDENT	\$ 1,000,000	
	If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N					E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000	
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000	
A	Professional Liability			If you are a Design Professional or a subcontractor providing design-build or design assist services, this Coverage is Required.			Per Claim: \$1,000,000 Aggregate: \$2,000,000		

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The Certificate Holder, Owner and all other parties as required by Contract are Additional Insured on a Primary & non-Contributory basis which includes "your work". A Waiver of Subrogation in favor of Holder is provided on all policies scheduled above. A 30-day cancellation notice must be provided by endorsement.

**NOTE:** Additional Insured endorsement must include On-Going & Completed Operations coverage. Copies of all endorsements are required.

### CERTIFICATE HOLDER

Samet Corporation and all of its Affiliates and Joint Venture partners  
309 Gallimore Dairy Road, Suite 102  
Greensboro, NC 27409

### CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Agent Signature Required

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ACORD 25 (2014/01)

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Doc. Date: 01-01-14, REV. 3: 10-01-17

ADDENDUM 1-1

Page 1 of 7



THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

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<b>PRODUCER</b> Subcontractor's Insurance Agency Name and Address	<b>CONTACT NAME:</b> <b>PHONE (A/C. No. Ext):</b> <span style="float: right;"><b>FAX (A/C. No):</b></span> <b>E-MAIL ADDRESS:</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">INSURER(S) AFFORDING COVERAGE</td> <td style="text-align: center;">NAIC #</td> </tr> <tr> <td>INSURER A: Insurance Company's Name(s)</td> <td></td> </tr> <tr> <td>INSURER B:</td> <td></td> </tr> <tr> <td>INSURER C:</td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A: Insurance Company's Name(s)		INSURER B:		INSURER C:		INSURER D:		INSURER E:		INSURER F:	
INSURER(S) AFFORDING COVERAGE	NAIC #														
INSURER A: Insurance Company's Name(s)															
INSURER B:															
INSURER C:															
INSURER D:															
INSURER E:															
INSURER F:															
<b>INSURED</b> Subcontractor's Name Address City, State, Zip NOTE: Must match the name on Subcontract/PO															

**COVERAGES** **CERTIFICATE NUMBER:** **REVISION NUMBER:**

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INSR LTR	TYPE OF INSURANCE		ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<div>COMMERCIAL GENERAL LIABILITY</div> <div><div><div><div></div></div>CLAIMS-MADE</div><div><div></div>OCCUR</div></div> <div></div> <div></div>							<div>EACH OCCURRENCE</div> <div>DAMAGE TO RENTED PREMISES (Ea occurrence)</div> <div>MED EXP (Any one person)</div> <div>PERSONAL &amp; ADV INJURY</div> <div>GENERAL AGGREGATE</div> <div>PRODUCTS - COMP/OP AGG</div> <div></div>
	<div>GEN'L AGGREGATE LIMIT APPLIES PER:</div> <div><div><div></div>POLICY</div><div><div></div>PRO-JECT</div><div><div></div>LOC</div></div> <div>OTHER:</div>							<div></div> <div></div> <div></div>
	<div>AUTOMOBILE LIABILITY</div> <div><div><div><div></div>ANY AUTO</div><div><div></div>ALL OWNED AUTOS</div><div><div></div>HIRED AUTOS</div></div><div><div><div></div>SCHEDULED AUTOS</div><div><div></div>NON-OWNED AUTOS</div></div></div>							<div>COMBINED SINGLE LIMIT (Ea accident)</div> <div>BODILY INJURY (Per person)</div> <div>BODILY INJURY (Per accident)</div> <div>PROPERTY DAMAGE (Per accident)</div> <div></div>
	<div>UMBRELLA LIAB</div> <div><div><div></div>EXCESS LIAB</div><div><div></div>OCCUR</div><div><div></div>CLAIMS-MADE</div></div> <div><div><div></div>DED</div><div><div></div>RETENTION \$</div></div>							<div>EACH OCCURRENCE</div> <div>AGGREGATE</div> <div></div>
	<div>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</div> <div>ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)</div> <div>If yes, describe under DESCRIPTION OF OPERATIONS below</div>		<div>Y / N</div> <div></div>	N / A		Current Policy Date	Current Policy Date	<div><div><div></div>PER STATUTE</div><div><div></div>OTH-ER</div></div> <div>E.L. EACH ACCIDENT</div> <div>E.L. DISEASE - EA EMPLOYEE</div> <div>E.L. DISEASE - POLICY LIMIT</div>
A	Pollution Liability				If you are a demolition, grading, remediation, abatement or similar subcontractor who has potential pollution exposure, OR if there is a project specific pollution requirement, this Coverage is Required.			Per Claim: \$1,000,000 Aggregate: \$2,000,000

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES** (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)  
 A 30-day cancellation notice must be provided by endorsement.

<b>CERTIFICATE HOLDER</b> Samet Corporation and all of its Affiliates and Joint Venture partners.	<b>CANCELLATION</b> SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE Agent Signature Required
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**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – AUTOMATIC STATUS FOR OTHER PARTIES WHEN REQUIRED IN WRITTEN CONSTRUCTION AGREEMENT**

This endorsement modifies insurance provided under the following:

### **COMMERCIAL GENERAL LIABILITY COVERAGE PART**

**A. Section II – Who Is An Insured** is amended to include as an additional insured:

1. Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy; and
2. Any other person or organization you are required to add as an additional insured under the contract or agreement described in Paragraph 1. above.

Such person(s) or organization(s) is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

- a. Your acts or omissions; or
- b. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured.

However, the insurance afforded to such additional insured described above:

- a. Only applies to the extent permitted by law; and
- b. Will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

A person's or organization's status as an additional insured under this endorsement ends when your operations for the person or organization described in Paragraph 1. above are completed.

**B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:**

This insurance does not apply to:

1. "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:
  - a. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
  - b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

2. "Bodily injury" or "property damage" occurring after:
  - a. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or



**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### **SCHEDULE**

<b>Name Of Additional Insured Person(s) Or Organization(s)</b>	<b>Location And Description Of Completed Operations</b>
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B.** With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;  
whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

EXAMPLE

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement  
Insured

Effective Policy No.

Endorsement No.  
Premium

Insurance Company

Countersigned by\_\_\_\_\_



POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY  
CG 24 04 05 09

## WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### SCHEDULE

Name Of Person Or Organization:

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – Conditions:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

POLICY NUMBER:

COMMERCIAL AUTO  
CA 04 44 10 13

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM  
BUSINESS AUTO COVERAGE FORM  
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

**Named Insured:**

**Endorsement Effective Date:**

### **SCHEDULE**

**Name(s) Of Person(s) Or Organization(s):**

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.



## **ADDENDUM 2**

### **WORK RULES, SAFETY & QUALITY POLICY**

Subcontractor:

Project Name: Sandbox Test Project - Charlotte Region

Samet Job #:

Subcontract #: 20039003

#### **ARTICLE A2.1 GENERAL**

Unless otherwise specifically defined in this Addendum 2, any capitalized terms herein shall have the same meaning as set forth in the Subcontract Agreement. This Addendum 2 is a material component of the Subcontract Agreement. The provisions of this Addendum 2 are in addition to, and not in lieu of, any provisions in the Subcontract Agreement.

#### **ARTICLE A2.2 SAFETY**

**A2.2.1** Subcontractor shall execute its Work with a visible, proactive commitment to safety at all levels. Subcontractor, its employees, and all its tiered subcontractors engaged on the Project site are required to adhere to Contractor's safety rules, regulations and policies. Subcontractor shall review and comply with Contractor's Site-Specific Safety Plan, if applicable, which shall be provided to the Subcontractor at the kick-off meeting. In addition, Subcontractor shall also review and comply with the Contractor's Site Safety & Incident Prevention Program, available here: <https://www.sametcorp.com/subcontractors/safety/>, which requirements are incorporated into the Subcontract Agreement by reference.

**A2.2.2** Subcontractor shall designate a fulltime employee at the Project site who shall act as Subcontractor's "Competent Person", as defined by OSHA regulations. Subcontractor's Competent Person shall oversee the safety of Subcontractor's employees and will be expected to have above average knowledge of OSHA construction standards, pre-task safety planning, job hazard analysis and risk/severity assessment. Unless otherwise identified by Subcontractor in writing to Contractor, the Competent Person shall be the Subcontractor's Supervisor who shall have the necessary training and authority required by OSHA regulations to act as Subcontractor's "Competent Person". Such Competent Person shall attend all Project safety meeting as requested by Contractor and must be able to speak English fluently and speak the language(s) of the Subcontractor's employees and lower tier subcontractors it engages on the Project site. The Subcontractor's Competent Person may be asked to translate safety meetings and onsite orientations for Subcontractor's employees and its lower tier subcontractors. Contractor has the authority to remove or request a replacement of Subcontractor's Competent Person if such Competent Person is found not to be engaged in his/her duties or safe work practices.

**A2.2.3** Subcontractor, its sub-subcontractors, suppliers, and any other person or entity for whom Subcontractor is responsible, shall not generate, introduce or transport any hazardous substance, material or equipment at, near or on the Project site without the prior approval of Contractor. Subcontractor shall exercise extreme care in performing any Work which involves explosives or other dangerous methods of construction or hazardous procedures, materials or equipment. Subcontractor shall use properly qualified individuals or entities to carry out its Work in a safe and reasonable manner to reduce the risk of bodily injury and property damage.

**A2.2.4** Subcontractor shall provide Contractor with an inventory of all materials Subcontractor has or will have on site that are regulated under OSHA Standard 1910.1200. Subcontractor shall also provide Contractor with a Safety Data Sheet (SDS) on all the materials listed on its inventory prior to transporting such materials to the Project site. Subcontractor shall not subcontract any of its Work without securing the above from its sub-subcontractors and providing the same to Contractor.

**A2.2.5** In an emergency affecting the safety of persons or property, Subcontractor shall act immediately to prevent threatened damage, injury or loss. In addition to, and not in lieu of, the safety requirements of the Contract Documents, Subcontractor shall immediately notify Contractor of any illness, injury or property damage with an accident investigation to be completed within twenty-four (24) hours of the incident notification. Any amputations or fatalities must be reported to the local OSHA office within twenty-four (24) hours of the incident. A receipt of required communication to the OSHA office shall be provided to Contractor within twenty-four (24) hours.

**A2.2.6** Contractor is committed to providing a safe, drug-free workplace for all persons engaged on the Project site. Subcontractor shall promote a drug-free workplace with their employees. Subcontractor shall ensure compliance by itself, its employees, and sub-subcontractors with any applicable laws or regulations with respect to "drugs and the workplace" and shall be solely responsible for the consequence of any drug-related losses or expenses due to noncompliance. If required by the Prime Contract, or upon reasonable request of Contractor, Subcontractor shall provide a negative drug screening report for any of its employees or sub-subcontractors who will be working on the Project site.

**A2.2.7** Subcontractor shall comply with the reasonable recommendations of insurance companies having an interest in the Project and shall stop any part of the Work which Contractor deems unsafe until corrective measures satisfactory to Contractor have been taken. Contractor's failure to stop Subcontractor's unsafe practices shall not relieve Subcontractor of its responsibility therefor.

**A2.2.8** Contractor will conduct regular jobsite safety inspections to evaluate safety hazards and general compliance with OSHA Standards. Contractor shall notify Subcontractor of any discovered safety violation or conditions deemed hazardous by Contractor. Corrective action shall be required within a reasonable time as established by the notice. Failure to comply within the time established by the notice shall be considered grounds for Default as provided for in the Subcontract Agreement, and Contractor may, at its option, provide corrective action as required and deduct the cost thereof from any money due or thereafter to become due to Subcontractor. Contractor notifications are not intended to cover the requirements of any federal, state or local statute, ordinance or regulation, nor do they relieve Subcontractor of its legal obligation to maintain safe premises and operations for its employees.

**A2.2.9** If required for the performance of its Work, Subcontractor shall erect and maintain suitable fences, barriers, and barricades. Subcontractor shall replace any fences, barriers and/or barricades which Subcontractor removes or damages in the performance of its Work and shall be responsible for maintaining a safe working environment while such fences, barriers and/or barricades are damaged or removed.

**A2.2.10** Subcontractor has an affirmative duty not to overload the structures or conditions at the Project site and shall take reasonable steps to prevent any loading of any part of the structure or Project site that could give rise to an unsafe condition or create an unreasonable risk of bodily injury or property damage.

**A2.2.11** In the event of any local, state or national epidemic or pandemic, including without limitation the COVID-19 pandemic or any similar or other pandemics or communicable diseases (hereafter "Diseases"), Subcontractor shall comply with all federal, state and local orders, recommendations and requirements of authorities having jurisdiction, including public safety authorities such as the Centers for Disease Control (CDC), as related to such Diseases and Subcontractor's Work on the Project. Such orders may include social distancing recommendations, and require additional personal protective equipment to be utilized on the Project site, monitoring of employee temperatures, increased sanitation measures related to Subcontractor's Work, increased personal hygiene measures, and other proactive measures to prevent the spread of the Diseases, all of which shall be complied with by Subcontractor while on the Project site at Subcontractor's expense. Additionally, Subcontractor shall notify Contractor immediately upon learning that any of Subcontractor's employees or lower tier subcontractors who were on the Project site have tested positive for any Diseases or are awaiting test results and are presumed positive. Such notice by Subcontractor need only indicate that an employee has tested positive or is presumed positive and indicate the day(s) the employee was on the Project site so that Contractor may take appropriate measures to sanitize the Project site, notify others who may have been exposed, and notify the Owner as may be required by the Prime Contract. Subcontractor need not provide any information in violation of HIPAA or other Laws.

#### **ARTICLE A2.3 COMPLIANCE WITH LAWS AND ENVIRONMENTAL REGULATIONS**

**A2.3.1** Compliance requirements of the Prime Contract are incorporated herein by reference, and Subcontractor shall comply with such requirements. Specific reference is made to, but not limited to, the following: (a) equal opportunity employment requirements, (b) special trade permits and connection permits or fees, (c) employee wage rate determinations required by governing authorities, if applicable, (d) insurance provisions, and (e) environmental policy.

**A2.3.2** Subcontractor shall give notices and comply with all Federal, state and local laws, ordinances, rules, regulations, codes and orders of any public authority bearing on the performance of the Work of this Agreement, including but not limited to: the Occupational Safety and Health Act of 1970; Fair Labor Standards Act; building codes; federal, state and local tax laws; Workers' Compensation Acts; the General Safety Rules and Regulations of the Construction Industry as currently required by the governing authorities having jurisdiction; and such other labor, non-discrimination, employment, Social Security and tax laws to the extent applicable to performance of the Work under this Agreement.

**A2.3.3** Subcontractor shall observe and comply with all environmental requirements of Owner, Architect, Engineer, Contractor and the Prime Contract. Owner, Architect, Engineer and/or Contractor may retain independent persons experienced in environmental matters to ensure that acceptable environmental standards are being maintained during the performance of the Work. Failure by Subcontractor to comply with such environmental requirements shall constitute an immediate event of default, and upon the occurrence thereof, Contractor may exercise any or all of the rights and remedies available to it under this Agreement or Applicable Law. Subcontractor shall immediately give notice to Contractor of any environmental disturbance, including without limitation: contamination of the environment such as any spills or leaks of fuels, lubricants, motor oils, pipe dope or coating, paints, solvents, ballasts, bilge garbage, sewerage, pollutants or other materials caused by the acts or omissions of Subcontractor or anyone for whom it is responsible; erosion; or archaeological finds. Subcontractor shall, if directed by Contractor, immediately stop its Work causing or affecting the environmental disturbance and take such other actions as may be required by Owner, Architect, Engineer, or Contractor. Subcontractor shall be responsible for all costs, including control and removal of, and shall indemnify and hold harmless Owner and Contractor against and from all loss, costs, or damages arising from pollution or contamination which originates from any environmental disturbance caused by Subcontractor or anyone for whom it is responsible.

**A2.3.4** If hazardous materials or substances are being used on the site by Subcontractor, or anyone for whom they are responsible, and they are a type of hazardous material or substance of which an employer is required by law to notify its employees, Subcontractor shall, prior to delivery to the Project site or exposure of the Contractor, other subcontractors and other employers on the site to such material or substance, give notice of the chemical composition thereof to Contractor in sufficient detail and time to permit compliance with laws by Contractor, other subcontractors and other employers at the site.

**A2.3.5** Subcontractor shall reimburse Contractor for the cost and expense Contractor incurs (1) for remediation of a hazardous material or substance brought to the site and negligently handled by Subcontractor or (2) where Subcontractor fails to perform its obligations under Article A2.3.4, except to the extent that the cost and expense are due to Contractor's fault or negligence.

**A2.3.6** Subcontractor shall defend, indemnify and hold harmless Contractor and Owner from any and all liability, damages, fines, citations and costs arising out of Subcontractor's failure to comply with Applicable Law. In the event of Subcontractor's violation of any of the requirements of this Article A2.3, Subcontractor shall bear all costs resulting from any such violation and shall defend, indemnify and hold harmless Contractor and Owner from any damages, including reasonable attorney's fees, claims, losses, expenses and causes of actions arising from such violations.

## **ARTICLE A2.4 LABOR RELATIONS AND CONDUCT**

**A2.4.1** Subcontractor acknowledges and understands that contracts on the Project are awarded and labor employed without discrimination as to whether the employees of any contractor or subcontractor are members or non-members of any labor organization.

**A2.4.2** Subcontractor agrees that all workers employed or used by Subcontractor or its sub-subcontractors, shall be paid by their respective employers all wages and benefits to which they are entitled in accordance with Applicable Law, including but not limited to, the federal Davis Bacon Act if applicable to the Project, and to make payments at the time prescribed in the Subcontract Documents or by law. Subcontractor, upon request of Contractor, shall certify that it and all its subcontractors are in compliance with all laws pertaining to the payment of wages and benefits. If the Project of this Agreement is subject to the federal Davis Bacon Act, Subcontractor shall be notified by Contractor prior to execution of this Agreement and the terms of any wage and certification requirements shall be set forth on an exhibit to be attached to this Agreement. Subcontractor and its lower tier subcontractors agree that Contractor is entitled, but not required, to monitor compliance with this policy, and that any false certifications or failure to comply with Applicable Laws pertaining to payment of wages and benefits may result in termination and/or other penalties.

**A2.4.3** In addition to, and not in lieu of, any other provisions herein requiring compliance with Laws, Subcontractor warrants to Contractor that it: (a) has fully complied and shall continue to fully comply, at its sole cost, with all applicable federal, state and local Laws concerning employment and immigration, including without limitation, the Immigration Reform and Control Act of 1986 ("IRCA") and the employment eligibility verification provisions therein, and the child labor restrictions set forth in the Fair Labor Standards Act ("FLSA") and any other applicable statute; (2) has properly trained and shall continue to properly train its staff regarding the execution and retention of Forms I-9 Employment Eligibility Verification and any other applicable employment verification method used by Subcontractor to comply with any requirements of IRCA and any other applicable Laws; is not now in violation of IRCA or any child labor restrictions including without limitation those set forth in FLSA; (4) has provided written notification to Contractor of all prior citations by any government agency for violation of IRCA or any child labor restrictions including without limitation those set forth in FLSA; (5) has implemented and shall continue to implement a company-wide employment verification policy that fully complies with all applicable federal, state and local Laws, including without limitation the use of the **E-Verify** for employment eligibility verification for all new hires where such usage is required by law or required by the Prime Contract. Subcontractor further warrants that if Subcontractor becomes aware of any government audit of its employees, employer verification procedures or any child labor restrictions, it shall immediately notify Contractor in writing of such audit and provide Contractor a copy of the finding when they are made available.

**A2.4.4** Subcontract shall maintain harmony among its personnel, lower tier subcontractors and other workers. Subcontractor shall not employ any persons or engage in any activities which cause, or are likely to cause, a work stoppage or other similar concerted labor action. Subcontractor shall maintain and exercise control over all employees engaged in the performance of the Work and shall remove or cause to be removed from the Project site any such person(s) reasonably determined by Owner or Contractor to be detrimental to Owner's best interests.

**A2.4.5** If Subcontractor's workers, or workers of Subcontractor's lower tier subcontractors, engage in a work stoppage or strike, whether against Subcontractor or to support employees of a third party, Contractor may suspend Subcontractor for a reasonable time and either perform the services or retain a third party of its choosing to perform the services Subcontractor would have otherwise had to perform under this Agreement. Subcontractor shall defend, indemnify and hold harmless Contractor from all costs, losses or expenses, including reasonable attorney's fees incurred by Contractor related to such work stoppage and/or suspension of Subcontractor. If Contractor suspends Subcontractor under this provision, Subcontractor shall not receive any further payments under this Agreement except for payments for Work satisfactorily performed through the date of suspension less all costs, losses or expenses, including reasonable attorney's fees, incurred by Contractor, and Contractor may retain out of any payment due or to become due Subcontractor under this Agreement, or under any other agreement between Contractor and Subcontractor, an amount sufficient to cover such costs. Subcontractor shall refund Contractor, upon written demand, any amounts paid in advance for Work not performed by Subcontractor.

**A2.4.6** To the extent required by the Prime Contract and/or upon written request of Contractor, Subcontractor shall obtain criminal history record information regarding its and its subcontractor's "Covered Employees". For the purposes of this Article, "Covered Employees" means employees, agents, lower tier subcontractors or suppliers of Subcontractor who



have or will have continuing duties related to the Work to be performed at the Project. Subcontractor agrees that it will not assign any Covered Employees who Owner and/or Contractor reasonably determined have a disqualifying criminal history to work on the Project. On request of Contractor, Subcontractor shall provide all necessary identifying information to allow Contractor to obtain criminal history record information covered by employees of Subcontractor and all its lower tier subcontractors and suppliers. Subcontractor shall update this list at the request of Contractor. If Subcontractor becomes aware that a Covered Employee has a record disqualifying criminal history, then Subcontractor shall immediately remove the Covered Employee from the Project and notify Contractor in writing within three (3) business days. If Contractor objects to the assignment of any Covered Employee based on the Covered Employee's criminal history record information, Subcontractor agrees to discontinue using that Covered Employee on the Project.

**A2.4.7** Subcontractor shall conform to Contractor's hours of work, and any Work performed outside those hours must be approved in advance by Contractor. No premium or overtime will be allowed or paid without prior written approval by Contractor.

**A2.4.8** Subcontractor and all its lower tier subcontractors agree:

**A2.4.8.1** All personnel assigned to the Project site shall conduct themselves in a professional manner and be respectful of others on the Project including employees of Contractor, Owner, other subcontractors and adjacent property owners.

**A2.4.8.2** Obscene, vulgar or harsh conduct will not be tolerated in any manner. Obscene displays or inappropriate comments to the public or any Project personnel will result in the immediate dismissal of the offender from the Project site regardless of his or her position.

**A2.4.8.3** Alcohol, tobacco and controlled substances are prohibited on the Project site.

**A2.4.8.4** Subcontractor shall not communicate directly with Owner during the period of this Agreement unless agreed to by and in the presence of Contractor. All submittals or other Project communication or documentation, unless otherwise directed, will be directed to Contractor.

#### **ARTICLE A2.5 QUALITY**

**A2.5.1** In addition to the requirements of Article 8 of the Subcontract Agreement, Contractor may establish a Site-Specific Quality Control Plan to ensure that all Work performed by employees and subcontractors meets all contractual requirements. If applicable, Contractor's current Site-Specific Quality Control Plan will be provided to Subcontractor at the kick-off meeting. Upon receipt of the Site-Specific Quality Control Plan, Subcontractor will be expected to review and comply with the Site-Specific Quality Control Plan.

EXAMPLE

## ADDENDUM 3

### APPLICATION FOR PAYMENT



## INSTRUCTIONS TO RECEIVE PAYMENT

**The below items are required for payment.**

1. Application for payment must be received by the **20th day** of each month.

***Request for payment received after the 20th of each month will fall into the following month's payment cycle.***

2. Reconciliation of contract amount (including any change orders) with previous payments is a pre requisite of application acceptance.

***Applications submitted without proper mathematical reconciliation will be rejected.***

3. Contract/Change Orders must be fully executed (signatures of both parties).

### **YOU ARE RESPONSIBLE FOR PROPER DOCUMENTATION**

4. Current certificates of insurance, all of which meet 's requirements, must be on file. A sample certificate outlining 's requirements is available by visiting:  
<http://www.sametcorp.com/subcontractors/apply/>
5. Payments will be processed from original, faxed or emailed invoices (if faxed or emailed do not send a paper copy in the mail). Email Pay Applications to [accts@sametcorp.com](mailto:accts@sametcorp.com) or to fax to (336) 544 2562.
6. Application for payment must be **approved by the PROJECT MANAGER** and include an itemized schedule of values displaying a breakdown of labor, materials and equipment.
7. Any other documents that are specifically required for the project.

### **YOUR APPLICATION FOR PAYMENT consists of the following documents:**

- A. Application and Certification for Payment Form
- B. Continuation Sheet Approved Schedule of Values
- C. Subcontractors List of 2nd Tier Suppliers and Subcontractors
  - a. 2nd Tier Partial Lien Waivers may be requested with your partial payment request at 's discretion.
- D. Sales Tax Affidavit

**\*\*The Application for Payment documents listed above are available in a Microsoft Excel version by visiting:**

**<http://www.sametcorp.com/subcontractors/forms/>**

# SUBCONTRACTOR/SUPPLIER STANDARD APPLICATION & CERTIFICATION FOR PAYMENT

TO CONTRACTOR:

Samet Corporation

Project: \_\_\_\_\_

Project #: \_\_\_\_\_

FROM: SUBCONTRACTOR/SUPPLIER

Owner: \_\_\_\_\_

Designer: \_\_\_\_\_

Subcontractor for: \_\_\_\_\_

Application # \_\_\_\_\_

Subcontract / P.O. # \_\_\_\_\_

Period From: \_\_\_\_\_ to \_\_\_\_\_

**SUBCONTRACTOR/SUPPLIER'S APPLICATION FOR PAYMENT:** Applications made for payment, as shown below, in connection with the Contract. Continuation Sheet is attached.

## CONTRACTOR'S APPLICATION FOR PAYMENT

Application is made for payment, as shown below, in connection with the Contract. Continuation Sheet is attached.

1. ORIGINAL SUBCONTRACT/PURCHASE ORDER SUM \_\_\_\_\_
2. Net change by Change Orders \_\_\_\_\_
3. SUBCONTRACT/PURCHASE ORDER SUM TO DATE (Line 1 + 2) \_\_\_\_\_
4. TOTAL COMPLETED AND STORED TO DATE  
(Column G on Continuation Sheet) \_\_\_\_\_
5. RETAINAGE: \_\_\_\_\_
  - a. % of Completed & Stored to Date Work (Column I on Contin. Sheet) \_\_\_\_\_
  - Total Retainage (Line 5a or Total in Column I of Continuation Sheet) \_\_\_\_\_
6. TOTAL EARNED LESS RETAINAGE (Line 4 Less Line 5 Total). \_\_\_\_\_
7. LESS PREVIOUS CERTIFICATES FOR PAYMENT (Line 6 from prior Certificate) \_\_\_\_\_
8. CURRENT PAYMENT DUE: \_\_\_\_\_
9. BALANCE TO FINISH, INCLUDING RETAINAGE (Line 3 less Line 6). \_\_\_\_\_

CHANGE ORDER SUMMARY	ADDITIONS	DEDUCTIONS
Change Orders previously approved by GC		
Total approved this Month:		
Totals:		
Net change by Change Orders:		

**Partial Waiver of Lien** In consideration for, and effective upon receipt of, payment in the amount of Current payment Due noted above, to be paid after approval of this request, the Undersigned Subcontractor/Supplier does hereby waive, release and discharge all claims, liens, bond claims, Claims of Lien on Real Property, and Notices of Claim of Lien upon Funds on or against Owner, Contractor, Contractor's Surety or on the Project described above or any funds owed to anyone on the Project for and on account of labor, services, materials, fixtures, apparatus or machinery furnished by the Undersigned to or for the above-described Project, through the end date of the Pay period above, excepting only those claims for retainage withheld.

Further, Undersigned certifies that to the best of its knowledge, information and belief the Work covered by this Application for Payment has been completed in accordance with the Contract Documents and that Current Payment Due noted above is now due. Undersigned further represents and warrants that all labor, materials, equipment, services and other items, including without limitation all payroll, sales and privilege taxes furnished by it and/or its subcontractors and suppliers for Work on the Project for which Undersigned Subcontractor/Supplier has previously been paid by Contractor, have been paid by the Undersigned, and Undersigned agrees to indemnify Owner, Contractor and Contractor's Surety from any claims for the same.

## SUBCONTRACTOR OR SUPPLIER:

By: \_\_\_\_\_ Date: \_\_\_\_\_

State of: \_\_\_\_\_ County of: \_\_\_\_\_

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Notary Public:

My commission expires:

Contractor's Approval  
In accordance with the Contract Documents, based on on site observations and the data comprising the application, this Application for Payment has been approved.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Samet Corporation



**Outstanding Change Requests:**

If there are any outstanding change requests as of the date of this Application for Payment, the Subcontractor/Supplier shall provide a detailed list of these items below. Failure to list these items, if applicable, may result in the denial of the Subcontractor/ Supplier's change request due to untimely notice to the General Contractor.

**Outstanding Item(s) Description:**

**COR No.**

**Amount**

- 1.
- 2.
- 3.
- 4.

Total Outstanding Change Requests:

\$

EXAMPLE

# CONTINUATION SHEET

APPLICATION NO:  
 APPLICATION DATE:  
 PERIOD TO:  
 PROJECT NO:

Contractor's signed certification is attached.  
 In tabulations below, amounts are stated to the nearest dollar.  
 Use Column I on Contracts where variable retainage for line items may apply.

A	B	C	D	E	F	G	H	I
ITEM NO.	DESCRIPTION OF WORK	SCHEDULED VALUE	WORK COMPLETED FROM PREVIOUS APPLICATION (D + E)	WORK COMPLETED THIS PERIOD	MATERIALS PRESENTLY STORED (NOT IN D OR E)	TOTAL COMPLETED AND STORED TO DATE (D+E+F)	BALANCE TO FINISH (C - G)	RETAINAGE (IF VARIABLE RATE)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
GRAND TOTALS								

## Subcontractor's Name &amp; Address

Project Name

**Contact Name:**  
**Phone & Email:**

[illegible]

I ACKNOWLEDGE THE INFORMATION SUBMITTED IS TRUE AND ACCURATE.

Signed:

Name and Title:

(Must be signed by a Principal of the company)





## SALES TAX AFFIDAVIT

The purpose of this Sales Tax Affidavit is to provide Samet Corporation documentation that you have paid sales tax on materials purchased for the Samet Corporation job referenced below. Please select one of the three options shown below and provide this affidavit with each pay application to Samet Corporation. This document must be signed and returned to this office before any final retainages are released.

**Job Name:** \_\_\_\_\_

**Job Location:** \_\_\_\_\_  
\_\_\_\_\_

**Period To Date:**

☐ The undersigned certifies that all state and local taxes (including sales, use and excise taxes) applicable to the work and services performed and materials and equipment incorporated into the work, in each case pursuant to the contract referred to above, have been paid in full.

☐ If state and local taxes (including sales, use and excise taxes) have been paid to a jurisdiction other than the location of the project listed above, please indicate the amount of material purchases as well as amounts paid to each jurisdiction.

Net Amount Paid for Materials: \$ \_\_\_\_\_

County Tax	\$ _____	_____ %
City Tax	\$ _____	_____ %
State Tax	\$ _____	_____ %

☐ In the event state and local sales tax have not been, please list the amount of purchases made for materials and provide a brief description as to why sales tax has not been paid.

Net Amount Paid for Materials: \$ \_\_\_\_\_

Reason for no sales tax: \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Company Name:** \_\_\_\_\_

**Printed Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Sworn to and Subscribed before me:

This \_\_\_\_ Day of \_\_\_\_\_, 20\_\_\_\_  
(Seal)

Notary Public  
My Commission Expires:



# E 589CI

## Affidavit of Capital Improvement

Form E 589CI, Affidavit of Capital Improvement, is generally required to substantiate that a contract, or a portion of work to be performed to fulfill a contract, is to be taxed for sales and use tax purposes as a real property contract with respect to a capital improvement to real property.

- This affidavit may not be used to purchase building materials, other tangible personal property, or digital property to fulfill a real property contract exempt from sales and use tax.
- A person who willfully attempts, or a person who aids or abets a person to attempt in any manner, to evade or defeat a tax imposed by the Sales and Use Tax Laws, or the payment thereof, shall be guilty of a Class H felony. If there is a deficiency or delinquency in payment of any tax due to fraud with intent to evade the tax, there shall be assessed a penalty equal to 50% of the total deficiency.

### Section I. Single Use (Complete this section to issue the affidavit for a single capital improvement.)

**Owner, Tenant, or Real Property Contractor**

**Real Property Contractor** (General Contractor or Subcontractor)

*Hired to perform capital improvement*

**Describe capital improvement to be performed:**

**Project Name:**

**Project Address (where the work is to be performed)**

I certify that, to the best of my knowledge, this affidavit is accurate and complete and that the transaction described to be performed by the Real Property Contractor (General Contractor or Subcontractor identified in box "B") shall be treated as a real property contract with respect to a capital improvement to real property for sales and use tax purposes.

Signature of

Authorized Person: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

### Section II. Blanket Use (Complete this section execute a blanket affidavit.)

**C** **Real Property Contractor**

Address

City

State Zip Code

**D** **Real Property Contractor or Subcontractor**

*Hired to perform capital improvement*

Address

City

State Zip Code

**To be completed by the Real Property Contractor identified in Box C.**

I certify that I am a Real Property Contractor who performs capital improvements to real property and all transactions with the real property contractor (subcontractor) identified in box "D" shall be treated as real property contracts with respect to capital improvements for real property for sales and use tax purposes.

Signature of Authorized Person: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

## Affidavit of Capital Improvement Instructions

Form E-589CI, Affidavit of Capital Improvement, is generally required to be issued (see exceptions below) to substantiate that a contract, or a portion of work performed to fulfill a contract, is to be taxed for sales and use tax purposes as a real property contract with respect to a capital improvement to real property.

- Form E-589CI is not an affidavit of tax paid on building materials, other tangible personal property, or digital property purchased or used to fulfill a real property contract.
- Form E-589CI is not to be used to purchase building materials, other tangible personal property, or digital property purchased or used to fulfill a real property contract exempt from sales and use tax.
- A person that issues Form E-589CI in error is liable for use tax on the sales price of or the gross receipts derived from the transaction if it is determined that the contract is not a capital improvement to real property.

A person who willfully attempts, or a person who aids or abets a person to attempt in any manner, to evade or defeat a tax imposed by the Sales and Use Tax Laws, or the payment thereof, shall be guilty of a Class H felony. If there is a deficiency or delinquency in payment of any tax due to fraud with intent to evade the tax, there shall be assessed a penalty equal to 50% of the total deficiency.

### Exceptions to the Requirement to Issue Form E-589CI

The following are exceptions for transactions where Form E-589CI is not required to be issued to substantiate that the transaction is taxed, as applicable, for sales and use tax purposes as a real property contract with respect to a capital improvement to real property.

- Painting or wallpapering real property, or parts thereof.
- Landscaping service.

Form E-589CI is not required to be issued by the specific person for a transaction noted below. The exceptions do not apply to transactions between a general contractor hired to oversee the entire contract and one of its subcontractors (See "Blanket Use" of Form E-589CI (Section II) for possible exceptions.). The following exceptions do not apply to remodeling.

- A real property owner or other person hires a general contractor to oversee the entire contract and the contract is for "new construction" as defined in N.C. Gen. Stat. § 105-164.4H(e)(2).
- A real property owner or other person hires a general contractor to oversee the entire contract and the contract is to rebuild or construct again a prior existing permanent building, structure, or fixture on land (reconstruction as defined in N.C. Gen. Stat. § 105-164.4H(e)(3)).
- A general contractor that purchases all tangible personal property and digital property to fulfill the real property contract and provides the employee labor to fulfill the real property contract.

### Section I. Single Use Instructions

A person must complete "Section I - Single Use" of the form for a one time use to substantiate that a transaction that otherwise meets the definition of repair, maintenance, or installation services to real property is taxed for sales and use tax purposes as a real property contract with respect to a single capital improvement for real property. When a real property contractor hires a subcontractor to perform a portion of the overall contract and there is not a recurring business relationship between the two parties, "Section I - Single Use" of Form E-589CI shall be completed and the form issued to each subcontractor as notice that the transaction is subject to tax as a real property contract with respect to a capital improvement for sales and use tax purposes.

A property owner oversees the entire activity that is a real property contract with respect to a capital improvement for real property and hires various subcontractors to complete the real property contract:

- Box A - Owner, Tenant or Real Property Contractor: Enter property owner's name and address.
- Box B - Real Property Contractor (*General Contractor or Subcontractor*): Enter general contractor's or subcontractor's name and address.
- Property owner listed in Box A must describe real property contract with respect to capital improvement to be performed.
- Authorized Person (typically property owner) signs, enters title (owner), and enters the date.

A general contractor hires a subcontractor to perform a real property contract with respect to a capital improvement, or portion thereof:

- Box A - Owner, Tenant or Real Property Contractor: Enter general contractor's name and address.
- Box B - Real Property Contractor (*General Contractor or Subcontractor*): Enter subcontractor's name and address.
- General contractor listed in Box A describes real property contract with respect to capital improvement to be performed.
- Authorized Person (typically general contractor) signs, enters title (general contractor), and enters the date.

A lessee or tenant hires a general contractor (or subcontractor) to perform a real property contract with respect to a capital improvement for real property; provided the capital improvement is intended to become a permanent installation and title to it vests in the owner or lessor of the real property immediately upon installation:

- Box A - Owner, Tenant or Real Property Contractor: Enter lessee or tenant's name and address.
- Box B - Real Property Contractor (*General Contractor or Subcontractor*): Enter general contractor's or subcontractor's name and address.
- General contractor must describe capital improvement for real property to be performed.
- Authorized Person (typically lessee or tenant) signs, enters title, and enters the date.

### Section II. Blanket Use Instructions

A real property contractor may complete "Section II - Blanket Use" and issue the form to a real property contractor (subcontractor) who is used exclusively to perform part, or all, of real property contracts with respect to capital improvements to real property, where the person and the real property contractor have a recurring business relationship. A blanket use affidavit continues in force so long as the real property contractor named in "Box C" and the real property contractor (subcontractor) named in "Box D" maintain a recurring business relationship (when a period of no more than twelve months elapse between transactions between two parties) or until withdrawn or otherwise notified by the issuer of the form. The blanket use will generally apply for the following: (1) a builder who hires the same contractor(s) only for new construction; (2) a real property contractor who hires the same subcontractor(s) only for reconstruction; (3) a real property contractor who hires the same subcontractor(s) for remodeling and the activities performed by the subcontractor(s) are never repair, maintenance, and installation services for real property; and (4) a real property contractor who exclusively hires the same subcontractor(s) to perform part, or all, of its real property contracts with respect to capital improvements for real properties.

A general contractor or subcontractor hires a subcontractor to perform a capital improvement, or portion thereof:

- Box C - Real Property Contractor: Enter the hiring real property contractor's name and address.
- Box D - Real Property Contractor (*General Contractor or Subcontractor*): Enter subcontractor's name and address. Authorized person listed in Box C signs, enters title, and dates.



## **TRADE PACKAGE SCOPE OF WORK**

### **03A CONCRETE FOUNDATIONS, WALLS, SLABS, & SITE SUBCONTRACT**

Furnish all labor, materials, tools, taxes, safety, insurances, equipment, hoisting, cranes, supervision, and all other incidentals necessary to accomplish all **Concrete Foundations, Walls, Slabs, & Site** Work in accordance with all Contract Documents and as defined within **Trade Package General Scope Requirements** and this Scope of Work.

**Subcontractors/Suppliers performing work on multiple portions of the project site (i.e., buildings, parking area, site, etc.) shall provide separate equipment, hoisting, cranes, supervision including, but not limited to management, superintendent, foreman, tradesman, laborers, etc. for each portion unless agreed to otherwise in writing by the General Contractor. If the project needs and schedule are not being met to the satisfaction of the General Contractor, written approval will be rescinded, and the original staffing requirements shall be provided by the Subcontractor.**

Project Specifications for the Concrete Foundations, Walls, Slabs, & Site Scope of Work are listed below. This Subcontractor or Supplier shall carefully examine all specification sections and drawings within the Contract Documents and be responsible for all work described within this Scope of Work and as required on the project.

### **PROJECT SPECIFICATIONS**

This Subcontractor is responsible for all Division 1 - General Requirements as listed below prepared by the Architect, Design Consultants, and/or General Contractor or as designated elsewhere within the Technical Specifications or Drawings as applicable to this Trade Package Scope of Work.

<b>DIVISION 1 – GENERAL REQUIREMENTS</b>	
<b>GC Req.</b>	<b>General Requirements Manual</b>
<b>GC Req.</b>	<b>Trade Package Scope Manual</b>
<b>GC Req.</b>	<b>Trade Package General Scope Requirements</b>
010200	General Sitework Requirements
011000	Summary
012100	Allowances
012200	Unit Prices
012300	Alternates
012500	Substitution Procedures
012501	Substitution Request Form
012900	Payment Procedures
013100	Project Management and Coordination
013300	Submittals Procedures
014000	Quality Requirements
014110	Statement of Special Inspections
014200	References
015000	Temporary Facilities and Controls
016000	Product Requirements
017300	Execution

017419	Construction Waste Management and Disposal
017700	Closeout Procedures
017823	Operation and Maintenance Data

**Primary Responsibility**

**This Subcontractor is responsible for all Primary Specification Responsibilities listed below unless this Scope of Work specifically states otherwise.**

PRIMARY TECHNICAL SPECIFICATION RESPONSIBILITIES (PROJECT MANUAL)	
033000	Cast-in-Place Concrete
107500	Flagpoles
313116	Termite Control

**Secondary Responsibility**

**This Subcontractor is responsible for all Secondary Specification Responsibilities listed below to the extent applicable, or defined, within this Scope of Work.**

SECONDARY TECHNICAL SPECIFICATION RESPONSIBILITIES	
033100	Polished Concrete Flooring
055000	Metal Fabrications
055100	Metal Stairs
072100	Thermal Insulation
079200	Joint Sealants
079500	Expansion Control
105113	Metal Lockers
312000	Earthwork
321313	Site Concrete
334100	Storm Drainage

The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall be responsible for complying with the requirements of each Scope of Work Description / Clarification Section listed above, **even if** those requirements are not shown within the Specification Sections listed above.

This Subcontractor shall be responsible for all Primary Specification Responsibilities identified above in their entirety. All costs associated with Primary Specification Responsibilities shall be included in this Subcontractor's Scope of Work and reflected in bid amount.

This Subcontractor shall be at least partially responsible for Secondary Specification Responsibilities identified above. The Secondary Specifications identify work scopes for which this Subcontractor is not wholly responsible but shall be applicable as it relates to the execution of Primary Specification Responsibilities. This may include a varying degree of responsibility from simple coordination to performing entire portions of work. The Secondary Specifications are not intended to be all inclusive and shall not limit the Subcontractor in any way with regards to installation of work identified in Primary Specification Responsibilities.

The Concrete Foundations, Walls, Slabs, & Site Subcontractor is responsible for all Work described herein and

below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work. If for some reason an item of scope is included inadvertently in this scope of work and another trade package scope of work, this Subcontractor shall be responsible for including the subject scope of work within its base bid proposal regardless.

### **3.0 CONCRETE SCOPE OF WORK DESCRIPTION**

- 3.0.1 The Concrete Foundations, Walls, Slabs, & Site Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work.
- 3.0.2 The Concrete Foundations, Walls, Slabs, & Site Subcontractor is responsible for all layout work, field engineering including vertical control, providing and maintaining lines and batter boards, protection of survey pins provided by others and coordination between its Subcontractors and other onsite subcontractors for all aspects covered under this Scope of Work. Building corners and control points will be established and maintained by the Concrete Foundations, Walls, Slabs, & Site Subcontractor using a Certified Registered Surveyor. The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall have Surveyor provide control lines on building slabs and benchmark elevations as located by the General Contractor (4 per floor and roof) for all trades use.
- 3.0.3 Concrete Formwork – This Work shall include providing of a complete concrete formwork system, where required, including but not limited to, formwork design / engineering, safety measures, preformed steel forms, plyform material, strongbacks, walers, kickers, wall braces and shores, temporary elevated slab on deck shores, if required, formed construction joints, edge forms, form ties, form release agents, chamfer strips, installation of dovetail anchors slots furnished by others, flashing reglets, nails, spikes, lag bolts, through bolts, miscellaneous anchors, waterstop, adjustable wedge inserts, threaded inserts, sealers, miscellaneous incidentals, form stripping, pointing, patching and rubbing of all exposed concrete surfaces following the form stripping operation, concrete embed supports, etc. This Subcontractor shall provide all concrete form work, including but not limited to, concrete footing forms, where required, step footing forms, rebar templates, anchor bolt templates, slab on grade column blockout forms, concrete pier forms, concrete wall and pilaster forms, if required, wall blockout forms, where required, slab on grade edge forms, slab on grade construction joints, depressed slab forms, slab on grade turndown forms, etc.
- 3.0.4 Miscellaneous Blockout Formwork – Miscellaneous slab on grade, wall or elevated slab blockout forms / sleeves required to accommodate work of other trades will be provided by the Subcontractor requiring a specific slab on grade, wall or elevated slab blockout form / sleeve, unless noted otherwise. Coordination of these items will be required by this Subcontractor.
- 3.0.5 Concrete Reinforcement and Accessories – This Work shall include furnishing and installing a complete concrete reinforcement and accessories system, including not be limited to, all reinforcing steel, welded steel wire fabric at slab on grade, tie wire, bar supports, bar chairs, slab on grade expansion joint filler and felts, column / wall support anchor bolts, adhesive



anchors, etc. This Subcontractor shall furnish and install all concrete reinforcement and accessories work, including but not limited to, concrete foundation reinforcement, including footing wall dowels to receive masonry (block walls by others), concrete wall reinforcement, concrete steps on grade reinforcement, concrete column reinforcement, concrete pier reinforcements, concrete slab on grade turn down reinforcement, equipment pad reinforcement, concrete slabs on grade reinforcement, including thickened slab reinforcement, elevated supported slab reinforcement, etc. All concrete steel bar reinforcement such as concrete footing dowels, thickened slab on grade dowels, etc. cast into a concrete assembly is part of this Scope of Work.

3.0.6 Cast-In-Place Concrete and Accessories – This Work shall include furnishing and installing all cast-in-place concrete with admixtures and PSI requirements as specified and accessories, including but not limited to, all concrete materials for foundations, slabs on grade, elevated slab on deck, column block out concrete, stair pan fill, concrete steps on grade, exterior/interior concrete equipment pads, elevator machine slabs, etc. in accordance with the concrete finishes specified. Provide all concrete floor sealers, curing compounds, expansion joints, slab on grade vapor barriers, non-shrink grout, saw cut joints, waterstop, diamond dowels, smooth bar dowels, etc. to complete this concrete scope of work.

3.0.7 Grouting Base Plates – This Work shall include furnishing and installing non-shrink grout at all base plates provided by the Structural Steel Subcontractor that are utilized or set atop concrete foundations, piers or other concrete related work.

3.0.8 Concrete Finishes – This Work shall include placement and finishing of all concrete furnished and installed as part of this scope of work in accordance with the finish tolerance requirements specified. Work shall also include providing slab on grade saw cut and/or tooled joints, where specified. Unless noted otherwise, all exposed concrete shall be pointed, rubbed and patched to provide a uniform and smooth face finish as part of this Scope of Work. EXTREME CARE SHALL BE TAKEN TO PLACE AND FINISH THE SLAB ON GRADE TO ACHIEVE A FF35 / FL25 TOLERANCE. SLAB ON GRADE TOLERANCE UNDER GYMNASIUM, CORRIDORS AND CAFETERIA FLOORING SHALL BE EVEN MORE STRINGENT AT A FF50/FL35 TOLERANCE. THIS MEANS THAT CERTAIN PLACE AND FINISH TECHNIQUES (SEPARATE POURS, SETTING PIPE SCREEDS, ETC.) MUST BE UTILIZED TO ENSURE THESE TOLERANCE REQUIREMENTS ARE MET. ALL OTHER TOLERANCES SHALL BE AS SPECIFIED IN SECTION 03300 – CAST-IN-PLACE CONCRETE OR THE APPLICABLE FLOORING SYSTEM (WHICHEVER IS GREATER OR MORE STRINGENT) AS SPECIFIED IN DIVISION 9 FINISHES.

3.0.9 Polished Concrete Floor Finish – Placement of concrete shall be provided by the Concrete Foundations, Walls, Slab & Site Subcontractor in a separate pour/s in accordance with the plans and specifications at locations indicated; the Polished Concrete Flooring Subcontractor shall coordinate with the Concrete Foundations, Walls, Slab & Site Subcontractor prior to concrete placement to ensure the design mix and placement methods of the concrete pour/s meets the project specifications. A pre-installation meeting with each Subcontractor present will be held prior to concrete placement. Additionally, the Polished Concrete Subcontractor shall be present during these concrete placement activities to ensure the plans and specifications are being followed And the Polished Concrete Flooring

Subcontractor WILL saw cut all control joints. The Polished Concrete Flooring Subcontractor shall provide all polishing materials, hardening and sealing agents. The Polished Concrete Contractor shall provide all special concrete floor finishes as defined within the contract documents to include but not limited to finishing system, hardening/sealing agent, protective treatments, water and oil repellent, stain and cleaning products.

- 3.0.10 The Concrete Foundation, Walls, Slabs & Site Subcontractor shall specifically reference sheet A3.0.13 for proposed locations of polished concrete flooring. Subcontractor should also reference section 01230 – Alternates.
- 3.0.11 Concrete Curing – This Work shall include furnishing and installing specified curing and sealing compounds at all concrete slabs scheduled as part of this Scope of Work. The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall confirm that the proposed cure and seal compound will have compatibility with all future scheduled floor finishes so as to not impede any future floor finishes work being performed by other trades. This subcontractor is responsible for curing concrete per the project documents including but not limited to wet curing. If the proposed floor finishes specified requires that the concrete surface be wet cured in lieu of the specified cure and seal compound, then the Concrete Foundations, Walls and Slabs Subcontractor shall wet cure the concrete surface(s) at no additional cost. This Subcontractor shall coordinate with the Polished Concrete Flooring Subcontractor to ensure recommended curing practices are adhered to in all areas to receive polished concrete finishes per designated alternate, this includes any wet curing methods, other admixtures, wet curing blankets, etc. as required.
- 3.0.12 Stepped Footings / Forms – Where required to accommodate underground site utility piping, plumbing piping, electrical conduit or mechanical piping which is run across scheduled concrete foundations / footings, the Concrete Foundations, Walls, Slabs, & Site Subcontractor shall step footings as required to accommodate this work being provided by other trades at no additional cost. The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall reference the site utility, mechanical, electrical and plumbing drawings to determine underground pipe or conduit locations in order to ascertain these requirements.
- 3.0.13 Exterior & Interior Equipment Pads – This Work shall include furnishing and installing all concrete related work required for Plumbing, Mechanical / Electrical equipment including concrete equipment pads, transformer pads, water heater pads, boiler pads, Chiller pads, pump pads, housekeeping pads, etc. on slabs poured under this scope of work. The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall coordinate the specific size requirements of these exterior and interior equipment concrete pads with the respective HVAC, Plumbing and Electrical Subcontractor.
- 3.0.14 Dumpster and Masonry Wall Screen Enclosures - The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall specifically include all foundations, reinforcing, backfilling, slabs, concrete accessories, etc. for the Dumpster and Masonry Wall Screen Enclosures as indicated within the Contract Documents.

- 3.0.15 Concrete Admixtures & Corrosion Inhibitor – This subcontractor shall furnish all required or specified admixtures including but not limited to corrosion inhibitors, super plasticizer, accelerators, decelerators, air, fly ash, alkali-silica reaction inhibiting admixture, etc. to complete this trades scope of work and as specified in contract documents. All admixtures and quantities shall be listed on delivery tickets and provided to the CM prior each concrete pour. All admixtures and quantities shall be listed on all delivery tickets and copies given to the GC during each pour. Failure to supply admixture documentation could result in removal of that particular portion of the work at Concrete Foundations, Walls, Slabs, & Site Subcontractor expense.
- 3.0.16 Dry Shake Floor Hardener – If specified, the Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish and install dry shake floor hardener per specified quantities at areas indicated on the contract documents. Application rate shall be in accordance with specifications.
- 3.0.17 Liquid Floor Treatment – If specified, the Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish and install Liquid Floor Treatment per specified quantities at areas indicated on the contract documents. Application rate shall be in accordance with specifications.
- 3.0.18 Mud Mats – In order to avoid problematic excavations being left open before concrete can be poured following inspections, this work shall include providing and installing a minimum of (2) inches of lean concrete mud mats at the bottoms of all footing and foundation excavations. This may be avoided if the Concrete Foundations, Walls, Slabs, & Site Subcontractor can properly coordinate its work, however its best to error on the side of caution. No excuses for delay or cost shall be permitted should mud mats not be used during concrete work execution.
- 3.0.19 If required, this Subcontractor shall provide temporary shoring of elevated slabs on top of metal decks or free formed slabs in accordance with contract documents to accommodate the designed floor construction system. Evaluate structural design, structural notes and industry standard requirements to determine if this work will in fact be a required.
- 3.0.20 This Subcontract shall include the block out and forming necessary for the laundry extractor trench drain system as depicted on sheet P5.1. Coordinate size and locations with the 22A Plumbing Subcontractor. The 22A Plumbing Subcontractor shall provide all imbedded items to this Subcontractor for installation.

## **5.0 METALS SCOPE OF WORK DESCRIPTION**

- 5.0.1 The Concrete Foundations, Walls, Slabs, & Site Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work.
- 5.0.2 Installation of Steel Embeds – This Work shall include installing all steel embedded items furnished by others which are cast directly into a concrete system, including but not limited



to, all required field engineering, vertical control and layout, column anchor bolts, steel weld plates, interior and exterior bollards, if applicable, miscellaneous embedded angles, stair nosings, etc.

5.0.3 All structural steel embed items will be furnished by the Structural Steel Subcontractor to this Subcontractor for installation. The Concrete Foundations, Walls, Slabs, & Site Subcontractor will be responsible for unloading, sorting, storing and protecting aforementioned miscellaneous steel materials furnished by the Structural Steel Subcontractor.

5.0.4 Installation of Floor Expansion Joint Assemblies – The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall install all floor expansion joint assemblies. The expansion joint assemblies shall be furnished by the Drywall, Framing and Insulation Subcontractor.

## **7.0 THERMAL AND MOISTURE PROTECTION SCOPE OF WORK DESCRIPTION**

7.0.1 The Concrete Foundations, Walls, Slabs, & Site Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work.

7.0.2 Under-Slab Vapor Barriers – This Work shall include furnishing and installing a complete under slab vapor barrier system, including but not limited to, under slab vapor barrier membrane, pipe boots, seam tape, miscellaneous accessories, etc. at all locations designated within the Contract Documents. Any specific tears, rips, etc. made in the under slab vapor barrier shall be patched in accordance with manufacturer recommendations at no additional cost. Under-Slab Vapor Barrier shall be as specified but at a minimum 15 mil Stego Wrap material or approved equal.

## **10.0 SPECIALTIES SCOPE OF WORK DESCRIPTION**

10.0.1 Flagpoles - The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish and install flagpoles in strict accordance with contract documents including, but not limited to ground mounted flagpole, concrete foundations, sleeves, flashing collar, etc. for a complete installation and system. Flags shall be furnished by Owner.

10.0.2 Brick Sign Foundations – This Work shall include providing a complete reinforced concrete foundation to serve the School sign(s) detailed on Drawings. Confirm locations of these signs with the General Contractor prior to commencing with this work.

10.0.3 Locker Bases – This Work shall include providing a complete concrete locker bases to serve the applicable lockers detailed on Drawings.

**31.0 EARTHWORK SCOPE OF WORK DESCRIPTION**

- 31.0.1 The Concrete Foundations, Walls, Slabs, & Site Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work.
- 31.0.2 Excavation, Trenching, Backfilling, Fine Grading & Compaction - This Work shall include, but not be limited to, all excavation, trenching, backfilling, fine grading and compaction work associated with the proper installation of all work required of this Subcontract, including, but not limited to, concrete foundations, slab on grade turndowns, concrete steps on grade, interior concrete equipment pads, foundations, concrete piers, etc., backfilling and compacting stone or suitable backfill atop concrete foundations and within the elevated stage / ramp area, compacting soil and or stone adjacent to below grade masonry walls (interior and exterior against masonry foundations) etc. All excavation, backfilling, trenching and compaction work shall be based on the use of safe excavation practices, governed by the Occupational Safety and Health Administration (OSHA). Typical slab on grade elevations shall be left at approximately 8" below Finished Floor Elevations plus or minus one tenth as indicated on the Structural Drawings and all remaining excavation and backfill for foundations, slab elevation changes, etc. are the responsibility of this Subcontractor.
- 31.0.3 Graded Aggregate Stone Base - This Work shall include furnishing and installing all graded aggregate stone base underneath all concrete slabs on grades including but not limited to, crusher run (ABC stone) gravel base material in the four (4") inch thickness or as specified, fine grading, compaction, etc. at all slab locations being provided as part of this Scope of Work.
- 31.0.4 Termite Treatment - The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish and install all required termite control including, but not limited to all slab on grade areas, beneath or adjacent to foundations, piping, interior of open masonry cells, and associated warranty etc. and in accordance with contract documents. This Subcontractor shall coordinate installation of termite control with other trades and their work.
- 31.0.5 Excess Foundation Spoil – The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall remove and dispose of all excess foundation spoils to an on-site location. The typical spread footing, perimeter footings, pits around auditorium area shall be quoted assuming excess spoils to be loaded into a truck immediately after excavation.
- 31.0.6 Dewatering - The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall leave its work in a condition that will naturally drain at the end of each day. If standing water accumulates, this Subcontractor is responsible for dewatering, pumping of water, demucking, and subgrade and soil restoration at no additional cost.
- 31.0.7 Site Concrete Subgrades - The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall assume the responsibility for determining if the sidewalk and concrete paving subgrade elevations as delivered by the Earthwork, Storm Drainage and Erosion Control Subcontractor are within a tolerance no more than plus or minus two tenths ( $\pm 0.20'$ ) of one foot and are in conformance with the information reflected on the drawings. The General Contractor shall

be notified of the acceptance or rejection of these subgrades prior to commencement of this scope of work.

- 31.0.8 Building Pad Subgrades - The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall assume the responsibility for determining if the building pad subgrade elevations as delivered by the Earthwork, Storm Drainage and Erosion Control Subcontractor are within a tolerance no more than plus or minus one tenth ( $\pm 0.10'$ ) of one foot and are in conformance with the information reflected on the drawings. The General Contractor shall be notified of the acceptance or rejection of these subgrades prior to commencement of this scope of work.

### **32.0 EXTERIOR IMPROVEMENTS SCOPE OF WORK DESCRIPTION**

- 32.0.1 Graded Aggregate Stone Base - This Work shall include furnishing and installing a graded aggregate stone base underneath the following exterior concrete areas:

1. All exterior concrete slab, paving, sidewalk, etc. designated to receive a stone base on the drawings.

- 32.0.2 Site Concrete, Concrete Sidewalks and Pavement – This Work shall include furnishing and installing all concrete sidewalks, crosswalks and associated ramps, concrete pavement, transformer(s) pads, exterior equipment pads, exterior patio slabs, door stoops, concrete walls, grandstand bleacher concrete paving under outdoor seating, softball / baseball concrete pads, etc. designated on the drawings complete with concrete, expansion joint materials, reinforcing, forms, curing compounds, detectable warning surfaces, etc. in order to provide a complete concrete sidewalk and pavement system. All material costs for concrete and accessories shall be included in this scope of work.

- 32.0.3 Concrete Materials and Admixtures: This scope shall include the costs for all concrete material costs with the correct PSI mix designs and admixtures as specified within the contract documents including but not limited to Silica Fume, air, etc.

- 32.0.4 Wheel Chair Ramps and Truncated Domes– This work shall include furnishing and installing all wheel chair ramps and detectable warning domes in accordance with details on drawings.

- 32.0.5 Adjustment of Tops / Grates / Covers - The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall adjust to appropriate finish grade elevations all tops, grates and covers associated with the sanitary sewer manholes, catch basins, drop inlets, grate inlets, etc. located within or directly in contact with an concrete sidewalk or concrete paved system. Elevation adjustment, if required, to these miscellaneous tops, grates and covers will be undertaken during the final phase of the Site Development Work.

### **33.0 UTILITIES SCOPE OF WORK DESCRIPTION**

- 33.0.1 Auditorium Seating Area Subgrade Drainage - Provide a temporary drain pipe(s) at a depth adequate to not interfere with work of other trades including sump, pipe, fittings, coring,



grouting, patching, stone, fabric, etc. to serve as a temporary drainage device serving the low area and around all foundation walls at the Auditorium. Temporary drain piping shall be routed to the nearest stormwater manhole at the exterior of the building.

- 33.0.2 Subdrainage (Foundation) System - This Work shall include providing a complete permanent subdrainage (foundation) system serving the Auditorium depressed area and walls and from the elevator pit to the nearest storm drain structure outside the building, including but not limited to, drainage / porous fill material around the pipe and adjacent to the wall up to subgrade, fabric drainage panels, high density polyethylene pipe (6"), fittings, accessories, etc., filter fabric, roofing felts, matting, foundation pipe drain leaders from the perforated foundation drainage piping to storm drain inlets provided by others, coring and grout patch work of each storm drain inlet to receive each end of the foundation pipe drain leaders, pipe fittings, accessories, etc., couplings, coupled joints, etc. and any other incidentals which might be required to provide a completely functional subdrainage (foundation) system. It shall be the Concrete Subcontractor's responsibility to install the subdrainage (foundation) system in accordance with the specified minimum one percent (1%) slope and invert elevations to ensure the subdrainage (foundation) system performs properly. Should any invert or profile discrepancies occur, the Concrete Subcontractor shall immediately advise the General Contractor in writing, prior to proceeding.

### **39.0 SCOPE OF WORK CLARIFICATIONS AND/OR OTHER REQUIREMENTS**

- 39.0.1 All necessary hoisting equipment required to furnish and install all concrete shall be provided as part of this Scope of Work.
- 39.0.2 All necessary conveyance equipment required to place and finish all concrete shall be provided as part of this Scope of Work.
- 39.0.3 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall provide photo documentation of existing conditions for all items/areas including any items that are to be specifically reused or relocated. Any questionable items are to be brought to the attention of the General Contractor before beginning work.
- 39.0.4 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall include all necessary shoring and engineering as required by contract documents or as deemed necessary to provide minimum flatness and levelness specifications on all elevated slabs.
- 39.0.5 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall assume pouring the elevated concrete slabs using a leveling method and not a sticking method and include the additive costs in its bid amount. Confirm with the Structural Engineer and General Contractor during a pre-installation meeting if this is acceptable before work begins. Should this not be acceptable, a credit shall be issued to the General Contractor.
- 39.0.6 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall include the costs for light stands if required for night concrete pours. There will be no added costs for these stands.

- 39.0.7 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall include costs for temporary power with generators throughout the entire duration of the concrete scope of work.
- 39.0.8 This subcontractor's trash/debris shall be removed from the buildings and work area constantly as work progresses, or immediately upon request by the General Contractor's superintendent. All stored material will be kept in neat locations at all times as directed by the General Contractor.
- 39.0.9 Perimeter Board Insulation – The Masonry Subcontractor will include furnishing and installing a perimeter below grade insulation system, at vertical installations including but not limited to, board insulation, seam tape, miscellaneous accessories, etc. at all locations designated within the Contract Documents.
- 39.0.10 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall establish and maintain wash out areas for concrete trucks and routinely dispose of debris generated by this process including removal, recycling and re-grading of the areas at the completion of the work.
- 39.0.11 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish manpower and necessary equipment including street washing truck to assist in cleaning concrete truck tires and any other material delivery truck under this subcontract at the wheel wash station and ensure that roadways are left in a clean condition after each pour sequence or unloading operation.
- 39.0.12 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish ample flag men to flag, pump and route concrete trucks in and out of pour areas once trucks enter the site.
- 39.0.13 This Concrete Foundations, Walls, Slabs, & Site Subcontractor shall be responsible for the proper spacing and locating of the reinforcement dowels to accept the CMU as sized and located on the drawings. This Subcontractor shall coordinate with the General Contractor and the Masonry Subcontractor responsible for the masonry work prior to commencement and installation of reinforcement dowels to minimize conflicts and errors. Any and/or all reinforcement dowel(s) which are incorrectly located and interfere with the installation of the CMU shall be promptly and properly corrected, by this Subcontractor at its own expense by methods approved by the Designer.
- 39.0.14 The Structural Steel Subcontractor shall furnish, install and maintain a complete Fall Protection Guardrail System for all elevated slabs, decks, mezzanines, etc. which are required by OSHA to receive a Guardrail System as stipulated by the OSHA Handbook for the Construction Industry (29 CFR PART 1926), Subpart L – Scaffolding and Subpart M – Fall Protection. Installation of the Fall Protection Guardrail System shall be based upon the elevated slabs, decks, mezzanines, etc. finish floor elevations so as to comply with the requirements for fall protection during the installation of the metal decking and subsequent to the placement of the elevated concrete slabs. Additional clarification and coordination is described as follows:

1. Upon installation of the elevated concrete slabs on deck, the Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish, install and maintain any additional appurtenances to provide a complete Fall Protection Guardrail System as stipulated by the OSHA Handbook for the Construction Industry (29 CFR PART 1926), Subpart L – Scaffolding and Subpart M – Fall Protection (i.e. toe boards, etc.). The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall maintain the Fall Protection Guardrail System until the Structural Steel Subcontractor who is responsible for the steel railings at the mezzanine removes and palletizes the components of the Fall Protection Guardrail System to allow for immediate installation of metal railing work.
2. The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish, install and maintain any additional appurtenances to provide a complete Fall Protection Guardrail System as stipulated by the OSHA Handbook for the Construction Industry (29 CFR PART 1926), Subpart L – Scaffolding and Subpart M – Fall Protection (i.e. toe boards, etc.) for foundation walls, elevator pits and openings, retaining walls, pits, stairs, etc. until permanent walls or protection are installed by other trades.

39.0.15 Masonry Reinforcement and Accessories – Furnishing and installing steel bar reinforcement for masonry block walls is not part of this Scope of Work and will be provided by the Masonry Subcontractor. Dowels for masonry shall be provided by this subcontractor. The Concrete Foundations, Walls, Slabs, & Site Subcontractor and the Masonry Subcontractor shall closely coordinate the concrete and masonry reinforcing shop drawings to ensure a complete reinforcement system is accomplished between both trades Scope of Work.

39.0.16 The Concrete Foundations, Walls, Slabs, & Site Subcontractor is responsible for all Concrete Work with the exception of:

1. Miscellaneous concrete work associated with the storm drainage, sewer, water or other related work.
2. Concrete Foundations for Home side Exterior Grandstands are by the Outdoor Grandstand and Bleachers Subcontractor.
3. Electrical concrete pole bases and ductbanks by Electrical Subcontractor.
4. Concrete curb and gutter provided by the Asphalt Paving and Curb & Gutter Subcontractor.
5. Concrete trench drain at perimeter of asphalt running track, track and field runways, takeoff boards, shot put and discus pads by the Athletic Surfaces Subcontractor.
6. Concrete footings for fencing by the Fencing Subcontractor.
7. Concrete footings for outdoor athletic equipment, discus pad, and shot-put pad by the Outdoor Athletic Equipment Subcontractor.

39.0.17 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall provide one (1) sets of scaffold stairs furnished, installed, maintained and removal for an eight (8) month period. Stairs should extend from the lowest floor elevation to roof level. Stairs to be installed at the direction and location of the General Contractor. Installation and erection shall be provided by a trained/certified installation company and crew.



- 39.0.18 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall furnish, maintain and remove at the direction of the General Contractor stone and grading for temporary access drives or pads for pump and concrete truck egress to pour locations.
- 39.0.19 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall include 200 Manhours of miscellaneous labor to be used as directed by the GC Field Supervision at an agreed upon labor rate in the base bid amount.
- 39.0.20 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall include 200 tons placed and compacted of ABC stone for use as directed by the GC Field Supervision at an agreed upon tonnage rate in the base bid amount.
- 39.0.21 Special inspections - As Special inspections will be required on this project it will be the responsibility of this Concrete Foundations, Walls, Slabs & Site Subcontractor to provide supervision to accompany inspectors as required. Any deficiencies noted shall be corrected at the time of inspection. If this Subcontractor is unable to make the correction during the inspection and a deficiency is placed on a non-compliant list, this Subcontractor will have no more than 48 hrs to make the correction and schedule the reinspection to have the item removed from the non-compliant list. All non-complaint items shall be reported to the General Contractor as soon as possible and before the close of business on the day of inspection. Failure to make corrections as stated above could result in a stop work order until corrections are made.
- 39.0.22 This Subcontractor shall NOT include the cost for their Payment and Performance Bonds in their bid amount, however if requested by the General Contractor, this Subcontractor shall provide a Performance and Payment Bond at Cost if awarded the Subcontract.
- 39.0.23 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall provide a lockable ASTM / Testing Company approved concrete cylinder box for storing and curing of concrete test cylinders for the project.
- 39.0.24 Prior to infilling concrete block-outs, the Concrete Foundations, Walls, Slabs, & Site Subcontractor shall provide the bituminous asphaltic coating to the below grade steel on all applicable columns as required on Sheet S0.0.1., Structural Steel Note 8.
- 39.0.25 The Concrete Foundations, Walls, Slabs, & Site Subcontractor shall provide the aluminum canopy foundations and installation of the foam block-outs to receive the canopy columns provided by the Awnings & Canopies Subcontractor. The Awnings & Canopies Subcontractor will provide the foam block-outs to the Concrete Foundations, Walls, Slabs, & Site Subcontractor for its installation.

**—OTHER SCHEDULE SUMMARY INFORMATION—**

The Substantial Completion date for the Concrete Foundations, Walls, Slabs, & Site Subcontractor is as reflected within the Construction Schedule. Special attention should be directed to the Construction Schedule for project sequencing requirements which are a requirement of this Scope of Work.

SCHEDULE MILESTONE TABLE		
ACTIVITY NO.	ACTIVITY DESCRIPTION	COMPLETION DATE OR DURATION

**—ALLOWANCES—**

Allowances shall cover the cost of all materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses associated with stated allowance amounts shall be included in the Subcontract Amount but not in the allowances. Whenever costs are more than or less than an allowance amount, the Subcontract Amount shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual costs and the allowances.

ALLOWANCES		
ALLOWANCE NO.	ALLOWANCE DESCRIPTION	AMOUNT
1	Unsuitable Soil	\$100,000.00
2	Surveying	\$35,000.00

**—UNIT PRICES—**

To the extent that some or all of the Subcontractor's Work is to be performed on a unit price basis, the Subcontract Amount shall be computed in accordance with the unit prices set forth below. Unit prices are deemed to include all costs related to Subcontractor's performance of the Work, including, but not limited to, costs of labor, supervision, services, materials, equipment, tools, scaffolds, hoisting, transportation, storage, insurance, and taxes, and all overhead and profit. Quantities shall be measured by means acceptable to Owner, General Contractor and Subcontractor, and if applicable, an independent testing firm hired by Owner.

UNIT PRICES			
UNIT NO.	UNIT PRICE DESCRIPTION	UNIT PRICE	UNIT MEASURE
1	Unsuitable Soil Excavation Off-Site	\$25.00	CY

**—ALTERNATES—**

Each alternate designated below has been separated into the following three categories:

- “Accepted” – Alternate was accepted by General Contractor and the dollar value for the alternate is included within the Subcontractor Amount.
- “Pending” – Alternate is pending award by General Contractor with the decision being deferred until the date defined within each applicable Alternate. This cost is NOT included in the Subcontractor Amount.
- “Declined” – Alternate was NOT accepted by General Contractor and the dollar value for the alternate is NOT included within the Subcontractor Amount. By declining the alternate, all requirements applicable thereof are deleted from the contract documents.

<b>ALTERNATES</b>			
ALTERNATE NO.	ALTERNATE DESCRIPTION	VALUE	STATUS
1	Tennis Courts (Turnkey with HID Athletic Field Lighting)	N/A	Declined
2	Tennis Courts (Turnkey with LED Athletic Field Lighting)	N/A	Accepted
3	Gravel Parking Lot (Asphalt Paving, Curb & Gutter on Gravel Lot)	\$11,625.00	Accepted
4	Soccer Field Irrigation	N/A	Accepted
5	Polished Concrete (First Floor Main Corridor & Commons)	\$30,960.00	Accepted
6	Polished Concrete (First Floor Secondary Corridors)	\$32,617.00	Accepted
7	Exterior Steel Doors & Frames	N/A	Declined
8	TPO Roofing System	N/A	Declined



## Subcontract Cost Breakdown Summary

### 03A: Concrete Foundations, Walls, Slabs, and Site

<b>Base Contract Amount Total (Excluding Allowances &amp; Alternates):</b>		<b>\$3,850,000.00</b>
Scope Breakdown		
1	Concrete Foundations, Walls, Slabs, and Site	\$3,000,000.00
2		\$0.00
3		\$0.00
Subtotal:		<b>\$3,850,000.00</b>
<b>Accepted Alternates Total:</b>		<b>\$75,202.00</b>
No.	Description	
2	Tennis Courts (Turnkey with LED Athletic Field Lighting)	N/A
3	Gravel Parking Lot (Asphalt Paving, Curb & Gutter on Gravel Lot)	\$11,625.00
4	Soccer Field Irrigation	N/A
5	Polished Concrete (First Floor Main Corridor & Commons)	\$30,960.00
6	Polished Concrete (First Floor Secondary Corridors)	\$32,617.00
Subtotal:		<b>\$75,202.00</b>
<b>Allowances Total:</b>		<b>\$135,500.00</b>
No.	Description	
1	Unsuitable Soil	\$100,000.00
2	Surveying	\$35,500.00
Subtotal:		<b>\$135,500.00</b>
		Sales Tax
		Included
		P & P Bond
		Included
<b>Final Subcontract Amount:</b>		<b>\$4,060,702.00</b>

**—PAYMENT AND PERFORMANCE BONDS—**

If requested, the cost of the Performance and Payment Bonds will be reimbursed to the Subcontractor based on the following revised contract revision noted below:

Subcontractor shall provide Performance and Payment Bonds, if required, each with a penal amount equal to 100% of the Subcontract Amount, on forms acceptable to the General Contractor. The premium for these bonds shall be paid by Subcontractor and the cost thereof shall be invoiced separately to the General Contractor based on the Subcontractor providing an actual paid receipt from its surety agent. No mark-up, overhead, etc. shall be included as Samet will only reimburse the cost of the bond.

**END OF SECTION**

**TRADE PACKAGE SCOPE OF WORK:**

**03A CONCRETE FOUNDATIONS, WALLS, SLABS, & SITE SUBCONTRACT**

EXAMPLE

Name of Project  
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Description	Revision	Page Number
<b>GENERAL REQUIREMENTS MANUAL</b>		
PROJECT MANUAL COVER	0	1
INDEX TO CM GENERAL REQUIREMENTS MANUAL	0	1
NOTICE TO BIDDERS/ADVERTISEMENTS FOR BIDS	0	6
INSTRUCTIONS TO BIDDERS (AIA FORM A701-2018)	0	7
TRADE PACKAGE PRE-QUALIFICATION FORMS/REQUIREMENTS	0	22
STANDARD FORMS OF AGREEMENT BETWEEN OWNER AND CONSTRUCTION MANAGER	0	65
<b>01300 FORM(S) OF AGREEMENT (SUBCONTRACT AGREEMENT)</b>		
ADDENDUM 1- INSURANCE AND BONDS	0	11
ADDENDUM 2 -WORK RULES AND SAEFTY POLICY	0	4
ADDENDUM 3- APPLICATION FOR PAYMENT	0	4
ADDENDUM 4- ADDIDAVIT OF CAPITAL IMPROVEMENT	0	2
EXHIBIT A DETAILED SCOPE OF WORK (SAMPLE)	0	11
EXHIBIT B -LIST OF CONTRACT DOCUMENTS (SAMPLE)	0	1
EXHIBIT C -PROJECT SCHEDULE (SAMPLE)	0	1
<b>EXHIBIT D- NORTH CAROLINA STATE M/WBE FORMS</b>		
IDENTIFICATION OF HUB CERTIFIED/ MINOIRITY BUSINESS PARTICIPATION	0	1
AFFIDAVIT A - LISTING OF GOOD FAITH EFFORTS	0	1
AFFIDAVIT B- INTENT TO PERFORM CONTRACT WITH OWN WORKFORCE	0	1
AFFIDAVIT C- PROTION OF WORK TO BE PERFORMED BY HUB CERTIFIED/MINORITY BUSINESSES	0	1
AFFIDAVIT D- GOOD FAITH EFFORTS	0	1
EXHIBIT E- PRE-AWARD MEETING MINUTES	0	7
01340 SCHEDULE REQUIREMENTS	0	1
<b>TRADE PACKAGE SCOPE MANUAL</b>		
CONSTRUCTION MANAGER PACKAGE MANUAL COVER	0	1
TABLE OF CONTENTS	0	3
FORM OF PROPOSAL (BID FORM)	0	12
01210 ALLOWANCES	0	9
01230 ALTERNATES	0	4
LOGISTICS PLAN	0	1
LIST OF CONTRACT DOCUMENTS	0	18
REPORT OF SUBSURFACE EXPLORATION	0	124
BUILDING INFORMATION MODELING REQUIREMENTS	0	21
COMMISSIONING REQUIREMENTS	0	3
ASBESTOS INSPECTION INFORMATION	0	28
<b>TRADE PACKAGE SCOPE OF WORK</b>		
01A Final Clean	0	7
01B General Trades	0	12
03A Concrete Foundations, Walls, Slabs & Site	0	14
04A Masonry	0	8
05A Structural Steel, Miscellaneous Metals	0	8
07A Waterproofing, Dampproofing, & Joint Sealants	0	5
07B Membrane & Shingle Roofing	0	7
07C Metal Roofing	0	6
07D Membrane, Shingle & Metal Roofing Combination	0	3
08A Doors, Frames, & Hardware	0	8
08B Aluminum Storefront, Glass, & Glazing	0	8



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[illegible]

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Discipline	Drawing No.	Drawing Title	Revision	Drawing Date	Set Name
Architectural	A0.1	GENERAL ARCHITECTURAL NFORMATION	0	12/18/2020	Bid Set
Architectural	A0.2	WALL/PARTITION TYPES, WALL JOINTS AND TERMINATIONS	1	1/20/2021	Addendum 001
Architectural	A1.1.0	ENLARGED SERVICE COURTYARD	0	12/18/2020	Bid Set
Architectural	A1.1.1	SITE BUILDINGS & ENTRANCE CANOPY	0	12/18/2020	Bid Set
Architectural	A1.1.2	SITE DETAILS	0	12/18/2020	Bid Set
Architectural	A1.1.3	SITE DETAILS	0	12/18/2020	Bid Set
Architectural	A2.0.1	OVERALL FIRST FLOOR PLAN	0	12/18/2020	Bid Set
Architectural	A2.0.2	OVERALL SECOND FLOOR PLAN	0	12/18/2020	Bid Set
Architectural	A2.1.1	FIRST FLOOR PLAN PART A	1	1/20/2021	Addendum 001
Architectural	A2.1.2	FIRST FLOOR PLAN PART B	1	1/20/2021	Addendum 001
Architectural	A2.1.3	FIRST FLOOR PLAN PART C	1	1/20/2021	Addendum 001
Architectural	A2.1.4	FIRST FLOOR PLAN PART D	1	1/20/2021	Addendum 001
Architectural	A2.1.5	FIRST FLOOR PLAN PART E	1	1/20/2021	Addendum 001
Architectural	A2.1.6	FIRST FLOOR PLAN PART F	1	1/20/2021	Addendum 001
Architectural	A2.1.7	FIRST FLOOR PLAN PART G	1	1/20/2021	Addendum 001
Architectural	A2.1.8	SECOND FLOOR PLAN PART A	1	1/20/2021	Addendum 001
Architectural	A2.1.9	SECOND FLOOR PLAN PART B	1	1/20/2021	Addendum 001
Architectural	A2.1.10	SECOND FLOOR PLAN PART C	1	1/20/2021	Addendum 001
Architectural	A2.1.11	SECOND FLOOR PLAN PART D	1	1/20/2021	Addendum 001
Architectural	A2.1.12	EQUIPMENT PLATFORM (PARTS C,F,G)	1	1/20/2021	Addendum 001
Architectural	A2.1.13	EQUIPMENT PLATFORM (PART A)	1	1/20/2021	Addendum 001
Architectural	A2.1.14	EQUIPMENT PLATFORM (PART D)	1	1/20/2021	Addendum 001
Architectural	A2.2.1	PLAN DETAILS	0	12/18/2020	Bid Set
Architectural	A2.2.2	PLAN DETAILS	0	12/18/2020	Bid Set
Architectural	A2.2.3	PLAN DETAILS	0	12/18/2020	Bid Set
Architectural	A2.2.4	PLAN DETAILS	0	12/18/2020	Bid Set
Architectural	A2.2.5	PLAN DETAILS	0	12/18/2020	Bid Set
Architectural	A3.0.0	FINISH SCHEDULE	1	1/20/2021	Addendum 001
Architectural	A3.0.1	FINISH SCHEDULE	0	12/18/2020	Bid Set
Architectural	A3.0.2	FINISH PATTERNS - FIRST FLOOR PART A	0	12/18/2020	Bid Set
Architectural	A3.0.3	FINISH PATTERNS - FIRST FLOOR PART B	0	12/18/2020	Bid Set
Architectural	A3.0.4	FINISH PATTERNS - FIRST FLOOR PART C	0	12/18/2020	Bid Set
Architectural	A3.0.5	FINISH PATTERNS - FIRST FLOOR PART D	0	12/18/2020	Bid Set
Architectural	A3.0.6	FINISH PATTERNS - FIRST FLOOR PART E	0	12/18/2020	Bid Set
Architectural	A3.0.7	FINISH PATTERNS - FIRST FLOOR PART F	0	12/18/2020	Bid Set
Architectural	A3.0.8	FINISH PATTERNS - FIRST FLOOR PART G	0	12/18/2020	Bid Set
Architectural	A3.0.9	FINISH PATTERNS - SECOND FLOOR PART A	0	12/18/2020	Bid Set
Architectural	A3.0.10	FINISH PATTERNS - SECOND FLOOR PART B	0	12/18/2020	Bid Set
Architectural	A3.0.11	FINISH PATTERNS - SECOND FLOOR PART C	0	12/18/2020	Bid Set
Architectural	A3.0.12	FINISH PATTERNS - SECOND FLOOR PART D	0	12/18/2020	Bid Set
Architectural	A3.0.13	OVERALL FINISH PLAN ALTERNATES NO. 08 AND NO. 09	0	12/18/2020	Bid Set
Architectural	A3.1.0	591568 ALAMANCE BURLINGTON SCHOOL SYSTEM S. NC HWY 119, HAW RIVER, NORTH CAROLINA 27258	1	1/20/2021	Addendum 001
Architectural	A3.1.1	DOOR AND FRAME SCHEDULE	1	1/20/2021	Addendum 001
Architectural	A3.1.2	DOOR, FRAME AND GLAZING TYPES	0	12/18/2020	Bid Set
Architectural	A3.1.3	FRAME TYPES	0	12/18/2020	Bid Set
Architectural	A3.2.1	DOOR AND FRAME DETAILS	0	12/18/2020	Bid Set
Architectural	A3.2.2	DOOR AND FRAME DETAILS	0	12/18/2020	Bid Set

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Discipline	Drawing No.	Drawing Title	Revision	Drawing Date	Set Name
Architectural	A3.2.3	DOOR AND FRAME DETAILS	0	12/18/2020	Bid Set
Architectural	A4.0.1	OVERALL BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.0.2	OVERALL BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.1.1	BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.1.2	BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.1.3	BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.1.4	BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.1.5	BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.1.6	BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.1.7	BUILDING ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A4.2.1	INTERIOR ELEVATIONS GYMNASIUM	0	12/18/2020	Bid Set
Architectural	A4.2.2	INTERIOR ELVATIONS AUX. GYMNASIUM	0	12/18/2020	Bid Set
Architectural	A4.2.3	INTERIOR ELEVATIONS BAND, CHORUS, DANCE	0	12/18/2020	Bid Set
Architectural	A4.2.4	INTERIOR ELEVATIONS - COMMONS, LOBBY	0	12/18/2020	Bid Set
Architectural	A5.1.1	BUILDING SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.2	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.3	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.4	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.5	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.6	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.7	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.8	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.9	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.10	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.11	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.12	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.13	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.14	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.1.15	WALL SECTIONS	0	12/18/2020	Bid Set
Architectural	A5.2.1	SECTION DETAILS	0	12/18/2020	Bid Set
Architectural	A6.1.1	ENLARGED STAIR & RAMP DETAILS	0	12/18/2020	Bid Set
Architectural	A6.1.2	ENLARGED STAIR & RAMP DETAILS	0	12/18/2020	Bid Set
Architectural	A6.1.3	ENLARGED STAIR & RAMP DETAILS	0	12/18/2020	Bid Set
Architectural	A6.1.4	ENLARGED STAIR & RAMP DETAILS	0	12/18/2020	Bid Set
Architectural	A7.1.1	TOILET ASSEMBLIES,	0	12/18/2020	Bid Set
Architectural	A7.1.2	TOILET ASSEMBLIES	0	12/18/2020	Bid Set
Architectural	A7.1.3	TOILET ASSEMBLIES	0	12/18/2020	Bid Set
Architectural	A7.2.1	ENLARGED GYM PLAN	1	1/20/2021	Addendum 001
Architectural	A7.2.2	AUX GYM PLAN AND LOCKER ROOMS	1	1/20/2021	Addendum 001
Architectural	A7.2.3	ENLARGED FLOOR PLANS - FACS	1	1/20/2021	Addendum 001
Architectural	A7.2.4	ENLARGED PLANS - SCIENCE	1	1/20/2021	Addendum 001
Architectural	A7.2.5	ENLARGED PLANS - SCIENCE	1	1/20/2021	Addendum 001
Architectural	A7.3.1	ENLARGED AUDITORIUM PLAN	1	1/20/2021	Addendum 001
Architectural	A7.3.2	591568 ALAMANCE BURLINGTON SCHOOL SYSTEM S. NC HWY 119, HAW RIVER, NORTH CAROLINA 27258	1	1/20/2021	Addendum 001
Architectural	A7.3.3	AUDITORIUM ELEVATIONS	1	1/20/2021	Addendum 001
Architectural	A8.1.1	CASEWORK ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A8.1.2	CASEWORK ELEVATIONS	0	12/18/2020	Bid Set



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Discipline	Drawing No.	Drawing Title	Revision	Drawing Date	Set Name
Architectural	A8.2.1	SCIENCE CASEWORK ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A8.2.2	SCIENCE CASEWORK ELEVATIONS	0	12/18/2020	Bid Set
Architectural	A9.1.0	REFLECTED CEILING PLAN - SITE BUILDINGS	0	12/18/2020	Bid Set
Architectural	A9.1.1	REFLECTED CEILING PLAN - FIRST FLOOR - PART A	1	1/20/2021	Addendum 001
Architectural	A9.1.2	REFLECTED CEILING PLAN - FIRST FLOOR - PART B	0	12/18/2020	Bid Set
Architectural	A9.1.3	REFLECTED CEILING PLAN - FIRST FLOOR - PART C	1	1/20/2021	Addendum 001
Architectural	A9.1.4	REFLECTED CEILING PLAN - FIRST FLOOR - PART D	1	1/20/2021	Addendum 001
Architectural	A9.1.5	REFLECTED CEILING PLAN - FIRST FLOOR - PART E	1	1/20/2021	Addendum 001
Architectural	A9.1.6	REFLECTED CEILING PLAN - FIRST FLOOR - PART F	1	1/20/2021	Addendum 001
Architectural	A9.1.7	REFLECTED CEILING PLAN - FIRST FLOOR - PART G	1	1/20/2021	Addendum 001
Architectural	A9.1.8	REFLECTED CEILING PLAN - SECOND FLOOR - PART A	1	1/20/2021	Addendum 001
Architectural	A9.1.9	REFLECTED CEILING PLAN - SECOND FLOOR - PART B	0	12/18/2020	Bid Set
Architectural	A9.1.10	REFLECTED CEILING PLAN - SECOND FLOOR - PART C	0	12/18/2020	Bid Set
Architectural	A9.1.11	REFLECTED CEILING PLAN - SECOND FLOOR - PART D	1	1/20/2021	Addendum 001
Architectural	A10.1.1	ROOF PLAN	0	12/18/2020	Bid Set
Architectural	A10.1.2	PLAN	0	12/18/2020	Bid Set
Architectural	A10.1.3	AREA A	0	12/18/2020	Bid Set
Architectural	A10.1.4	ROOF PLAN	0	12/18/2020	Bid Set
Architectural	A10.1.6	ROOF PLAN -	0	12/18/2020	Bid Set
Architectural	A10.1.8	ROOF PLAN - AREA G	0	12/18/2020	Bid Set
Architectural	A10.1.9	ROOF PLAN	0	12/18/2020	Bid Set
Architectural	A10.2.1	DETAILS	0	12/18/2020	Bid Set
Architectural	AI 0.2.2	DETAILS	0	12/18/2020	Bid Set
Architectural	AI 0.2.3	DETAILS	0	12/18/2020	Bid Set
Architectural	AI 0.2.4	DETAILS	0	12/18/2020	Bid Set
C		0 COVER	0	12/18/2020	Bid Set
C		0 COVER	0	12/18/2020	Bid Set
Civil	C0.0	COVER SHEET	0	12/18/2020	Bid Set
Civil	C0.1	OVERALL PLAN	0	12/18/2020	Bid Set
Civil	C1.0	EXISTING CONDITIONS & DEMOLITION PLAN	0	12/18/2020	Bid Set
Civil	C1.1	EXISTING CONDITIONS & DEMOLITION PLAN	0	12/18/2020	Bid Set
Civil	C1.2	EXISTING CONDITIONS & DEMOLITION PLAN	0	12/18/2020	Bid Set
Civil	C2.0	PHASE I EROSION & SEDIMENT CONTROL	0	12/18/2020	Bid Set
Civil	C2.1	PHASE I EROSION & SEDIMENT CONTROL	1	1/20/2021	Addendum 001
Civil	C2.2	PHASE I EROSION & SEDIMENT CONTROL	0	12/18/2020	Bid Set
Civil	C2.3	PHASE II EROSION & SEDIMENT CONTROL	1	1/20/2021	Addendum 001
Civil	C2.4	PHASE II EROSION & SEDIMENT CONTROL	1	1/20/2021	Addendum 001
Civil	C2.5	PHASE II EROSION & SEDIMENT CONTROL	0	12/18/2020	Bid Set
Civil	C2.6	PHASE III EROSION & SEDIMENT	1	1/20/2021	Addendum 001
Civil	C2.7	PHASE III EROSION & SEDIMENT	1	1/20/2021	Addendum 001
Civil	C2.8	PHASE III EROSION & SEDIMENT	0	12/18/2020	Bid Set
Civil	C2.9	EROSION CONTROL NOTES & DETAILS	1	1/20/2021	Addendum 001
Civil	C2.10	EROSION CONTROL NOTES & DETAILS	1	1/20/2021	Addendum 001
Civil	C2.11	EROSION CONTROL NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C3.0	SITE LAYOUT	0	12/18/2020	Bid Set
Civil	C3.1	SITE LAYOUT	1	1/20/2021	Addendum 001
Civil	C3.2	UTILITY PLAN	0	12/18/2020	Bid Set

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Discipline	Drawing No.	Drawing Title	Revision	Drawing Date	Set Name
Civil	C3.3	UTILITY PLAN	0	12/18/2020	Bid Set
Civil	C3.4	UTILITY PLAN	0	12/18/2020	Bid Set
Civil	C3.5	STRIPING & SIGNAGE PLAN	0	12/18/2020	Bid Set
Civil	C3.6	STRIPING & SIGNAGE PLAN	0	12/18/2020	Bid Set
Civil	C3.7	ROAD WIDENING PLAN	0	12/18/2020	Bid Set
Civil	C3.8	SANITARY SEWER PROFILES	0	12/18/2020	Bid Set
Civil	C3.9	WATER LINE PROFILES	0	12/18/2020	Bid Set
Civil	C3.10	WATER LINE PROFILES	0	12/18/2020	Bid Set
Civil	C4.0	GRADING & DRAINAGE PLAN	0	12/18/2020	Bid Set
Civil	C4.1	GRADING & DRAINAGE PLAN	0	12/18/2020	Bid Set
Civil	C4.2	STORMWATER CONTROL PLAN	0	12/18/2020	Bid Set
Civil	C4.3	BMP DETAIL SHEET POND A1	0	12/18/2020	Bid Set
Civil	C4.4	BMP DETAIL SHEET POND B1	0	12/18/2020	Bid Set
Civil	C4.5	BMP DETAIL SHEET POND C1	0	12/18/2020	Bid Set
Civil	C4.6	BMP DETAIL SHEET POND D1	0	12/18/2020	Bid Set
Civil	C4.7	BMP DETAIL SHEET POND D2	0	12/18/2020	Bid Set
Civil	C4.8	BMP NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C4.9	STORM SEWER PROFILES	0	12/18/2020	Bid Set
Civil	C4.10	STORM SEWER PROFILES	0	12/18/2020	Bid Set
Civil	C4.11	STORM SEWER PROFILES	0	12/18/2020	Bid Set
Civil	C4.12	STORM TABLES	0	12/18/2020	Bid Set
Civil	C5.0	ALTERNATE NO. 1	0	12/18/2020	Bid Set
Civil	C5.1	ALTERNATE NO. 6	0	12/18/2020	Bid Set
Civil	C6.0	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.1	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.2	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.3	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.4	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.5	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.6	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.7	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.8	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.9	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.10	NOTES & DETAILS	0	12/18/2020	Bid Set
Civil	C6.11	NOTES & DETAILS	0	12/18/2020	Bid Set
Electrical	E0.1	LEGENDS, ABBREVIATIONS AND GENERAL NOTES	0	12/18/2020	Bid Set
Electrical	E1.1	OVERALL SITE PLAN - ELECTRICAL	1	1/20/2021	Addendum 001
Electrical	E1.2	UTILITY YARD POWER PLAN	1	1/20/2021	Addendum 001
Electrical	E1.3	FOOTBALL STADIUM LIGHTING PLAN	0	12/18/2020	Bid Set
Electrical	E1.4	BASEBALL/SOFTBALL FIELD LIGHTING PLAN	0	12/18/2020	Bid Set
Electrical	E1.5	ALTERNATE 01 & 04 - SOCCER/TENNIS LIGHTING PLAN	1	1/20/2021	Addendum 001
Electrical	E1.6	HID - SPORTS FIELDS PHOTOMETRY STUDIES	0	12/18/2020	Bid Set
Electrical	E1.7	LED - SPORTS FIELDS PHOTOMETRY STUDIES	0	12/18/2020	Bid Set
Electrical	E2.1A.1	FIRST FLOOR PLAN - PART A - LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.1A.2	FIRST FLOOR PLAN - PART A - POWER	0	12/18/2020	Bid Set
Electrical	E2.1A.3	FIRST FLOOR PLAN - PART A - COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.1B.1	FIRST FLOOR PLAN - PART B - LIGHTING	0	12/18/2020	Bid Set

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Electrical	E2.1B.2	FIRST FLOOR PLAN - PART B - POWER	0	12/18/2020	Bid Set
Electrical	E2.1B.3	FIRST FLOOR PLAN - PART B - COMMUNICATIONS	0	12/18/2020	Bid Set
Electrical	E2.1C.1	FIRST FLOOR PLAN - PART C - LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.1C.2	FIRST FLOOR PLAN - PART C - POWER	1	1/20/2021	Addendum 001
Electrical	E2.1C.3	FIRST FLOOR PLAN-PART C- COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.1D.1	FIRST FLOOR PLAN - PART D - LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.1D.2	FIRST FLOOR PLAN - PART D - POWER	0	12/18/2020	Bid Set
Electrical	E2.1D.3	FIRST FLOOR PLAN-PART D- COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.1E.1	FIRST FLOOR PLAN - PART E - LIGHTING	1	1/20/2021	Addendum 001
Electrical	E2.1E.2	FIRST FLOOR PLAN-PARTE POWER	1	1/20/2021	Addendum 001
Electrical	E2.1E.3	FIRST FLOOR PLAN-PARTE COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.1F.1	FIRST FLOOR PLAN - PART F - LIGHTING	1	1/20/2021	Addendum 001
Electrical	E2.1F.2	FIRST FLOOR PLAN - PART F - POWER	1	1/20/2021	Addendum 001
Electrical	E2.1F.3	FIRST FLOOR PLAN-PARTF- COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.1G.1	FIRST FLOOR PLAN-PARTG LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.1G.2	FIRST FLOOR PLAN-PARTG-POWER	1	1/20/2021	Addendum 001
Electrical	E2.1G.3	FIRST FLOOR PLAN-PARTG-COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.2A.1	SECOND FLOOR PLAN - PART A - LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.2A.2	SECOND FLOOR PLAN - PART A - POWER	0	12/18/2020	Bid Set
Electrical	E2.2A.3	SECOND FLOOR PLAN-PART A- COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.2B.1	SECOND FLOOR PLAN - PART B - LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.2B.2	SECOND FLOOR PLAN PART B - POWER	0	12/18/2020	Bid Set
Electrical	E2.2B.3	SECOND FLOOR PLAN-PART B- COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.2C.1	SECOND FLOOR PLAN - PART C - LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.2C.2	SECOND FLOOR PLAN - PART C - POWER	0	12/18/2020	Bid Set
Electrical	E2.2C.3	SECOND FLOOR PLAN-PART C- COMMUNICATIONS	0	12/18/2020	Bid Set
Electrical	E2.2C.5	EQUIPMENT PLATFORM PLAN -PARTC- LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.2C.6	EQUIPMENT PLATFORM PLAN PART C-POWER & COMMS	1	1/20/2021	Addendum 001
Electrical	E2.2D.1	SECOND FLOOR PLAN PART D - LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.2D.2	SECOND FLOOR PLAN-PART D- POWER	0	12/18/2020	Bid Set
Electrical	E2.2D.3	SECOND FLOOR PLAN-PART D- COMMUNICATIONS	1	1/20/2021	Addendum 001
Electrical	E2.2F.1	EQUIPMENT PLATFORM PLAN -PARTF- LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.2F.2	EQUIPMENT PLATFORM PLAN PART F-POWER & COMMS	1	1/20/2021	Addendum 001
Electrical	E2.2G.1	EQUIPMENT PLATFORM PLAN -PARTG- LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.2G.2	EQUIPMENT PLATFORM PLAN PARTG-POWER & COMMS	1	1/20/2021	Addendum 001
Electrical	E2.3A.1	EQUIPMENT PLATFORM PLAN PART A- LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.3A.2	EQUIPMENT PLATFORM PLAN PART A-POWER & COMMS	1	1/20/2021	Addendum 001
Electrical	E2.3D.1	EQUIPMENT PLATFORM PLAN -PARTD- LIGHTING	0	12/18/2020	Bid Set
Electrical	E2.3D.2	EQUIPMENT PLATFORM PLAN PART D-POWER & COMMS	1	1/20/2021	Addendum 001
Electrical	E2.4	ELECTRICAL ROOF PLAN	0	12/18/2020	Bid Set
Electrical	E3.1	OVERALL FIRST FLOOR PLAN - COMMUNICATIONS ZONES	0	12/18/2020	Bid Set
Electrical	E3.2	OVERALL SECOND FLOOR PLAN- COMMUNICATIONS ZONES	0	12/18/2020	Bid Set
Electrical	E4.1.1	DETAILS	0	12/18/2020	Bid Set
Electrical	E4.1.2	DETAILS	0	12/18/2020	Bid Set
Electrical	E4.2	OUTBUILDINGS - POWER, COMMUNICATIONS AND LIGHTING	1	1/20/2021	Addendum 001
Electrical	E4.3	CTE BUILDING - POWER, COMMUNICATIONS & LIGHTING	1	1/20/2021	Addendum 001
Electrical	E4.4	ENLARGE KITCHEN PLAN	0	12/18/2020	Bid Set



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Electrical	E5.1	POWER ONE-LINE DIAGRAM	1	1/20/2021	Addendum 001
Electrical	E5.2	FIRE ALARM RISER DIAGRAMS	0	12/18/2020	Bid Set
Electrical	E5.3	NETWORK RISER DIAGRAM	0	12/18/2020	Bid Set
Electrical	E6.1	PANELBOARD SCHEDULES	1	1/20/2021	Addendum 001
Electrical	E6.2	PANELBOARD SCHEDULES	1	1/20/2021	Addendum 001
Electrical	E6.3	PANELBOARD SCHEDULES	1	1/20/2021	Addendum 001
Electrical	E6.4	PANELBOARD SCHEDULES	1	1/20/2021	Addendum 001
Electrical	E6.5	PANELBOARD SCHEDULES	1	1/20/2021	Addendum 001
Electrical	E6.6	PANELBOARD SCHEDULES	0	12/18/2020	Bid Set
Electrical	E6.7	PANELBOARD SCHEDULES	0	12/18/2020	Bid Set
Electrical	EPS1.1	AUDITORIUM AV FIRST FLOOR PLAN PARTG	0	12/18/2020	Bid Set
Electrical	EPS2.1	AUDITORIUM AV FIRST FLOOR RCP PARTG	0	12/18/2020	Bid Set
Electrical	EPS3.1	AUDITORIUM AV SECTION PART G	0	12/18/2020	Bid Set
Electrical	EPS4.1	AUDITORIUM AV DETAILS	0	12/18/2020	Bid Set
Electrical	EPS4.2	AUDITORIUM AV DETAILS	0	12/18/2020	Bid Set
Electrical	EPS4.3	AUDITORIUM AV DETAILS	0	12/18/2020	Bid Set
Electrical	EPS4.4	AUDITORIUM AV DETAILS	0	12/18/2020	Bid Set
Electrical	EPS5.1	LOCATION	0	12/18/2020	Bid Set
Electrical	EPS5.2	SPORTS LOUDSPEAKER LOCATIONS	0	12/18/2020	Bid Set
Electrical	EPS5.3	SPORTS DETAILS	0	12/18/2020	Bid Set
Electrical	EPS5.4	SPORTS LOUDSPEAKER DETAILS	0	12/18/2020	Bid Set
Electrical	EPSL	AV LEGEND	0	12/18/2020	Bid Set
Fire Protection	FP0.1	LEGENDS, ABBREVIATIONS AND GENERAL NOTES	0	12/18/2020	Bid Set
Fire Protection	FP2.1.1	FIRST FLOOR PLAN - PART A - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.1.2	FIRST FLOOR PLAN - PART B - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.1.3	FIRST FLOOR PLAN - PART C - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.1.4	FIRST FLOOR PLAN - PART D - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.1.5	FIRST FLOOR PLAN - PART E - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.1.6	FIRST FLOOR PLAN - PART F - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.1.7	FIRST FLOOR PLAN - PART G - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.1.8	CTE FLOOR PLAN - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.2.1	SECOND FLOOR PLAN - PART A - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.2.2	SECOND FLOOR PLAN - PART B - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.2.3	SECOND FLOOR PLAN - PART C - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.2.4	SECOND FLOOR PLAN - PART D - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FP2.2.5	SECOND FLOOR PLAN - PART E - FIRE PROTECTION	0	12/18/2020	Bid Set
Fire Protection	FS.01	FOODSERVICE EQUIPMENT PLAN	1	1/20/2021	Addendum 001
Fire Protection	FS.02	FOOD SERVICE EQUIPMENT SCHEDULE	1	1/20/2021	Addendum 001
Fire Protection	FS.03	FOOD SERVICE PLUMBING PLAN	0	12/18/2020	Bid Set
Fire Protection	FS.04	FOOD SERVICE ELECTRICAL PLAN	0	12/18/2020	Bid Set
Fire Protection	FS.05	FOOD SERVICE EQUIPMENT	0	12/18/2020	Bid Set
Fire Protection	FS.06	COLD STORAGE DETAILS	0	12/18/2020	Bid Set
General	G0.0.1	INTEGRATED MOCKUP PANEL	0	12/18/2020	Bid Set
General	G0.0.2	GENERAL INFORMATION - AIR BARRIER	0	12/18/2020	Bid Set
General	G2.1	GENERAL INFORMATION - AIR BARRIER	0	12/18/2020	Bid Set
IR	IR-1	IRRIGATION PLAN	0	12/18/2020	Bid Set
IR	IR-2	IRRIGATION PLAN	0	12/18/2020	Bid Set

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IR	IR-3	IRRIGATION PLAN	0	12/18/2020	Bid Set
Landscape	L1.0	SOD & SEED PLAN	0	12/18/2020	Bid Set
Landscape	L1.1	SEED & SOD PLAN	0	12/18/2020	Bid Set
Life Safety	LS1.1	CODE SUMMARY BLDG 1-4	0	12/18/2020	Bid Set
Life Safety	LS1.2	CODE SUMMARY BLDG 5	0	12/18/2020	Bid Set
Life Safety	LS1.3	CODE SUMMARY BLDG 6	0	12/18/2020	Bid Set
Life Safety	LS1.4	CODE SUMMARY BLDG 7	0	12/18/2020	Bid Set
Life Safety	LS1.5	CODE SUMMARY BLDG 8	0	12/18/2020	Bid Set
Life Safety	LS2.1	LIFE SAFETY INFORMATION	0	12/18/2020	Bid Set
Life Safety	LS2.2	LIFE SAFETY INFORMATION	0	12/18/2020	Bid Set
Life Safety	LS2.3	LIFE SAFETY INFORMATION	0	12/18/2020	Bid Set
Life Safety	LS2.4	LIFE SAFETY INFORMATION	0	12/18/2020	Bid Set
Life Safety	LS2.5	LIFE SAFETY INFORMATION	0	12/18/2020	Bid Set
Life Safety	LS3.1	UL ASSEMBLIES	0	12/18/2020	Bid Set
Mechanical	M0.1	LEGENDS, ABBREVIATIONS AND GENERAL NOTES	0	12/18/2020	Bid Set
Mechanical	M0.2	SCHEDULES	0	12/18/2020	Bid Set
Mechanical	M0.3	SCHEDULES	0	12/18/2020	Bid Set
Mechanical	M0A.1	- X9ckIMERS __ nrRer iU , __ 1B-1rtCKWU __ TOP of: D&CK tvr. - c0RRUrmeeS0rWNNSS	0	12/18/2020	Bid Set
Mechanical	M0A5	NEW HIGH SCHOOL 591568   SALAMANCA BURLINGTON SCHOOL SYSTEM   S. NC HWY 119, NORTH CAROLINA 2	0	12/18/2020	Bid Set
Mechanical	M1.1	OVERALL FLOOR PLAN	0	12/18/2020	Bid Set
Mechanical	M1.2	CTE BUILDING 'A' - FLOOR PLAN	1	1/20/2021	Addendum 001
Mechanical	M1.3	SITE BUILDINGS - FLOOR PLANS	0	12/18/2020	Bid Set
Mechanical	M2.1.1	FIRST FLOOR PLAN - PART A - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.1.2	FIRST FLOOR PLAN - PART A - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.2.1	FIRST FLOOR PLAN - PART B - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.2.2	FIRST FLOOR PLAN - PART B - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.3.1	FIRST FLOOR PLAN - PART C - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.3.2	FIRST FLOOR PLAN - PART C - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.4.1	FIRST FLOOR PLAN - PART D - DUCTWORK	1	1/20/2021	Addendum 001
Mechanical	M2.4.2	FIRST FLOOR PLAN - PART D - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.5.1	FIRST FLOOR PLAN - PART E - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.5.2	FIRST FLOOR PLAN - PART E - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.6.1	FIRST FLOOR PLAN - PART F - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.6.2	FIRST FLOOR PLAN - PART F - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.7.1	FIRST FLOOR PLAN - PART G - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.7.2	FIRST FLOOR PLAN - PART G - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.8.1	SECOND FLOOR PLAN - PART A - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.8.2	SECOND FLOOR PLAN - PART A - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.9.1	SECOND FLOOR PLAN - PART B - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.9.2	SECOND FLOOR PLAN - PART B - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.10.1	SECOND FLOOR PLAN - PART C - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.10.2	SECOND FLOOR PLAN - PART C - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.11.1	SECOND FLOOR PLAN - PART D - DUCTWORK	0	12/18/2020	Bid Set
Mechanical	M2.11.2	SECOND FLOOR PLAN - PART D - PIPING	0	12/18/2020	Bid Set
Mechanical	M2.12	ROOF PLAN	0	12/18/2020	Bid Set
Mechanical	M3.1	MECHANICAL ROOM AND EQUIPMENT AREA	0	12/18/2020	Bid Set
Mechanical	M3.2	EQUIPMENT PLATFORM - PART A	0	12/18/2020	Bid Set

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Mechanical	M3.3	EQUIPMENT PLATFORM - PART D	0	12/18/2020	Bid Set
Mechanical	M3.4	EQUIPMENT PLATFORM - KITCHEN	0	12/18/2020	Bid Set
Mechanical	M3.5	EQUIPMENT PLATFORM - GYM	0	12/18/2020	Bid Set
Mechanical	M3.6	EQUIPMENT PLATFORM - MUSIC	0	12/18/2020	Bid Set
Mechanical	M4.1	SECTIONS	0	12/18/2020	Bid Set
Mechanical	M4.2	SECTIONS	0	12/18/2020	Bid Set
Mechanical	M4.3	SECTIONS	0	12/18/2020	Bid Set
Mechanical	M4.4	SECTIONS	0	12/18/2020	Bid Set
Mechanical	M5.1	DETAILS	0	12/18/2020	Bid Set
Mechanical	M5.2	DETAILS	0	12/18/2020	Bid Set
Mechanical	M5.3	DETAILS	0	12/18/2020	Bid Set
Mechanical	M5.4	UNIT LAYOUT DETAILS	0	12/18/2020	Bid Set
Mechanical	M5.5	UNIT LAYOUT DETAILS	0	12/18/2020	Bid Set
Mechanical	M6.1	SYSTEM SCHEMATICS	0	12/18/2020	Bid Set
Mechanical	M7.1	CONTROL DIAGRAMS	0	12/18/2020	Bid Set
Mechanical	M7.2	CONTROL DIAGRAMS	0	12/18/2020	Bid Set
Plumbing	P0.1	LEGENDS, ABBREVIATIONS AND GENERAL NOTES	0	12/18/2020	Bid Set
Plumbing	P2.0.1	FOUNDATION PLAN - PART A - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.0.2	FOUNDATION PLAN - PART B - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.0.3	FOUNDATION PLAN - PART C - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.0.4	FOUNDATION PLAN - PART D - PLUMBING	1	1/20/2021	Addendum 001
Plumbing	P2.0.5	FOUNDATION PLAN - PART E - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.0.6	FOUNDATION PLAN - PART F - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.0.7	FOUNDATION PLAN - PART G - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.1.1	FIRST FLOOR PLAN - PART A - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.1.2	FIRST FLOOR PLAN - PART B - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.1.3	FIRST FLOOR PLAN - PART C - SANITARY	1	1/20/2021	Addendum 001
Plumbing	P2.1.4	FIRST FLOOR PLAN - PART D - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.1.5	FIRST FLOOR PLAN - PART E - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.1.6	FIRST FLOOR PLAN - PART F - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.1.7	FIRST FLOOR PLAN - PART G - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.1.8	FIRST FLOOR PLAN - PART A - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.1.9	FIRST FLOOR PLAN - PART B - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.1.10	FIRST FLOOR PLAN - PART C - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.1.11	FIRST FLOOR PLAN - PART D - DOMESTIC	1	1/20/2021	Addendum 001
Plumbing	P2.1.12	FIRST FLOOR PLAN - PART E - DOMESTIC	1	1/20/2021	Addendum 001
Plumbing	P2.1.13	FIRST FLOOR PLAN - PART F - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.1.14	FIRST FLOOR PLAN - PART G - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.2.1	SECOND FLOOR PLAN - PART A - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.2.2	SECOND FLOOR PLAN - PART B - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.2.3	SECOND FLOOR PLAN - PART C - SANITARY	1	1/20/2021	Addendum 001
Plumbing	P2.2.4	SECOND FLOOR PLAN - PART D - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.2.5	SECOND FLOOR PLAN - PART E - SANITARY	0	12/18/2020	Bid Set
Plumbing	P2.2.6	SECOND FLOOR PLAN - PART A - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.2.7	SECOND FLOOR PLAN - PART B - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.2.8	SECOND FLOOR PLAN - PART C - DOMESTIC	1	1/20/2021	Addendum 001
Plumbing	P2.2.9	SECOND FLOOR PLAN - PART D - DOMESTIC	0	12/18/2020	Bid Set



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Plumbing	P2.2.10	SECOND FLOOR PLAN - PART E - DOMESTIC	0	12/18/2020	Bid Set
Plumbing	P2.3	PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.4	CONCESSION STAND C FLOOR PLANS - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.5	CONCESSION STAND D FLOOR PLANS - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.6	CTE BUILDING FLOOR PLANS - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P2.11	MECHANICAL PLATFORM PLANS - SANITARY	0	12/18/2020	Bid Set
Plumbing	P3.1.1	ROOF PLAN - PART A - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P3.1.2	ROOF PLAN - PART B - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P3.1.3	ROOF PLAN - PART C - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P3.1.4	ROOF PLAN - PART D - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P3.1.5	ROOF PLAN - PART E - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P3.1.6	ROOF PLAN - PART F - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P3.1.7	ROOF PLAN - PART G - PLUMBING	0	12/18/2020	Bid Set
Plumbing	P4.1	ENLARGED MECHANICAL ROOM PLAN	1	1/20/2021	Addendum 001
Plumbing	P4.2	ENLARGED PLANS	0	12/18/2020	Bid Set
Plumbing	P4.3	ENLARGED PLANS	0	12/18/2020	Bid Set
Plumbing	P4.4	ENLARGED PLANS	0	12/18/2020	Bid Set
Plumbing	P4.5	ENLARGED PLANS	0	12/18/2020	Bid Set
Plumbing	P4.6	ENLARGED KITCHEN PLAN	1	1/20/2021	Addendum 001
Plumbing	P4.7	ENLARGED KITCHEN PLAN	1	1/20/2021	Addendum 001
Plumbing	P4.8	ENLARGED KITCHEN PLAN	0	12/18/2020	Bid Set
Plumbing	P4.9	RISER DIAGRAMS	0	12/18/2020	Bid Set
Plumbing	P5.1	DETAILS	0	12/18/2020	Bid Set
Plumbing	P5.2	DETAILS	0	12/18/2020	Bid Set
Plumbing	P6.1	SCHEDULES	0	12/18/2020	Bid Set
Plumbing	P7.1	STORM RISER DIAGRAM	0	12/18/2020	Bid Set
Plumbing	P51.1	AUDIO	0	12/18/2020	Bid Set
Plumbing	P51.2	AUDITORIUM AUDIO FLOW 2	0	12/18/2020	Bid Set
Plumbing	P51.3	FLOW 3	0	12/18/2020	Bid Set
Plumbing	P51.4	AUDITORIUM VIDEO FLOW	0	12/18/2020	Bid Set
Plumbing	P51.5	AUDITORIUM CONTROL FLOW	0	12/18/2020	Bid Set
Plumbing	P51.6	CLASSROOM AUDIO FLOW	0	12/18/2020	Bid Set
Plumbing	P51.7	SPORTS AUDIO FLOW	0	12/18/2020	Bid Set
Structural	S0.0.1	GENERAL NOTES AND LEGENDS	1	1/20/2021	Addendum 001
Structural	S0.0.2	SCHEDULE OF SPECIAL INSPECTIONS	0	12/18/2020	Bid Set
Structural	S0.0.3	SNOW LOADING	0	12/18/2020	Bid Set
Structural	S0.0.4	WIND PRESSURE DIAGRAM	0	12/18/2020	Bid Set
Structural	S1.1.1	FOUNDATION PLAN - PART A	1	1/20/2021	Addendum 001
Structural	S1.1.2	FOUNDATION PLAN - PART B	0	12/18/2020	Bid Set
Structural	S1.1.3	FOUNDATION PLAN - PART C	0	12/18/2020	Bid Set
Structural	S1.1.4	FOUNDATION PLAN - PART D	0	12/18/2020	Bid Set
Structural	S1.1.5	FOUNDATION PLAN - PART E	0	12/18/2020	Bid Set
Structural	S1.1.6	FOUNDATION PLAN - PART F	0	12/18/2020	Bid Set
Structural	S1.1.7	FOUNDATION PLAN - PART G	1	1/20/2021	Addendum 001
Structural	S1.1.8	PARTIAL FOUNDATION PLAN - PART E	0	12/18/2020	Bid Set
Structural	S1.1.9	FOUNDATION PLANS - SITE BUILDINGS	1	1/20/2021	Addendum 001
Structural	S1.1.10	SLAB CONTROL JOINT PLAN	0	12/18/2020	Bid Set

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Discipline	Drawing No.	Drawing Title	Revision	Drawing Date	Set Name
Structural	S1.1.11	SLAB CONTROL JOINT PLANS - SITE	0	12/18/2020	Bid Set
Structural	S2.1.1	2ND FLOOR FRAMING PLAN - PART A	0	12/18/2020	Bid Set
Structural	S2.1.2	2ND FLOOR FRAMING PLAN - PART B	0	12/18/2020	Bid Set
Structural	S2.1.3	2ND FLOOR FRAMING PLAN - PART C	0	12/18/2020	Bid Set
Structural	S2.1.4	2ND FLOOR FRAMING PLAN - PART D	0	12/18/2020	Bid Set
Structural	S2.1.5	2ND FLOOR AND LOW ROOF FRAMING PLAN - PART E	0	12/18/2020	Bid Set
Structural	S2.1.6	LOW ROOF AND MECHANICAL MEZZ FRAMING - PART F	0	12/18/2020	Bid Set
Structural	S2.1.7	MECHANICAL MEZZ FRAMING PLAN - PART G	0	12/18/2020	Bid Set
Structural	S2.2.1	MECHANICAL MEZZANINE FRAMING PLAN - PART A	0	12/18/2020	Bid Set
Structural	S2.2.2	MECHANICAL MEZZANINE FRAMING PLAN - PART D	0	12/18/2020	Bid Set
Structural	S2.3.1	ROOF FRAMING PLAN - PART A	0	12/18/2020	Bid Set
Structural	S2.3.2	ROOF FRAMING PLAN - PART B	0	12/18/2020	Bid Set
Structural	S2.3.3	ROOF FRAMING PLAN - PART C	0	12/18/2020	Bid Set
Structural	S2.3.4	ROOF FRAMING PLAN - PART D	0	12/18/2020	Bid Set
Structural	S2.3.5	ROOF FRAMING PLAN - PART E	0	12/18/2020	Bid Set
Structural	S2.3.6	ROOF FRAMING PLAN - PART F	0	12/18/2020	Bid Set
Structural	S2.3.7	ROOF FRAMING PLAN - PART G	0	12/18/2020	Bid Set
Structural	S2.3.8	ROOF FRAMING PLAN - SITE BUILDINGS	1	1/20/2021	Addendum 001
Structural	S3.0.1	TYPICAL FOUNDATION DETAILS	0	12/18/2020	Bid Set
Structural	S3.0.2	TYPICAL SLAB DETAILS	0	12/18/2020	Bid Set
Structural	S3.1.1	FOUNDATION SECTIONS	0	12/18/2020	Bid Set
Structural	S3.1.2	FOUNDATION SECTIONS	0	12/18/2020	Bid Set
Structural	S4.0.1	TYPICAL MASONRY WALL AND LINTEL DETAILS	0	12/18/2020	Bid Set
Structural	S4.0.2	TYPICAL FRAMING DETAILS	0	12/18/2020	Bid Set
Structural	S4.0.3	TYPICAL FRAMING DETAILS AND DECK SCHEDULE	0	12/18/2020	Bid Set
Structural	S4.1.1	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.2	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.3	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.4	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.5	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.6	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.7	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.8	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.9	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.10	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S4.1.11	FRAMING SECTIONS	0	12/18/2020	Bid Set
Structural	S5.1.1	PORTAL DETAILS	0	12/18/2020	Bid Set
Structural	S5.1.2	PORTAL DETAILS	0	12/18/2020	Bid Set
Structural	S5.1.3	PORTAL DETAILS	0	12/18/2020	Bid Set
Structural	S5.1.4	PORTAL DETAILS	0	12/18/2020	Bid Set
Structural	S5.1.5	PORTAL DETAILS	0	12/18/2020	Bid Set
Structural	S5.1.6	PORTAL DETAILS	0	12/18/2020	Bid Set
Structural	S6.1.1	JOIST LOADING DIAGRAMS	0	12/18/2020	Bid Set

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Division	Number	Description	Revision	Issued Date	Set
01 - General Requirements	10200	General Sitework Requirements	1	1/20/2021	Addendum 001
01 - General Requirements	11000	Summary need Cx	0	12/18/2020	Bid Set
01 - General Requirements	12100	Allowances	0	12/18/2020	Bid Set
01 - General Requirements	12200	Unit Prices	0	12/18/2020	Bid Set
01 - General Requirements	12300	Alternates	1	1/20/2021	Addendum 001
01 - General Requirements	12500	Substitution Procedures	0	12/18/2020	Bid Set
01 - General Requirements	12900	Payment Procedures	0	12/18/2020	Bid Set
01 - General Requirements	13100	Project Management and Coordination	0	12/18/2020	Bid Set
01 - General Requirements	13300	Submittals Procedures	0	12/18/2020	Bid Set
01 - General Requirements	14000	Quality Requirements	0	12/18/2020	Bid Set
01 - General Requirements	14200	References	0	12/18/2020	Bid Set
01 - General Requirements	14520	Testing, Adjusting and Balancing for HVAC	0	12/18/2020	Bid Set
01 - General Requirements	15000	Temporary Facilities and Controls	0	12/18/2020	Bid Set
01 - General Requirements	16000	Product Requirements	0	12/18/2020	Bid Set
01 - General Requirements	17300	Execution	0	12/18/2020	Bid Set
01 - General Requirements	17419	Construction Waste Management and Disposal	0	12/18/2020	Bid Set
01 - General Requirements	17700	Closeout Procedures	0	12/18/2020	Bid Set
01 - General Requirements	17823	Operation and Maintenance Data	0	12/18/2020	Bid Set
01 - General Requirements	18119	Indoor Air Quality Requirements	0	12/18/2020	Bid Set
01 - General Requirements	18317	Exterior Building Enclosure Air Barrier Requirements	0	12/18/2020	Bid Set
02 - Existing Conditions	24113	Selective Site Demolition	0	12/18/2020	Bid Set
02 - Existing Conditions	24116	Structural Demolition	0	12/18/2020	Bid Set
03 - Concrete	33000	Cast-In-Place Concrete	1	1/20/2021	Addendum 001
03 - Concrete	33100	Polished Concrete Floor Finish	1	1/20/2021	Addendum 001
03 - Concrete	33519	Colored Concrete Finishing	0	12/18/2020	Bid Set
04 - Masonry	42000	Unit Masonry	0	12/18/2020	Bid Set
05 - Metals	51200	Structural Steel Framing	0	12/18/2020	Bid Set
05 - Metals	52100	Steel Joist Framing	0	12/18/2020	Bid Set
05 - Metals	53100	Steel Decking	0	12/18/2020	Bid Set
05 - Metals	54000	Cold-Formed Steel Framing	0	12/18/2020	Bid Set
05 - Metals	54400	Cold-Formed Metal Trusses	0	12/18/2020	Bid Set
05 - Metals	55000	Metal Fabrications	0	12/18/2020	Bid Set
05 - Metals	55100	Metal Stairs	0	12/18/2020	Bid Set
05 - Metals	55213	Pipe and Tube Railing	0	12/18/2020	Bid Set
06 - Wood, Plastics, and Composites	60501	Rough Carpentry for Roofing	0	12/18/2020	Bid Set
06 - Wood, Plastics, and Composites	61000	Rough Carpentry	0	12/18/2020	Bid Set
06 - Wood, Plastics, and Composites	61600	Sheathing	0	12/18/2020	Bid Set
06 - Wood, Plastics, and Composites	64023	Interior Architectural Woodwork	1	1/20/2021	Addendum 001
07 - Thermal and Moisture Protection	71326	Self-Adhering Sheet Waterproofing	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	72100	Thermal Insulation	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	72120	Board Roof Insulation	0	12/18/2020	Bid Set



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07 - Thermal and Moisture Protection	72727	Spray Polyurethane Foam Air Barrier	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	73110	Asphalt Shingle Roof System	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	74100	Sheet Metal Roofing System	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	75400	Thermoplastic Single-Ply Roof System	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	76200	Sheet Metal Roof Flashings	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	77200	Roof Accessories	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	78413	Penetration Firestopping	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	78426	Thermal Barriers for Plastic	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	79200	Joint Sealants	0	12/18/2020	Bid Set
07 - Thermal and Moisture Protection	79500	Expansion Control	0	12/18/2020	Bid Set
08 - Openings	08 7100	Door Hardware	0	12/18/2020	Bid Set
08 - Openings	81113	Steel Doors and Frames	0	12/18/2020	Bid Set
08 - Openings	81416	Flush Wood Doors	0	12/18/2020	Bid Set
08 - Openings	81613	Fiberglass Reinforces Polyester (FRP) Flush Doors	0	12/18/2020	Bid Set
08 - Openings	83113	Access Doors and Frames	0	12/18/2020	Bid Set
08 - Openings	83313	Coiling Counter Doors	0	12/18/2020	Bid Set
08 - Openings	83323	Overhead Coiling Doors	0	12/18/2020	Bid Set
08 - Openings	83326	Overhead Coiling Grilles	0	12/18/2020	Bid Set
08 - Openings	84000	Aluminum Framed Entrances and Storefront	0	12/18/2020	Bid Set
08 - Openings	88000	Glazing	0	12/18/2020	Bid Set
08 - Openings	88300	Mirrors	0	12/18/2020	Bid Set
08 - Openings	89000	Louvers and Vents	0	12/18/2020	Bid Set
09 - Finishes	92116	Gypsum Board Assemblies	0	12/18/2020	Bid Set
09 - Finishes	92216	Cold-Formed Steel Framing - Non-Structural (CFSF-NS)	0	12/18/2020	Bid Set
09 - Finishes	92900	Gypsum Board	0	12/18/2020	Bid Set
09 - Finishes	93000	Tiling	0	12/18/2020	Bid Set
09 - Finishes	95113	Acoustical Panel Ceilings	1	1/20/2021	Addendum 001
09 - Finishes	96453	Stage Flooring Assembly	0	12/18/2020	Bid Set
09 - Finishes	96466	Wood Athletic Flooring	1	1/20/2021	Addendum 001
09 - Finishes	96467	Wood Dance Flooring Assemblies	1	1/20/2021	Addendum 001
09 - Finishes	96513	Resilient Base & Accessories	1	1/20/2021	Addendum 001
09 - Finishes	96519	Resilient Tile Flooring	1	1/20/2021	Addendum 001
09 - Finishes	96566	Rubber Athletic Flooring	1	1/20/2021	Addendum 001
09 - Finishes	96723	Resinous Flooring and Wall Systems	1	1/20/2021	Addendum 001
09 - Finishes	96816	Sheet Carpeting	1	1/20/2021	Addendum 001
09 - Finishes	97713	Stretched-Fabric Wall Systems	0	12/18/2020	Bid Set
09 - Finishes	98433	Sound Absorbing and Diffusing Wall Units	0	12/18/2020	Bid Set
09 - Finishes	98436	Sound Absorbing Ceiling Units	0	12/18/2020	Bid Set
09 - Finishes	99100	Painting	0	12/18/2020	Bid Set
10 - Specialties	101100	Visual Display Surfaces	0	12/18/2020	Bid Set
10 - Specialties	101200	Display Cases	0	12/18/2020	Bid Set

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10 - Specialties	101400	Signage	0	12/18/2020	Bid Set
10 - Specialties	102113	Solid-Polymer Toilet Compartments	0	12/18/2020	Bid Set
10 - Specialties	102123	Cubicle Curtain and Track	0	12/18/2020	Bid Set
10 - Specialties	102600	Wall Protection	0	12/18/2020	Bid Set
10 - Specialties	102800	Toilet, Bath, and Laundry Accessories	0	12/18/2020	Bid Set
10 - Specialties	104400	Fire Protection Specialties	0	12/18/2020	Bid Set
10 - Specialties	105113	Metal Lockers	0	12/18/2020	Bid Set
10 - Specialties	107300	Protective Covers	1	1/20/2021	Addendum 001
10 - Specialties	107500	Flagpoles	0	12/18/2020	Bid Set
11 - Equipment	111300	Loading Dock Equipment	0	12/18/2020	Bid Set
11 - Equipment	112300	Commercial Laundry Equipment	0	12/18/2020	Bid Set
11 - Equipment	113100	Residential Appliances	0	12/18/2020	Bid Set
11 - Equipment	114000	Foodservice Equipment	1	1/20/2021	Addendum 001
11 - Equipment	116143	Stage Curtains	0	12/18/2020	Bid Set
11 - Equipment	116613	Ballet Barres	0	12/18/2020	Bid Set
11 - Equipment	116623	Gymnasium Equipment	0	12/18/2020	Bid Set
11 - Equipment	119513	Kilns	0	12/18/2020	Bid Set
12 - Furnishings	122113	Horizontal Louver Blinds	0	12/18/2020	Bid Set
12 - Furnishings	123216	Manufactured Plastic-Laminate-Faced Casework	1	1/20/2021	Addendum 001
12 - Furnishings	123553	Laboratory Casework	1	1/20/2021	Addendum 001
12 - Furnishings	123616	Metal Countertops	0	12/18/2020	Bid Set
12 - Furnishings	126100	Fixed Audience Seating	0	12/18/2020	Bid Set
12 - Furnishings	126600	Telescoping Stands	0	12/18/2020	Bid Set
13 - Special Construction	133416	Grandstands and Press Box	1	1/20/2021	Addendum 001
13 - Special Construction	133423	Greenhouse Structure	0	12/18/2020	Bid Set
14 - Conveying Equipment	142100	Electric Traction Machine-Roomless Elevators	0	12/18/2020	Bid Set
21 - Fire Suppression	210500	Common Work Results for Fire-Suppression	0	12/18/2020	Bid Set
21 - Fire Suppression	211000	Water-Based Fire-Suppression Systems	0	12/18/2020	Bid Set
22 - Plumbing	220500	Common Work Results for Plumbing Piping	0	12/18/2020	Bid Set
22 - Plumbing	220513	Motors for Plumbing Equipment	0	12/18/2020	Bid Set
22 - Plumbing	220516	Expansion Fittings and Loops for Plumbing Piping	0	12/18/2020	Bid Set
22 - Plumbing	220517	Sleeves and Sleeve Seals for Plumbing Piping	0	12/18/2020	Bid Set
22 - Plumbing	220519	Meters and Gages for Plumbing Piping	0	12/18/2020	Bid Set
22 - Plumbing	220523	General Duty Valves for Plumbing Piping	0	12/18/2020	Bid Set
22 - Plumbing	220529	Hangers and Supports for Plumbing Piping	0	12/18/2020	Bid Set
22 - Plumbing	220553	Identification for Plumbing Piping and Equipment	0	12/18/2020	Bid Set
22 - Plumbing	220700	Plumbing Insulation	0	12/18/2020	Bid Set
22 - Plumbing	221113	Facility Natural Gas Piping	0	12/18/2020	Bid Set
22 - Plumbing	221116	Domestic Water Piping	0	12/18/2020	Bid Set
22 - Plumbing	221119	Domestic Water Piping Specialties	0	12/18/2020	Bid Set
22 - Plumbing	221125	Circulating Pumps	0	12/18/2020	Bid Set

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22 - Plumbing	221316	Sanitary Waste and Vent Piping	0	12/18/2020	Bid Set
22 - Plumbing	221319	Sanitary Waste Piping Specialties	0	12/18/2020	Bid Set
22 - Plumbing	221413	Facility Storm Drainage Piping	0	12/18/2020	Bid Set
22 - Plumbing	221423	Storm Drainage Piping Specialties	0	12/18/2020	Bid Set
22 - Plumbing	221429	Sump Pumps	0	12/18/2020	Bid Set
22 - Plumbing	223300	Electric Water Heaters	0	12/18/2020	Bid Set
22 - Plumbing	223400	Fuel-Fired, Domestic-Water Heaters	0	12/18/2020	Bid Set
22 - Plumbing	224000	Plumbing Fixtures	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230500	Common Work Results for HVAC	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230513	Motors for HVAC Equipment	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230514	Variable Speed Drives	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230516	Expansion Fittings and Loops for HVAC Piping	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230517	Sleeves and Sleeve Seals for HVAC Piping	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230519	Meters and Gauges for HVAC Piping	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230523	General Duty Valves for HVAC Piping	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230529	Hangers and Supports for HVAC Piping and Equipment	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230533	Heat Tracing for HVAC Piping	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230553	Identification for HVAC Piping and Equipment	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230700	HVAC Insulation	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230900	Building Automation System	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	230993	Sequence of Control For HVAC	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	232113	Hydronic Piping	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	232123	Hydronic Pumps	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	232500	HVAC Water Treatment	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	233113	Metal Ducts	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	233300	Air Duct Accessories	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	233424	Specialty Exhaust Systems	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	233600	Air Terminal Units	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	233713	Diffusers Registers and Grilles	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	233716	Fabric Ducts	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	233723	HVAC Gravity Ventilators	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	234100	Particulate Air Filtration	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	235100	Breechings Chimneys and Stacks	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	235216	Condensing Boilers	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	236426	Air-Cooled, Rotary-Screw Water Chillers	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	237313	Modular Indoor Central Station Air Handling Units	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	237433	Energy Recovery Units	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	238123	Computer Room Air Conditioners	1	1/20/2021	Addendum 001
23 - Heating, Ventilating, and Air Conditioning (HVAC)	238126	Ductless Split-System Air Conditioning Units	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	238127	Split-System Air Conditioners	0	12/18/2020	Bid Set
23 - Heating, Ventilating, and Air Conditioning (HVAC)	238240	Electric Unit Heaters	0	12/18/2020	Bid Set



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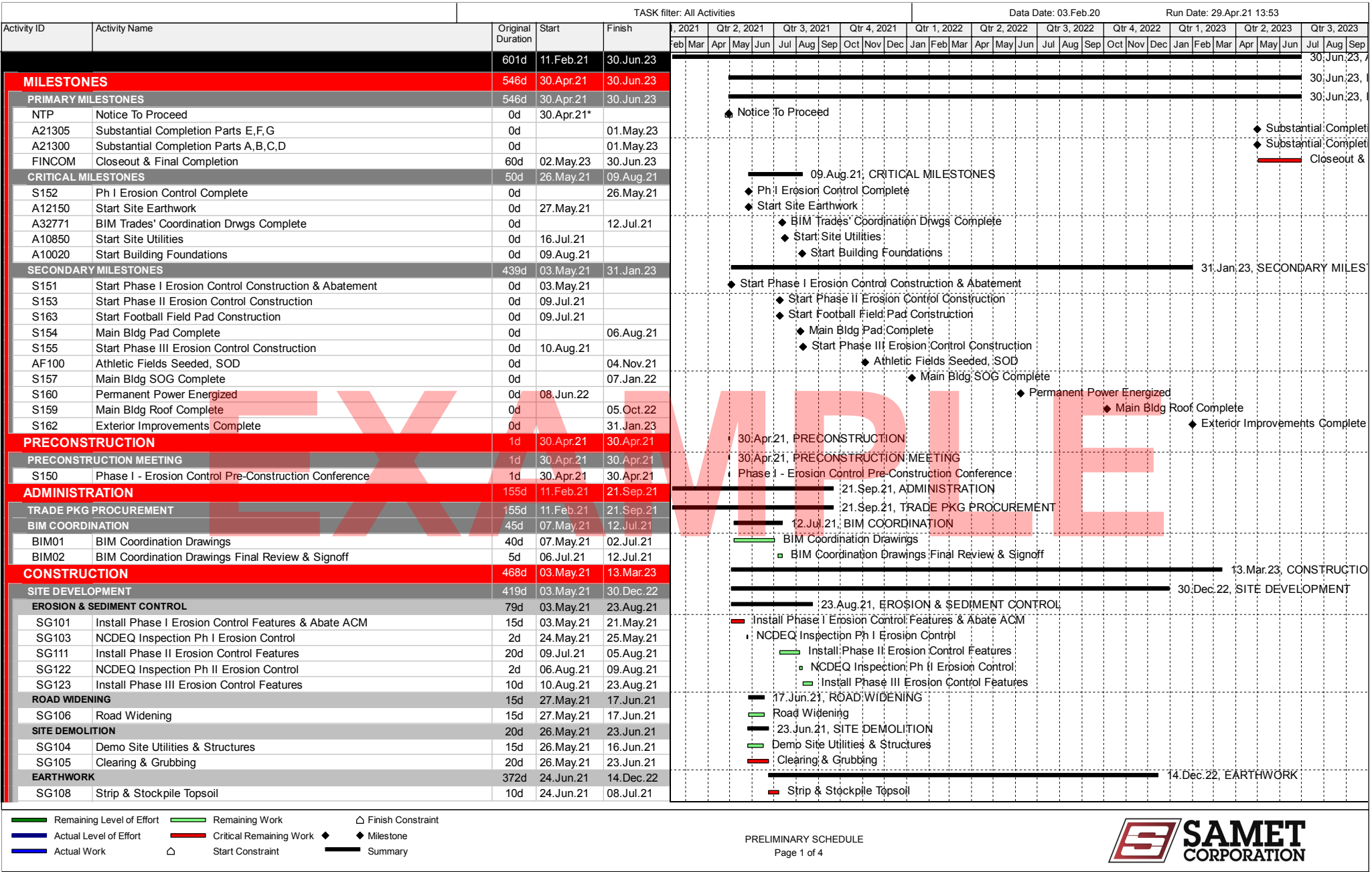
Division	Number	Description	Revision	Issued Date	Set
26 - Electrical	260519	Low-Voltage Electrical Power Conductors and Cables	1	1/20/2021	Addendum 001
26 - Electrical	260526	Grounding and Bonding for Electrical Systems	0	12/18/2020	Bid Set
26 - Electrical	260529	Hangers and Supports for Electrical Systems	0	12/18/2020	Bid Set
26 - Electrical	260533	Raceways and Boxes for Electrical Systems	0	12/18/2020	Bid Set
26 - Electrical	260536	Cable Trays for Electrical Systems	0	12/18/2020	Bid Set
26 - Electrical	260544	Sleeves and Sleeve Seals for Electrical Raceways and Cabling	0	12/18/2020	Bid Set
26 - Electrical	260553	Identification for Electrical Systems	0	12/18/2020	Bid Set
26 - Electrical	260572	Overcurrent Protective Device Short-Circuit Study	0	12/18/2020	Bid Set
26 - Electrical	260573	Overcurrent Protective Device Coordination Study	0	12/18/2020	Bid Set
26 - Electrical	260574	Overcurrent Protective Device Arc-Flash Study	0	12/18/2020	Bid Set
26 - Electrical	260923	Lighting Control Devices	0	12/18/2020	Bid Set
26 - Electrical	262200	Low-Voltage Transformers	0	12/18/2020	Bid Set
26 - Electrical	262413	Switchboards	0	12/18/2020	Bid Set
26 - Electrical	262416	Panelboards	0	12/18/2020	Bid Set
26 - Electrical	262726	Wiring Devices	0	12/18/2020	Bid Set
26 - Electrical	262816	Enclosed Switches and Circuit Breakers	0	12/18/2020	Bid Set
26 - Electrical	263214	Engine Generators Diesel	0	12/18/2020	Bid Set
26 - Electrical	263600	Automatic Transfer Switches	0	12/18/2020	Bid Set
26 - Electrical	264313	Surge Protection Devices	0	12/18/2020	Bid Set
26 - Electrical	265119	LED Interior Lighting	0	12/18/2020	Bid Set
26 - Electrical	265619	LED Exterior Lighting	0	12/18/2020	Bid Set
27 - Communications	274116	Integrated Av Communications	0	12/18/2020	Bid Set
27 - Communications	270500	Common Work Results for Communications Systems	0	12/18/2020	Bid Set
27 - Communications	271100	Communications Equipment Room Fittings	0	12/18/2020	Bid Set
27 - Communications	271300	Communications Backbone Cabling	0	12/18/2020	Bid Set
27 - Communications	271500	Communications Horizontal Cabling	0	12/18/2020	Bid Set
27 - Communications	275116	Public Address System	0	12/18/2020	Bid Set
27 - Communications	275515	Bi-Directional Amplification System	0	12/18/2020	Bid Set
28 - Electronic Safety and Security	283111	Emergency Voice Communication Fire Alarm System	0	12/18/2020	Bid Set
31 - Earthwork	312000	Earthwork	1	1/20/2021	Addendum 001
31 - Earthwork	311000	Site Clearing	1	1/20/2021	Addendum 001
31 - Earthwork	312500	Erosion Control	0	12/18/2020	Bid Set
31 - Earthwork	313116	Termite Control	0	12/18/2020	Bid Set
32 - Exterior Improvements	321900	Exterior Athletic Equipment	0	12/18/2020	Bid Set
32 - Exterior Improvements	323113	Chain Link Fences and Gates (Galvanized)	0	12/18/2020	Bid Set
32 - Exterior Improvements	321216	Asphalt Pavement	0	12/18/2020	Bid Set
32 - Exterior Improvements	321313	Site Concrete	0	12/18/2020	Bid Set
32 - Exterior Improvements	321700	Pavement Markings, Signs and Specialties	0	12/18/2020	Bid Set
32 - Exterior Improvements	321823	Athletic Surfacing	0	12/18/2020	Bid Set
32 - Exterior Improvements	328400	Irrigation System	0	12/18/2020	Bid Set
32 - Exterior Improvements	329200	Lawns and Grasses	0	12/18/2020	Bid Set

Name of Project  
City of Project  
Samet Project # XX-XXX



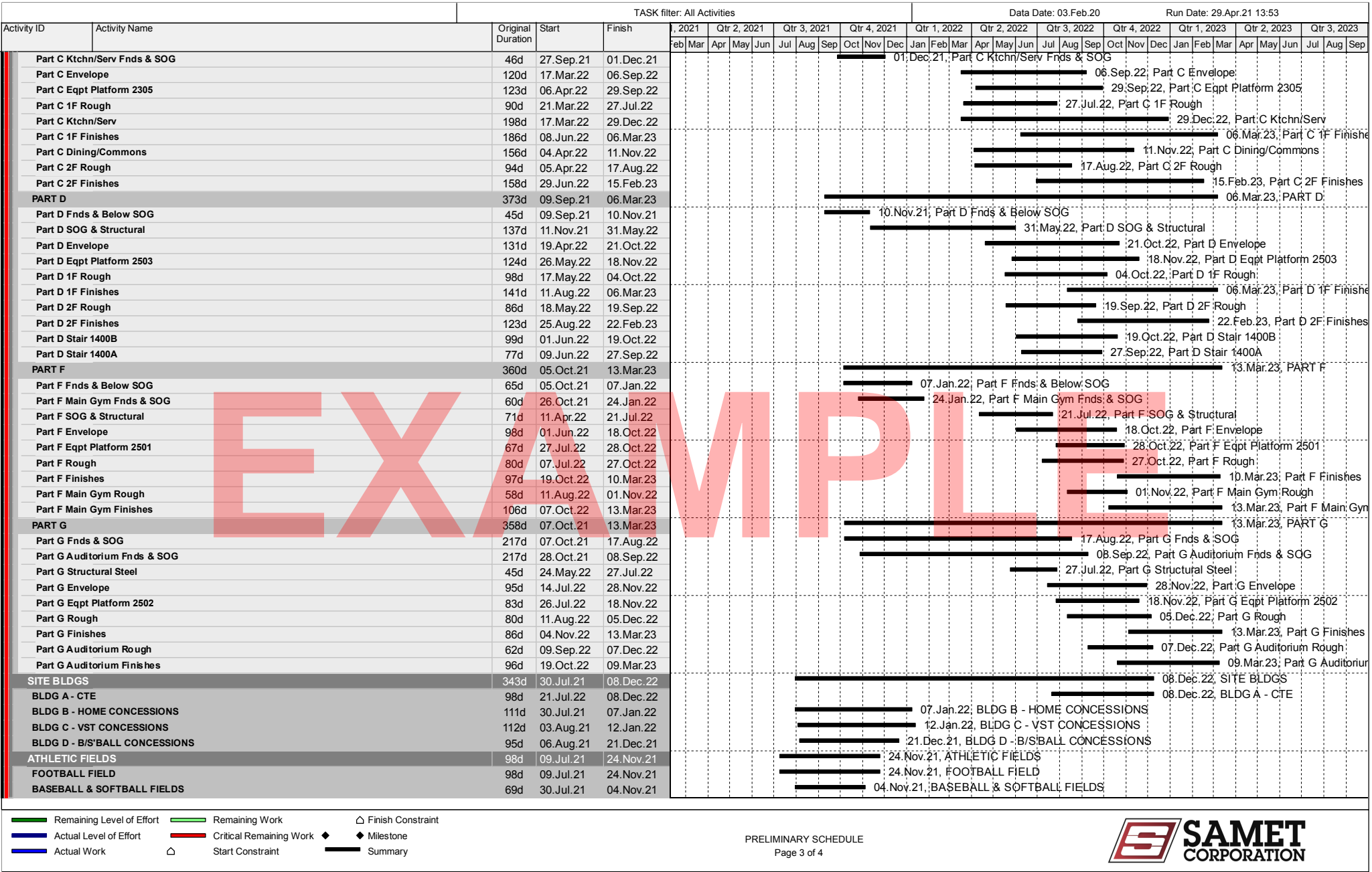
Division	Number	Description	Revision	Issued Date	Set
32 - Exterior Improvements	329300	Exterior plants	0	12/18/2020	Bid Set
33 - Utilities	331000	Exterior Water System	0	12/18/2020	Bid Set
33 - Utilities	333000	Sanitary Sewerage	0	12/18/2020	Bid Set
33 - Utilities	334100	Storm Drainage	0	12/18/2020	Bid Set
59 - Unknown	591568	Architects Project No	1	12/18/2020	Bid Set

EXAMPLE





[illegible]



			TASK filter: All Activities												Data Date: 03.Feb.20												Run Date: 29.Apr.21 13:53													
Activity ID	Activity Name	Original Duration	Start	Finish	Qtr 1, 2021			Qtr 2, 2021			Qtr 3, 2021			Qtr 4, 2021			Qtr 1, 2022			Qtr 2, 2022			Qtr 3, 2022			Qtr 4, 2022			Qtr 1, 2023			Qtr 2, 2023			Qtr 3, 2023					
					Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep			
FINAL INSPECTIONS		97d	09.Dec.22	01.May.23																																				
PARTS A,B,C,D		97d	09.Dec.22	01.May.23																																				
A32590	Health Departments Final Inspections	10d	09.Dec.22	22.Dec.22																																				
A19730	Testing Fire Alarm System	10d	06.Jan.23	20.Jan.23																																				
A19930	Final Inspections Fire Sprinkler System	10d	06.Jan.23	20.Jan.23																																				
A20010	Prelim Inspect Elevator C	10d	23.Jan.23	03.Feb.23																																				
A20070	Elevator Inspections	2d	06.Feb.23	07.Feb.23																																				
A20120	Final MEP Inspections Parts A, B, C, D	10d	09.Feb.23	22.Feb.23																																				
A20170	Fire Marshall Inspections Parts A, B, C, D	5d	23.Feb.23	01.Mar.23																																				
A20200	City/County Inspections Parts A, B, C, D	10d	02.Mar.23	15.Mar.23																																				
SAMET	Samet Quality Inspections	32d	16.Mar.23	01.May.23																																				
PARTS E,F,G		23d	13.Feb.23	15.Mar.23																																				
A25860	Final MEP Inspections Parts E,F,G	10d	13.Feb.23	24.Feb.23																																				
A25870	Fire Marshall Inspections Parts E,F,G	5d	23.Feb.23	01.Mar.23																																				
A25880	City/County Inspections Parts E,F,G	10d	02.Mar.23	15.Mar.23																																				

EXAMPLE

Finish ConstraintMilestoneSummary



**ATTACHMENT E**  
**MBE DOCUMENTATION FOR CONTRACT PAYMENTS**

Prime Contractor/Architect: \_\_\_\_\_

Address & Phone: \_\_\_\_\_

Project Name: \_\_\_\_\_

Pay Application #: \_\_\_\_\_ Period: \_\_\_\_\_

The following is a list of payments to be made to minority business contractors on this project for the above-mentioned period.

Firm Name	*Minority Category	Payment Amount	Owner Use Only
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

\*Minority categories: Black, African American (B), Hispanic (H), Asian American (A), American Indian (I), Female (F), Socially and Economically Disadvantaged (D)

Date: \_\_\_\_\_

Approved/Certified By: \_\_\_\_\_

Name

Title

Signature

**\*\*THIS DOCUMENT MUST BE SUBMITTED WITH EACH PAY REQUEST & FINAL PAYMENT\*\***

Name of Project  
City of Project  
Samet Project # XX-XXX



## TRADE PARTNER PRE-AWARD MEETING

<XXX> <Trade Package Name> (Insert Division(s)) / (Insert Package Name)	
Project Name:	<Project Name>
Project Number:	XX-XXX Meeting Date/ Time: XX/XX/XXXX XX:XX am/pm

**Attendees:** List all meeting participants or attach sign-in sheet

Name	Company

Name	Company

### 1. Bid Proposal

Bid Amount \$ \_\_\_\_\_

#### Standard Alternates

Alternate No. 1:	\$	
Alternate No. 2:	\$	
Alternate No. 3:	\$	
Alternate No. 4:	\$	
Alternate No. 5:	\$	
Alternate No. 6:	\$	
	\$	
	\$	
	\$	
	\$	
	\$	

#### Other Alternates

	\$	
	\$	
	\$	
	\$	
	\$	
	\$	
	\$	
	\$	
	\$	
	\$	

Name of Project  
City of Project  
Samet Project # XX-XXX



Voluntary Alternates

☐ Yes ☐ No

**Unit prices**

<u>Item</u>	<u>Price</u>	<u>Unit Measure</u>
	\$0	HR

**Labor Rates**

<u>Position Description</u>	<u>Price</u>	<u>Unit Measure</u>
	\$	
	\$	
	\$	
	\$	
	\$	

**Allowances** – Included in base proposal amount? ☐ Yes ☐ No

<u>#</u>	<u>Description</u>	<u>Cost</u>
1		
2		
3		

Permits are included in the base proposal amount? ☐ Yes ☐ No

**See Remarks for any comments regarding Section 1?** ☐ Yes ☐ No

**2. General Conditions**

Indicate document has been read/reviewed, understood and included as part of the bid.

	<u>Document Date</u>	<u>Yes</u>	<u>No</u>	<u>N/A</u>
a. Bidder is pre-qualified with Samet	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Form of agreement between Contractor and Subcontractor	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Purchase Order agreement (if applicable)	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. General Conditions of the Contract for Construction	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Bid # / Specifications	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Bid Drawings	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Bid Clarifications	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Addenda	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Number (1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Number (2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Number (3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Name of Project  
City of Project  
Samet Project # XX-XXX



- |   |       |                          |                          |                          |
|---|-------|--------------------------|--------------------------|--------------------------|
| Number (4)  | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Number (5)  | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Other  | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| j. Bidder accepts Samet Terms & Conditions of Agreement | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| k. Exceptions or Exclusion to above items               | _____ | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**See Remarks for any comments regarding Section 2?** ☐ Yes ☐ No

### 3. Scope of Work Document Review

Note any issues:

Item #	Comment

### 4. Payment of Invoices

- a. Invoices are to be submitted to:  
Accts@sametcorp.com
- b. Invoices are due on the **20th** day of the month
- c. Required documentation with all invoices are noted below and samples provided to Trade Partner:

	Yes	No	To Be Issued
Application & Certification for Payment with Lien waiver	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
List of Second Tier Subcontracts and Suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Understand the requirements for the payment application process, preparation of the schedule of values and timely completion of closeout document preparation?

☐ Yes ☐ No

**See Remarks for any comments regarding Section 4?**

### 5. Change Order Procedures

- |                                    |                  |                     |
|------------------------------------|------------------|---------------------|
| a. % of mark up: Self Performed    | <u>xx% Labor</u> | <u>xx% Material</u> |
| b. % of mark up: Sub-subcontractor | <u>xx% Labor</u> | <u>xx% Material</u> |

Name of Project  
City of Project  
Samet Project # XX-XXX



c. Authorization process reviewed ☐ Yes ☐ No

d. Who at Samet can authorize your request: \_\_\_\_\_

e. Who at your company may submit and approve a request: \_\_\_\_\_

**See Remarks for any comments regarding Section 5?** ☐ Yes ☐ No

## 6. Proposed Subcontractors/Suppliers

Proposed Major Subs/Suppliers

---

---

---

Proposed Workforce Diversity, Small Business Subs/Suppliers

---

---

---

**See Remarks for any comments regarding Section 6?** ☐ Yes ☐ No

## 7. Bonding & Insurance

- |  | Yes                      | No                       | N/A                      |
|--|--------------------------|--------------------------|--------------------------|
| a. Insurance requirements reviewed and example of completed COI provided to Trade Partner                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Professional Liability insurance requirements reviewed and within required limits                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Sealed design documents, submitted by a registered design professional, etc. are to be provided for design services | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c. Subcontract Payment/Performance Bond required (attach)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d. Bid Bond Included   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| e. Bonding Company Name: _____   |                          |                          |                          |

**See Remarks for any comments regarding Section 7?** ☐ Yes ☐ No

## 8. Safety Procedures / Requirements

- |   | Yes                      | No                       | N/A                      |
|---|--------------------------|--------------------------|--------------------------|
| f. Completed Contractor Safety Certificate on file? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| g. Bidder's current EMR rating: _____               |                          |                          |                          |
| h. Daily clean up included per Samet requirements?  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| i. Bidder's Safety Representative: _____            |                          |                          |                          |

(name)

(phone)

(e-mail)

**See Remarks for any comments regarding Section 8?** ☐ Yes ☐ No

## 9. Schedule Requirements

- |  | Yes                      | No                       | N/A                      |
|--|--------------------------|--------------------------|--------------------------|
| a. Project Construction Schedule understood and accepted | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Name of Project  
City of Project  
Samet Project # XX-XXX



- b. Project Substantial Completion Date – Base Bid: \_\_\_\_\_ (date)
- c. Bidder's proposed schedule durations: (record on lines below)
- |                             |       |
|-----------------------------|-------|
| Shop Drawings/Submittals    | _____ |
| Material/Equipment Delivery | _____ |
| Installation/Erection       | _____ |
| Long Lead Items             | _____ |
- d. All costs included to meet schedule (i.e. overtime/shift time) ☐ Yes ☐ No ☐ N/A
- e. Overtime for shut-downs and work in existing facilities included ☐ Yes ☐ No ☐ N/A
- f. Bidder has the manpower to perform the work ☐ Yes ☐ No ☐ N/A
- See Remarks for any comments regarding Section 9?** ☐ Yes ☐ No

#### 10. Submittals / Document Control

- a. Proposed time frames for submittals if different than schedule:
- |                          |       |
|--------------------------|-------|
| Shop drawings            | _____ |
| Coordination Drawings    | _____ |
| Product Data             | _____ |
| Fabrication and Delivery | _____ |
- b. Number of copies to be submitted: \_\_\_\_\_
- c. Transmittal procedures reviewed ☐ Yes ☐ No ☐ N/A
- d. How will bidder monitor document control \_\_\_\_\_

**See Remarks for any comments regarding Section 10?**

☐ Yes ☐ No

#### 11. Building Information Modeling

- a. BIM project requirements understood and accepted? ☐ Yes ☐ No ☐ N/A
- See Remarks for any comments regarding Section 11?** ☐ Yes ☐ No

#### 12. Product Substitutions – N/A

Product substitutions are not accepted post bid.

**See Remarks for any comments regarding Section 12?** ☐ Yes ☐ No

#### 13. Liquidated Damages

- |   |                          |                          |                          |
|---|--------------------------|--------------------------|--------------------------|
|   | Yes                      | No                       | N/A                      |
| a. Bidder understands role in preventing        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Bidder understands consequences of incurring | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**See Remarks for any comments regarding Section 13?** ☐ Yes ☐ No

#### 14. Recycling

- a. This site recycles all materials noted below. Material is to be properly separated and placed in the dumpster(s) provided by Samet. Bidder is responsible for ensuring daily compliance:

- |                                 |                                    |   |
|---------------------------------|------------------------------------|---|
| <input type="checkbox"/> Brick  | <input type="checkbox"/> Cardboard | <input type="checkbox"/> Concrete Block |
| <input type="checkbox"/> Gypsum | <input type="checkbox"/> Metals    | <input type="checkbox"/> Wood Pallets   |
| <input type="checkbox"/> Other  | _____                              |   |



Name of Project  
City of Project  
Samet Project # XX-XXX



See Remarks for any comments regarding Section 14?

☐ Yes ☐ No

### 15. Site Logistics

a. Bidder's site requirements (check those that apply):

- ☐ Site Trailer ☐ Parking  
☐ Staging ☐ Hoisting  
☐ Other: \_\_\_\_\_

b. Temporary facilities, utilities, power, storage, access, security, etc. reviewed ☐ Yes ☐ No

c. Temporary protection plan \_\_\_\_\_

d. Temporary heating/cooling/electric procedures \_\_\_\_\_

e. Have you made a site visit? ☐ Yes ☐ No

See Remarks for any comments regarding Section 15?

☐ Yes ☐ No

### 16. Project Meetings

a. Meeting(s) Schedule (day/time): (Time TBD) \_\_\_\_\_

b. Location: \_\_\_\_\_

c. Who will attend \_\_\_\_\_

(must be a person with decision making authority)

### 17. Contacts for Project

All communication shall go through the Samet Corporation; any communication given or received from a third party to the Subcontractor/Supplier will not be recognized by Samet Corporation. This is to ensure the Samet Corporation is involved in all Project processes and decisions.

Trade Partner Info:	Name	Cell	E-mail
Samet Team Info:	Name	Cell	E-mail



**SAMET**  
CORPORATION

[illegible]

This is to acknowledge that the items detailed on this Agenda have been reviewed with me and I have had the opportunity to ask any questions I may have had during the review.

For: \_\_\_\_\_

Signature: \_\_\_\_\_

Print  
Name: \_\_\_\_\_

Date: \_\_\_\_\_

Trade Partner Pre-Award Meeting Minutes - Page 7 of 7

Project Name  
City of Project  
Samet Project # XX-XXX



## **PROJECT STATEMENT**

### **NOTICE OF PROJECT STATEMENT**

A. Name of Project:  
<Name of Project>

B. Physical Address of the Project:  
<Street Address>  
<City>, <State> <Zip>

C. Contracting Body:  
<Owner Name>  
<Owner Address>  
<Owner City>, <Owner State> <Owner Zip>

D. Name of Construction Manager:  
Samet Corporation, 309 Gallimore Dairy Road, Suite 102, Greensboro, NC 27409

E. The name, phone number, and mailing address of an agent authorized by the Construction Manager to accept service of the requests for payment bond, the notice of public subcontract, and the notice of claim on payment bond referenced in subsection (b) of this section:

Douglas A Beane, CFO  
Samet Corporation  
P.O. Box 8050  
Greensboro, NC 27419  
(336) 544-2600

F. The name and address of the principal place of business of the surety issuing the payment bond required by G.S. 44A—26(a) for the construction contract:

Liberty Mutual Insurance  
Attn: Surety Claims Department  
1001 4<sup>th</sup> Avenue  
Suite 1700  
Seattle, WA 98154

Dated: <Date>



This is a Sample Certificate that is required by Samet (and all of its subsidiaries).

**NOTE:** It is only a sample. The Minimum Coverages shown below are just that. You must verify against and meet any Project Specific requirements. All other below Check boxes are required unless otherwise noted.



## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
Current Date

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Subcontractor's Insurance Agency Name and Address	<b>CONTACT NAME:</b>	
	<b>PHONE (A/C. No. Ext):</b>	<b>FAX (A/C. No.):</b>
<b>INSURED</b> Subcontractor's Name Address City, State, Zip <b>NOTE: Must match the name on Subcontract/PO</b>	<b>E-MAIL ADDRESS:</b>	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
	<b>INSURER A:</b> Insurance Company's Name(s)	<b>NAIC #</b>
	<b>INSURER B:</b> "	
	<b>INSURER C:</b> "	
	<b>INSURER D:</b> "	
	<b>INSURER E:</b> "	
	<b>INSURER F:</b> "	

### COVERAGES

### CERTIFICATE NUMBER:

### REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR VVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	COMMERCIAL GENERAL LIABILITY			Policy Numbers Required for each type of Insurance Coverage "Occur" box Must be Checked "Project" box Must be Checked	Current Policy Date	Current Policy Date	EACH OCCURRENCE	\$ 1,000,000
	CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 300,000
							MED EXP (Any one person)	\$ 10,000
							PERSONAL & ADV INJURY	\$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	\$ 2,000,000
	<input checked="" type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC						PRODUCTS - COMP/OP AGG	\$ 2,000,000
	<input checked="" type="checkbox"/> OTHER: EIFS							\$
A	AUTOMOBILE LIABILITY			Must include Hired and Non-Owned OR Any Auto			COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person)	\$
	<input checked="" type="checkbox"/> ALL OWNED AUTOS	<input checked="" type="checkbox"/> SCHEDULED AUTOS					BODILY INJURY (Per accident)	\$
	<input checked="" type="checkbox"/> HIRED AUTOS	<input checked="" type="checkbox"/> NON-OWNED AUTOS					PROPERTY DAMAGE (Per accident)	\$
A	UMBRELLA LIAB						EACH OCCURRENCE	\$ 1,000,000
	EXCESS LIAB						AGGREGATE	\$ 1,000,000
	DED	RETENTION \$					\$	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			You MUST enter a "Y" or "N" in this box based on your policy. As noted, ONLY Proprietor/Partner/Officer/Members are permitted exclusions.			PER STATUTE	OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y/N					E.L. EACH ACCIDENT	\$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N					E.L. DISEASE - EA EMPLOYEE	\$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	\$ 1,000,000
A	Professional Liability			If you are a Design Professional or a subcontractor providing design-build or design assist services, this Coverage is Required.			Per Claim: \$1,000,000 Aggregate: \$2,000,000	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

The Certificate Holder, Owner and all other parties as required by Contract are Additional Insured on a Primary & non-Contributory basis which includes "your work". A Waiver of Subrogation in favor of Holder is provided on all policies scheduled above. A 30-day cancellation notice must be provided by endorsement.

**NOTE:** Additional Insured endorsement must include On-Going & Completed Operations coverage. Copies of all endorsements are required.

### CERTIFICATE HOLDER

### CANCELLATION

Samet Corporation and all of its Affiliates and Joint Venture partners 309 Gallimore Dairy Road, Suite 102 Greensboro, NC 27409	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE Agent Signature Required

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ACORD 25 (2014/01)

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Doc. Date: 01-01-14, REV. 3: 10-01-17

**ADDENDUM 1-1**  
**Page 1 of 7**

**NOTE:** This is a Sample Certificate that is required by Samet (and all of its subsidiaries). It is only a sample. The Minimum Coverages shown below are just that. You must verify against and meet any Project Specific requirements. All other below Check boxes are required unless otherwise noted.



# CERTIFICATE OF LIABILITY INSURANCE -Cont'd

DATE (MM/DD/YYYY)  
Current Date

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> <b>Subcontractor's Insurance Agency</b> <b>Name and Address</b>		<b>CONTACT NAME:</b> <b>PHONE (A/C. No. Ext):</b> <b>FAX (A/C. No):</b> <b>E-MAIL ADDRESS:</b>	
		<b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A:</b> <b>Insurance Company's Name(s)</b>	
<b>INSURED</b> <b>Subcontractor's Name</b> <b>Address</b> <b>City, State, Zip</b> <b>NOTE: Must match the name on Subcontract/PO</b>		<b>INSURER B:</b> <b>INSURER C:</b> <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	

## COVERAGES

## CERTIFICATE NUMBER:

## REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
	<b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC <input type="checkbox"/> OTHER:						EACH OCCURRENCE \$ DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ PERSONAL & ADV INJURY \$ GENERAL AGGREGATE \$ PRODUCTS - COMP/OP AGG \$ \$
	<b>AUTOMOBILE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS						COMBINED SINGLE LIMIT (Ea accident) \$ BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<b>UMBRELLA LIAB</b> <input type="checkbox"/> OCCUR <b>EXCESS LIAB</b> <input type="checkbox"/> CLAIMS-MADE DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below				Current Policy Date	Current Policy Date	PER STATUTE <input type="checkbox"/> OTH-ER <input type="checkbox"/> E.L. EACH ACCIDENT \$ E.L. DISEASE - EA EMPLOYEE \$ E.L. DISEASE - POLICY LIMIT \$
A	<b>Pollution Liability</b>						If you are a demolition, grading, remediation, abatement or similar subcontractor who has potential pollution exposure, OR if there is a project specific pollution requirement, this Coverage is Required. <b>Per Claim: \$1,000,000</b> <b>Aggregate: \$2,000,000</b>

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

A 30-day cancellation notice must be provided by endorsement.

## CERTIFICATE HOLDER

Samet Corporation and all of its Affiliates and Joint Venture partners.

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Agent Signature Required

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – AUTOMATIC STATUS FOR OTHER PARTIES WHEN REQUIRED IN WRITTEN CONSTRUCTION AGREEMENT**

This endorsement modifies insurance provided under the following:

### **COMMERCIAL GENERAL LIABILITY COVERAGE PART**

**A. Section II – Who Is An Insured** is amended to include as an additional insured:

1. Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization be added as an additional insured on your policy; and
2. Any other person or organization you are required to add as an additional insured under the contract or agreement described in Paragraph 1. above.

Such person(s) or organization(s) is an additional insured only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

- a. Your acts or omissions; or
- b. The acts or omissions of those acting on your behalf;

in the performance of your ongoing operations for the additional insured.

However, the insurance afforded to such additional insured described above:

- a. Only applies to the extent permitted by law; and
- b. Will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

A person's or organization's status as an additional insured under this endorsement ends when your operations for the person or organization described in Paragraph 1. above are completed.

**B.** With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to:

1. "Bodily injury", "property damage" or "personal and advertising injury" arising out of the rendering of, or the failure to render, any professional architectural, engineering or surveying services, including:
  - a. The preparing, approving, or failing to prepare or approve, maps, shop drawings, opinions, reports, surveys, field orders, change orders or drawings and specifications; or
  - b. Supervisory, inspection, architectural or engineering activities.

This exclusion applies even if the claims against any insured allege negligence or other wrongdoing in the supervision, hiring, employment, training or monitoring of others by that insured, if the "occurrence" which caused the "bodily injury" or "property damage", or the offense which caused the "personal and advertising injury", involved the rendering of, or the failure to render, any professional architectural, engineering or surveying services.

2. "Bodily injury" or "property damage" occurring after:
  - a. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or



THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

## ADDITIONAL INSURED – OWNERS, LESSEES OR CONTRACTORS – COMPLETED OPERATIONS

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s)	Location And Description Of Completed Operations

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

**A. Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the Schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and
2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

**B.** With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;  
whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

**WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT**

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule. (This agreement applies only to the extent that you perform work under a written contract that requires you to obtain this agreement from us.)

This agreement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

Schedule

**SAMPLE**

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

**(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)**

Endorsement  
Insured

Effective Policy No.

Endorsement No.  
Premium

Insurance Company

Countersigned by \_\_\_\_\_

**WC 00 03 13**  
(Ed. 4-84)

POLICY NUMBER:

**SAMPLE**

COMMERCIAL GENERAL LIABILITY  
CG 24 04 05 09

## WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART  
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

### SCHEDULE

**Name Of Person Or Organization:**

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph **8. Transfer Of Rights Of Recovery Against Others To Us** of **Section IV – Conditions**:

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.



# SAMPLE

POLICY NUMBER:

COMMERCIAL AUTO  
CA 04 44 10 13

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.**

## **WAIVER OF TRANSFER OF RIGHTS OF RECOVERY AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

This endorsement modifies insurance provided under the following:

AUTO DEALERS COVERAGE FORM  
BUSINESS AUTO COVERAGE FORM  
MOTOR CARRIER COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

**Named Insured:**

**Endorsement Effective Date:**

### **SCHEDULE**

**Name(s) Of Person(s) Or Organization(s):**

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.



309 Gallimore Dairy Rd., Suite 102  
Greensboro, North Carolina 27409  
(336) 544-2600 Phone

## SUBCONTRACT WORK ORDER

(Valid for Subcontracts Less Than \$50,000)

THIS SUBCONTRACT AGREEMENT (hereinafter "Agreement") made and entered as of this date , by and between Samet Corporation (hereinafter "Contractor") and Subcontractor named below (hereinafter "Subcontractor"), pertains to the following:

<b>Subcontract #</b>	<b>NC GC License:</b> 3538
	<b>SC GC License:</b> G16448
<b>Subcontract For:</b>	<b>VA GC License:</b> 2705065547
	<b>GA GC License:</b> GCCO003331
<b>With:</b>	<b>Rep Name:</b>
<b>Address:</b>	<b>Email:</b>
<b>Phone:</b>	<b>Fax:</b>
<b>Project #:</b>	<b>Project Name:</b>
<b>Project Manager:</b>	<b>Superintendent:</b>
<b>Contract Amount:</b> \$0.00	

For consideration named, the receipt and sufficiency of which is hereby acknowledged, the Contractor and Subcontractor hereby covenant and agree that Subcontractor shall perform the Work as described below in "Scope of Services," all in accordance with this Agreement, the Contract Documents, Specifications and all Exhibits and Addenda hereto.

**PAYMENT:** Invoices for payment received on or before the 20th of each month will be processed for payment on the 25th of the following month. Payments will be processed from electronically submitted invoices. Email invoices to [accts@sametcorp.com](mailto:accts@sametcorp.com) .

**The Subcontractor agrees to provide the following scope of services:**

### Subcontract Addenda:

Addendum 1	N/A
Addendum 2	N/A
Addendum 3	N/A
Addendum 4	Affidavit of Capital Improvement

### Subcontract Exhibits:

Exhibit A	Detailed Scope of Work
Exhibit B	List of Contract Documents
Exhibit C	Project Schedule
Exhibit D	D Exhibit
Exhibit E	E Exhibit
Exhibit F	F Exhibit
Exhibit G	G Exhibit
Exhibit H	H Exhibit
Exhibit I	I Exhibit
Exhibit J	J Exhibit

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309 Gallimore Dairy Rd., Suite 102  
Greensboro, North Carolina 27409  
(336) 544-2600 Phone

Samet Corporation

By: SAMPLE - not for signature

By: SAMPLE - not for signature

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_



**SUBCONTRACT WORK ORDER TERMS & CONDITIONS**  
**The above items are incorporated by reference below**

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Contractor, and Subcontractor, agree for themselves, their successors and assigns as follows:

- 1. Work.** Subcontractor shall perform and furnish all labor, supervision, materials, equipment and all other things necessary to prosecute and complete the Work as outlined in the scope of services above. Work shall be performed by Subcontractor in a good and workmanlike manner strictly in accordance with the Contract Documents. With respect to the Work, to be bound to Contractor by the terms and conditions of the Contract Documents and this Subcontract Work Order and hereby assumes toward Contractor all of the duties, obligations and responsibilities that Contractor has by the Contract Documents assumed toward the Owner.
- 2. Price.** Contractor shall pay to Subcontractor for the satisfactory performance and completion of the Work and all the duties, obligations and responsibilities of Subcontractor under this Subcontract Work Order, the sum set forth above as the Price which shall be deemed to include all costs of Subcontractor's performance of the Work.
- 3. Final Payment.** A final payment, consisting of the unpaid balance of the Price, shall be made within 30 days after the last of the following to occur; (a) completion of the Work by Subcontractor, (b) furnishing of evidence satisfactory to Contractor that there are no claims, obligations, liens outstanding or unsatisfied for labor, services, materials, equipment, taxes or other items performed, furnished or incurred in connection with the Work, (c) delivery of all guaranties, warranties, bonds, instruction manuals, performance charts, diagrams, as-built drawings and similar items required of Subcontractor or its suppliers or subcontractors and (d) delivery of a general release, in a form satisfactory to Contractor, executed by Subcontractor running to and in favor of Contractor and Owner.
- 4. Time.** Time is of the essence. Therefore, Subcontractor shall begin the Work upon Contractor's order to do so, and perform the Work diligently and promptly and in such order and sequence as Contractor may direct to achieve the milestone dates and project coordination as directed in the project schedule.
- 5. Change Orders.** Contractor may from time to time, by written order ("Change Order") to Subcontractor, make changes in the Work to the same extent and in the same manner as may be required of Contractor by Owner under the Contract Documents; and Subcontractor shall thereupon perform the changed Work in accordance with the terms of the Subcontract Work Order. The price shall be adjusted by the net amount of any direct savings and direct costs, plus not to exceed 10% markup for Overhead and Profit, (unless otherwise indicated in the Contract Documents) attributable to the Change Order.
- 6. Insurance.** Subcontractor shall secure, pay for, and maintain insurance as enumerated below, and such insurance shall be from an insurer lawfully authorized to transact business in the state wherein the Project is located and A.M. Best "A" rated. The insurance must be issued by an insurer acceptable to the Contractor, and in such amounts as required by the Contract Documents. Subcontractor shall furnish such other insurance coverages as may be applicable to its Work and as required under this Agreement, all prior to commencing its Work. All insurance policies shall contain a provision that the coverages afforded thereunder shall not be cancelled, allowed to expire, or not renewed nor restricted modifications added unless at least thirty (30) days prior written notice has been given to Contractor. Coverages shall be maintained without interruption from the date of commencement of Subcontractor's Work for a period no less than the Statue of Repose in the state the project is located. Certificates of insurance or copies of policies acceptable to the Contractor shall be filed with the Contractor prior to the commencement of Subcontractor's Work. Attached to all certificates of insurance provided by Subcontractor shall be a copy of the Additional Insured Endorsement that is part of the Subcontractor's Commercial General Liability policy. Additional insured coverage shall apply as primary insurance with respect to any other insurance afforded to Owner or Contractor. In the event Subcontractor fails to obtain or maintain any insurance coverage required by this Agreement, or the Contract Documents, Contractor may at its option: (i) terminate the Subcontractor; or (ii) purchase such coverage and charge the expense thereof to the Subcontractor. A sample certificate, outlining Contractor's requirements is available by clicking **HERE**:

<http://sametcorp.com/prequalification-initial>

The coverage and limits of said insurance are as follows:

- (a) Workers' Compensation** (i) Statutory limits (ii) Employers Liability Limits of at least \$1,000,000 each accident for bodily injury by accident and \$1,000,000 each employee for injury by disease. Subcontractor shall provide workers' compensation insurance even if the Subcontractor does not have sufficient number of employees to require such insurance coverage under applicable state statutes.
- (b) Commercial General Liability ("CGL")** (i) Limit \$1,000,000 combined single limit for bodily injury and property damages; (ii) Aggregate Limit \$2,000,000 per project and location; (iii) CGL coverage shall be written on ISO Occurrence form CG00 01 10/04 or a substitute form providing equivalent coverage and shall cover liability arising from premise and operations, independent contractors, products-completed operations and personal and advertising injury and liability assumed under an insured contract (including the tort liability of another assumed in a business contract); (iv) Contractor,

Owner and all other parties required of Contractor by contract shall be included as additional insureds on the CGL, using ISO Additional Insured Endorsement CG 20 10 11/85 or both CG 20 10 10/01 and CG 20 37 10/01 or an equivalent coverage to the additional insured. This insurance for the additional insured shall be as broad as the coverage provided for the named insured subcontractor. It shall apply as primary insurance on a non-contributing basis before any other insurance or self-insurance, including any deductible, maintained by or provided to the additional insured; (v) There shall be no endorsement or modification of the Subcontractor's CGL policy arising from pollution, explosion, collapse, underground property damage or work performed by subcontractors; and (vi) Subcontractor shall maintain CGL coverage for itself and all additional insureds for the duration of the project and maintain completed operations coverage for itself and each additional insured for a period no less than the Statue of Repose in the state the project is located.

**(c) Commercial Automobile Liability** (i) Limit \$1,000,000 combined single limit for bodily injury and property damage, including owned, leased, non-owned and hired motor vehicles; and (ii) Endorsement naming Contractor as an additional insured.

**(d)** Subcontractor shall provide Performance and Payment Bonds, if required, each with a penal amount equal to 100% of the Subcontract Amount, on forms acceptable to the Contractor. The premium for these bonds shall be paid by Subcontractor and the cost thereof is included in the Subcontract Amount. All bonds issued pursuant to this Article shall be issued by a Surety acceptable to Contractor and lawfully authorized to transact business in the State of North Carolina and in the state wherein the Project is located.

**(e)** Subcontractor shall furnish to the Contractor all bonds required under this Agreement prior to the commencement of the Subcontractor's Work. Commencement of Work by the Subcontractor without having provided said Performance and Payment Bonds shall not be considered a waiver or release by the Contractor of the above requirement for bonds, and Subcontractor shall have proceeded with the Work at its own risk and shall not be entitled to payment hereunder until such bonds are delivered to the Contractor.

**10. Indemnity.** Subcontractor shall indemnify and hold harmless the Contractor and the Owner and all agents and employees of either of them from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the Subcontractor's Work under this Agreement, provided that any such claim, damage, loss or expense (i) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property including the loss of use resulting therefrom and (ii) is caused in whole or in part by any negligent act or omission of the Subcontractor or anyone directly or indirectly employed by him or anyone for whose acts he may be liable, regardless of whether such claim, damage, loss or expense is caused in part by a party indemnified hereunder.

In any and all claims against the Contractor or any of his agents or employees by any employee of the Subcontractor, anyone directly or indirectly, employed by him or anyone for whose acts he may be liable, the indemnification obligations under these paragraphs shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the Subcontractor under workmen's compensation acts, disability benefit acts or other employee benefit acts.

**11. Assignment.** Subcontractor shall not assign or subcontract any part of the Work, without the prior written consent of Contractor. Subcontractor shall not be relieved of its duties and obligations hereunder by any such assignment or subcontract.

**12. Compliance.** Subcontractor shall, at its own expense, obtain all necessary licenses and permits pertaining to the Work and comply with all statutes, ordinances, rules, regulations, Environmental Policy and orders of any governmental or quasi-governmental authority having jurisdiction over the Work or the performance thereof, and respond to, and shall defend, indemnify and save harmless Contractor and Owner from and against any loss, liability or expense arising from, any such violations and any citations, assessments, fines or penalties resulting therefrom.

**13. Safety.** Subcontractor shall establish and implement safety measures, policies and standards conforming to those required or recommended by governmental and quasi-governmental authorities having jurisdiction and by Contractor and Owner. Subcontractor shall review and comply with Contractor's Site Safety & Incident Prevention Program, which is available by clicking **HERE**:

<http://sametcorp.com/safety-requirements>

In addition, Subcontractor shall review and comply with Contractor's Site Specific Safety Plan, as applicable.

**14. Cleaning Up.** The scope of Subcontractor's Work includes an obligation to completely clean all Work and remove all contributing debris from the Project site as often as necessary and as often as directed by Contractor. This Subcontractor shall be required to broom clean each work area prior to discontinuing work in that area. Further, Subcontractor shall be required to participate in the clean-up of any common areas in the building or site jointly used by

Subcontractor, the Contractor and other subcontractors. If Subcontractor fails, within twenty-four (24) hours of receipt of written notice to the Subcontractor's field supervisor, to correct a failure to properly clean-up and dispose of all trash and waste materials created by the Subcontractor, the Contractor shall have the right to terminate the Subcontract or at its option to perform such clean-up for Subcontractor; and the Subcontractor hereby agrees to indemnify and to pay Contractor all costs incurred by the Contractor in performing the clean-up work. Clean-up of the Work and the daily removal of debris from the areas of the work is mandatory. Each day, all trash and debris shall be removed from the Project. Fire exits, corridors, ladderways, doorways and exit paths in general shall be clear of debris and open to pedestrian and wheelchair traffic at all times, specifically including nights and weekends.

**15. Guarantees.** Subcontractor warrants and guarantees the Work to the full extent provided for in the Contract Documents, but in no event shall the period of such guarantee be less than one year from the time of acceptance of the Project by Owner.

**16. Damage.** Contractor shall not be liable or responsible for loss or damage to the equipment, tools, facilities, or other personal property owned, rented, or used by Subcontractor, or anyone employed by Subcontractor, in the performance of the Work. Except to the extent of any proceeds received by Contractor for the benefit of Subcontractor under a policy of builders' risk or fire insurance, Contractor shall not be liable or responsible for any loss or damage to the Work, and Subcontractor shall be responsible for the correction or restoration of any such loss or damage to the Work, or to the work of Contractor or any other subcontractor, resulting from the operations of Subcontractor, or its subcontractors, agents, servants, or employees hereunder.

**17. Default.** Should Subcontractor at any time: (a) fail to supply the labor, materials, equipment, supervision or other things required of it in sufficient quantities and of sufficient quality to perform the Work with the skill, conformity, promptness, and diligence required hereunder, (b) cause stoppage or delay of or interference with the Project work, (c) become insolvent, or (d) fail in the performance or observance of any of the covenants, conditions, or other terms of this Subcontract Work Order, then in any such event, each of which shall constitute a default hereunder by Subcontractor, Contractor shall, after giving Subcontractor notice of default and 48 hours within which to cure, have the right to remedy the default by whatever means Contractor may deem necessary or appropriate, including, but not limited to, correcting, furnishing, performing, or otherwise completing the Work, or any part thereof, by itself or through others (utilizing where appropriate any materials and equipment previously purchased for that purpose by Subcontractor) and deducting the cost thereof from any monies due or to become due to Subcontractor hereunder, and recover from Subcontractor all losses, damages, penalties and fines, whether actual or liquidated, direct or consequential, and all reasonable attorneys' fees suffered or incurred by Contractor by reason of or as a result of Subcontractor's default.

**18. Miscellaneous Requirements and Special Provisions:**

**a. Quality Assurance Plan.** This Subcontractor shall comply with the requirements of the Quality Assurance Plan by Contractor. Compliance includes coordination with other trades, mandatory attendance at a Pre-Installation Conference, and performance of work in a manner that will meet or exceed contract document requirements and client expectations.

**b. Assignment by Contractor.** Contractor shall have the right to assign its rights and obligations under this agreement to any direct or indirect parent or subsidiary without the consent of the other party or parties to this agreement.

**c. Use of Contractor's Equipment:** Subcontractor, its agent, employees, subcontractors or suppliers shall not use Contractor's labor or equipment without the express permission of Contractor. By using any labor, equipment, tools, scaffolding, hoists, lifts or similar items (collectively "equipment") owned, leased, or under the control of Contractor, Subcontractor shall be deemed to have assumed all risks in connection therewith including the risk of defects in said equipment, and Article 9 hereof shall apply to any loss or damage which arises from such use. Subcontract shall reimburse the Contractor the reasonable value of any of the Contractor's equipment used by Subcontractor in performing its work.

**d. Illegal Drugs and Alcohol:** Any worker on a Contractor construction site who is suspected of using illegal drugs and/or alcohol will be removed from the construction site. His/her employer will be given the opportunity to administer a drug and/or alcohol test at their expense. If the test proves negative, that person will be allowed back on our site. The results will be submitted to Contractor's Safety Director. If the worker tests positive for illegal drugs and/or alcohol, he will be barred from Contractor construction sites. To continue working for Contractor, the employer must certify in writing that all his employees are drug and/or alcohol free. Failure to abide by this requirement will result in termination of subcontractor's subcontract and being removed from Contractor's bid list.





# E 589CI

## Affidavit of Capital Improvement

Form E 589CI, Affidavit of Capital Improvement, is generally required to substantiate that a contract, or a portion of work to be performed to fulfill a contract, is to be taxed for sales and use tax purposes as a real property contract with respect to a capital improvement to real property.

- This affidavit may not be used to purchase building materials, other tangible personal property, or digital property to fulfill a real property contract exempt from sales and use tax.
- A person who willfully attempts, or a person who aids or abets a person to attempt in any manner, to evade or defeat a tax imposed by the Sales and Use Tax Laws, or the payment thereof, shall be guilty of a Class H felony. If there is a deficiency or delinquency in payment of any tax due to fraud with intent to evade the tax, there shall be assessed a penalty equal to 50% of the total deficiency.

### Section I. Single Use (Complete this section to issue the affidavit for a single capital improvement.)

#### Owner, Tenant, or Real Property Contractor

Samet Corporation  
309 Gallimore Dairy Rd., Suite 102  
Greensboro, North Carolina 27409

#### Real Property Contractor (General Contractor or Subcontractor)

*Hired to perform capital improvement*

#### Describe capital improvement to be performed:

#### Project Name:

#### Project Address (where the work is to be performed)

I certify that, to the best of my knowledge, this affidavit is accurate and complete and that the transaction described to be performed by the Real Property Contractor (General Contractor or Subcontractor identified in box "B") shall be treated as a real property contract with respect to a capital improvement to real property for sales and use tax purposes.

Signature of Authorized Person: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

### Section II. Blanket Use (Complete this section execute a blanket affidavit.)

#### C Real Property Contractor

Address

City

State

Zip Code

#### D Real Property Contractor or Subcontractor

*Hired to perform capital improvement*

Address

City

State

Zip Code

#### To be completed by the Real Property Contractor identified in Box C.

I certify that I am a Real Property Contractor who performs capital improvements to real property and all transactions with the real property contractor (subcontractor) identified in box "D" shall be treated as real property contracts with respect to capital improvements for real property for sales and use tax purposes.

Signature of Authorized Person: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

## Affidavit of Capital Improvement Instructions

Form E-589CI, Affidavit of Capital Improvement, is generally required to be issued (see exceptions below) to substantiate that a contract, or a portion of work performed to fulfill a contract, is to be taxed for sales and use tax purposes as a real property contract with respect to a capital improvement to real property.

- Form E-589CI is not an affidavit of tax paid on building materials, other tangible personal property, or digital property purchased or used to fulfill a real property contract.
- Form E-589CI is not to be used to purchase building materials, other tangible personal property, or digital property purchased or used to fulfill a real property contract exempt from sales and use tax.
- A person that issues Form E-589CI in error is liable for use tax on the sales price of or the gross receipts derived from the transaction if it is determined that the contract is not a capital improvement to real property.

A person who willfully attempts, or a person who aids or abets a person to attempt in any manner, to evade or defeat a tax imposed by the Sales and Use Tax Laws, or the payment thereof, shall be guilty of a Class H felony. If there is a deficiency or delinquency in payment of any tax due to fraud with intent to evade the tax, there shall be assessed a penalty equal to 50% of the total deficiency.

### Exceptions to the Requirement to Issue Form E-589CI

The following are exceptions for transactions where Form E-589CI is not required to be issued to substantiate that the transaction is taxed, as applicable, for sales and use tax purposes as a real property contract with respect to a capital improvement to real property.

- Painting or wallpapering real property, or parts thereof.
- Landscaping service.

Form E-589CI is not required to be issued by the specific person for a transaction noted below. The exceptions do not apply to transactions between a general contractor hired to oversee the entire contract and one of its subcontractors (See "Blanket Use" of Form E-589CI (Section II) for possible exceptions.). The following exceptions do not apply to remodeling.

- A real property owner or other person hires a general contractor to oversee the entire contract and the contract is for "new construction" as defined in N.C. Gen. Stat. § 105-164.4H(e)(2).
- A real property owner or other person hires a general contractor to oversee the entire contract and the contract is to rebuild or construct again a prior existing permanent building, structure, or fixture on land (reconstruction as defined in N.C. Gen. Stat. § 105-164.4H(e)(3)).
- A general contractor that purchases all tangible personal property and digital property to fulfill the real property contract and provides the employee labor to fulfill the real property contract.

### Section I. Single Use Instructions

A person must complete "Section I - Single Use" of the form for a one time use to substantiate that a transaction that otherwise meets the definition of repair, maintenance, or installation services to real property is taxed for sales and use tax purposes as a real property contract with respect to a single capital improvement for real property. When a real property contractor hires a subcontractor to perform a portion of the overall contract and there is not a recurring business relationship between the two parties, "Section I - Single Use" of Form E-589CI shall be completed and the form issued to each subcontractor as notice that the transaction is subject to tax as a real property contract with respect to a capital improvement for sales and use tax purposes.

A property owner oversees the entire activity that is a real property contract with respect to a capital improvement for real property and hires various subcontractors to complete the real property contract:

- **Box A - Owner, Tenant or Real Property Contractor:** Enter property owner's name and address.
- **Box B - Real Property Contractor (General Contractor or Subcontractor):** Enter general contractor's or subcontractor's name and address.
- Property owner listed in Box A must describe real property contract with respect to capital improvement to be performed.
- Authorized Person (typically property owner) signs, enters title (owner), and enters the date.

A general contractor hires a subcontractor to perform a real property contract with respect to a capital improvement, or portion thereof:

- **Box A - Owner, Tenant or Real Property Contractor:** Enter general contractor's name and address.
- **Box B - Real Property Contractor (General Contractor or Subcontractor):** Enter subcontractor's name and address.
- General contractor listed in Box A describes real property contract with respect to capital improvement to be performed.
- Authorized Person (typically general contractor) signs, enters title (general contractor), and enters the date.

A lessee or tenant hires a general contractor (or subcontractor) to perform a real property contract with respect to a capital improvement for real property; provided the capital improvement is intended to become a permanent installation and title to it vests in the owner or lessor of the real property immediately upon installation:

- **Box A - Owner, Tenant or Real Property Contractor:** Enter lessee or tenant's name and address.
- **Box B - Real Property Contractor (General Contractor or Subcontractor):** Enter general contractor's or subcontractor's name and address.
- General contractor must describe capital improvement for real property to be performed.
- Authorized Person (typically lessee or tenant) signs, enters title, and enters the date.

### Section II. Blanket Use Instructions

A real property contractor may complete "Section II - Blanket Use" and issue the form to a real property contractor (subcontractor) who is used exclusively to perform part, or all, of real property contracts with respect to capital improvements to real property, where the person and the real property contractor have a recurring business relationship. A blanket use affidavit continues in force so long as the real property contractor named in "Box C" and the real property contractor (subcontractor) named in "Box D" maintain a recurring business relationship (when a period of no more than twelve months elapse between transactions between two parties) or until withdrawn or otherwise notified by the issuer of the form. The blanket use will generally apply for the following: (1) a builder who hires the same contractor(s) only for new construction; (2) a real property contractor who hires the same subcontractor(s) only for reconstruction; (3) a real property contractor who hires the same subcontractor(s) for remodeling and the activities performed by the subcontractor(s) are never repair, maintenance, and installation services for real property; and (4) a real property contractor who exclusively hires the same subcontractor(s) to perform part, or all, of its real property contracts with respect to capital improvements for real properties.

A general contractor or subcontractor hires a subcontractor to perform a capital improvement, or portion thereof:

- **Box C - Real Property Contractor:** Enter the hiring real property contractor's name and address.
- **Box D - Real Property Contractor (General Contractor or Subcontractor):** Enter subcontractor's name and address. Authorized person listed in Box C signs, enters title, and dates.

## **TRADE PACKAGE GENERAL SCOPE REQUIREMENTS**

### **I. INTRODUCTION**

The PROJECT MANUAL was prepared to assist with the overall administrative functions of the Project. It provides information and examples of several aspects of Project correspondence that should be followed throughout the job; however, the following requirements are not intended to supersede any more strenuous requirements elsewhere in the Contract Documents.

Revisions to this Manual and additional information may be issued periodically and should be inserted in the applicable section(s).

The General Contractor (Construction Manager (CM)) suggests that you copy portions of the Manual and distribute the necessary pages within your organization (especially field personnel) to ensure that these procedures are followed. This should eliminate inconsistencies, allowing an efficient completion of the Project.

Unless noted otherwise herein, requirements applicable to ALL trade package scopes of work are defined within this Section. Further, these requirements herein shall become part of each trade package scope of work as if fully written out in each respective trade package scope of work.

Each Subcontractor/Vendor is required to furnish General Contractor, in writing, the name of all their Supervisory Personnel clearly identifying and listing their roles and responsibilities related to the project. An organization chart shall be included as part of this submittal.

Note: All correspondence and/or communication must be directed through General Contractor. All construction directives must come through General Contractor. DO NOT contact the Owner or Architect directly without the consent of General Contractor.

“General Contractor” or “Contractor” specified in Contract Document trade specific Technical Specification sections refers to this Subcontractor for all work pertaining to the scope described herein unless otherwise noted.

### **II. DEFINITIONS**

Outlined below are specific terms, which are used throughout the Contract Documents. These terms are described below to clarify the particular “term” as it is used in context throughout the Contract Documents.

<b><u>#</u></b>	<b><u>Term:</u></b>	<b><u>Definition:</u></b>
1.	“Owner”	Wake Technical Community College 4723 Advantage way Raleigh, NC 27603
2.	“Designer, Architect of Record, Architect/Engineer”	HH Architecture 1100 Dresser Court Raleigh, NC 27609



3.	"General Contractor or Construction Manager"	Samet Corporation (SAMET) 5430 Wade Park Blvd, Suite 110 Raleigh, NC 27607
4.	"Contractor"	All areas within the Contract Documents (except where implied differently when referring to an entity under contract with the General Contractor (e.g., references in a technical specification)) where this term is used shall mean "General Contractor" and not Contractor.
5.	"Subcontractor"	An entity who contracts directly with the General Contractor through execution of the <i>Standard form of Agreement between Contractor and Subcontractor</i> included within the Contract Documents to furnish and install specific goods and services as defined within a specific Trade Package Scope of Work.
6.	"Sub-Subcontractor"	An entity who contracts directly with the Subcontractor to furnish and install specific goods and services as defined within a specific Trade Package Scope of Work.
7.	"Supplier"	An entity who contracts directly with the General Contractor through execution of the standard <i>Purchase Order Agreement</i> included within the Contract Documents to furnish specific goods and services as defined within a specific Trade Package Scope of Work.
8.	"Provide"	This term shall mean to furnish and install a particular item(s) as necessary to accomplish a complete, finished and properly operating installation.
9.	"Furnish"	This term shall mean to furnish including taxes and delivery of a particular item(s) as necessary to facilitate a complete and finished installation by others or as defined within the Trade Package Scope of Work.
10.	"Install"	This term shall mean to install a particular item(s) as necessary to facilitate a complete and finished installation through materials, equipment or the like furnished by others or as defined within the Trade package Scope of Work.
11.	"PROJECT MANUAL"	The PROJECT MANUAL shall consist of all technical specifications, sample forms, sample agreements, trade package scopes of work, general requirements, proposal forms and procedures, etc. as prepared by the Designer, General Contractor and/or Owner for use in bidding and constructing

		the project.
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### **III. CONTRACT DOCUMENTS**

- 3.0. As applicable and defined within the respective Trade Package Scope of Work, furnish all labor, materials, tools, taxes, insurances, equipment, hoisting, supervision and all other incidentals necessary to accomplish all Work in accordance with ALL Contract Documents, which consist of the following:
1. All Addenda or Bid Clarifications issued prior to Bid Date.
  2. Drawings and/or supplemental sketches prepared by Designer.
  3. Technical Specifications located within the PROJECT MANUAL and/or as amended by Addendum as prepared by the Designer and General Contractor.
  4. Form of Agreement (Subcontractor Agreement or Purchase Order Agreement) between Samet Corporation and Subcontractor or Supplier contained within the PROJECT MANUAL, – Contract Documents.
  5. All Division 1 – General Requirement Specifications located within the PROJECT MANUAL and/or as amended by Addendum as prepared by the Designer and General Contractor.
  6. Form of Agreement between the Owner and General Contractor containing the General Conditions for the Contract of Construction as contained within the PROJECT MANUAL, – Contract Documents.
  7. Project Construction Schedule as prepared by the General Contractor contained within the SCOPE AND INFORMATION MANUALS – Contract Documents.
  8. Safety Procedures and Requirements contained within the PROJECT MANUAL, – Contract Documents.
- 3.1. All Contract Documents shall be at each Subcontractor's expense.
- 3.2. Modifications are prohibited to the Standard Form of Agreement between the Contractor and Subcontractor. Successful Bidders will be required to execute the agreement without exception.

### **IV. APPLICATIONS FOR PAYMENT**

- 4.0. Application for Payment Format – Applications for Payment must be submitted by the Subcontractor/Supplier Standard Application & Certification for Payment Forms furnished by the General Contractor. No exceptions will be allowed. Reference the Subcontractor/Supplier Standard Application & Certification for Payment Forms which are included within the PROJECT MANUAL for further information.

- 4.1. The Schedule of Values shall be approved by the General Contractor prior to the Subcontractor or Supplier submitting its first application for payment. The schedules of values must be submitted to the General Contractor for approval at least thirty (30) days before the Subcontractor or Vendor apply for payment.
- 4.2. The Subcontractor shall modify its Schedule of Values as directed by the General Contractor in order to provide sufficient breakdown of cost, reflect changes within the Subcontract Sum due to Change Orders and/or other modifications of the Subcontract Agreement.
- 4.3. All MWBE sub-Subcontractors and Suppliers shall be listed separately on the Trade Subcontractor or Supplier's Schedule of Values in order to easily track payments to these companies. Additionally, each Trade Subcontractor shall submit a completed "Appendix E – MBE Documentation for Contract Payments" Form with each of its Applications for Payment.
- 4.4. Materials stored on site may be submitted for payment provided the following conditions are adhered to by the Subcontractor:
  1. Material is on site and properly stored and protected.
  2. Submittals for materials have been forwarded to the General Contractor and Designer for review and the Designer has provided an acceptable review.
  3. Field receiving reports (material delivery tickets) are provided with the Applications for Payment. The description and quantities of the subject material being invoiced shall be depicted on the subject field receiving report in order to comply with this requirement.
  4. The material on site is the same material submitted and reviewed by the General Contractor and Designer.
  5. Stored materials must be specific to the project. Items such as conduit, wire, pipe, etc. will not be paid for as stored material without prior approval of the Owner, General Contractor and the Designers.
- 4.5. Material stored off site may be submitted for payment provided the following conditions are adhered to by the Subcontractor:
  1. The General Contractor must receive approval from the Designer and Owner on behalf of a Subcontractor prior to approving payment.
  2. Material is in a bonded warehouse and properly stored and protected.
  3. Submittals for materials have been forwarded to the General Contractor and Designer for review and the Designer has provided an acceptable review.



4. Field receiving reports (material delivery tickets) are provided with the Applications for Payment. The description and quantities of the subject material being invoiced shall be depicted on the subject field receiving report in order to comply with this requirement.
  5. The stored material is the same material submitted and reviewed by the General Contractor and Designer.
  6. Material shall be fully insured by the Subcontractor to include full replacement thereof due to theft, fire, natural disaster, or any other cause under or outside the control of the Subcontractor. Subcontractor's insurance company via a certificate of insurance or letter as deemed acceptable to the Owner and/or General Contractor shall confirm that this separate coverage is intact prior to considering processing payment to Subcontractor. Offsite materials shall be stored in a bonded warehouse acceptable to the General Contractor and Owner in order to be considered for payment.
  7. Bill of Sale for all stored materials are provided with the Applications for Payment.
  8. Stored materials must be specific to the project. Items such as conduit, wire, pipe, etc. will not be paid for as stored material without prior approval of the Owner, General Contractor and the Designers.
  9. The stored materials must be clearly marked for this project only at the stored location and stored separately from other materials, such that this material can be clearly delineated in provided photos satisfactory to the Owner, Designer and General Contractor. The Owner, Designer or General Contractor also require inspection of said materials, so this subcontractor or vendor shall fully cooperate to accomplish this inspection.
- 4.6. Retainage - The General Contractor shall pay ninety-five percent (95%) of the amount due to the Subcontractor which is an equivalent to five percent (5%) retainage. Upon fifty percent (50%) completion of the overall project and the Subcontractor's Scope of Work and if the project is proceeding satisfactorily as determined by the General Contractor, Designer and Owner and if approved by the Owner, no further retainage will be withheld from the Subcontractor. The retainage withheld (totaling two and one-half percent (2.5%) retainage at final completion) after the Subcontractor achieving the fifty percent (50%) completion stage of its Work shall be held until final completion is achieved. If the project is not proceeding satisfactorily on or after the Subcontractor achieves the fifty percent (50%) completion stage as determined by the General Contractor and Designer and Owner, retainage shall remain or be readjusted to five percent (5%). Additionally, retainage will not be withheld on materials purchased by the General Contractor through a Purchase Order Agreement.
- 4.7. Quick Payment Program – In order to promote a good faith effort to recruit Historically Underutilized Businesses, Minority Business Enterprises and/or Non-Minority Business

Enterprises, the General Contractor will consider implementing a quick payment program for this project. This quick payment program / process must be approved and facilitated by the Owner through early payments to the General Contractor. In all cases, each Subcontractor who wants to be considered for inclusion in this program shall provide a written request to the General Contractor on or before thirty (30) days prior to submission of its first Application for Payment. The General Contractor will also consider reviewing a Subcontractor's request if submitted to the General Contractor with its Subcontractor / Supplier Pre-qualification Application. Following receipt and review of the aforementioned written request, the General Contractor will advise the Subcontractor of its decision of what it can and cannot do in order to assist the Subcontractor with expediting its payments.

- 4.8. At a minimum, the Subcontractor's written request for enrollment into the General Contractor's Quick Payment Program shall include the following for review and consideration by both the General Contractor and Owner. Please note that only Subcontractors who may benefit from this program will be considered for inclusion. The General Contractor's decision on this matter will be final.
1. Provide a specific reason(s) as to why your company needs to receive payment on an alternative payment schedule (e.g., every two weeks, etc.) in lieu of the payment terms defined herein.
  2. The aforementioned reason(s) shall be accompanied with an explanation and documentation in order to substantiate as to why this is necessary in order for the applying firm to meet its financial obligations.
  3. Documentation which must be provided to the General Contractor shall include, but not be limited to the following:
    - i. A comprehensive project list must be provided to include all projects currently under contract between an Owner(s) or other Contractor(s) and the applying Subcontractor.
    - ii. Comprehensive project list shall include each project's completion status, contract amount between applying firm and Owner or other Contractor and amount of each contract currently paid to date.
    - iii. Copies of recent bank statements (last six (6) months) illustrating the applying Subcontractor's cash on hand and its recent payment history.
  4. Provide a proposed payment schedule and frequency thereof for review and consideration.
  5. Define any other reasons for consideration for enrollment into the General Contractor's Quick Payment Program.

- 4.9. "Quick Payment Agreement" form to be used as part of this Quick Payment Program is included in Section 01600 - Forms of this Project Manual.
- 4.10. Joint Check Agreement – If deemed in the best interest of the Project, as determined by the General Contractor, the General Contractor may require the Trade Subcontractor to pay its Sub-subcontractor or Supplier via Joint Check. If required, the following procedure must be undertaken to complete the joint check process.
  1. This Subcontractor shall provide the General Contractor with a comprehensive list of all material / equipment Suppliers and/or Sub-Subcontractors with whom the Trade Subcontractor intends on or will be purchasing materials / equipment and/or sub-subcontracting certain aspects of the Work for this project.
  2. On behalf of the Trade Subcontractor, each of the proposed material / equipment suppliers or sub-subcontractors who are contracted by the Trade Subcontractor shall be paid by the General Contractor via a joint check naming both the Trade Subcontractor and material/equipment supplier or sub-subcontractor as a payee on the applicable check.
  3. A joint check agreement shall be executed between the Trade Subcontractor and General Contractor in accordance with the General Contractor's standard Joint Check Procedure defined herein. There needs to be a Joint Check Agreement for each of the Trade Subcontractor's suppliers or Sub-subcontractors. Both signatures need to be notarized on each of the agreements.
  4. The Trade Subcontractor shall also have its Material/Equipment Supplier or Sub-subcontractor shall submit and notarize a "Partial Waiver of Liens" form with each application of payment in order for the General Contractor's accounting department to determine the exact amount of each applicable joint check to be issued for the Trade Subcontract.

**The following steps need to be completed every month before payment can be released by the General Contractor:**

5. The Trade Subcontractor needs to supply the General Contractor with all invoices due to their sub-Subcontractors or Suppliers for that month.
6. A partial lien waiver needs to be completed for the correct amount scheduled to be paid to each sub-Subcontractor or Supplier that month.
7. Each Supplier and Subcontractor need to sign the partial lien waiver and both signatures are to be notarized.
8. Checks will be issued jointly to the Sub-subcontractor or Supplier and Trade Subcontractor. The Trade Subcontractor will need to execute and endorse the back of the check. In turn, the check will then be given to the Sub-subcontractor or Supplier by the General Contractor.



9. Reference the General Contractor's Joint Check Agreement Form included in Section 01600 of this Project Manual for further information.
- 4.11. Early Release of Final Payment – Contingent upon receipt of approval from the Owner, a particular Subcontract may be closed out financially upon the completion of the applicable Subcontractor's Scope of Work. In any event, prior to a Subcontract being closed out financially, the General Contractor and/or Designer must complete a Final Inspection of the Subcontractor's work, all punch list items, if applicable, must be completed in their entirety by the applicable Subcontractor and all required close out documentation shall be received and approved by the General Contractor, Designer and/or Owner. Additionally, if the Subcontractor's work is closed out financially prior to the achieving the substantial completion date of the project, all warranties and guarantees shall be post dated to the Substantial Completion date of the project. Upon completion of the aforementioned, and only contingent upon the Owner's concurrence, the applicable Subcontract will be considered complete and will be closed out accordingly.
- 4.12. Reference other Specification Sections contained within the PROJECT MANUAL as prepared by the General Contractor or Designer for other requirements pertaining to this section.

## **V. CHANGE ORDER PROCEDURE**

- 5.0. Change Order Work
  - a. Definition: Any work that changes the scope of the Subcontractor's/Supplier's agreement whether directed by the Owner, Architect, or General Contractor.
  - b. Instructions for change order Work of any type must be in writing and include a General Contractor Proposed Change Order Number (PCO Number).
  - c. Extra Work performed without prior written instruction AND including a General Contractor's PCO Number will be at the Subcontractor's/Supplier's expense.
  - d. It is the Subcontractor's responsibility to ensure that the field supervisors are familiar with the extent and scope of Subcontractor's Work so that the Work is not delayed due to disagreements regarding contractual responsibilities.
  - e. **All Field Work Tickets are to be signed daily by the General Contractor's authorized representative.** Signing of this Field Work Ticket only constitutes Subcontractor has performed the work in question, **not** approval that Subcontractor will receive compensation. Each Field Work Ticket must have a **detailed** description of the work performed, itemized materials list, equipment utilized, and man-hours hours spent. Subcontractor shall forward to the General Contractor within one (1) week of such occurrence a Request for Change Order in the format defined herein. Failure to provide **all** information may result in rejection of claim.
- 5.1. Changes in Scope of Work

- a. General Contractor will review all changes initiated by the Owner or Architect, assign a General Contractor PCO Number, and forward the information to applicable Subcontractors/ Supplier's with instructions.
  - b. It is imperative that the Subcontractor/Supplier's reply with a response in writing for the proposed change Work within five (5) business days of receipt of the General Contractor's **Proposed Change Order (PCO)** Letter. All proposals must include itemized breakdowns including the following:
    - i. Material
    - ii. Equipment rental
    - iii. Labor
    - iv. Taxes
    - v. Overhead and profit
    - vi. Bond/insurance, if applicable
  - c. If at the time Subcontractor submits his quotation (Change Proposal) he does not specify that a time extension is required, he will be required to complete the work required by the change as indicated by the most current Project Schedule.  
**Each change proposal shall reference only one General Contractor PCO Number. Change proposals that do not have the proper General Contractor PCO Number listed and/or a complete breakdown will be returned to the Subcontractor and may result in rejection of claim.**
  - d. The pre-assigned Proposed Change Order Number shall be referenced on all correspondence relating to CHANGES and PROPOSED CHANGES once a number has been assigned.  
**When a Subcontractor/ Supplier submits a change proposal for a change under a particular referenced Proposed Change Order Number, it will be assumed to cover all Work required by that change unless indicated otherwise. It is the Subcontractor's/Supplier's responsibility to investigate the total scope of the change and notify General Contractor at the time the change proposal is submitted, of any exclusions and/or qualifications that would affect Subcontractor's/Supplier's quote.**
  - e. If a change order(s) significantly increases the Subcontract value (in excess of 15% of the original subcontract amount), Subcontractor must provide a rider from its surety company increasing the Performance and Payment Bond amounts.
  - f. When Owner, Designer and General Contractor have approved Subcontractor change in scope, a Subcontractor Change Order will be issued.
- 5.2. Time and Material Change in Scope of Work (T&M) - If Subcontractor is instructed to perform Work on a "time and material" basis, the cost of the Work is to be documented as follows:
- a. Prior to proceeding with any time and material Work, Subcontractor must obtain a **Field Work Ticket (Copy included in Section 01600 of this Project Manual)** form, along with a General Contractor PCO Number from the General Contractor's Project Manager responsible for that Project.
  - b. The **Field Work Ticket (included in Project Manual)** form must be completed in its entirety and **signed daily by the General Contractor's Superintendent or Project Manager.**

- c. Time and material tickets are to be signed on a daily basis by General Contractor's authorized representative and attached as documentation to the **Field Work Ticket** form. One (1) copy of the signed ticket is to be given to General Contractor's authorized representative prior to leaving the site at the end of each day. Information on the daily tickets is to include:
    - i. Date
    - ii. Subcontractor
    - iii. Complete description of the Work, including type, location, extent, quantities, etc.
    - iv. Manpower involved, broken down by trade and number of hours worked by each
    - v. Material used
    - vi. Equipment used
    - vii. Include General Contractor reference number
    - viii. Estimated cost to complete the Work
  - d. **Extra Work Authorization** directives issued by the General Contractor are **valid for a Thirty (30) Calendar Day period**. If work extends beyond (30) calendar days, the subcontractor performing the work is responsible for obtaining a new **Extra Work Authorization** from the General Contractor. Failure to obtain a new **Extra Work Order** will result in rejection of payment for the work.
  - e. Failure to fully comply with the above requirements will result in rejection of claim.
- 5.3. Billing of Changes - All Subcontractor Pay Applications for base contract Work and change order Work (including change in Scope of Work, time and material Work, etc.) will be paid as progress billings ONLY. There will be no payments for change order work of any type without a signed General Contractor Change Order.
- a. Change in Scope of Work - Upon receipt of a contract/change order from the Designer or Owner; General Contractor will issue a Subcontract Change Order.
  - b. Change in Scope of Work **not** involving the Owner or Designer - Upon General Contractor's review and approval of Subcontractor's quotation, General Contractor will issue a Subcontract Change Order.
- 5.4. Overhead and Profit Mark-up –
- a. Subcontractor agrees to be bound to the provisions of the Contract Documents between the Owner and the General Contractor, with regards to percentage markups for changes and in no case shall the applicable percentage for overhead and profit for all tiers of Subcontractors exceed the amount shown on the Subcontract.
  - b. Supervision costs included in the original Subcontractor's Agreement cannot be included in any change order pricing unless additional supervision is required to execute change.
  - c. Overhead and fee will not be allowed on premium time.



- 5.5. In order to facilitate checking of quotations for extras or credits, all change requests from Subcontractors or Suppliers, except those so minor that their propriety can be seen by inspection, shall be accompanied by a complete itemization of costs including labor, materials, equipment and sub-Subcontractors. Labor and materials shall be itemized in the manner prescribed below. When major cost items as provided through sub-subcontracts are applicable to the particular change request, the same itemization shall be required of the sub-Subcontractor. In no case will a change involving over \$500.00 be approved without such itemization.
- 5.6. All change requests shall be submitted directly to the General Contractor for review and approval and when applicable, subsequent submission to the Designer and Owner for their review and approval.
- 5.7. Submit one (1) original cost proposal along with all appropriate supporting documentation, including at least invoice(s) for any materials, cost proposal for any sub-subcontract work, invoice(s) for equipment rental, etc.
- 5.8. The Subcontractor's Change Order Request shall include an allowance for overhead and profit in accordance with the schedule as follows:
- 15% on net additional cost for work performed by Subcontractor's own forces or for work performed by others under sub-subcontract to the Subcontractor.
  - No markups will be allowed below a sub-subcontractor level.
  - For all change orders (additive or deductive) to the subcontract sum, the change order shall include the net cost plus ten (15%) overhead and profit.
  - Reference General Conditions, Article 7 for specific percentage adjustments applicable to Changes associated with a Subcontractor or Suppliers work.
- 5.9. Change requests that result in an added cost of more than \$500.00 shall be accompanied with an itemized cost breakdown of all material, labor, equipment, sub-subcontract work and bonds (if applicable) similar to the following format.

**Change Request Cost Breakdown**

**Materials**

xxx units @ \$xxx/unit	\$xxx.xx
sales tax	<u>\$xx.xx</u>
Total Material:	\$xxx.xx

**Labor**

tradesman xxhrs @ \$xx.xx/hr	\$xxx.xx
payroll tax & insurance @ xx%	<u>\$xxx.xx</u>
Total Labor:	\$xxx.xx

Rental Equipment

Equipment xxday @ \$xx.xx/day \$xxx.xx

Total Rental Equipment: \$xxx.xx

Sub-subcontract (see attached separate material and labor breakdown)

Total Sub-subcontract: \$xxx.xx

**Change Request Cost Summary**

Self-Performed Work

Total material \$xxx.xx

Total labor \$xxx.xx

Total rental equipment \$xxx.xx

Subtotal \$xxx.xx

Overhead / profit @ 15% \$xxx.xx

Subtotal Self Performed Work: \$xxx.xx

Sub-subcontract Work

Total sub-subcontract \$xxx.xx

Overhead / profit @ 8% \$xxx.xx

Subtotal Sub-subcontract Work: \$xxx.xx

Total Self Performed and  
Sub-subcontract Work: \$xxx.xx

Bond Premium (if applicable) \$xxx.xx

Total Change Request Amount: \$xxx.xx

- 5.10. Labor rates and labor burden must be substantiated through a detailed cost breakdown acceptable to the General Contractor.
- 5.11. Upon request from the General Contractor for a specific change order proposal, the Subcontractor shall submit a change request proposal in accordance with the previously described format by no later than five (5) calendar days upon receipt of the request.
- 5.12. Should the Subcontractor discover a discrepancy among the Contract Documents or a concealed condition or other cause for initiating a change in the Subcontract Sum or Time of Completion, the Subcontractor shall notify the General Contractor immediately, but no later than seven (7) calendar days or sooner if required by other pertinent provisions of the Contract Documents. Failure to notify the General Contractor within the

aforementioned established timeframe may result in a “No Cost” Change Order to the Subcontractor.

- 5.13. Should the Owner and/or Designer approve a change in the Work or a change in the Contract Time of Completion, the General Contractor shall issue a Change Order or a Notice to Proceed in the Change of the Work to the Subcontractor or Supplier for an agreed upon dollar value.
- 5.14. Cost Increase Policy – Subcontractor has assumed the risk of cost increases and the effects of shortages or lack of availability of materials, energy, goods, and labor, and neither the price nor schedule for performance and completion of the Work shall be subject to adjustments should any of these risks arise.
- 5.15. Upon request, Subcontractor shall assist the General Contractor in preparing Time and Material / Unit Price Estimates before the Extra Work commences.

## **VI. SUBMITTALS**

- 6.0. Timing of Submittals - Upon receipt of a Notice to Proceed, Subcontract Agreement or Purchase Order Agreement from the General Contractor, all submittals supporting critical path activities shall be transmitted to the General Contractor for review and subsequent forwarding to the Designer for review within thirty (30) calendar days, unless reflected otherwise within the Project Construction Schedule.

All submittals must be submitted to the General Contractor within thirty (30) calendar days from receipt of a Notice to Proceed, Subcontract Agreement or Purchase Order Agreement from the General Contractor. Only with prior approval from the General Contractor, at the latest any submittal shall be submitted to the General Contractor is sixty (60) calendar days from receipt of a Notice to Proceed, Subcontract Agreement or Purchase Order Agreement from the General Contractor. Subcontractor Monthly Pay Applications shall include a separate line item for submittals acceptable to the Owner, Designers and General Contractor. Subcontractor Pay Applications will not be processed for payment until all submittals have been submitted to the General Contractor for review and approval.

- 6.1. Prior to the Subcontractor preparing the submittals, the General Contractor shall advise the Subcontractor or Supplier of the required number of submittals including shop drawings, product data or color samples to be transmitted to the General Contractor for review. At a minimum, the Subcontractor shall assume a minimum of seven (7) copies. All submittals shall also be provided in a PDF electronic format organized by specified sections, paragraphs and subparagraphs numerical system.
- 6.2. It shall be the Subcontractor or Supplier’s responsibility to forward all submittals far enough in advance to provide sufficient time required for reviews, for securing necessary approvals, including possible revisions and re-submittals, and for placing orders and securing delivery to enable installation of material or equipment to meet the Project Construction Schedule.



- 6.3. No extension of Subcontract Time will be authorized because of the Subcontractor or Supplier's failure to transmit submittals to the General Contractor sufficiently in advance of the Work to permit processing.
- 6.4. Each Subcontractor shall allow at least fourteen (14) calendar days for review of submittals by the General Contractor and an additional twenty (20) calendar days for review by the Designer following receipt of the submittal. Each Subcontractor is responsible for timely submission of submittals. Submittals shall be transmitted enough in advance of the work to permit processing including resubmittals. All costs for schedule delays or expediting costs associated with deliveries and work for late submission is the responsibility of the submitting Subcontractor.
- 6.5. Coordinate transmittal of different types of submittals for related elements of the Work such that processing will not be delayed by the need to review submittals concurrently for coordination. The General Contractor and/or Designer reserve the right to withhold action on any particular submittal requiring coordination with other submittals until all related submittals are received.
- 6.6. If required by the General Contractor, the Subcontractor or Supplier shall provide to the General Contractor six (6) sets of "Field Use Drawings" (i.e., rebar, structural steel, bar joist, trusses, food service equipment layout, etc.) for distribution to other Subcontractors for coordination purposes. "Field Use Drawings" shall incorporate all Designer approved and/or directed revisions and include the words "Field Use Drawings" stamped on each sheet.
- 6.7. Prior to each submittal, the Subcontractor or Supplier shall carefully review and coordinate all aspects of each item being submitted.
- 6.8. The Subcontractor or Supplier shall verify that each item and the submittal for it, conforms in all aspects with the specified requirements.
- 6.9. All shop drawings submitted shall be marked with the name of the project and associated building, numbered consecutively and bear **the signed and dated stamp of the approval of that Subcontractor or Supplier** as evidence that the drawings have been checked by the Subcontractor or Supplier. Any drawings submitted without this stamp of approval shall not be reviewed and shall be returned to the Subcontractor or Supplier for resubmission. In lieu of a review stamp, the Subcontractor or Supplier may provide **a letter with each submittal certifying the contents of the submittal have been reviewed by the Subcontractor or Supplier and that the same has been reviewed for compliance with the Contract Documents.** If the shop drawings indicate variations from the requirements of the Contract Documents because of standard shop practices or other reasons, the Subcontractor or Supplier shall make specific notation of such variations in its letter of transmittal and on the drawings in order that, if acceptable, suitable action may be taken for proper adjustment; otherwise, that Subcontractor or Supplier shall not be relieved of the responsibility for executing the Work in accordance with the Contract Documents even though such shop drawings have been reviewed.

- 6.10. Reference other Specification Sections including but not limited to submittals, as-built and record documents contained within the PROJECT MANUAL as prepared by the General Contractor or Designer for other requirements pertaining to this section.

## **VII. SUBMITTAL OF SUBSTITUTIONS**

- 7.0. The Trade Subcontractor or Supplier's Base Bid shall be in strict accordance with the Contract Documents.
- 7.1. The Trade Subcontractor has the option of requesting substitutions during the bid period by submitting a completed Substitution Request Form to the General Contractor.
- 7.2. The Substitution Request Form shall be submitted a minimum of ten (10) calendar days prior to the Bid Date. Requests received by the General Contractor within ten (10) calendar days prior to Bid Date shall be included within an addendum, if acceptable to the General Contractor, Designer and/or Owner.
- 7.3. Reference the "Substitution Request Form" which is included in Section 01600 - Forms in this Project Manual or in not there, reference the Designer's Technical Specifications of their Project Manual.
- 7.4. Subcontractors submitting substitution request shall be responsible for coordination and all costs of other work required and/or necessitated by the substitution.

## **VIII. COORDINATION WITH OTHER TRADE SUBCONTRACTORS**

- 8.0. Each Trade Subcontractor or Supplier shall coordinate its work with the work of the other Trade Subcontractors or Suppliers in such a manner as the General Contractor may direct.
- 8.1. Subcontractor understands and agrees that the Work performed under this agreement is intended to be a complete Scope of Work and shall perform such Work as may be reasonably inferred from the Contract Documents or required to complete the Work.
- 8.2. All RFI – Request for Information (questions, confirmation and clarifications of the contract documents) are required to be made using the General Contractor's Procore Project Management System. Subcontractor shall obtain permission rights and password from the General Contractor.
- 8.3. If a Trade Subcontractor notifies the General Contractor in writing that a second Trade Subcontractor on the project is failing to coordinate its work with the work under the first Trade Subcontractor's Subcontract, the General Contractor will promptly investigate the matter and, if the allegation is determined to be justified, shall issue such directions to the second Subcontractor as are appropriate or as deemed necessary to resolve the issue. However, the General Contractor shall not be liable for any costs incurred by the Subcontractor by reason of the second Subcontractor's failure to coordinate or his failure to comply with directives of the General Contractor. Additionally, it shall be understood

and agreed to by all Trade Subcontractors that the General Contractor does not guarantee that other Trade Subcontractors will not breach their obligations to coordinate their work with that of the Trade Subcontractor.

- 8.4. Various Trade Subcontractors and their respective Sub-subcontractors are required to work the days required when coordination between the Trade Subcontractors is required, even if the additional days worked are not considered a scheduled or normal workday. Trade Subcontractors can achieve this coordination by alternating workdays and/or shifts in a manner so as not to incur overtime or additional cost to the Trade Subcontractor. Instances which may require coordination, include but are not limited to, the following items:
- A. Blockout sizing, locating and installing within:
    - 1. Footings
    - 2. Slabs on grade
    - 3. Elevated Slabs
    - 4. Masonry
    - 5. Roof Decks
  - B. Installation of material within concrete, masonry, metal stud framing, drywall, acoustical ceiling grid, etc.:
    - 1. Anchor Bolts
    - 2. Embeds
    - 3. Anchorage's and/or backing
    - 4. Structural Steel Framing
    - 5. Building Insulation
    - 6. Electrical
    - 7. Plumbing
    - 8. HVAC
    - 9. Fire Protection
    - 10. Fire Safing
    - 11. Spray-on Fireproofing
- 8.5. Failure on the Trade Subcontractor's part not to coordinate and provide sufficient manpower to maintain the Project Construction Schedule shall be at no fault of the other Trade Subcontractors and their Sub-subcontractors. Any demolition and rework required to install work which should have been located and/or installed during the construction and/or erection of other work shall be back charged to the negligent Trade Subcontractor(s) and deducted from its Subcontract Amount.
- 8.6. Fireproofing - All items that are attached to the structural steel and/or metal deck must be in place before the fireproofing is installed. Should this Subcontractor damage or disturb the fireproofing this Subcontractor will be charged for patching and repair costs.
- 8.7. Backing and Blocking -
- a. The Drywall, Framing and Insulation Subcontractor shall provide all backing, blocking, and/or concealed framing required within their work and shall install



same in a timely manner so as not to delay the Work of other trades. Fire-treated wood shall be used as required.

- b. The Drywall, Framing and Insulation Subcontractor shall provide all in-wall blocking (and include double studs) as necessary to be attached to framing for support. The Drywall, Framing and Insulation, Subcontractor shall include all wood blocking attached to studs for systems installed by Others. Each Subcontractor requiring the blocking shall coordinate location and confirm/verify layout/installation of all blocking requirements with the installing subcontractor. All wood blocking and plywood to be fire rated as required. This includes plywood backing at all electrical panels, control panels, etc.
  - c. In-wall blocking support for all "Owner Furnished Contractor Installed", "Owner Furnished Owner Installed," and "Vendor Furnished Contractor Installed" equipment shall be furnished and installed by the Drywall, Framing and Insulation Subcontractor. Work provided by the Drywall, Framing and Insulation Subcontractor shall include, but not be limited to, wood, metal backing, framed openings, etc. sufficient to support the equipment while in static or operating position.
  - d. All Roof blocking including but not limited to nailers, cants, plywood at parapets, blocking at parapets, blocking at eaves, rakes and freeze boards, expansion joints, roof openings, etc. shall be by the Roofing Subcontractor(s).
  - e. Provide all materials as required (misc. iron, brackets, pipe, hangers, rods, inserts, etc.) to support, hang, secure, mount, and brace all equipment and materials encompassed by the terms of the Subcontract.
  - f. Provide all welding, bolting, fasteners, anchors, anchorage devices, and devices of similar distinction as required for the performance of the Work in the Subcontract.
- 8.8. Dewatering - Dewatering operations as needed to facilitate and continue work are included within each applicable Subcontract. Provide sump pits or other suitable means as required for dewatering.
- 8.9. Equipment Coordination - All Work associated with Owner or Vendor Furnished Equipment shall be coordinated with the manufacturer's requirements, product data/cut sheets, Owner requirements, and other trades Work.

#### **IX. PRECEDING WORK / EXISTING CONDITIONS**

- 9.0. All Trade Subcontractors and Suppliers shall be responsible for inspecting all job conditions affecting the installation of an item being furnished and/or installed as part of their respective Work. Additionally, all Trade Subcontractors and Suppliers shall take field measurements required prior to fabrication of an item to ensure that the item concerned will integrate properly with all adjacent materials and fit all other conditions as they exist or will exist in the finished construction.
- 9.1. All Work in connection with installation of an item(s) being furnished and/or installed as part of a Trade Package Scope of Work shall be coordinated with all other affected work and trades.

- 9.2. Each Subcontractor is responsible for inspecting the work that precedes its work and reporting any deficiencies which will affect its work to the General Contractor prior to commencing with the new work. Once the new work has been installed over preceding work, the General Contractor shall consider this action as the Subcontractor installing the new work as acceptance of all preceding work.

**X. LIQUIDATED DAMAGES / SCHEDULE RECOVERY PLAN**

- 10.0. Reference the CM – Owner Agreement for a detailed outline of the liquidated damages applicable to this project. Each Trade Subcontractor is responsible for liquidated damages if enacted by the Owner based on the portion thereof contributed by the Trade Subcontractor due to non-performance of its agreement between the General Contractor and Subcontractor.
- 10.1. Further requirements of this section are defined below.
- 10.2. The Dates for Substantial Completion and Final Acceptance / Completion are designated on the Project Construction Schedule.
- 10.3. As time is of the essence, all efforts shall be taken by all Trade Subcontractor's or Supplier's to ensure that the durations and dates within the Project Construction Schedule are maintained and are met by all project participants.
- 10.4. If enacted by the Owner due to the project failing to meet its scheduled dates plus time extensions granted by the Owner, liquidated damages will be assessed to the Trade Subcontractor(s) who is determined to be the cause of the delay. This determination will be made by the General Contractor by completing a detailed analysis of the "Critical Path" contained within the Project Construction Schedule. Once the schedule activity(s) is determined and the responsibility thereof assigned, the Trade Subcontractor initially causing the delay will be obligated to pay / reimburse the liquidated damages to the General Contractor to be paid to the Owner. If it is determined that the responsibility of the delay is a result of more than one Trade Subcontractor's inability to maintain the durations and dates on Project Construction Schedule, then the General Contractor will appropriate a pro-rata share of the liquidated damages to each Trade Subcontractor responsible for the delay.
- 10.5. If required, the Trade Subcontractor's application for payment may be placed on hold by the General Contractor in an amount(s) deemed sufficient to cover projected liquidated damages if it is likely that liquidated damages will be assessed by the Owner.
- 10.6. During the course of the project and if it is found that a particular Trade Subcontractor is behind schedule as measured by the current Project Construction Schedule, the General Contractor will serve the delinquent Trade Subcontractor a written notice of the delay and will instruct the Trade Subcontractor to provide a schedule recovery plan to the General Contractor for review and approval. The Trade Subcontractor will be allowed seventy-two (72) hours to submit this plan for review and approval. Upon receipt, the

General Contractor will respond promptly as to the acceptance or rejection of this plan. If the Trade Subcontractor fails to submit an acceptable schedule recovery plan to the General Contractor within the seventy-two (72) hour time frame, the General Contractor will provide a mandatory schedule recovery plan to the Trade Subcontractor for its execution.

- 10.7. The Trade Subcontractor shall maintain the schedule recovery plan by working overtime, weekends, multiple shifts, multiple crews, etc. at no additional cost and as required to maintain and achieve the durations and activity completion dates defined within the Project Construction Schedule. The Trade Subcontractor may become responsible for the additional supervisory time required by the General Contractor as a result of the Trade Subcontractor not maintaining the Project Construction Schedule.
- 10.8. All Trade Subcontractor's or Supplier's recognize that the Project Construction Schedule represents the latest an activity shall start. Should the Project Construction Schedule be improved during construction, the Trade Subcontractor or Supplier Subcontractor shall be required to begin the Work as soon as the preceding work allows or as expeditiously as the progress of the project permits in the opinion of the General Contractor.
- 10.9. If a Trade Subcontractor falls behind schedule for causes not entitling it to an extension of time under any provisions within the Contract Documents, and the delay in progress causes delay to another Trade Subcontractor's performance, the Trade Subcontractor shall indemnify and hold harmless the General Contractor from all reasonable costs incurred as a result of the delay.
- 10.10. Additionally, time is of the essence as it relates to crew sizing and scheduling of critical path activities, particularly those associated with work covered by each Trade Subcontractor's Scope of Work. The scheduling of each Trade Subcontractor's Scope of Work shall be based on the fact that different portions of the project will be undertaken separately and completed simultaneously in a timely manner in order to accomplish all work within the time frames designated within the Project Construction Schedule. Unless alternate scheduling proves the project can otherwise be completed on schedule, activities among different portions of the building shall not be interdependent.

#### **XI. PERMITS, FEES, INSPECTIONS AND TESTING & LICENSING**

- 11.0. The NCDEQ grading permit will be obtained by the Owner at no cost to the Trade Subcontractor(s).
- 11.1. All sanitary sewer and water tap and/or impact / connection fees, acreage fees, frontage fees, etc. will be paid directly by the Owner at no cost to the Trade Subcontractor(s).
- 11.2. Water meters and associated meter fees, if applicable shall be paid by the Owner at no cost to the Trade Subcontractor(s).
- 11.3. The Building Permit will be paid by the Owner at no cost to the Trade Subcontractor(s).



- 11.4. Any other applicable permits, licenses, and fees not included as part of the Building Permit including permits for HVAC, Plumbing, Electrical and/or Fire Protection Work shall be obtained and paid for by the respective Trade Subcontractor requiring the permit in order to be authorized to commence its work on site. Wake County is the permitting authority for this project.
- 11.5. Where tests, certificates or approvals by authorities other than the Designer are required for an item of work or material, the Trade Subcontractor shall have such tests performed and/or shall procure such certifications or approvals and forward four (4) copies of the test results of the certificates or approvals to the General Contractor prior to proceeding with the work involved. Such laboratories and/or authorities as are employed for this purpose shall be competent, with a generally recognized reputation in the field concerned and shall be subject to approval of the Designer.
- 11.6. Inspections by the Local Fire Marshal, City or County Building Inspectors or Utility Companies shall be obtained by and coordinated by the Trade Subcontractor through the General Contractor. The cost of inspections shall be borne by the responsible Trade Subcontractor for applicable inspections.
- 11.7. Each Trade Subcontractor shall be responsible for notifying the City Inspectors and/or County Inspectors and/or State Inspectors when their services or inspections are required. Expedite notification to insure proper lead-time. The Trade Subcontractor shall notify the General Contractor in writing twenty-four (24) hours prior to any inspection.
- 11.8. Independent Construction Materials Testing, Field Inspections and Special Inspections specifically provided by the Owner, will be at no cost to the General Contractor or Trade Subcontractor unless noted otherwise. The Subcontractor will offer complete cooperation to all testing and inspection-related personnel. Subcontractor shall provide the necessary equipment, devices, etc. to facilitate safe access to the points of inspection.
- 11.9. Excluding only tests and testing performed by a Testing Engineer employed by the Owner, the Subcontractor shall be responsible for the execution of all tests and testing required by the Specifications and by all governmental authorities having jurisdiction and shall pay the costs of all such tests and testing. The Subcontractor shall submit certified results of the test to the General Contractor for the Architect's approval. If directed in writing by General Contractor, the Subcontractor shall provide additional tests and testing performed by approved personnel working under the direction and supervision of General Contractor.
- 11.10. If retesting a certain aspect of the work results in confirmation of an initial failed test result, then the Trade Subcontractor responsible for the failed test result shall be responsible for reimbursing the cost thereof to the Owner for the additional testing work.
- 11.11. Each Trade Subcontractor shall be responsible for notifying the General Contractor in accordance with the Contract Documents, but no less than one (1) week of a specific work activity requiring an Owner furnished test and/or inspection in order for the General Contractor to timely schedule Owner furnished Construction Testing/Inspection Services.

Failure of the Trade Subcontractor to advise the General Contractor no less than one (1) week of the requested testing and/or inspection shall not constitute an extension of time should the Construction Testing/Inspection Services not be available at the requested time.

- 11.12. Each Trade Subcontractor shall be responsible for having a Specialty Contractor's license to perform its Scope of Work as required by all state and/or local governing codes and/or requirements. For example, the HVAC, Plumbing, Electrical, Fire Protection, Site Utilities Trades require a Specialty Contractor's License in the State of North Carolina.

## **XII. PROJECT MEETINGS / REPORTING**

- 12.0. Pre-construction Meeting – A Pre-Construction Meeting will be scheduled and conducted by the General Contractor and Designer. All Subcontractors and Suppliers issued a Subcontract Agreement and/or Purchase Order Agreement shall attend this meeting. At a minimum, the Project Manager and Field Superintendent for the Subcontractor or Supplier shall attend this meeting as many processes and procedures will be discussed in detail during the course of this important meeting. The Owner, Designer and other interested parties will also attend this meeting. The General Contractor will establish the time and place of this meeting.
- 12.1. Weekly Project Meetings - Project Site Meetings will be held weekly at the project site. The purpose of these meetings will be discussing the Project Construction Schedule, Safety, Coordination Issues, Status of Submittals, RFI's, Change Requests, etc. At least two (2) weeks prior to the start of a Subcontractor's on-site work and through the completion thereof, each Subcontractor shall be represented at every weekly meeting by its on-site Superintendent or Project Supervisor. Additionally, each Subcontractor or Supplier's Project Manager(s) is required to attend the weekly project site meeting at least twice a month or as required by the General Contractor. Failure to attend the required weekly meetings will result in a \$500 fine per occurrence. The General Contractor will establish time and place of these meetings.
- 12.2. Preparatory Meetings - The Subcontractor and/or Supplier and its sub-Subcontractor(s) shall not commence with any new work at the project site until such time as a preparatory meeting is scheduled. The intent of the General Contractor's preparatory meeting is outlined below.
  1. The purpose of the preparatory meeting is to indoctrinate the Subcontractor's employees and/or sub-Subcontractors of the specific requirements, changes, clarifications, interfaces with other work, safety related issues, etc. which may affect the forthcoming new work.
  2. The Subcontractor shall provide the General Contractor with a proposed list of the work items for which a preparatory meeting must be held prior to commencing on site work. The list shall be provided to the General Contractor within Ten (10) Calendar Days of receiving a Notice to Proceed for approval.

3. Prior to the preparatory meeting being scheduled, all submittal requirements, pending changes and/or clarifications affecting the new work shall have been completed and/or resolved.
  4. At a minimum, the Subcontractor's onsite supervisor and/or key foreman who are going to directly supervise the installation of the Subcontractors work shall be in attendance at this meeting. This superintendent must be able to discuss and make decisions relative to schedule, costs, scope of work, etc.
  5. The General Contractor reserves the right not to proceed with new work until the preparatory meeting(s) is held with the Subcontractor.
- 12.3. All Subcontractors will be required to submit a Daily Construction Report by 10:00 AM of the following workday to the General Contractor. The report shall include the number of men by trade or craft, type and location of work. It shall include the Subcontractor's work and other information as required by the General Contractor. Each Subcontractor shall use the General Contractor's "Daily Construction Report Form" which is included in Section 01600 - Forms of this Project Manual or received during the preparatory meeting.

### **XIII. QUALITY EXPECTATIONS**

- 13.0. All items shall be installed in a workmanlike manner in accordance with the best-recognized practice in the field concerned.
- 13.1. Manufactured items shall be installed in strict accordance with the manufacturer's printed directions, specifications and/or recommendations for installation of highest quality. All working parts shall be properly adjusted after installation and left in new working order.
- 13.2. Unless otherwise indicated, items exposed to weather or subject to flooding or wetting shall be installed so as to shed and not retain water. Items shall in all cases be installed plumb and true and/or in proper relation to surrounding materials.
- 13.3. All materials entering into the construction of the building covered by this Contract, including but not be limited to, those mentioned below, shall be securely anchored and/or tied together in accordance with the best recognized practice in the field concerned whether shown, specified or not.
- 13.4. Ties and anchors shall be best quality and material for the purpose and/or location for installation. Wythes of masonry and corners of masonry walls and partitions shall be bonded together if possible unless otherwise specifically shown and where not bonded shall be secured with appropriate metal ties or anchors. Masonry walls shall be anchored to adjacent columns unless otherwise specifically shown.
- 13.5. All wood, steel, concrete or other framing shall be securely anchored and tied together and to supporting or abutting masonry. All veneer finishes and applied items shall be securely anchored and tied to the backing material.



- 13.6. Except for expansion joints or otherwise where materials are purposely separated, each and every piece of material integrated into the building shall be bonded, anchored, tied or otherwise secured in place in a permanent manner that will permit expansion, contraction and other minor movements and normal use of the structure without structural features of the building becoming impaired and without any of its components becoming loose.
- 13.7. If in the opinion of the General Contractor, a Subcontractor's work requires caulking to provide the "finished product" appearance of any item installed, that Subcontractor shall furnish and install that caulking whether specified or not within the Contract Documents at no additional cost.
- 13.8. Unless otherwise specifically mentioned, all anchors, bolts, screws, fittings, fillers, hardware, accessories, trim and other parts required for or in connection with an item of material to make a complete, serviceable, finished and first quality installation shall be furnished and installed as part of the item whether specified or not within the Contract Documents at no additional cost.
- 13.9. Unless otherwise specifically specified, all items and parts thereof that are made of steel, iron or other ferrous metal that are not galvanized, plated or otherwise specified to be factory finished, shall be cleaned and painted with one shop coat of the best quality rust inhibitive metallic primer by the Painting Subcontractor unless specifically specified in the Contract Documents or other trade scopes. After installation, all exposed metal connections and abrasions shall be touched up with the same materials as the shop coat and left in good condition for final finishing.
- 13.10. Each respective Trade Subcontractor shall provide its own related supporting devices, including but not limited to, hangers and supports, seismic hangers and supports, hanger saddles, vibration isolation hangers, and miscellaneous structural steel supports and/or angle frame supports which are not detailed or illustrated on the drawings as being provided as part of Division 5 – Metals Work which are needed to support equipment as defined within the respective Trade Subcontractor's Scope of Work. When applicable, the respective Subcontractor shall be responsible for obtaining written approval for all attachments (i.e., beam clamps, all thread hangers, uni-strut, clamps, braces, etc.) attached to other Subcontractor's work prior to commencing with the installation of said attachments. Failure to obtain written approval from the respective Trade Subcontractor and/or Designer may result in the General Contractor's rejection of the installation(s).
- 13.11. The Subcontractor requiring access shall furnish access panels as required for access to items in their scope of work, panels to be installed by the Drywall/Acoustical or Masonry Subcontractor in their respective Scope of Work. This Subcontractor providing the access panels is responsible for provision of specified panels, included rated panels as required. Provide layout and coordination prior to all wall and ceiling construction for all access panels. All access panels to be keyed identical throughout the Project and shall be coordinated with other Subcontractors by this Subcontractor.

- 13.12. Provide dewatering operations as needed to facilitate and continue work included within this Contract.
- 13.13. Mold Prevention and Management Plan – The Subcontractor will comply with all mold prevention and management requirements as detailed in the Construction Mold Prevention and Management Plan that is part of the Project Manual enclosures. This includes all responsibilities, procedural controls, and moisture controls pertaining to Subcontractor's Scope of Work. Water leaks are to be responded to immediately upon discovery. Subcontractors are responsible for all rework and damage due to mold per Subcontractor's work.
- 13.14. This Subcontractor shall be fully responsible for Federal ADA standards compliance in the construction of this work. Where the Contract Documents conflict with these requirements, it is the supplier's responsibility to bring these inconsistencies to the attention of General Contractor in writing for clarification by the designer prior to the installation of the work. If any work is produced contrary to the Federal ADA, then this Subcontractor will be responsible for the cost of all work to bring it to compliance.
- 13.15. All materials furnished by Subcontractor are furnished and installed unless clearly specified otherwise.

**XIV. SEPARATE TRADE PACKAGE SCOPES OF WORK**

- 14.0. Each section of the Designer's Division 2 through 33 project specifications has been assigned to a minimum of one of the Trade Package Scopes of Work. Where a section of the specifications is referenced or in a Trade Package Scope of Work, then any and all items necessary for the proper and normal installation of the item referenced in the specification sections shall be included whether indicated within the documents or not.
- 14.1. This Subcontractor is responsible for all Contract Documents for this project. No allowance will be made for lack of knowledge of other subcontractor's work or existing conditions required in connection with HVAC, plumbing, electrical and other Subcontractors, including Owner furnished equipment.

**XV. ON SITE SUPERVISION / WORK HOURS / MULTIPLE MOBILIZATIONS**

- 15.0. Subcontractors/Suppliers performing work on multiple buildings or areas of the project site (i.e., buildings, road widening, site, etc.) shall provide separate equipment, hoisting, cranes, supervision including, but not limited to management, superintendent, foreman, tradesman, laborers, etc. for each building or area unless agreed to otherwise in writing by the General Contractor. If the project needs and schedule are not being met to the satisfaction of the General Contractor, written approval will be rescinded, and the original staffing requirements shall be provided by the Subcontractor.
- 15.1. Each Subcontractor shall have supervision on site any time work within their scope or the Subcontractor's tiered Subcontractors are being performed unless approved otherwise by the General Contractor.

- 15.2. The General Contractor will establish the project work hours that shall be adhered to by all Trade Subcontractor's, Sub-subcontractors and the like assigned to the project. Refer to Section 01340 of the Project Manual and the Trade Package Scope of Work Clarifications.
- 15.3. Should a Subcontractor fail to provide a competent supervisor, the Subcontractor's employees, Sub-Subcontractors, etc. shall be directed by the General Contractor to leave the project site.
- 15.4. Subcontractor's Field Supervision - Supervisor must be knowledgeable in all codes applicable to the Work including scope performed by sub-subcontractors. Qualified full-time supervision (onsite) is required for daily procedures with sole authority to make decisions on behalf of the company.
- 15.5. The Subcontractor and/or Supplier or its Sub-Subcontractor(s) shall have a full-time employee on site that is capable of translating/communicating with the other site employees who cannot speak the English language fluently. This requirement is to ensure that all on site field personnel are able to receive immediate verbal direction from their supervisors. Any employees on-site who are incapable of speaking the English language fluently, and who are not supervised by individuals capable of communicating with these employees, shall be removed for the project site immediately. This requirement is only applicable if the Subcontractor has employees not capable of speaking the English language fluently.
- 15.6. Multiple mobilizations may be required to complete the respective Trade Package Scope of Work. No additional charges or cost will be accepted by the General Contractor from the Trade Subcontractor or Supplier for multiple mobilizations.
- 15.7. The Work includes any out-of-sequence work required to meet job progress. Work necessitated by the special construction phasing requirements of the Project, or work interrupted by the Owner's operations shall include "comeback" costs required to complete this work at no additional cost to the Owner or the General Contractor.

#### **XVI. TEMPORARY FACILITIES**

- 16.0. Temporary facilities that affect all Trade Subcontractors and/or are specifically assigned to a particular Trade Package Scope of Work is designated below.
- 16.1. All temporary facilities installed by this trade shall be removed by the installing trade as directed by General Contractor unless specifically noted otherwise. The location of any temporary facilities shall be returned to the condition which existed prior to starting Work by the removing Subcontractor.
- 16.2. Each Subcontractor shall provide or arrange for the use of a telephone and/or radio for its own use while on the project. If required, each Subcontractor's Superintendent/Forman shall have in their possession at all times radio(s) compatible



with the General Contractor's radios/communication system. The General Contractor shall be able to contact each Subcontractor's Superintendent / Foreman (Responsible person having authority to make decisions on behalf of the company) at all times by use of the radio(s) or cell phone.

- 16.3. Each Subcontractor shall provide its own water coolers, ice, drinking water and cups for its own work force in accordance with the applicable FDA, OSHA and Union Labor requirements.
- 16.4. Portable power (i.e., generator, etc.), if necessary, shall be the responsibility of the Subcontractor requiring power along with its associated cost if a fixed power source is not available during construction unless specified otherwise.
- 16.5. Each trade Subcontractor shall provide generators as required for the Work of this Subcontract until temporary power is available to the building pads (exact location to be determined by General Contractor).
- 16.6. If temporary "task" lighting is required to complete the Subcontractor's work, then the Trade Subcontractor requiring the temporary "task" lighting in order to complete its work shall provide its own temporary lighting at its own expense.
- 16.7. Unless approved by the General Contractor, Subcontractors are not permitted to install any project signage on site and/or on any office and storage trailers.
- 16.8. Each Subcontractor shall be responsible for utilizing wheel wash equipment to wash off all of its respective vehicles leaving the project site which have accumulated mud, debris, etc. Any mud, debris, etc. tracked onto the adjacent roadway(s), due to the Subcontractor's failure to wash off affected vehicles, shall be scraped, cleaned and pressure washed immediately by and at the expense of the Subcontractor.
- 16.9. All other required temporary facilities or services not specifically assigned responsibility shall be provided by the Subcontractor requiring the service(s).

#### **XVII. MATERIAL DELIVERY, STORAGE AND HANDLING**

- 17.0. Each Subcontractor and/or Supplier is responsible for securing and protecting all materials furnished under its respective Scope of Work. Should a specific Trade Subcontractor and/or other entity furnish material to another Trade Subcontractor for installation, then at that time the Trade Subcontractor receiving the material from the other Trade Subcontractor and/or other entity becomes responsible for securing and protecting that material.
- 17.1. Each Subcontractor is responsible for coordinating on site material deliveries 24 hours in advance with the General Contractor's on-site project representative. Failure to do so, the General Contractor may request the material delivery to be rescheduled. This requirement will be strictly enforced by General Contractor.

- 17.2. Materials furnished and installed as part of the Trade Subcontractor's Scope of Work shall be received by a representative of the Trade Subcontractor and unloaded / transported by this Subcontractor to each respective work area for installation as part of this Scope of Work.
- 17.3. Unless noted otherwise, materials or equipment furnished by others for installation as part of the designated Trade Subcontractor's Scope of Work shall be received by a representative of the receiving Subcontractor in conjunction with a representative of General Contractor and unloaded / transported by the receiving Subcontractor to each respective work area on site for installation as part of the designated Trade Subcontractor's Scope of Work.
- 17.4. Any Trade Subcontractor or Supplier supplying and delivering equipment or materials that are to be installed by another Subcontractor must notify the receiving Subcontractor at least twenty-four (24) hours prior to delivery. If requested by the General Contractor and prior to authorizing the Subcontractor's or Supplier's payment, the receiving Subcontractor shall be responsible for unloading and must provide either a shipping invoice or a delivered materials list that has been signed and certified by the receiving Subcontractor.
- 17.5. Each Subcontractor shall be responsible for receiving, storing, distributing to the installed location and protecting all materials incorporated within their respective Scope of Work.
- 17.6. Any Subcontractor furnishing and delivering equipment or materials that are to be installed under its Scope of Work must provide personnel and equipment to unload these materials at the time they arrive on site or make provisions for receiving and unloading the shipment. Any deliveries arriving on site without proper personnel present to receive and unload the shipment shall be instructed by the General Contractor to return to the shipping terminal.
- 17.7. All materials shall be shipped and stored and handled in a manner that will afford protection and ensure their being in first-class condition at the time they are incorporated into the work. Improperly stored materials that accumulate mud, debris, rust or other foreign matter shall be restored to its original condition prior to concealment or final acceptance of the work.
- 17.8. After installation, the materials shall be properly protected against damage to ensure their being in first-class condition when the construction is substantially completed and accepted by the General Contractor, Designer and Owner.
- 17.9. Each Subcontractor is solely responsible for the security of its own material and equipment. The General Contractor, Designer nor Owner shall be responsible for the cost to replace stolen or missing material and equipment.
- 17.10. There is very limited storage and lay down area available on site, subsequently materials delivered to the site should be installed as soon as possible after delivery. Each Subcontractor may need off site storage in order to accommodate limited laydown and

storage areas. The areas that are available shall be coordinated with and approved by the General Contractor. Storage and lay down areas may have to be relocated by the Trade Subcontractor multiple times during the duration of the project to accommodate construction progress. If requested by the General Contractor, the Trade Subcontractor shall relocate all material(s) at no additional cost.

- 17.11. Reference the Logistics Plan prepared by the General Contractor for further information.
- 17.12. All hoisting of materials into the building and to the installed location is the responsibility of each Subcontractor.
- 17.13. Each Subcontractor shall retain stored items in an orderly arrangement allowing maximum access, not impeding traffic or drainage and providing required protection of materials.
- 17.14. Each Subcontractor will remove all excess materials from the site at the time work has been completed. Failure to do so the General Contractor will give the Subcontractor a 24-hour notice at the end of this 24 hours the General Contractor will make arrangements to have the material removed. This work and the supervision of this work will be at the cost of this Subcontractor.

#### **XVIII. PROGRESS CLEAN-UP**

- 18.0. Each Subcontractor shall provide daily clean up relative to its own Scope of Work. Should the Subcontractor fail to provide daily clean-up of its own work, the General Contractor will provide the subject Subcontractor with a written notice. Upon receipt of the written notice, the Subcontractor will have Twenty-Four (24) hours to complete its daily clean up requirements. Failure to comply with this notification may result in the General Contractor completing the daily clean-up work on behalf of the Subcontractor through the General Trades/Final Cleaning Subcontractor or other means determined by the General Contractor, thus resulting in back charges to the Subcontractor. This requirement will be strictly enforced by General Contractor.
- 18.1. Scrap, debris, waste material and other items shall not be accumulated at or around the construction site.
- 18.2. At least once a week and more often, if necessary, completely remove all scrap, debris and waste material from the job site. Provide adequate storage for all items awaiting removal from the job site, observing requirements for fire protection and protection of the ecology.
- 18.3. At least once a week and more often, if necessary, inspect all arrangements of materials stored on the site. Re-stack or rearrange stored materials on site to ensure the site is maintained in a neat and orderly fashion.
- 18.4. During the course Project if debris and waste material get to be excessive, (determined by the General Contractor) the jobsite will be shut down and an all-hands clean-up will



occur until the area is orderly. Costs of this effort will be at each Subcontractors expense. If a trade does not participate the General Contractor will supplement their part of the work and this cost will be paid by this subcontractor.

- 18.5. Each individual Subcontractor will be required to supply his own drum containers for the depositing of miscellaneous trash generated within the Subcontractor's office areas. No food or drinks other than water will be allowed in the buildings at any time. Coffee breaks/Meals/Snack areas will be identified by the General Contractor for the Subcontractors use outside the Buildings construction areas. Subcontractors are responsible for maintaining these areas in a clean and orderly manner at all times. Subcontractor will be responsible for keeping these areas clean and sanitary. No Subcontractor will allow waste materials to accumulate in any area without consolidating them for pickup for more than the duration of one (1) workday, or as may be directed by General Contractor to facilitate job cleanliness.
- 18.6. Trash and debris shall be removed and placed in designated dumpster daily.
- 18.7. All offsite disposal costs associated with remedial work, if encountered during the course of the project shall be borne by the Subcontractor responsible for the remedial work.
- 18.8. Reference the Logistics Plan prepared by the General Contractor for further information. Subcontractors should anticipate and expect the site logistics plan to change with updates during the course of construction.

**XIX. FIELD ENGINEERING AND LAYOUT**

- 19.0. The Earthwork, Storm Drainage and Erosion Control Subcontractor and Cast-in-Place Concrete Subcontractor will provide initial field engineering services as defined within their respective Scopes of Work for the vertical building trades use and coordination by establishing select building corners and column lines and vertical control via establishing a benchmark(s) reference at select area(s) of the site. These initial field engineering services will be established subsequent to completion of the building pad by a licensed surveyor for use by all Trade Subcontractors. Any additional or remaining field engineering, layout work, etc. as required to complete a respective Trade Package Scope of Work shall be provided by the Subcontractor requiring the additional or remaining field engineering services at its own cost.
- 19.1. Layout work and field engineering services required of each Subcontractor shall include, but not be limited to the following:
  1. Unless specifically noted otherwise within a specific Trade Package Scope of Work or herein, each Subcontractor is responsible for its own layout work, field engineering and protection of the same necessary to complete its own respective Scope of Work.
  2. Upon commencement of the Subcontractor's work, the pre-established reference points, benchmarks, etc. as provided by others shall be field verified

and protected and become the responsibility of each Subcontractor using the subject reference points and/or benchmarks. This responsibility shall cease upon the preceding Subcontractor starting its Work with the responsibility thereof being transferred therewith.

3. Establishing additional lines and levels and/or maintaining lines and levels including horizontal and vertical control as required to properly install the Work shall be provided by the Subcontractor.
4. Locate and protect all control points before starting work on the project site.
5. Preserve permanent reference points during the progress of the work.
6. Do not change or relocate reference points or items of the work without written approval from the General Contractor.
7. Promptly advise the General Contractor when a reference point is lost or destroyed or requiring relocation because of other changes in the work. Upon direction of the General Contractor, the Subcontractor's field engineer or licensed surveyor as engaged by the Subcontractor shall immediately replace the lost or destroyed reference stakes or markers as not to slow or stop other trades work activities, which were its responsibility to protect. Subcontractor shall locate such replacements according to the original survey control points at no additional cost. Failure to do so the General Contractor will supplement this work and this cost will be paid by this subcontractor.

## **XX. PROTECTION OF WORK**

- 20.0. Each Subcontractor is responsible for the protection and security of its finished work until final acceptance of the work. If finished work is damaged by another Trade Subcontractor, then the responsible Trade Subcontractor shall be held accountable. However, if the entity responsible for the damage cannot be determined, it is the responsibility of each Subcontractor to repair, replace or restore its own work to an acceptable condition.
- 20.1. Any part of the finish product damaged during installation or prior to final acceptance of the work shall be repaired so as to be unnoticeable and to be equal of quality, appearance, serviceability and all other aspects to an undamaged item. Where this cannot be fully accomplished the damaged item or part shall be replaced. Upon completion of the repair(s) or replacement installation, all exposed surfaces and parts of the item(s) shall be cleaned in a manner that shall not damage the finish or any of the parts of the item(s) and the finish product left in first-class condition, free of all visible defects.
- 20.2. Each Subcontractor shall take all necessary precautions so as not to damage existing construction. However, if damage occurs the responsible Subcontractor shall be responsible for restoring the existing construction to a condition, which is equal to that found prior to the damage occurring at its own cost.

- 20.3. General Contractor will not accept any claim for repair or replacement of Subcontractor's material or installed Work required because of vandalism, malicious mischief, normal construction traffic, theft, etc.
- 20.4. Damage by another Subcontractor - If Subcontractor's Work is damaged by another, the Subcontractor who caused the damage will be responsible for any repair and/or replacement costs. The work is not to be delayed by disputes regarding cost responsibility. The burden of proof will be on the Subcontractor whose Work was damaged.
- 20.5. Repair or Replacement of Installed Work –
  - a. Subcontractor's responsibilities as noted above will be in effect until both the following conditions are met:
    - i. Certificate of Beneficial Occupancy/Substantial Completion or Final Acceptance for the Project has been issued by the Designer.
    - ii. The Owner accepts the Work and takes over the building for their beneficial use.
- 20.6. No work shall be performed on concrete floors that would detrimentally affect the finish or appearance of uncovered floors or the application of finish flooring where called for. Operations such as cutting or threading pipe, burring, welding, paint mixing, or cleanup of painting will not be permitted in these areas.
- 20.7. The Subcontractor must obtain approval in advance from the General Contractor's Superintendent for any usage of lifts, trucks, trailers, cranes, or other heavy equipment that will sit on or move over completed structures. Any damage to these structures caused by the Subcontractor's actions will be the responsibility of the Subcontractor.
- 20.8. Watchmen services will not be provided. Neither General Contractor nor the Owner will be responsible for loss due to theft or otherwise of the property of any Subcontractor or their employees, including construction materials and equipment not yet accepted by the Owner.
- 20.9. The Subcontractor shall provide security as deemed necessary to protect its own work, tools, materials, etc.
- 20.10. Each Subcontractor shall provide protection and /or cleaning of permanent roof following completion of the Subcontractor's work. This shall include but not be limited to foot traffic / mud removal, temporary protection and roof protection, etc.
- 20.11. Each Subcontractor is responsible for all roof protection to complete the Subcontractors scope of work. Provide a protective material (i.e., visqueen, rigid insulation with plywood) when performing work on or adjacent to the roof. A ½" layer of insulation board shall also be installed under the protective material. Maintenance and removal are by this Subcontractor.



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**XXI. CUTTING AND PATCHING**

- 21.0. Unless specifically noted otherwise within a specific Trade Package Scope of Work, each Subcontractor is responsible for its own cutting and patching work as required facilitating the proper installation of its own Work.
- 21.1. Repair and/or replacement of the surrounding surfaces to their original condition shall be the responsibility of the Subcontractor requiring the activity to continue its own Work.
- 21.2. All cutting and patching shall be completed in a manner to ensure that the patched surfaces are compatible with the adjacent surfaces in which the repairs or cutting and patching work was performed.

**XXII. SLEEVES AND FIRESTOPPING**

- 22.0. All subcontractors having penetrations through wall, ceilings and or floors will participate in the construction of a mockup panel to be approved by the Designers, Inspectors and other governing authorities having jurisdiction.
- 22.1. All penetrations through walls, ceilings and/or floors shall be sealed in such a manner in order to meet or exceed the requirements of the Contract Documents and all building codes, fire codes, etc., applicable to this project. Additionally, all penetrations shall be sealed with the required firesafing or firestopping materials to meet or exceed the fire rating requirements of the applicable wall, ceiling and/or floor assembly as acceptable to the General Contractor, Designer and governing authorities.
- 22.2. Unless specifically noted otherwise within a Trade Package Scope of Work, all penetrations made by any Subcontractor through walls, ceilings and/or floors shall be sealed by the Subcontractor requiring the penetration in such a manner in order to meet or exceed the requirements of the Contract Documents and all building codes, fire codes, etc., applicable to this project. Additionally, all penetrations shall be sealed with the required firesafing or firestopping materials to meet or exceed the fire rating requirements of the applicable wall, ceiling and/or floor assembly as acceptable to the General Contractor, Designer and governing authorities.
- 22.3. Unless specifically noted otherwise within a Trade Package Scope of Work, all sleeves or embeds set or cast into concrete, masonry or other work shall be furnished and installed by the Subcontractor requiring these items in order to complete the installation of its respective work. Additionally, these items shall be provided in a timely manner so as not to delay the concrete, masonry or other work. In the event the Subcontractor requiring the sleeve(s) or embed(s) fails to provide them in a timely manner, the Subcontractor requiring the sleeve(s) or embed(s) will be required to bear the cost associated with cutting and patching the work in order to properly to install the sleeve(s) or embed(s).
- 22.4. The Drywall Subcontractor shall provide all sprayed firestopping at tops of ALL walls. Each Trade Subcontractor shall be responsible for firestopping all penetrations made by their respective trade.

- 22.5. All through-penetration firestop systems installed around fire protection piping shall comply fully with NFPA 13 requirements for minimum annular space and sealant flexibility, as well as, requirements imposed by the design assembly itself.
- 22.6. The installing Subcontractor must provide UL approved details for each firestopping condition. If among the specified firestop manufacturers, no approved firestop assembly exists for non-standard openings in need of firestopping, mock-ups may be required for any proposed engineering judgment designs for approval by the General Contractor, the Architect, the Owner and/or the authority having jurisdiction prior to final firestop installation. Accepted in-place mock-ups will be accepted as final work. All engineering judgements must be sealed by licensed North Carolina engineer provided by the installing Subcontractor.
- 22.7. Firestopping installers must provide proof of Factory Mutual Firm 4991 certification and approval. Work must be performed by a specialty firestop installer who must provide evidence that they have been trained and achieved a passing score in a competency-based testing by the manufacturer whose products will be installed. All firestopping materials will be supplied by only one of the specified manufacturers.

**XXIII. PME SYSTEM START UP, PUNCH LIST, WARRANTIES, RECORD DRAWINGS, CLOSEOUT DOCUMENTS**

- 23.0. Prior to Final Inspection and Turnover to the General Contractor, each Trade Subcontractor and/or Supplier shall provide sufficient manpower and materials to adequately "punch" out the Project, such that all Work required of each Trade Subcontract is undertaken and completed within twenty-one (21) calendar days of commencement and/or issuance of punch list or deficiency notice.
- 23.1. All Work shall be guaranteed by each Trade Subcontractor against defects in material or workmanship for a period defined within the Contract Documents and/or by the Laws of North Carolina as measured from the Date of Final Acceptance as established in writing by the Designer and/or Owner.
- 23.2. The HVAC, Plumbing, and Electrical Subcontractors shall place the permanent HVAC and Electrical systems in operation during the construction of this project to insure proper environmental conditions to allow for installation of finishes to cure and subsequent to final inspections by Designer and Owner. All warranties and guarantees shall start on the Date of Final Acceptance, established in writing by the Designer and/or Owner. If the manufacturer's warranties start at the date of installation, each Trade Subcontractor shall extend the warranties to start at the Date of Final Acceptance at no additional cost.
- 23.3. Unless advised otherwise by the General Contractor, each Trade Subcontractor shall furnish the General Contractor / Owner with four (4) original copies of the defined warranty / guarantee, delivered within the close-out documents, provided on the Trade Subcontractor's stationery with original signatures on each copy, signed and sealed, stating the language as reflected within the sample letter following this section.

- 23.4. Unless advised otherwise by the General Contractor, each Trade Subcontractor shall furnish the General Contractor with four (4) original copies of a Subcontractor / Supplier Final Waiver of Lien, delivered within the close-out documents, provided on the Trade Subcontractor's stationery with original signatures on each copy, signed and sealed, stating the language as reflected within the sample Final Lien Waiver following this section.
- 23.5. Unless required otherwise by the General Contractor or contract documents, each Trade Subcontractor shall provide a minimum of four (4) copies of its own Project Record Documents including Record Drawings and Operation and Maintenance Manuals to the General Contractor for subsequent review and approval by the General Contractor, Designer and Owner. These documents shall be provided to the General Contractor prior to the Substantial Completion Date/ Beneficial Occupation of the Project. Additionally, submitting these and all other required Closeout Documents required of the Project Specifications shall be received and approved by the General Contractor, Designer and Owner before the Trade Subcontractor receives its Final Payment.
- 23.6. All Closeout Documents including Record Drawings and Operation and Maintenance Manuals shall be submitted electronically in a PDF format and shall be bookmarked and cataloged for easy reference.

**XXIV. FIREARM POLICY, BADGE PROGRAM & BACKGROUND CHECKS**

- 24.0. ABSOLUTELY NO FIREARMS, WEAPONS OR THE LIKE SHALL BE PERMITTED ON SITE. Any violators will be removed from the project site immediately by the local authorities.
- 24.1. Employees of each Trade Subcontractor or Supplier including Sub-subcontractors, visitors, etc. may be required to carry an identification badge furnished by the General Contractor at no cost to the Trade Subcontractor or Supplier. Replacement badges if lost by the Trade Subcontractor or Supplier's employees shall be replaced at the Trade Subcontractor's or Supplier's expense. Anyone who is making a delivery to the site or just visiting the site must check in at the General Contractor's site office to obtain a visitor's badge. Badges will only be required if work is performed when the building is occupied by the owner.
- 24.2. Trade Subcontractors may be required to complete the Sexual Offender Registry Check Certification Form if included within the CM – Owner Agreement and to complete a Background Check of each of its employees to certify this form's contents BEFORE the Subcontractor commences any on-site Work. Forms shall be turned into the General Contractor for further distribution to the Owner.

**XXV. FIRE PREVENTION PROGRAM**

- 25.0. Each Subcontractor is required to maintain portable firefighting equipment for their work and their work areas (i.e., hot work areas, storage units, fuel storage, mobile equipment,



trailers, etc.). All firefighting equipment is required to meet OSHA regulations and/or the local authority having jurisdiction requirements.

- 25.1. Each Subcontractor shall be required to furnish and maintain full, tested fire extinguishers for all of their equipment and work areas, as required by the latest federal, state, and local regulations. All Subcontractors involved in burning, welding, soldering, or cutting operations shall furnish their own fire extinguishers, welding blankets, fire watch, etc. in adequate quantities or provide fireproof protective enclosures.
- 25.2. All applicable safety rules and practices must be followed at all times. It is the responsibility of the Subcontractor to provide required training, PPE, and appropriate and safe materials, tools, and equipment, and to ensure that they are used in an appropriate manner. Proof of appropriate safety training programs may be required at any time.

#### **XXVI. PARKING AND PROJECT ACCESS**

- 26.1 There is limited area for parking for construction workers for all trades. Due limited site area for parking, material storage, equipment, etc., each Subcontractor may be limited in the number of vehicles onsite. Each Subcontractor may be required to make arrangements for off site parking for employee individual vehicles and transport said employees to the site with multiple workers in single vehicle or bus type transportation. See the Logistics Plan for further information.



## Housekeeping Commitment Agreement – Exhibit E

Contractor Company Name: \_\_\_\_\_

Contractor Supervisor Name: \_\_\_\_\_

A clean jobsite leads to a safe jobsite. With that basic principle in mind, I (and all of my tiered subcontractors) agree to follow these rules:

- Allocate adequate resources to ensure this housekeeping standard is maintained throughout their time on the project.
- Be responsible and accountable for each of your workers and any tiered contractor(s) under your control assigned to work on this project for complying with this Housekeeping Standard.
- Agree to allocate the necessary personnel, equipment, and supplies required to comply with this standard.
- Dumpsters for general trash, construction debris (wood, metal, concrete, etc.) and or specific recycling dumpsters pursuant to contract requirements will be provided.
- Samet will provide trash containers on site for general trash and debris. There will be no bottles, food wrappers, cups, etc. thrown on the ground.
- When containers are  $\frac{3}{4}$  full they will be either removed from the site or dumped in a large metal dumpster provided by Samet.
- All materials, equipment, etc. brought on site shall be organized and stored in areas designated by project team. Subcontractors are responsible for organizing material, equipment, and tools so they do not create a tripping hazard or impede/block exits out of the area or rooms they are working in.
- Subcontractors are responsible for daily clean-up of excess material and debris. Excess material and debris shall be deposited in appropriate containers throughout the day.
- In areas and rooms where multiple subcontractors are working each subcontractor shall clean up their own excess material and debris.
- When work is completed in a room or area all excess material and debris shall be removed and the area or room broom cleaned.
- Any stored materials must be easily transportable to make way for clean-up.

**The complete copy of Samet Corporation Housekeeping Standard is contained in the Site Safety and Incident Prevention Program. There may be Terms and Conditions in your subcontract agreement that may override or supersede the above.**

I fully understand that if my company or my tiered contractor(s) fail(s) to comply with any part of this Housekeeping Standard, that I will incur all costs associated with Samet Corporation cleaning up your areas of responsibility to meet this standard. Additionally, any and/or all the work being performed by my company may be suspended until such time this standard has been accepted by Samet Corporation.

<b>Contractor Performing Work:</b>	_____	<b>Sign:</b>	_____	<b>Date:</b>	_____
<b>Contractor/Project Safety:</b>	_____	<b>Sign:</b>	_____	<b>Date:</b>	_____



# **SITE SPECIFIC SAFETY PLAN**

**WTCC Fire and Rescue Training Center  
23-878**





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### **SITE SPECIFIC SAFETY PLAN**

This SSSP was prepared to assist all workers in understanding the health and safety expectations and requirements of Samet Corporation on this project. Compliance with this Plan is expected and a condition of work. Contractors' project managers and superintendents have overall responsibility for the implementation and the execution of this Plan.

On this project site, Samet Corporation enforces its Safety Program through its Superintendent, Safety Manager and other designees and weekly meetings with our own labor force and contractor employees (including tiers) stressing the importance of maintaining a safe and productive work site.

Health and safety will always remain the top priority for all levels of management, supervision, and workers engaged in construction activities. Health and safety will never be sacrificed in lieu of schedule, cost, production, or any other component of the work process.

To comply with this philosophy, the project's contractors will:

- ❖ Thoroughly plan all work activities and operations so they are performed safely, as well as efficiently.
- ❖ Effectively communicate the health and safety requirements of Samet Corporation this Site-Specific Safety Plan to all contractors and their workers through open communications, comprehensive training, assessments, and workplace inspections.
- ❖ Develop an understanding, among those in leadership on this project, of their responsibilities and accountability for providing a safe and healthful workplace.
- ❖ Plan and coordinate work operations and activities to minimize or eliminate situations which may jeopardize worker's health and safety due to conflicting or simultaneous work operations or activities.
- ❖ Communicate to all workers that safety is their responsibility, and they will be held responsible, accountable, and assigned the appropriate authority for their individual safety and the safety of their co-workers.

All contractors will incorporate, as a minimum, OSHA 29 CFR 1926 Construction Safety Standards, OSHA 29 CFR 1910 General Industry Standards (as applicable), specific state safety regulations, specific owner requirements, project safety rules, and this SSSP when determining the safe work practices and protection of all workers. If any of these standards, requirements, or procedures conflict, the more stringent requirement shall prevail.

#### ***Refer to Samet's TSW "Above OSHA Requirements"***

The term "contractor" within this document refers to any contractor or subcontractor of any and all tiers. Samet Corporation, as the general contractor, is referred to by name.

### **SITE SPECIFIC SAFETY COMMITTEE**

A site-specific safety committee will be utilized to assist project team in implementing this SSSP and to work as a team to identify and correct safety or health hazards, identify unsafe work practices and offer solutions to safety issues. Participation is mandatory and each contractor must designate at least one (1) foreman level (or higher) to actively participate.

#### ***Refer to Samet's TSW for Project Safety Committee***

## **CONTRACTOR SAFETY PERFORMANCE**

Samet Corporation expects all contractors to execute their work on this project with a proactive commitment to safety at all levels. Each contractor should plan their work focusing on protecting their workers from incidents and injuries. The following are actions that each of us can take to improve safety performance on this project:

- Attend and actively participate in toolbox meetings.
- Discuss safety in all meeting.
- Include safety and high-risk activities in daily huddles.
- Revisit high-risk activity plans at least 1 week prior to work so allow for safe and proper planning.
- When you talk about safety, talk about people, not numbers or statistics.
- Ask where the next injury is likely to happen and what can be done to prevent it – Run The 2 Minute Drill
- Fill a Pre-Task Plan for all high-risk activities on a daily basis and have it communicated/acknowledged by all crew members involved.
- Recognize individuals and groups daily for working safely – Implement MVA program
- Take positive actions when you see someone doing something you believe is unsafe. Talk to them about your concern for their safety, not about violating rules or procedures -Safeguarding Families
- Take responsibility for people's safety that work with you, for you and around you.
- Find ways to express care and concern for people and work to improve the dignity and respect people experience on the project.
- Make and keep promises around safety issues.

Samet Corporation or their representative will continually monitor and assess each contractor for compliance with this SSSP and appropriate regulatory requirements.

Immediate corrective action will be taken to eliminate any safety discrepancy, hazard, at-risk behavior, or violation observed.

## **DESIGNATED CONTRACTOR COMPETENT PERSON**

Each contractor will designate a competent person as defined by OSHA 29 CFR 1926.32(f) as “one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them” as their project safety representative. This person(s) name will be submitted to Samet Corporation and this person must have the authority and responsibility to ensure the proper implementation and enforcement of this SSSP.

The General Trades Competent Person/Foreman designated will be expected to have an adequate knowledge of OSHA construction standards,

The Scaffold Competent Person designated to oversee erection and dismantling of scaffolds will be expected to have an above average knowledge of OSHA 29 CFR 1926.450 Subpart L –Scaffolds, and proof of qualification training.

The Trenching and Excavation Competent Person designated to oversee digging trenches and excavations will be expected to have an above average knowledge of OSHA 29 CFR 1926.650 Subpart P – Excavations, and proof of qualification training.

The Fall Protection Competent Person designated to oversee his company's fall protection plan will be expected to have an above average knowledge of OSHA 29 CFR 1926.500 Subpart M – Fall Protection, and proof of qualification training.

The Electrical Competent Person designated to oversee his company's electrical protection plan will be expected to have an above average knowledge of OSHA 29 CFR 1926.400 Subpart K and NFPA 70E – and proof of qualification training,

The Rigging qualified person designated to oversee the rigging of structural steel, concrete panels, materials or other equipment hoisted above the ground will be expected to have an above average knowledge of OSHA 29 CFR 1926.251. Competent Person



designated for rigging structural steel shall have an above average knowledge of OSHA 29 CFR 1926.753 Hoisting and rigging, and formal training.

The Safety Competent Person designated to oversee the safety of their employees and subcontractors will be expected to have an above average knowledge of OSHA construction standards.

As a minimum, each of these competent persons must:

- be proficient in the development and execution of pre-task safety plans, competency plans and risk/severity assessments. Audit, document and submit as required.
- obtain an OSHA 10-hour certificate from a certified OSHA trainer and a minimum of 3 years' experience as a foreman/competent person. OSHA 30-hour certificate and at least 5 years construction safety training is highly recommended. Experience must be in the non-residential construction industry.
- obtain certified competency training conducted by an authorized OSHA certified trainer.
- conduct regular safety meetings with workers to instruct them on safe work practices and requirements.
- timely submission of all safety related documents.
- conduct documented pre-task safety plans and communicate daily to workers to ensure compliance with safe work practices, this Site Safety and Prevention Program and OSHA safety regulations.

For the purposes of this Program, the use of the words "competent person", in any format, is defined pursuant to the OSHA definition as stated above.

#### **WORK-RELATED INJURIES, ILLNESSES, AND INCIDENT INVESTIGATION - MONTHLY INCIDENT SUMMARY REPORTS**

An incident is defined as any unplanned or undesired event that results in or has the potential to result in a work-related injury/illness, property damage, or disruption of business where the cause was from human errors or omission.

Every incident will be investigated to determine the probable root causes (s) and steps required preventing a similar occurrence from happening in the future. All contractors must fully cooperate with Samet's investigation under the law.

All work-related injuries/illnesses and incidents must be reported to Samet Corporation immediately and submit a preliminary report within 24 hours of the incident. A final report must be submitted within 48 hours for review and implementation of lessons learned to prevent further incidents from occurring.

Each contractor must submit a report monthly indicating the below information. This form must be submitted even if the subcontractor has no incidents to report.

- Total man hours worked, first aid cases, OSHA medical treatment cases & lost workday cases, restricted work cases.

#### **CONTRACTOR SAFETY SUBMITTALS**

Prior to beginning work, each contractor shall submit the following minimum (but not limited to) documentation:

- Contractor's written site-specific safety programs including, but not limited to substance abuse and silica exposure control.
- Contractor's written housekeeping plan and Samet Housekeeping Commitment Agreement
- Energized Work Permit.
- Detailed job hazard analysis/pre-task safety plan
- Personal protective equipment hazard assessment and certification (if applicable)
- Annual crane inspections
- Verification of OSHA and or project required training as necessary. Employee training shall be verified by contractor's management and documentation of training submitted to Samet team. Examples of training may include:
  - OSHA 10- and 30-hour construction safety training
  - Fall protection
  - Pre-task safety training and risk assessment
  - Ladders
  - Scaffolds

- Trenching
- Crane signalperson
- Confined spaces
- Respiratory protection
- Lockout/Tagout
- Rigging (plan)
- Mechanized equipment (all types) operators
- Traffic control (public right-of-way)
- First aid
- Competent persons by scope of work

Throughout the course of the project each contractor will be required to submit various on-going safety documents as required by the scope of work. These submittals may include but are not limited to:

- Weekly Jobsite Inspection Checklist.
- Daily documented scaffold, trench, crane, aerial lift, rigging/hoisting equipment, PFAS, welding machines, generators, ladders, power tools, heavy equipment (i.e., backhoe, dump truck, front end loader) and forklift inspections.
- Weekly safety toolbox meeting training records.
- Daily pre-task safety plan
- Air sampling data (if respirator in use)

#### **VIOLATION OF SAFETY AND HEALTH REQUIREMENTS**

Violations of statutory health and safety regulations, project safety rules and policies contained in this plan or at-risk behavior will not be tolerated. All identified hazards are to be abated immediately. When a hazard cannot be immediately corrected, a written explanation is to be submitted to Samet Corporation team. Failure to correct hazards may result in disciplinary actions or suspension of part or all work.

#### **DISCIPLINARY PROGRAM**

Each worker has an individual responsibility to work safely and minimize unsafe actions. Samet Corporation reserves the right to discipline any contractor based on safety violations committed by their employees of any tier, or the contractor itself.

Samet Corporation has established a progressive disciplinary program as outlined below:

Committing an unsafe act, practice of disregard for policies (see below) that is not considered Immediately Dangerous to Life or Health (IDLH) can result in the following consequences:

- First occurrence: Verbal warning with a note to file
- Second occurrence: Written warning, re-training, or action to include, but not limited to suspension from project, holding monthly invoice checks, etc.
- Third occurrence: Written notification of actions up to termination from project site.

Other-than-serious unsafe safety acts may consist of, but not limited to:

- Failure to wear hard hat properly.
- Failure to wear safety glasses/eye protection when required.
- Failure to use hearing protection when required.
- Failure to wear proper work boots/shoes and clothing.
- Failure to wear seatbelts on mechanized equipment.
- Failure to have first aid kit.
- Using frayed/cut drop cords.
- Using drop cords less than #14 AWG.
- Using unrated ladders.
- Failure to submit daily safety reports.
- Failure to submit weekly toolbox safety talks.

Committing unsafe acts and or practices that are considered Immediately Dangerous to Life and Health (IDLH) may result in worker and supervisor's immediate removal from the project. Samet Corporation also reserves the right to immediately discipline/sanction

a contractor. Sanctions include but are not limited to immediate abatement of the IDLH condition/hazard or a mandatory meeting with contractor's ownership to discuss actions to improve safety performance. Samet Corporation reserves the right to terminate a contractor for repeated IDLH safety violations.

IDLH safety violations may include, but are not limited to:

- Failure to follow fall protections requirements.
- Removing guard rails and not putting them back in place.
- Working in an unprotected trench greater than 5 feet deep.
- Failure to follow the Substance Abuse Policy.
- Possession of firearms, explosives or dangerous weapons.
- Violation of project security rules and procedures.
- Fighting, horseplay, practical joking or gambling.
- Entering a confined space without following procedures.
- Failure to follow lock-out/tag-out procedures.
- Working on energized circuits without an energized hot work permit.
- Physical altercations, or any sort of harassment (investigated).
- Smoking within any structure or outside the designated smoking area.

It is impossible to publish every safety rule to cover every circumstance. However, if workers fail to follow safe work practices not covered by this policy, disciplinary actions will be assessed based on Samet Corporation's assessment of the violation.

### **SUBSTANCE ABUSE POLICY**

This project is committed to providing a safe, drug free workplace for all employees. This policy applies to all Samet Corporation contractors, vendors and other third-party employees.

The use, sale, offer to sell, purchase, and transfer, distribution, or possession of drug paraphernalia, any detectable amounts of alcohol or illegal drug, firearm, or other dangerous weapons by any employee on this project is prohibited. Each contractor will promote a Drug Free Workplace with their employees and communicate during the safety orientation what constitutes prohibited activities. Every worker involved in an incident shall have a post incident drug/alcohol test performed within three (3) hours after the incident. Any worker on the project site who is reasonably suspected of being under the influence of alcohol or a controlled substance shall be tested. Contractors are responsible for having their workers tested at an approved facility and reporting the results to Samet. Any worker that refuses to test, stall to be tested, are uncooperative with collectors, or attempt to alter a urine specimen will be considered positive and immediately removed from the project.

### **SAFETY PLANNING**

#### **Job Hazard Analysis** (Completed by Contractor Superintendent and Project Manager)

Prior to starting work on this project, each contractor will submit a written Job Hazard Analysis (JHA) for their scope of work. The JHA can be included in the Site-Specific Safety Plan. The JHA must identify and outline each work component or activity, list the potential safety hazards, risk/severity assessment and health hazards associated with each activity. It must also describe what safety controls, PPE, tools and equipment will be implemented and required to mitigate the recognized hazards and safely complete each activity.

#### **Pre-Task Safety Planning** (Completed by Contractor Foreman or First Line Supervisor)

Each Foreman, designated supervisor and/or workers will analyze each task to be performed by scope of work and identify the work sequences, hazards, and controls necessary to protect workers from the identified hazards. Our hierarchy of controls must be observed. The Pre-Task Safety Plan (PTP) will be communicated daily to each crew performing work on this project. Each employee will sign the PTP acknowledging the safety procedures while engaged in the task. In cases of a changed construction activity, the employee or contractor's competent person must assess the change(s), retrain his employees and document that re-training in his daily pre-task safety plan and field report.

**2 Minute Drill** -throughout the day, each worker should run the 2 Minute Drill to help prevent any potential accidents.

### **SAFETY INSPECTIONS**

Each Contractor performing work will be responsible for conducting weekly safety inspections of their work area, tools and equipment



(daily). The following inspections will be required as applicable to ongoing work activities. Safety forms or permits can be obtained from project team.

#### General Daily Worksite Safety Inspections (weekly documentation Required)

Each contractor will perform a visual general safety inspection of their work area where their employees and subcontractors are working daily. Subcontractor's competent person will use their daily pre-task safety plan when assessing the potential hazards utilizing a hierarchy of risk control. Safe work practices and physical hazards must be verified while conducting inspection of their work areas. Samet weekly Worksite Safety Inspection form or equivalent form must be used to document these inspections and the completed corrective actions

#### Daily Inspections

Contractors using the below equipment or performing the specific type of work will designate a competent person to inspect and document each day prior to use.

Scaffolds, trenches, cranes, forklifts, aerial lifts, material handling and hoisting equipment, rigging, ladders and hand and power tools.

Notes: All rigging equipment shall be inspected and certified by contractor prior to use and as a minimum monthly.

A visible inspection tag must be used for scaffolds and mechanized equipment.

Each contractor who requires their employees to wear personal fall arrest systems (PFAS) shall inspect harnesses and lanyards as required. Workers engaged in steel working activities shall inspect harnesses and lanyards daily. All others shall inspect harnesses and lanyards monthly (or as required by manufacturer), color code or tag them to indicate current inspection.

#### **SAFETY TRAINING**

Safety and health training are a requirement and mandatory for all and contractor workers assigned to this project to promote and ensure that an incident and injury free environment exists.

#### Safety Orientation:

All project management, supervisors, and workers shall attend site-specific safety orientation training and will be allowed to start work until they have attended.

Upon conclusion thereof, all personnel will be given a hard hat sticker verifying that they have been through the orientation and will, be asked to sign the orientation summary and the Samet "I am Committed to Safety For" sign.

#### **GENERAL SAFETY GUIDING PRINCIPLES**

Clean and safe working conditions are essential for achieving an Incident and Injury Free Environment. Everyone must maintain a strong personal desire to think and act safely.

The following Safety Guiding Principles will be used to guide all work activities on this site and to help foster a culture of ensuring that all workers go home safely to their families each day.

- Everyone is responsible for safety and health -
- We look out for each other –
- Safety is planned into our work –
- All injuries are preventable –
- All deficiencies will be resolved immediately –
- Management is accountable for preventing injuries –
- Everyone must be trained to work safely & healthfully –
- Working safely and healthfully is a condition of employment –
- We measure safety performance –
- React to incidents, not just injuries –
- Off the job safety is as important as on the job safety
- Every worker has 100% Stop Work Authority (SWA)\_

### **EMERGENCY ACTION PROCEDURES**

A site-specific emergency action plan (EAP) will be written, and all subcontractor competent persons will be provided a copy will be discussed during the project safety orientation meeting.

A site-specific emergency action plan (EAP) will be written and maintained in the Samet field office. The EAP determines the proper access/egress of emergency equipment and/or personnel into or out of the site in case of emergency.

- Project superintendent will activate EAP using 3 long air horn blasts and/or phone communication to subcontractor competent persons.
- Supervisors will be directed to key locations on the site to assist in an emergency.
- Each employee is expected to follow direction of supervisors and cooperate in any emergency action effort.
- Personnel should evacuate the site in an orderly fashion if instructed to do so by supervisors.
- If you become aware of an emergency or an injury, notify a supervisor immediately.
- Two means of access/egress must be available, identified and unobstructed at all times.

Personnel are strictly forbidden to discuss project conditions, incidents, or emergencies with the media, press or any person not associated with the project.

### **PROJECT SITE SECURITY**

“No Trespassing” signs shall be posted at the project site to prevent casual entry by the public (See Project Signage TSW). All construction traffic and parking will follow Site Logistics plan.

All workers may be subject to Samet Corporation disciplinary procedures for violation of project security measures and will be held under applicable Local, State and Federal laws for any offenses that violate said laws including but not limited to:

- Possession of firearms and other weapons
- Fighting or horseplay.
- Being on project while under the influence or possession, distribution, or offering for sale of alcohol or controlled substances.
- Theft.
- Smoking in unauthorized areas.
- Negligent damage of owner’s property or the property of contractors or employees.

### **FIRST AID POLICY**

In the event an employee is injured on the job, first aid kits are available for the employee to treat their own injuries. First aid kits will be in the vicinity of the work area and contents of the kit inspected when brought on site. Subcontractor Foreman will notify project superintendent or his representative if employees use first aid items. In the event of a serious injury, 911 will be called.

No employee is required to treat another’s wounds. However, in the event “Good Samaritan” assistance is rendered, the exposed employee and victim will be evaluated by a medical clinic or doctor for Blood Borne Pathogens exposure control within 24 hours. The exposed employee will receive general blood borne pathogen training pursuant to OSHA 1910.1030 requirements.

### **HEAT STRESS**

Work involving high air temperature, radiant heat sources, high humidity, direct physical contact with hot objects or strenuous physical activities have a high potential for inducing heat stress in workers engaged in construction activities.

Workers should consume adequate liquids and take necessary rest breaks to help prevent heat disorders. Water is recommended over carbonated beverages or sport drinks like Gatorade.

#### Heat Disorders and Health Effects

Heat stroke: Occurs when the body temperature rises to critical levels, Heat stroke is a medical emergency. Do not send worker home or leave unattended.

Heat Exhaustion: Symptoms often are non-specific and may be sudden in onset. These symptoms often resemble a viral illness. It is caused from dehydration where a large loss of body fluid causes a slowing of the circulatory system.

Heat Cramps: Usually caused by performing hard physical labor in a hot environment. They are caused from an electrolyte imbalance or by too little or too much salt.

#### **HAZARDOUS COMMUNICATION/SDS**

All contractors will submit their hazardous communication program and SDS to the Samet team prior to the start of work. Each contractor must supervise employees under his direct supervision for proper training and proper precautions prior to the hazardous chemical's introduction to the jobsite. The following information will assist in understanding OSHA Hazardous Communication requirements:

##### List of Hazardous Chemicals

The team will maintain a master list of all hazardous chemicals on the project. This list will be in the trailer and available for all employees upon request.

##### Safety Data Sheets (SDS's)

Each contractor must have ready access to the SDS for all chemicals they bring to the project site.

Labels and Other Forms of Warning

Each contractor will ensure all containers on the site have proper, up-to-date labels.

##### Training

Each contractor is responsible for the proper training of their employees.

##### Contractor Employees

Project team will advise contractors of location of hazardous chemical inventory list during the safety orientation.

Each contractor bringing chemicals onsite must provide a copy of their written Hazardous Communication Program including all SDS's to Samet team prior to mobilization on the jobsite.

##### Community Right to Know

Each project location will cooperate with city and county officials to comply with requirements of the OSHA standards regarding hazardous materials onsite.

#### **FALL PROTECTION**

All individuals will take all practical measures to eliminate, prevent, and control fall hazards. All work will be planned with the intent to eliminate identified and potential fall hazards. Samet Corporation's fall protection policy and OSHA 29 CFR 1926.500 Subpart M govern the requirements to protect workers exposed to falls. Additionally, Samet Corporation's fall protection policy is 100% fall protection when exposed six (6) feet or greater above a lower level. The use of conventional fall protection systems (passive preferred) shall be utilized to protect workers from falls to lower levels. Workers wearing personal fall arrest systems shall not free fall more than six (6) feet or contact a lower level.

A written fall protection and prevention plan, including a rescue plan as applicable, may be required as deemed necessary by Samet Corporation. Contractors engaged in the following shall submit their fall protection plan for approval prior to beginning work on site: Steel erection, concrete (cast in place), wood framing, dry laid masonry wall (segmented), pre-cast concrete walls, tilt-up concrete walls, and roofing work. The plan must be agreed to prior to beginning work and the designated competent person must enforce said plan.

Acceptable fall protection systems include the following conventional systems: guardrails, safety netting, floor and wall hole



covers, positioning device systems, fall restraint systems, protection from falling objects and personal fall arrest systems.

**\*\*\*Safety monitoring systems as part of a warning line fall protection system is prohibited.\*\*\***

Workers exposed to fall hazards shall be uniformly equipped, trained, and given periodic refresher training in fall protection at specific intervals to minimize the adverse effects of accidental falls. Fall protection training records will be maintained on the project and available for review by Samet Corporation.

Low-Slope & Flat Roof fall protection program: Warning line systems:

There are times when a warning line is necessary. The roofers shall place the warning line as close as six (6) feet from the edge. For the other trades working on a roof the warning line must be 15 feet from the edge.

Anyone outside of the warning line system is required to wear personal fall protection.

Personal fall arrest systems will be required for workers on ladders when the following conditions are present:

- center of worker's body is outside the side rails of the ladder,
- ladder is positioned such that its distance to a leading edge or open-sided floor is less than the working height of the ladder, plus 6 feet.
- 3 points of contact cannot be maintained when climbing,
- Competent Person evaluation of conditions, working greater than 6 feet above a lower level and tying off does not create an additional hazard on the ladder.

General fall protection requirements:

Any task or activity involving work at heights must be carefully planned and communicated with all involved. Effective controls must be implemented to protect people/tools/materials from falling distances equal or greater than 6 feet.

Any contractor that creates a floor hole or penetration larger than 2 inches will be responsible for protecting that opening and properly marking it with the words "HOLE-DO NOT REMOVE" or "COVER-DO NOT REMOVE" in languages that the workers speak most prevalently.

**SCAFFOLDS AND AERIAL LIFTS**

All Contractors shall identify a Competent Person responsible for the erecting and dismantling of all scaffolds according to OSHA regulations (29 CFR 1926 subpart L- Scaffolds) and Codes of Safe Practice (Scaffold Industry Association). Records will be maintained for scaffold training and be available for review by Samet Corporation team. The Competent person shall submit to Samet Corporation Superintendent or his representative a fall protection plan for erecting and dismantling scaffolds.

Employees working on scaffolds 6 feet above a lower level shall be protected from falling by either a standard guardrail system or personal fall arrest system. Any use of a personal fall arrest system used on a scaffold shall be approved by Samet Corporation team and Samet Corporation EHS Director. The subsequent specific scaffold requirements shall be followed:

- All scaffolds shall be erected under the supervision of a competent person and inspected daily. Scaffold tags or equivalent shall be used to document the inspection. Green Tags - Approved ready for use. Yellow Tags - Caution if restrictions are required. Red Tags – Scaffold unsafe do not use. Narrow span scaffolds (Baker scaffolds) are required to be inspected and tagged.

Aerial Lifts

- All contractors are required to ensure that their workers are properly trained in the use and operation of aerial lifts, including any manufacturer specific requirements and OSHA requirements of 29 CFR 1926 subpart L.
- Workers must wear their personal fall arrest system while working on any mobile elevated working platforms.

**PERSONAL PROTECTIVE EQUIPMENT**

All personal protective equipment (PPE) shall meet applicable standards of the American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM) and properly used in accordance with the manufactures' recommendations. Each employer shall furnish their employees approved PPE that fits to size and provide training in the selection, use and care of such, retraining to be performed as necessary. Employees must maintain their PPE in good sanitary conditions, if defective or showing signs of excessive wear PPE must be replaced. All persons entering the jobsite will, as a

minimum, wear the following personal protective equipment at all time in the designated work area while on this project (except in office and lunch areas). At no times during the project will PPE requirements be relaxed.

#### Head Protection

An approved hard hat must always be worn.

#### Eye and Face Protection

- Safety glasses (Z87.1) with side shields must always be worn.
- Workers that wear prescription safety glasses may do one of the following:
  - Obtain prescription safety glasses (Z87.1) with rigid side shields.
  - Wear over- the- glass safety glasses.

In addition, the following eye/face equipment must be worn when performing the following work activities:

- |                              |                                     |
|------------------------------|-------------------------------------|
| • Arc welding                | Welding hood with proper shading*.  |
| • Burning                    | Burning goggles with proper shading |
| • Grinding or cutting metals | Face shield*                        |
| • Drilling (rock)            | Face shield*                        |
| • Chemical handling          | Face shield*                        |
| • Molten materials           | Face shield*                        |
| • Corrosive liquids          | Face Shield*                        |
| • Concrete pouring           | Face Shield*                        |

Note: \* Safety glasses will be worn in conjunction with face shields and welding hoods.

#### Foot Protection

Above the ankle hard soled work boots or shoes that are in good condition must always be worn. Safety toed work boots if worn must conform to ASTM F2412-05 & ASTM F-2413-05.

#### Work attire

- Shirt sleeves will have a minimum length of 4 inches. No shorts, tank tops, or cut-off shirts are permitted.
- All personnel shall wear a reflective vests or high visibility clothing while in the designated work zone. During the hours of dusk to dawn ANSI class II reflective vests or clothing shall be worn.
- Long pants that fit properly around the waist and of a proper length so as not to create a trip hazard
- Long hair must be contained so as not to create a hazard of getting caught.

#### Respiratory Protection

All contractors are required to determine if hazards exist that require respiratory protection. If so, the Competent Person must submit a plan to the Samet team prior to the start of work. Respiratory protection would be required if OSHA permissible exposure limits are exceeded, and no means of engineering controls could be used. Subcontractor would be responsible for determining the exposure level by sampling for airborne contaminants.

When respiratory protection is required, the employer must establish a comprehensive respiratory protection program, as outlined in OSHA's Small Entity Compliance Guide for Respiratory Protection and as required in the OSHA respiratory protection standard [29 CFR 1910.134 and 1926.103].

#### Use of Respirators

As the primary means of preventing or minimizing exposures to airborne contaminants, use effective source controls such as substitution, automation, enclosed systems, local exhaust ventilation or wet methods.

#### Hearing Protection

Approved hearing protection will be worn as specified in posted areas and while working with or around high-noise level producing machines, tools, or equipment. A good rule to follow is: When you must raise your voice to be heard, you need hearing protection. Exposure to impulsive or impact noise must not exceed 140dB noise level.

#### Hand Protection

Workers will wear appropriate level of hand protection as necessary and as determined by the Competent Person to prevent hand and finger injuries.

#### Additional Protections

Specific activities may require that additional personal protective equipment be worn such as working on energized circuits. Contractors and their Competent Persons shall evaluate the need for additional protection based on their pre-task safety plan.

#### Hand and Power Tools

All hand and power tools will be operated, kept in good condition and regularly maintained per manufacturer's recommendations. Workers working 6 feet or greater above a lower level while using handheld tools and or power tools that may be subject to dropping shall be tethered or area barricaded to prevent tool from hitting unsuspected workers below.

#### **HOUSEKEEPING AND ORDERLINESS**

All persons shall always maintain their work locations in an orderly and clean manner. Daily cleanup of work areas is mandatory for all trades on site. Subcontractor competent person shall submit a housekeeping plan to project team prior to starting work.

#### Samet Corporation Cleanliness Standard

Dumpsters for general trash, construction debris (wood, metal, concrete and etc) and recycling dumpsters will be provided pursuant to contract requirements. Contractors shall provide trash containers on site for general trash and debris. All miscellaneous trash generated by workers shall be deposited in a container or in the back of pickup trucks daily. Do not throw bottles, food wrappers, cups or any other types of trash on the floor or ground. When containers are  $\frac{3}{4}$  full, they will be either removed from the site or dumped in a large metal dumpster. Contractors, as required by contract, will provide their own dumpsters for their specific excess materials and allocate adequate resources to ensure this housekeeping standard is maintained throughout their time on the project. Project team shall address this housekeeping standard with all subcontractors prior to beginning work.

#### General Housekeeping Requirements:

Housekeeping is an important part of our daily work. All materials, equipment, etc. brought on site shall be organized and stored in areas designated by Samet project team. Trade partners are responsible for organizing material, equipment, and tools so they do not create tripping hazards or impede/block exits. Trade partners are responsible for daily clean up of excess material and debris which shall be deposited in appropriate containers throughout the day. When work is completed in a room or area all excess material and debris shall be removed and broom cleaned.

***Refer to Samet's "Housekeeping Commitment Agreement" as provided by the project team***

#### **LADDER SAFETY**

Samet Corporation requires all portable ladders to be rated heavy duty Type 1, 1A, or 1AA. Type II or Type III Ladders (<225 Lbs.) and all types of aluminum ladders are prohibited. Job made ladders shall comply with ANSI A14.4 1979 and 2009 as well as OSHA 29 CFR 1926 Subpart X. Contractor Competent Person shall evaluate the use of personal fall protection systems while on ladders greater than 6 feet above the finished floor the ladder sits on.

Refer to manufacturer's specifications for the proper use of all ladders.

#### **ELECTRICAL SAFETY**

The following regulations apply to both temporary and permanent electrical installations used on this Project site. Electricians working on exposed live (50 to 280 volts) parts shall wear the appropriate level of personal protective equipment required under NFPA 70e and as designated by the Competent Person.

- Extension cords used with portable electrical tools and appliances shall be #14 AWG or greater and be three-wire type designed for hard or extra-hard usage. Grounds are never to be removed from the extension cords.
- All flexible cords plugged into a generator with an output of 5KW or greater and all flexible cords plugged into the permanent wiring of the building shall be protected by a ground fault circuit interrupter (GFCI).
- Any replacement plug ends installed on flexible cords shall be UL/FM approved for its intended use. Note: Open construction sites are considered wet locations. UL/FM approved water-resistant replacement plug ends would be acceptable.
- Temporary lights shall be equipped with guards to prevent accidental contact with the bulb. "Red" bulbs will be used to designate exit ways. Temporary lighting circuits shall be permitted within cable assemblies, or within multi-conductor cord or cable of a type identified for hard usage or extra-hard usage.
- Electrical and extension cords or cable are not to be laid on floors, in walkways, etc., unless it is impractical to do otherwise. They should be suspended or protected in such a way as not to block or hang in walkways, doorways, or work areas.



- It is Samet Corporation policy that electrical panels shall be de-energized and locked out prior to being worked on. However, if any work on energized circuits is required with panels removed an “Energized Work Permit” and safety plan shall be submitted and reviewed by Samet project team and EHS Director. Compliance with NFPA 70E is mandatory. PPE requirements shall comply with NFPA 70E Hazard Risk Classification Table 130.7 (c)(9) and 130.7 (c)(10).
- A weekly cord roll-up program is required on this project. This includes cords of every type, not just extension cords.

### **TRENCHING & EXCAVATION SAFETY**

The following regulations apply to all trenching and excavation activities on this site: OSHA CFR 1926, Subpart P.

- Any contractor engaged in trenching operations deeper than 5 feet shall designate a Competent Person and inform Samet Corporation team.
- Underground utilities must be located.
- Trenches or excavations greater than 5 feet in depth will be sloped, benched, or otherwise protected from cave-ins as determined by the Competent Person. Sloping, benching or other protective systems are recommended for any trenches and excavations over three (3) feet in depth.
- Protective systems designed to be placed in trenches such as trench boxes must have tabulated data available for review as necessary.
- Spoil piles and other materials will be placed a minimum of 2 feet from the edges of all trenches and excavations.
- In trenches deeper than four (4) feet, locate means of egress, such as ladders or steps or ramps (45-degree slope), so they are no more than 25 feet of travel from anyone in trench.
- The Competent Person must inspect all trenches daily before work begins and after every rainstorm or other hazardous conditions.
- A registered professional engineer must design all excavations and protective systems over 20 feet in depth.
- Completion and acceptance of Samet’s “Underground Utility Excavation Permit/Checklist” is required for each trench.

### **UNDERGROUND UTILITY LOCATIONS**

Any contractor who digs a trench or excavation shall call the State appropriate 811 service. Before digging, be sure that all utilities have responded to your locate request. The 811 representatives will advise you of the member utility owners notified. It is the responsibility of the caller (the contractor responsible for excavation) to contact a utility locating company to have any private lines located.

A copy of the 811-notification form shall be submitted to Samet Corporation team as part of the completion and acceptance of Samet’s “Underground Utility Excavation Permit/Checklist”.

Private or third-party independent locate is required if 811 Service isn’t available in the location where the excavation will be occurring.

### **CONFINED SPACE**

The following regulations apply to all confined space activities on this site: OSHA CFR 1926.1201.

Samet Corporation team along with contractor’s Competent Person will identify all confined spaces on the project. Confined Space in Construction shall abide by all the requirements of the standard. Specific requirements for work in a confined space shall be attached as an amendment to this SSSP. As a minimum before work starts at a project site, each contractor must ensure that a Competent Person identifies all confined spaces in which one or more of their employees it directs may work, and identifies each space that is a permit space, through considerations and evaluation of the elements of that space, including testing as necessary. Samet Corporation policy is that all confined spaces by definition as indicated in 29 CFR 1926.1201 will be reclassified as a non-permit confined space based on 1926.1203(e)(1)(i-vi). Contractor’s Competent Person shall submit to Samet Corporation team a confined space entry permit indicating its reclassification as a non-permit confined space. In the event a confined space can’t be reclassified as a non-permit space, all requirements under 1926.1203(a-d) shall be followed. Samet Corporation team is required to coordinate confined space rescue with local fire department in absence of on-site rescue procedures.

### **FIRE PROTECTION AND PREVENTION**

#### **Fire Protection**

Temporary fire protection measures, such as fire extinguishers, temporary hose lines, and temporary standpipes are required near

hazardous locations and as required by OSHA regulations 29 CFR 1926 Subpart F.

- Fire extinguishers will be the primary means for fire protection and must be located within 75' feet of travel distance from any point within any structure under construction, although other means may be added.
- Any discharge of a fire extinguisher must be reported to Samet Corporation team.
- All enclosed buildings under construction shall have appropriate number of fire extinguishers rated not less than 4A-40B:C (10 lbs. ABC) and not less than 2A-20B:C (5 lbs. ABC) for motorized equipment.
- All temporary buildings (shops, field offices, locker rooms, etc.) will have a class ABC fire extinguisher rated not less than a 2A-10B:C
- All spark producing, welding, cutting or flammable storage operations shall require the fire extinguisher rated not less than 4A-40B:C (minimum 10 lbs. ABC Fire extinguisher) be approximately 25' from operations.

### **Fire Prevention**

Combustible refuse from construction operations will not be burned or dumped anywhere on the construction site. Such refuse will be removed at frequent intervals, as required. Storage of large quantities of construction debris will be placed in metal dumpsters.

Compressed gasses will be:

- Stored with valve caps securely fastened when not attached to a regulator.
- Always secured upright, including when transported in vehicles.
- Fuel and oxygen cylinders will be separated by 20 feet for greater when not in use or separated by a not less than a 5' fire rated (one-half hour) wall.
- Empty cylinders shall be stored separate from full cylinders.
- Oily rags and waste are to be stored separately in metal containers fitted with self-closing lids.
- **Smoking shall not be permitted inside any structure**, only permitted in designated smoking areas.
- **Smoking areas shall be delineated with physical barriers, with proper signage, have a 4A-40B:C (10 lbs. Fire Extinguishers) and safe receptacles for smoking materials disposal.**

### **Flammable Liquid Storage and Dispensing**

Flammable liquids will be:

- Stored outside and no closer than 20 feet of any structure or inside a properly constructed storage container.
- Stored in approved metal safety cans and marked to indicate its contents.
- Not more than 25 gallons stored inside any trailer or building.
- Posted with "No Smoking" signs.
- Outside storage areas kept free of other combustible materials.
- Gasoline or diesel storage tanks will be double walled and protected from contact by mechanized equipment.
- At fuel dispensing points, the following is required:
  - Fire extinguisher rated not less than 40 B-C located within 75 feet of fueling point.
  - "No Smoking" signs posted.
  - Self-locking fuel nozzle prohibited.
  - Spill kit stored nearby.

### **HOTWORK PERMIT REQUIREMENTS**

A Hot Work Permit is required for any temporary operation involving open flames or producing heat and/or sparks. This includes, but not limited to brazing, flame cutting, grinding, soldering, torch applied roofing and welding. Hot work permits will be issued by Samet Corporation team and will filled out by contractor engaged in hot work operations in an enclosed building/structure.

- All provisions of the Hot Work Permit will be followed including fire watch personnel. Hot Work Permits can be issued for the duration of the hot work but not to exceed the work shift.
- Hot work operations will be minimized or eliminated by selection of safer means methods whenever possible (example; utilizing hydraulic cutters/shears vs flame torches)
- ***Refer to Samet's PtW – Hot Work Permit***

### **EQUIPMENT AND VEHICLES**

- Heavy equipment (cranes, forklifts, dump trucks, excavators/backhoes, man-lifts, etc.) used on this project will be inspected

- prior to use and comply with applicable OSHA and ANSI standards as well as manufacturers documentation.
- Seat belts shall be worn on all equipment with roll-overprotective structures.
- Windshields will be free from cracks or other visible damage.
- Vehicles and equipment with an obstructed view to the rear must have an audible backup alarm or a flagman must be used.
- No equipment or vehicle will be used to transport personnel unless it is specifically designed to do so.
- Equipment operators are responsible to check their equipment daily to verify it is working properly.
- Equipment operators will possess the required training, certification, and licenses as required by law for the equipment that they are required to operate. All forklift operators shall have a valid operator's license, a copy of which must be submitted to Samet Corporation team.
- If operating a forklift, backhoe, or similar piece of equipment in a public ROW, a valid State driver's license is required and must be on file with Samet Corporation team.

## **CRANE SAFETY, RIGGING AND HOISTING OPERATIONS**

Any contractor who uses a crane on this Project Site shall adhere to the requirements of 29 CFR 1926.1400 Cranes and Derricks in Construction and ASME B30. **All crane operators shall fill out Samet Pre-Erection/Assembly Crane Analysis and provide required documentation such as annual inspection certification, operator's license, and signalman training.**

**Each qualified crane operator will be responsible to conduct a detailed daily inspection of its crane and ensure findings are properly logged in a written daily report and reported to crane supplier and Samet.**

### **Mobile Cranes**

- No crane will be brought onto the project without a current annual inspection and applicable load charts.
- Crane operators will perform daily crane safety inspections. Crane operators are to turn in the Daily Crane Safety Checklist to Samet Superintendent. A Daily Safety Crane Checklist is provided in the Appendix to this manual. Note: An equivalent form may be used.
- All cranes will be equipped with an anti-two block device. Hooks will be equipped with safety latches.
- Contractor's supervisor shall designate a qualified person to monitor all rigging. All rigging will be inspected daily and before each shift. A Daily Rigging Safety Inspection Checklist is provided in the Appendix to this manual.
- The crane manufacturer's operating manual, instructions and load charts for a specific crane will be used to determine the safe operation of all cranes.
- All crane operators must be certified by the National Commission on Certification of Crane Operators (NCCCO) or equivalent. This rule applies to Contractors as well as Samet employees. Exception: cranes mounted on delivery trucks that unload outside, onto the ground.
- The supervisor shall ensure that crane operators meet legal and Owner requirements. After initial qualification, the supervisor shall closely monitor until the operator's capability is established.
- The ground where the crane will be set up must be solid and able to support the weight of the loaded crane. Determine if underground utilities exist near where the crane will be set up.
- Cranes will be set up level with outriggers fully extended or set per the manufacturer's recommendation for particular lift configuration. All tires should be clear of the ground.
- Cribbing or mats under outrigger pads should be of sufficient size and properly placed to ensure adequate soil bearing.
- Tag lines shall be used when needed to control the load. (Exception: When loading and unloading trucks)
- The entire swing radius of the rear rotating superstructure of all cranes must be barricaded to prevent crushing injuries.
- The load path shall be barricaded to protect worker from overhead hazards.
- Loads shall be routed to minimize exposure to workers.
- Before a lift, determine the load weight and load capacity. A designated qualified person will determine the load weight. Refer to the shipping weight or have the equipment or machinery assembly weighed. Calculate all structural loads and determine the center of gravity.
- Position the crane so there is a minimum swing and load path clearance of two feet. Cranes and their loads shall not be operated within 20 feet of electrical lines. Increased clearance is required for higher voltage lines. When working near electrical sources (overhead lines or lightning), the crane should be grounded.
- Crane operators are to know the weight of the load they are lifting.
- A written critical lift and rigging plan are required for any lift where:
  - The load is greater than 75% of the crane capacity as configured for the lift.



- Two cranes are used.
- The Project Manager/Superintendent or Safety Director determines the lift to be non-routine.
- Lift plans are required for all project hoisting operations not taken plan of regular basis.

### Rigging

- Special attention needs to be taken when wind speeds exceed 20mph. Such lifts will only be made at the discretion of the crane operator, project superintendent and safety director and must follow Crane manufacture's recommendations. Lower crane booms/raise hook when appropriate due to high winds.
- All loads to be slung, lifted, or transported must have no uncontrolled movement or loss of the load. This can involve redundant slinging or secondary containment for small objects.
- All lifting gear and tackle (e.g., chains, wire ropes, kibbles, slings and rubbish removal skips) must be inspected before use and must be structurally sound, fit for purpose and designed for lifting (with certified lifting points and the rated capacity/safe working load clearly displayed).
- Tag lines shall be used when needed to control the load.
- Objects transported through site must be adequately restrained to prevent uncontrolled movement forwards, rearwards, upwards or sideways.
- Slinging methods must manage any expected dynamic load forces (e.g. wind, sudden crane halt).
- Deliveries where the load has the potential to fall/roll when unshackled must be inspected by a Competent Person, i.e. Rigger/Signal Person or equivalent and restrained before removal, e.g. chocked or slung with hoisting/lifting gear.
- The requirement for exclusion zones for lifting/hoisting operations must be identified and included in the crane lifting plan or PTP.
- All riggers must possess a valid qualification card and identifiable at all times (e.g. different color vest with Rigger identification) or hardhats)
- Proprietary Loading platforms are preferred (Prestonbox Type) when utilized by multiple trade partners. All platforms must be engineered, load capacity posted, enclosed on all sides and equipped with means of controlling access to the platform.

### Signalman Training and Qualifications

Employers of signalmen shall ensure that each signal person meets the qualification requirements contained in 29 CFR 1926.1419 Signals – General Requirements.

- Know and understand the type of signals used. If hand signals are used, the signal person shall be designated in writing and know and understand the standard method for hand signals.
- Be competent in the application of the type of signals used.  
Have a basic understanding of equipment operations and limitations, including the crane dynamics involved in swinging and stopping loads and boom deflection from hoisting loads.
- The crane operator, signal person shall be able to effectively communicate the language used.
- The signals used (hand, voice, audible, or new) and means of transmitting the signals to the operator (such as line of sight, video, radio, etc.) shall be appropriate for the site conditions.
- If radios are used to signal crane operator radio must have a dedicated channel.
- Hand signal charts shall be either posted on the equipment or readily available at the site.
- A crane operator should always move loads according to the established code of signals and use a signaler. Hand signals are preferred and commonly used.
- Only a qualified person should give signals to the crane operator.
- There should be only one designated person at a time giving crane signals.
- A crane operator should move loads only on crane signals from one person.
- A crane operator must obey STOP signals no matter who gives it.
- The person giving crane signals must be in clear view of the crane operator.
- The person giving crane signals must have a clear view of the load and the equipment,
- The person giving crane signals must keep persons outside the crane's operating area. Any request or questions should be addressed to the signaler.
- The person giving crane signals should never direct a load over a person.

## **DEMOLITION**

- Demolition plans shall follow OSHA 29 CFR 1926 Subpart T.
- Prior to start of any demolition work, an engineering survey of the building or area to be demolished is required to determine the condition of the area. Debris and material shall not be dropped through walls, floor holes, windows, or other elevated work areas without the area below being barricaded and proper signs posted.
- Debris chutes shall have a substantial gate at all elevated openings.
- Samet Corporation may require the demolition contractor to submit a site-specific fall protection plan if the work requires the removal of exterior walls and or flooring.

## **CONCRETE AND MASONRY**

- Free standing masonry walls over eight (8) feet in height will be adequately braced to prevent collapse. Limited access zones will be established as required by OSHA 1926, Subpart Q, to protect workers from the hazards associated with collapsing masonry walls.
- All rebar dowels, electrical conduits or similar items which are considered a “potential impalement hazard” shall always be capped (protected). This includes vertical and horizontal impalement hazards.
- Refer to Section on [SILICA](#) for specific requirements.

## **Pre-Cast Concrete**

- The inspection and supervision of all rigging and hardware must be performed by a Competent Person.
- Never move pre-cast members over another worker.
- 100% fall protection is required of all workers involved in the setting or connection of pre-cast members
- No workers will use their hands to reach under a pre-cast member to adjust a shim or bearing pad.

## **STEEL ERECTION**

The steel erection contractor shall submit a written steel erection plan to the Samet Corporation team prior to any work being performed. The plan must be comprehensive and include all aspects of the erection process, including but not limited to storage/staging of materials, equipment for hoisting materials, routes for lifting operations, critical lifts, rigging procedures, connection procedures, erection bridging procedures, stability requirements, fall protection requirements, decking procedures and proper training of workers. Steel erection procedures shall follow OSHA 29 CFR 1926. 750 Subpart R – Steel Erection standard or any supplemental requirements required by Samet Corporation. The following requirement shall be incorporated into the plan:

- 100% continuous fall protection for heights six (6) feet or greater above a lower level. Workers engaged in steel erection activities to include connecting, bolt-up and decking are **not exempt** from the project’s 100% fall protection requirements.
- During skeletal steel erection, a tightly planked temporary floor shall be maintained within two (2) stories or thirty (30) feet, whichever is less, below and directly under that portion of each tier of beams on which any work is being performed.
- During structural steel assembly, a safety railing of wire rope (at least 3/8” dia.) or equivalent shall be installed. Top railing should be forty-five (45) inches and a mid-railing at twenty-two (22) inches above the deck along all open sides including stairway landings and elevator shafts. The railing must support two hundred (200) lbs. of downward force and not deflect below thirty-nine (39) inches and shall not deflect outward beyond the edge of the floor. Flagging must be placed no more than every six (6) feet apart using a hi-visibility material.
- When placing structural steel members, the load shall not be released from the hoisting line until the member is secured by at least two bolts or the equivalent at each connection, drawn up wrench tight.

## **MOLD CONTROL**

If mold is observed, work must not continue in the area until Samet Corporation supervision has made an evaluation of the exposure and develop an abatement plan.

## **SILICA**

Contractors shall submit an exposure control plan to Samet team prior to beginning any work. The contractor shall adhere to the requirements of 29 CFR 1926.1153 Respirable crystalline silica. If respiratory protection is required by this section, the contractor shall institute a respiratory protection program according to 29 CFR 1910.134. In addition, contractor shall ensure medical surveillance is available at no cost to employees as required under 29 CFR 1926.1153(h).

- Workers that perform any of the following work tasks will be protected from exposure to crystalline silica dust:
  - Abrasive blasting using silica sand as a blasting medium.
  - Abrasive blasting of concrete regardless of the type of medium.
  - Sawing, hammering, drilling, grinding, sanding or chipping of concrete, rock or masonry products.
  - Heavy equipment and utility vehicles used to fracture or abrade silica containing materials, i.e. rock ripping, grading, demolition, fracturing
  - Dry sweeping or compressed air blowing of concrete, masonry, rock, or sand dust.
- Workers exposed to silica dust will receive training on silica hazards and protection methods.
- Examples of acceptable engineering controls are:
  - Substitute blasting medium for less hazardous material with 0% silica.
  - Dust collection systems shall be equipped with a commercially available shroud and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.
  - Wet saw systems equipped with integrated water delivery system that continuously feeds water to the blade or cutting surface.
  - Wet sweeping, HEPA-filtered vacuuming shall be used to clean up materials and debris where crystalline silica may be present.
- Do not use respirators as the primary means of preventing or minimizing exposures to airborne contaminants. Instead, use effective source controls such as substitution, automation, enclosed systems, local exhaust ventilation, wet methods, and good work practices as indicated in 29 CFR 1926.1153 Respirable crystalline silica.
- Do not eat, drink, or use tobacco products in areas where crystalline silica dust is present. Always wash hands and face before eating, drinking, or using tobacco products.

#### **INSTALLING AND SANDING SHEETROCK**

This procedure outlines the safety requirements for installing and sanding sheet rock in all buildings under construction.

- While wearing stilts, workers are prohibited from walking up and down stairs or working near leading edges without proper physical protection.
- Workers wearing stilts who are within ten (10) feet of standard guardrails must extend the top rail an additional two (2) feet to ensure proper protection.
- Workers hand sanding sheetrock joints can, on a voluntary basis, wear a disposable respirator (dust mask) rated N95. Workers must be trained and sign Appendix D to section 29 CFR 1910.134 "Voluntary Use of a Disposable Respirator".
- Workers engaged in mechanically sanding (powered orbital sander) sheetrock joint compound shall not be exposed to airborne concentrations of respirable dust above the OSHA permissible exposure level (PEL). Contractor is responsible for determining the exposure level of respirable dust in and around their employees breathing zone. The use of a vacuum attached to powered orbital sanders is the preferred means to reduce respirable dust below the OSHA PEL.
- Workers who would be exposed to respirable dust that is greater than 5mg/m3 in and around workers breathing zone must submit a comprehensive respiratory protection program that complies with 29 CFR 1910.134 if they require their employees to wear respiratory protection when sanding sheetrock joint compound.

#### **LOCK OUT POLICY**

This procedure establishes the minimum requirements for the lockout of energy isolation devices whenever maintenance or servicing is done on machines or electrical equipment. It shall be used to ensure that the machine or electrical equipment is stopped, isolated from all potentially hazardous energy sources, and locked out before anyone performs any servicing or maintenance where the unexpected energization or start-up of the machine or electrical equipment or release of stored energy could cause injury.

- Lockout is the preferred method of isolating machines or electrical equipment from energy sources. To assist employers in developing a procedure which meets the requirements of the standard, the following simple procedure is provided for use in lockout programs. This procedure may be used when there are limited numbers or types of machines or electrical equipment or there is a single power source. For more complex systems, a more comprehensive procedure will need to be developed, documented, and utilized.
- All employees and contractor employees are required to comply with the restrictions and limitations imposed on them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees and contractor employees, upon observing a machine or piece of electrical equipment which is locked out to perform servicing or maintenance, shall not attempt to start, energize, or use that machine or electrical equipment.
- ***Refer to Samet's TSW for LOTO, Verify Permit***

### Responsibility

- Appropriate employees (contractor) shall be instructed in the safety significance of the lockout procedure.
- A competent person will conduct a survey to locate and identify all isolating devices to be certain which switch(s), valve(s) or other energy isolating devices apply to the equipment to be locked out. More than one energy source (electrical, mechanical, or others) may be involved.

### Lockout system procedure

- Notify all affected employees that a lockout system is going to be utilized and the reason. The authorized employee (contractor) shall know the type and magnitude of energy that the machine or electrical equipment utilizes and shall understand the hazards.
- If the machine or electrical equipment is operating, shut it down by the normal stopping procedure.
- Operate the switch, valve, or other energy isolating device(s) so that the equipment is isolated from its energy source(s). Stored energy (such as that in springs, elevated machine members, rotating flywheels, hydraulic systems, and air, gas, steam, or water pressure, etc.) must be dissipated or restrained by methods such as repositioning, blocking, bleeding down, etc.
- Lockout the energy isolating devices with assigned individual lock(s) and tag(s).
- Ensure that the equipment is disconnected from the energy source(s) by first checking that no personnel are exposed, then verify the isolation of the equipment by operating the push button or other normal operating control(s) or by testing to make certain the equipment will not operate. Return operating control(s) to neutral or "off" position after verifying the isolation of the equipment. The machine is now locked out.

### Restoring Equipment to Service

When the servicing or maintenance is complete and the machine or electrical equipment is ready to return to normal operating condition, the following steps shall be taken.

- Check the machine or electrical equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and that the machine or electrical equipment components are operationally intact.
- Check the work area to ensure that all employees have been safely positioned or removed from the area.
- Verify that the controls are in neutral.
- Remove the lockout devices and reenergize the machine or electrical equipment.
- Notify affected employees that the servicing or maintenance is complete, and the machine or electrical equipment is ready for use.

### **CODE OF CONDUCT /WORKPLACE VIOLENCE**

Nothing is more important to Samet Corporation than the safety and security of its associates and partners. Threats, threatening behavior or acts of violence against anyone on Company property or projects sites will not be tolerated. Violations of this policy will lead to disciplinary action (up to and including termination) and/or removal from premises.

In carrying out Samet Corporation policies, it is essential that all personnel understand that no existing Samet Corporation policy, practice, or procedure should be interpreted to prohibit decisions designed to prevent a threat from being carried out, a violent act from occurring, or a life-threatening situation from developing.

All workers are responsible for notifying their supervisor and Samet Corporation team of any and all threats or unusual behavior, which they may witnessed, receive or have been told that another person has witnessed or received.

This policy also requires all individuals who apply for or obtain a protective restraining order, which lists company locations as being protected areas to provide such to Samet's Safety Director. Samet Corporation understands the sensitivity of the information requested and will respect the confidentiality thereof.

### **PROTECTING ASSOCIATES IN THE WORKPLACE**

Protecting all Associates' safety and well-being is of utmost importance to maintaining a positive, productive work environment and culture. This commitment includes protecting Samet field and office Associates from harassment, threats, and violent behavior, and extends to our sub-contractors, customers, and anyone present at one of our job sites or offices. Being a good steward of your own personal safety and the safety of others involves knowing the risk factors, reducing any known risks, and taking pro-active approaches to help yourself and others stay safe and free from harassment, threatening or volatile behavior in any form.



Risk factors for working on construction sites:

- Working late at night or early morning hours
- Working during non-daylight hours
- Working alone or with a limited number of co-workers
- Uncontrolled access to a construction site
- Areas of known security concerns
- General construction parking areas
- Areas that cannot be readily seen by others (i.e., apartment units, closets, enclosed spaces)

Reducing the risks:

- Remove yourself from any contentious situation immediately and do not confront the workers or engage in conversation
- Note who the workers are and or what job they were doing
- If harassed in any form, contact your supervisor or a co-worker immediately and then report the incident to Associate Services. If you wish to by-pass your immediate supervisor, you may reach out to Associate Services or any member of the management team.
- Report all safety concerns to a member of Samet's safety team or VP of Administration
- You can raise concerns or make reports without fear of reprisal

Practical tips for helping yourself and others stay safe at work:

- Always be aware of your surroundings
- Inform your co-workers when working alone
- Inform your co-workers when you intend to enter and return from the project site
- Park your vehicle near the construction office and not in the general parking area
- Keep your cell phone handy and ensure it is charged
- Keep phone numbers of project or department team members in your cell phone's favorites file
- Be aware of groups congregated in and around isolated areas
- Do not stay in isolated areas too long
- Keep doors to isolated spaces open
- When possible, position yourself between the door and the person(s) you are with

If you believe you are being harassed either through verbal communication, body language, or gestures, report the incident immediately to your supervisor and Associate Services. Samet will investigate and take prompt action against any worker(s) or individual(s) who harass Associates in the workplace or the general public near a project site. Threats, hostile behavior, or acts of violence against Associates, contractors, visitors, guests, or other individuals by anyone on company property or projects sites will not be tolerated. Violators will be subject to disciplinary action up to and including termination of employment. You may view Samet's full policy on harassment and sexual harassment on SametNet. If you have concerns about the safety and security of a Samet job site or office, please contact a member of our safety team or VP of Administration.

Revision History

June 1, 2016 – Added Silica Requirements (Section XX) and Modified Aerial Lift Requirement (Section XX)

April 18, 2018 – Revised SSSP

March 2020 – General re-write

May 2021 – Revised / Reformatted

June 2022 – High Rise Construction requirements under Fall Protection, Hot Work Requirements updated, Tower Cranes and hoists third party inspections added.

May 2023 – Fire Prevention was updated - No Smoking allowed within any structure, language for designated smoking areas added. Also updated the Fire Extinguisher size to 10 lbs for general purposes and Fire Watch purposes

## **Samet Requirements Above OSHA – Exhibit D**

Safety is one of Samet Corporation's core values. It is incumbent on each of us to do all we can to ensure that all associates, trade partners and visitors go home safely to their families every day. While our actions are an important and integral part of this process, we also have a duty to properly document our work daily. This is a key factor in ensuring that we keep our commitment to ensuring associates, trade partners and visitors do not compromise safety performance by undertaking work they are not qualified or trained for, and that they have the proper equipment to perform the task. To that end, Samet follows OSHA's minimum requirements and guidelines as part of our safety program except for the below standards that we exceed. Please review these requirements as you will be held accountable for following.

### **A. Subpart C - General Safety and Health Provisions**

#### Accident prevention OSHA 20(b)(1)

Samet has a written site safety and incident prevention program for each project. Subcontractors submit written site-specific safety and health programs for each project.

#### Job site inspections OSHA 20(b)(2)

Samet requires weekly written job site/areas inspections by our associates and subcontractor's competent persons (2 independent inspections). Daily Pre-task Plans and Permits to Work are required for high-risk activities and must be filled by subcontractor's competent persons and reviewed with working crew. Additional Inspections would include Material and Equipment Inspections.

#### Machinery and equipment operator training OSHA 20(b)(4)

Samet requires all subcontractors to identify, in writing, that all their equipment operators (lifts, earth moving, etc.) have been trained and qualified to operate the equipment/machinery.

#### Housekeeping OSHA 25(a-c)

Samet requires subcontractors to keep their work areas in and around buildings cleaned & organized, deposit their scrap/debris into provided dumpsters daily and remove or bend nails protruding from lumber. When unable to deposit debris daily into dumpsters, their trash/excess materials need to be organized and not obstruct means of egress out of the building. A Housekeeping agreement must be signed by all trades.

### **B. Subpart D - Occupational Health and Environmental Controls**

#### Medical services and first aid OSHA 50(a-g)

Samet requires that in the event an employee is injured on the job, First Aid kits are available for the employee to treat their own injuries. Subcontractor's first aid kits will be near the work area and contents of the kit inspected when brought on site. Subcontractor foreman will notify project superintendent or his representative if employees use first aid items. In the event of a severe injury, 911 will be called. Employees with minor injuries can self-treat their injuries or be taken to a nearby clinic for a medical evaluation and or treatment. As Samet projects sites are all within 15 minutes of a nearby medical facility or an EMS station (which meets the requirement as reasonably accessible), we do not require our associates and subcontractors' employees to be trained in first aid. No employee is required to treat another's wounds. However, in the event "Good Samaritan" assistance is rendered the exposed employee and victim will be evaluated by a medical clinic or doctor for Blood Borne Pathogens exposure control within 24 hours. The exposed employee will receive general blood borne pathogen training pursuant to OSHA 1910.1030 requirements.

### **C. Subpart E - Personal Protective Equipment and Life Saving Equipment**

#### Personal protective equipment OSHA 95(a-d)

Samet requires its associates and subcontractor employees on all project sites to wear hard hats,



safety glasses, high visibility clothing or vests, work boots, long pants, shirts with 4"sleeves, have hearing protection on their person and wear gloves (based on the hazard) regardless if associates and subcontractor employees are exposed to respective hazards or conditions.

**D. Subpart K – Electrical**

Samet requires all flexible cords to be three-wire 14 AWG or greater and rated for hard or extra hard use. Cords must be kept off the ground on walkways and means of access/egress to avoid tripping hazards.

**E. Subpart L – Scaffolds**

Samet requires fall protection (guardrails) on scaffolds at 6 feet and greater in height.

**F. Subpart M - Fall Protection**

Samet requires workers on low-sloped roofs (4 pitch or less) to be protected from leading edge falls of 6 feet or greater using guardrails or personal fall protection systems. Safety monitoring systems as part of a warning line fall protection system is prohibited. Samet required PFAS to be worn on all Mobile Elevated Working Platforms including scissor's lift.

**G. Subpart R - Steel Erection**

Samet requires 100% continuous fall protection for heights six (6) feet or greater above a lower level. Workers engaged in steel erection activities to include connecting, bolt-up and decking are **not exempt** from the project's 100% fall protection requirements.

**H. Subpart X - Stairways and Ladders**

Samet requires all portable ladders to be rated heavy duty Type 1, 1A, or 1AA. **Type II or Type III Ladders (<225 Lbs.) are Prohibited.** The use of aluminum ladders is also prohibited.

**Personal fall arrest systems will be required for workers on ladders when the following conditions are present:**

- a. Work requires the employee to reach such that the center of the body travels outside the area between the side rails of the ladders.
- b. The ladder is positioned such that its distance to a leading edge or open-sided floor is less than the working height of the ladder.
- c. Employees not maintaining 3 points of contact when climbing the ladder.
- d. Employees working on ladders when it's feasible and would not create an additional hazard to tie off to an approved anchor point when working greater than 6 feet above a lower level on the ladder.

Note: Competent Person shall evaluate conditions that would support tying off on ladders.

**Samet adheres to all the below Subparts as written:**

Subpart F Fire Protection and Prevention, Subpart G - Signs, Signals, and Barricades, Subpart H - Materials Handling, Storage, Use, and Disposal, Subpart I - Tools - Hand and Power, Subpart J - Welding and Cutting, Subpart N - Helicopters, Hoists, Elevators, and Conveyors, Subpart O - Motor Vehicles, Mechanized Equipment, and Marine Operations, Subpart P – Excavations, Subpart Q - Concrete and Masonry Construction, Subpart S - Underground Construction, Caissons, Cofferdams, and Compressed Air, Subpart T – Demolition, Subpart U - Blasting and the Use of Explosives, Subpart V - Electric Power Transmission and Distribution, Subpart W - Rollover Protective Structures; Overhead Protection, Subpart Y - Commercial Diving Operations, Subpart Z - Toxic and Hazardous Substances, Subpart AA - Confined Spaces in Construction, Subpart CC - Cranes & Derricks in Construction, 29 CFR 1926.1153 –Respirable Crystalline Silica

Additionally, Samet adheres to the OSHA regulations (Z- 1153) and to 29 CFR 1910 General Industry Standards as referenced in 29 CFR 1926 Construction standards as written.



WTCC – Fire and Rescue Training Center

Quality Control Plan





## Subcontractor's Site-Specific Quality Control Plan

<b>Trade Partner</b>	<b>Samet Job No.:</b>	23-878
<b>Attn:</b>	<b>Project Nam</b>	WTCC: F&R Training
	<b>Fax:</b>	
<b>Email:</b>	<b>Scope of Services:</b>	
<b>Phone:</b>		

<b>Email:</b>	<b>Project Start:</b> /        /
<b>Phone:</b>	<b>Project Finish:</b> /        /

### Contractor Quality Team

<b>Quality Control Director:</b>	Coleman Fenton	<b>Ph:</b>	910-777-9995	<b>Email:</b>	cfenton@sametcorp.com
----------------------------------	----------------	------------	--------------	---------------	-----------------------

(Responsible for the overall QA/QC Program for the CONTRACTOR)

<b>Project Superintendent:</b>	TBD	<b>Ph:</b>		<b>Email:</b>	
--------------------------------	-----	------------	--	---------------	--

(Responsible for this project's specific quality program for the CONTRACTOR)

<b>Site Quality Coordinator:</b>	Superintendent-TBD	<b>Ph:</b>		<b>Email:</b>	
----------------------------------	--------------------	------------	--	---------------	--

(Responsible for all inspections and field documentation for this project for the CONTRACTOR)

### Trade Partner Quality Team

<b>Operations Manager:</b>		<b>Ph:</b>		<b>Email:</b>	
----------------------------	--	------------	--	---------------	--

(Responsible for the overall QA/QC Program for Trade Partner)

<b>Project Manager:</b>		<b>Ph:</b>		<b>Email:</b>	
-------------------------	--	------------	--	---------------	--

(Responsible for this SSQCP for Trade Partner)

<b>Site Quality Representative:</b>		<b>Ph:</b>		<b>Email:</b>	
-------------------------------------	--	------------	--	---------------	--

(Responsible for all inspections and field documentation for this SSQCP for Trade Partner)

### Trade Partner's Quality Program Objective:

The principal objective of this Site-Specific Quality Control Plan (SSQCP) is to provide the CONTRACTOR and the Owner with the specified materials and high-quality workmanship that meets or exceeds their expectations. To accomplish this, both Samet Corporation's management and its employees are committed to continuous improvement in the quality of the products and services we provide.

This SSQCP has been established to ensure that all work performed by employees and Trade Partners of Samet Corp meet or exceed all contractual and regulatory requirements. Our Quality Team (defined above) takes total responsibility for the implementation of this program and its success for our scope of work on this project.

**Quality Control Requirements**

Topic	Required Actions & Documentation	Initials
Documentation Control: RFI's COR's	<p>Keep an organized file of all required project documents up to date at all times.</p> <p>Submit timely RFI's.</p> <p><u><i>Include suggestions for best outcome with the RFI.</i></u></p> <p>Submit timely Changes. Include cost, detail and time impacts of all ASI's, RFI's or other Project changes. NO LATE CO's.</p> <p>Communicate with CONTRACTOR when the inspection or test reports will be completed and the frequency of submissions.</p>	
Submittals and 100% Material Verification	<p>Conform to contractual requirements regarding submittals.</p> <p>If the project specifications do not call out what is to be submitted, then Samet Corp will create a list of products to be used. At the time of First Work-in-Place inspection or earlier, field verify that materials conform to the approved material submittal for the materials in question.</p>	
Manufacturer's Application	<p>Confirm the Approved Submitted Material is compatible for with other products that interface with this duct.</p> <p>What does it go on, go in, or what's on it?</p> <p>Confirm interface details.</p>	
Storage & Handling of Materials/Equipment First Delivery	<p>Identify any special requirements and documentation specific to Samet Corp's contract.</p> <p>Execute First Delivery Checklist.</p>	
Pre-installation Meetings	<p>Attend Samet's Pre-Installation Meetings as a primary Trade Partner or coordinating Trade Partner with the Trade Partner's qualified Field Supervisor(s)* performing the work and the Trade Partner's Project Manager and any other key personnel at all Pre-installation Meetings requested.</p> <p>*Includes supervisors for tiered Trade Partners.</p>	
First Work-in-Place Inspections	<p>Manage First Work-in-Place inspections and reviews with CONTRACTOR, Designer, etc. Document Standard of Performance.</p>	
Quality Control Checklists & Special Documentation	<p>Trade specific Inspection Checklists will be utilized on this project. All checklists are to be signed off by Samet Corp's Site Quality Representative (SQR.) All inspection results and documentation will be completed and turned over to the CONTRACTOR at job completion.</p>	
Testing & Inspections	<p>A Testing and Inspection Plan will be prepared by Samet Corp's SQR that lists all specified tests and inspections from the Project Specification for Samet Corp's scope of work.</p> <p>Tests &amp; Inspections will be witnessed by Samet Corp's SQR.</p> <p>Samet Corp's SQR will track all contractual and non-contractual inspections on a Testing &amp; Inspection Log.</p>	
Non-Conformances	<p>Samet Corp will document and notify Trade Partner to rectify all non-conformances. All issues will be corrected per the approved corrective action plan and completed in an acceptable timeframe tracked on a Deficiency Log.</p>	



Subcontractor's Site-Specific Quality Control Plan

Progress Photos	Trade Partner and Samet Corp will take daily progress photos, documented to confirm work complies with Project Requirements.	
As-built Drawings	The master as-built drawing set kept by Samet Corp in the field office will be updated by your field supervisor on a weekly basis, as applicable.	
Close-out and Warranty Procedures	Submit all Close-out Data, complete and timely to Project Requirements. Warranty, Guarantee, Attic Stock, Manufacturer Maintenance Data, and Training – each as may be required. Provide responsive action to Warranty Issues. Manage Warranty issues with a goal of overall Customer Satisfaction.	

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Trade Partner's Site Quality Representative (SQR)

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Samet Corp Representative



## Quality Inspection

### Forms





## Subcontractor's Site-Specific Quality Control Plan

### Inspection and Testing Requirements

Item #	Item Description	Inspection Checklist or Inspection Form

Notes: Inspection Checklists and Inspection Report Forms shall be attached.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*Trade Partner's Site Quality Representative (SQR)*

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*Samet Corp Representative*

[illegible]

# QUALITY INSPECTION



QUALITY

**Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ **Project:** \_\_\_\_\_ **Job No:** \_\_\_\_\_

**Location:** \_\_\_\_\_ **Meet at:** \_\_\_\_\_

**Bid Packages:** \_\_\_\_\_ **Trade Partner(s):** \_\_\_\_\_

**Specification Section(s):** \_\_\_\_\_ **Drawing No(s):** \_\_\_\_\_

Quality Inspection Sign-Off		
Trade Partner Names:	Trade Partner Signatures	Date:
Attached photos documenting the inspection.		
Photos to be taken by the Trade Partner and Samet Corporation representative.		

# QUALITY INSPECTION



QUALITY

Does the area/item Inspected conform to the Contract Documents? **Yes** ☐ **No** ☐

If not, is re-inspection by Samet acceptable for approval? ☐ **Yes** ☐ **No**

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Acceptance Signatures:**

**Samet** \_\_\_\_\_ **TC** \_\_\_\_\_

**Owner** \_\_\_\_\_ **A/E** \_\_\_\_\_



# QUALITY COORDINATION



## QUALITY

The Contractor shall coordinate all Electrical requirements for equipment provided under this Trade Partner's Scope of Work.

Provide a written statement confirming coordination of voltage requirements for all equipment requiring an electrical connection. Statement shall bear the names and signatures of the Trade Partner supplying the equipment and the Electrical contractors. Coordinate location, position, orientation, or other requirements for connecting equipment with Electrical and other trades as may be needed.

### VOLTAGE COORDINATION STATEMENT

This statement is to confirm that the voltages of all equipment provided under this Trade Partner's Scope of Work have been coordinated with the Electrical Drawings and Specifications, as well as with the Electrical Contractor.

Trade Partner: \_\_\_\_\_ Project Manager Name: \_\_\_\_\_

Project Manager Signature: \_\_\_\_\_

Date:  /  /

Electrical Trade Partner: \_\_\_\_\_ Project Manager Name: \_\_\_\_\_

Project Manager Signature: \_\_\_\_\_

Date:  /  /

Connections:

Who Supplies Disconnects?

Who Wires Disconnects to Power Supply?

Who Wires Disconnects to Equipment?

Who Supplies Fire Alarm Devices? (e.g. - Smoke / Heat Detectors for Duct)

Who Wires Fire Alarm, Security Devices? (e.g. - Tamper Switches, Door Hardware)

Notice:

At the time of discovery of a discrepancy within the Project Documents as regards power requirements, the Trade Partner shall issue a Request for Information identifying the following: Specifications, Drawings, Submittals, or other Project Documents related to the discrepancy. Include specific information as to the nature of the discrepancy and a suggestion for resolving the issue.

(No Changes will be issued for cost or time impacts related to a failure to coordinate the appropriate power requirements for this Trade Partner's Scope of Work.)

## QUALITY

### COORDINATION OF TRADES

The Contractor shall give full cooperation to other trades and shall furnish all information necessary to permit the work of all trades to be installed satisfactorily and with the least possible interference or delay.

Coordinate with all preceding trades and follow-on trades related to this Trade Partner's Scope of Work. Confirm compliance of preceding and follow on work to the Work of this Trade Partner with regards to the following:

- Specifications (e.g. – Tolerances match or exceed follow-on trade tolerances.)
- Drawings
- Submittals
- Manufacturer's Applications
- Specified Trade Association / Institute Requirements (e.g. – ACI, AISC, etc.)

Preceding Trade Partner(s): \_\_\_\_\_ Project Manager Name: \_\_\_\_\_  
Project Manager Signature: \_\_\_\_\_  
Date:  /  /

**Trade Partner:** \_\_\_\_\_ Project Manager Name: \_\_\_\_\_  
Project Manager Signature: \_\_\_\_\_  
Date:  /  /

Follow-on Trade Partner(s): \_\_\_\_\_ Project Manager Name: \_\_\_\_\_  
Project Manager Signature: \_\_\_\_\_  
Date:  /  /

### NOTICE:

Notify Samet Corporation in writing at the time of discovery of a discrepancy affecting this Trade Partner's Scope of Work prior to the application of the Work of this Subcontract. Re-assess after corrections are made and execute this document.

(No Changes will be issued for cost or time impacts related to a failure to coordinate with and inspect the preceding or follow on work with this Trade Partner's Scope of Work.)

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## **SCHEDULE REQUIREMENTS**

### **I. Project Construction Schedule**

Samet Corporation's Master Project Construction Schedule which has been issued and is part of the Contract Documents illustrates the project schedule plan for this project. Each work activity required for the project is depicted on this schedule and will be updated on a monthly basis or as required by Samet until project completion. Additional work activities, when required, will be added to the project construction schedule as deemed warranted by Samet. Each subcontractor and/or supplier bidding and/or contracted to complete an aspect of this project shall comply with the durations and time frames established by this schedule. Additionally, all subcontractors and suppliers shall comply with project schedule updates and/or additional schedule requirements implemented by Samet during the course of the project to ensure the project is completed on schedule. *The Project Construction Schedule will be strictly enforced by Samet.*

Additionally, it is imperative that each Subcontractor or Supplier intending to bid this project thoroughly review the Project Construction Schedule in conjunction with the Contract Documents and prepare its bid proposal to meet the Project Construction Schedule. The successful Subcontractor(s) or Supplier shall be required to maintain the scheduled activity dates whether by the required forty (40) hour work week, or additional overtime labor and/or additional shifts. If in the opinion of Samet, the Subcontractor or Supplier falls behind schedule, the Subcontractor or Supplier shall be required to increase crew size, work overtime, shift work and/or weekends and provide supplemental equipment as necessary at no additional cost in order to recover the slippage of the schedule. Work hours shall be set by Samet and shall be adhered to by the Subcontractor or Supplier.

If inclement weather is encountered during the regular scheduled work week, weekends (Saturday or Sunday) shall be worked (full day) in order to make up lost time at no additional cost as directed by the Construction Manager.

At a minimum, the work week shall be Monday through Friday, working eight (8) hours per day (7:00 AM to 4:00 PM) with Saturdays or Sundays being a make-up day(s).

### **II. Short Interval Schedules**

"Short Interval Schedules" may also be utilized by Samet's Site Superintendent or Project Manager during the course of the project to compliment the Master Project Construction Schedule. "Short Interval Schedules" will be discussed, reviewed and agreed to during weekly subcontractor / supplier coordination meetings held on site.

Each Subcontractor shall submit a two (2) week Look Ahead Schedule in a format acceptable to the Construction Manager on or before each Monday Morning by 9:00 am for the total duration of the Subcontractors Work. The Construction Manager will review, approve or provide modifications to the proposed two (2) week Look Ahead Schedule as necessary to maintain the project construction schedule.

**PERFORMANCE BOND  
(Subcontract)**

**KNOW ALL MEN BY THESE PRESENTS**, That

(hereinafter called the "Principal"), as Principal and

a corporation organized and existing under the laws of the State of \_\_\_\_\_  
and firmly bound unto

(hereinafter called the "Surety"), as Surety, are held

(hereinafter called the "Obligee"), in the sum of

Dollars(\$ \_\_\_\_\_).

for the payment of which sum well and truly to be made, the said Principal and Surety bind themselves, and their respective heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents.

**WHEREAS**, the Obligee has been awarded a contract (hereinafter called the "Prime Contract"), by

for

and; **WHEREAS**, the Principal has entered into a written Subcontract with the Obligee, dated \_\_\_\_\_ to perform, as Subcontractor, certain portions of the work in connection with said Prime Contract, consisting of

which Subcontract is hereby referred to and made a part hereof.

**NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION IS SUCH** that, if the above bounden Principal shall well and truly perform all the undertakings, covenants, terms, conditions, and agreements of said Subcontract within the time provided therein and any extensions thereof that may be granted by the Obligee, and during the life of any guaranty required under said Subcontract, and shall also well and truly perform all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said Subcontract that may hereafter be made, and shall indemnify and save harmless said Obligee of and from any and all loss, damage, and expense, including costs and attorney's fees, which the said Obligee may sustain by reason of failure so to do, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The said Surety agrees that no change, extension of time, alteration, addition, omission, or other modification of the terms *of* either the said Subcontract or the said Prime Contract, or both, or in the said work to be performed, or in the specifications, or in the plans, shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such changes, extensions of time, alterations, additions, omissions, and other modifications.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Witness:

\_\_\_\_\_  
Or Secretary's Attest

Witness:

\_\_\_\_\_  
(Principal) (Seal)

\_\_\_\_\_  
(Business Address)

By: \_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Surety)

\_\_\_\_\_  
(Business Address)

By: \_\_\_\_\_



**PAYMENT BOND  
(Subcontract)**

**KNOW ALL MEN BY THESE PRESENTS,** That

(hereinafter called the "Principal"), as Principal and

a corporation organized and existing under the laws of the State of \_\_\_\_\_ (hereinafter called the "Surety"), as Surety, are held and firmly bound unto

(hereinafter called the "Obligee"), in the sum of

Dollars (\$ \_\_\_\_\_).

for the payment of which sum well and truly to be made, the said Principal and Surety bind themselves, and their respective heirs, administrators, executors, successors, and assigns, jointly and severally, firmly by these presents.

**WHEREAS,** the Obligee has been awarded a contract (hereinafter called the "Prime Contract"), by

for

and;

**WHEREAS,** the Principal has entered into a written Subcontract with the Obligee, dated \_\_\_\_\_ to perform, as Subcontractor, certain portions of the work in connection with said Prime Contract, consisting of

which Subcontract is hereby referred to and made a part hereof.

**NOW, THEREFORE, THE CONDITION OF THE OBLIGATION IS SUCH** that, if the Principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said Subcontract and any and all modifications of said Subcontract that may hereafter be made, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The said Surety agrees that no change, extension of time, alteration, addition, omission, or other modification of the terms of either the said Subcontract or the said Prime Contract, or both, or in the said work to be performed, or in the specification, or in the plans, shall in anywise affect its obligation on this Bond, and it does hereby waive notice of any such changes, extension of time, alterations, additions, omissions, and other modifications.

The said Principal and the said Surety agree that this Bond shall inure to the benefit of all persons supplying labor and material in the prosecution of the work provided for in said Subcontract, as well as to the Obligee, and that such persons may maintain independent actions upon this Bond in their own names.

IN WITNESS WHEREOF, the above bounden parties have executed this instrument under their several seals this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Witness:

\_\_\_\_\_  
(Principal) (Seal)

\_\_\_\_\_  
(Business Address)

\_\_\_\_\_  
Or Secretary's Attest

By:

\_\_\_\_\_  
(Signature and Title)

Witness:

\_\_\_\_\_  
(Surety)

\_\_\_\_\_  
(Business Address)

By:

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
Or Secretary's Attest

**QUICK PAY AGREEMENT  
(01600.3)**

For

Project Name: WTCC Fire and Rescue Training Facility

Samet Corporation agrees to provide quick pay to Minority or Women or Socially and Economically Disadvantaged Business Enterprise (MWBE) contractors in connection with the above-named project, to enable the MWBE to meet cash-flow demands. For the purpose of this Agreement, the term "Quick Pay" means a commitment to pay the MWBE within fifteen (15) days after confirmation that performance has been properly completed.

Name of Project  
City of Project  
Samet Project # XX-XXX



**JOINT CHECK AGREEMENT BETWEEN SUBCONTRACTOR AND SUB-SUBCONTRACTOR (01600.4)**

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and among:

Subcontractor:

Sub-Subcontractor:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

For the establishment of an open account with the Sub-Subcontractor for the purchase of certain materials to be sold by Sub-Subcontractor to Subcontractor and identified for delivery to the following project: \_\_\_\_\_

Subcontractor and Sub-Subcontractor hereby acknowledge, agree and authorize Samet Corporation to make disbursement of joint-payee checks drawn jointly payable to both the Subcontractor and Sub-Subcontractor. Said joint-payee checks shall be delivered by Samet to Subcontractor who further agrees to endorse same then transmit to Sub-Subcontractor for deposit and credit on the open account.

The Sub-Subcontractor agrees not to apply any portion of the checks issued pursuant to this Agreement to or for any account other than the subcontract and the project involved, shall apply all amounts for credit against materials actually furnished or services actually rendered in connection with the subcontract, and will not rebill any such amounts to Samet Corporation, the Subcontractor, or the owner.

All payments made by joint-payee check shall constitute a credit for or payment of sums due from Samet Corporation to Subcontractor on the designated project.

The obligations of Samet Corporation to the Subcontractor and the Sub-subcontractor, or either of them, under this Agreement, are expressly made subject to the terms of the contract between Samet Corporation and the Subcontractor and to all rights at law or in equity which Samet Corporation has with respect thereto including back charges for defective work, setoffs, or otherwise.

Samet Corporation assumes no obligation or liability to the Subcontractor or the Sub-Subcontractor pursuant to this Agreement. The Subcontractor and the Sub-Subcontractor shall release, indemnify, and hold Samet Corporation harmless from any and all liability, including reasonable attorneys' fees, to any party as a result of complying or failing to comply with the provisions hereof.

To the maximum extent allowed by law, execution of this Agreement shall constitute a waiver by Sub-Subcontractor of all claims, demands, or liens of any sort against the Project, the Owner of the Project, Samet Corporation, and \_\_\_\_\_ surety and bonds provided by any of the above for labor materials equipment or services provided by Sub-Subcontractor on the Project.

Receipt and negotiation of any referenced check shall constitute evidence of payment of outstanding invoices from Sub-Subcontractor to Subcontractor and will operate as a full release and discharge of all lien or other rights against Samet Corporation by Sub-Subcontractor and Subcontractor to the extent of such payments.

Nothing in this Agreement shall constitute a security interest, guaranty, additional assurance, or grant of any other or further rights against Samet Corporation to either Subcontractor or Sub-Subcontractor.

This Agreement cannot be altered or revoked without the written consent of Samet Corporation.

Unless this Agreement is sooner terminated by mutual agreement by the Subcontractor and Sub-Subcontractor, the Sub-Subcontractor, upon receipt of all amounts owed by Samet Corporation for materials and services furnished on account for the project, shall promptly give written notice to Samet Corporation of the termination of this Agreement.

Sub-Subcontractor:

Subcontractor:

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Name of Project  
City of Project  
Samet Project # XX-XXX



**JOINT CHECK AGREEMENT BETWEEN SUBCONTRACTOR AND SUPPLIER (01600.5)**

THIS AGREEMENT made this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, by and among:

Subcontractor:

Supplier:

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

For the establishment of an open account with the Supplier for the purchase of certain materials to be sold by Supplier to Subcontractor and identified for delivery to the following project: \_\_\_\_\_

Subcontractor and Supplier hereby acknowledge, agree and authorize Samet Corporation to make disbursement of joint-payee checks drawn jointly payable to both the Subcontractor and Supplier. Said joint-payee checks shall be delivered by Samet Corporation to Subcontractor who further agrees to endorse same and then transmit to Supplier for deposit and credit on the open account.

The Supplier agrees not to apply any portion of the checks issued pursuant to this Agreement to or for any account other than the subcontract and the project involved, shall apply all amounts for credit against materials actually furnished or services actually rendered in connection with the subcontract, and will not rebill any such amounts to Samet Corporation, the Subcontractor, or the owner.

All payments made by joint-payee check shall constitute a credit for or payment of sums due from Samet Corporation to Subcontractor on the designated project.

The obligations of Samet Corporation to the Subcontractor and the Supplier, or either of them, under this Agreement, are expressly made subject to the terms of the contract between Samet Corporation and the Subcontractor and to all rights at law or in equity which Samet has with respect thereto including back charges for defective work, setoffs, or otherwise.

Samet Corporation assumes no obligation or liability to the Subcontractor or the Supplier pursuant to this Agreement. The Subcontractor and the Supplier shall release, indemnify, and hold Samet Corporation harmless from any and all liability, including reasonable attorneys' fees, to any party as a result of complying or failing to comply with the provisions hereof.

To the maximum extent allowed by law, execution of this Agreement shall constitute a waiver by Supplier of all claims, demands, or liens of any sort against the Project, the Owner of the Project, Samet Corporation, and \_\_\_\_\_ surety and bonds provided by any of the above for labor materials equipment or services provided by Supplier on the Project.

Receipt and negotiation of any referenced check shall constitute evidence of payment of outstanding invoices from Supplier to Subcontractor and will operate as a full release and discharge of all lien or other rights against Samet Corporation by Supplier and Subcontractor to the extent of such payments.

Nothing in this Agreement shall constitute a security interest, guaranty, additional assurance, or grant of any other or further rights against Samet Corporation to either Subcontractor or Supplier.

This Agreement cannot be altered or revoked without the written consent of Samet Corporation.

Unless this Agreement is sooner terminated by mutual agreement by the Subcontractor and Supplier, the Supplier, upon receipt of all amounts owed by Samet Corporation for materials and services furnished on account for the project, shall promptly give written notice to Samet of the termination of this Agreement.

Supplier:

Subcontractor:

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_



Company: \_\_\_\_\_ Project: \_\_\_\_\_ Date: \_\_\_\_\_

Weather Conditions: AM \_\_\_\_\_ PM \_\_\_\_\_

Temperature: 7:00AM \_\_\_\_\_ Lunch \_\_\_\_\_ 4:00PM \_\_\_\_\_

### Manpower Summary

NOTE: Include all sub-tier personnel as well as direct employees

	Total # Employees	Total Manhours	Description
Superintendent			
Foreman			
Journeyman			
Apprentice			
Laborer			
Operator			

### Description of Work Activities (IN DETAIL):

---



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### Look Ahead Tasks (IN DETAIL):

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Safety:	Yes/No	Comments
Have all on-site sub personnel and sub-tiers have attended Samet Safety orientation?		
Were any employees injured today?		
Are there any unsafe conditions to report?		
Is the Daily Pre-Task Plan/Jobsite Checklist attached? (Required)		
<b>Environmental:</b>		
Are there any environmental issues to report?		
<b>Quality Assurance/Control:</b>		
Have all inspections/testing per project specifications been performed, documented, and submitted to Samet Corporation?		

### Materials Delivered (IN DETAIL):

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### Inspections Performed (IN DETAIL):

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The information contained herein this report is true and accurate to the best of my knowledge:

\_\_\_\_\_  
Name (Print)

\_\_\_\_\_  
Name (Signature)

\_\_\_\_\_  
Date



**GENERAL CONDITIONS OF THE CONTRACT**

**STANDARD FORM FOR CONSTRUCTION MANAGER-AT-RISK PROJECTS**

**NORTH CAROLINA**

**DEPARTMENT OF ADMINISTRATION**

**STATE CONSTRUCTION OFFICE**

**Form OC-15CM**

**This document is intended for use on State capital construction projects and shall not be used on any project that is not reviewed and approved by the State Construction Office. Extensive modification to the General Conditions by means of “Supplementary General Conditions” is strongly discouraged. State agencies and institutions may include special requirements in “Division 1 – General Requirements” of the specifications, where they do not conflict with the General Conditions.**

**Second Edition January 2013**

**Revision 1 – May 2024: Article 23.b**

## GENERAL CONDITIONS OF THE CONTRACT

The use or reproduction of this document or any part thereof is authorized for and limited to use on projects of the State of North Carolina, and is distributed by, through and at the discretion of the State Construction Office, Raleigh, North Carolina, for that distinct and sole purpose.

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## ARTICLE 1 - DEFINITIONS

- a. The **contract documents** consist of the Request for Proposal (RFP); Construction Manager's formal response to the RFP; General Conditions of the Contract; special conditions if applicable; Supplementary General Conditions; the drawing and specifications, including all bulletins, addenda or other modifications of the drawings and specifications incorporated into the documents prior to their execution; the contract; the performance bond; the payment bond; insurance certificates; the approval of the attorney general; and the certificate of the Office of State Budget and Management. All of these items together form the contract.
- b. The **Owner** is the State of North Carolina by and through the agency or institution named in the contract..
- c. The **designer** or **project designer** means the firm or firms of architects or engineers or both (and their consultants) which have undertaken to design the project pursuant to a contract with the Owner, (hereinafter, the "design contract").
- d. The **Construction Manager-at-Risk (CM)** accepts a relationship of trust and confidence between himself and the Owner and undertakes to act as the Owner's fiduciary in the handling and opening of bids in accordance with the provisions of North Carolina General Statute (N.C.G.S.) 143-128.1. The CM agrees to furnish his best skills and his best judgment to cooperate with the Owner and Designer for undertaking all necessary action contemplated under the contract documents to (a) establish during the design phase a Guaranteed Maximum Price (GMP) to construct the project and (b) ensure timely and quality completion of the project at a cost within the GMP. Construction Manager or CM as used in the contract documents means Construction Manager-at-Risk (CM at Risk).
- e. A **subcontractor**, as the term is used herein, shall be in the case of a principal trade contractor, a general, mechanical, electrical or plumbing contractor or in the case of a specialty contractor, a trade contractor who is not a principal trade contractor, who has entered into a direct contract with a CM, and includes one who furnishes materials worked to a special design in accordance with plans and specifications covered by the contract, but does not include one who only sells or furnishes materials not requiring work so described or detailed.
- f. **Written notice** shall be defined as notice in writing delivered in person to the contractor, or to a partner of the firm in the case of a partnership, or to a member of the contracting organization, or to an officer of the organization in the case of a corporation, or sent to the last known business address of the contracting organization by registered mail.
- g. **Work**, as used herein as a noun, is intended to include materials, labor, and workmanship of the appropriate contractor as supervised by the CM.
- h. The **project** is the total construction work to be performed under the contract documents.
- i. **Construction Management Fee** shall be an all inclusive lump sum management fee which will include all Construction Manager-at-Risk home office, project site and project related costs including all Construction Manager-at-Risk overhead costs and profit.
- j. **Change order**, as used herein, shall mean a written order to the CM subsequent to the signing of the contract authorizing a change in the GMP contract. The change order shall be signed by the CM, designer and the Owner, and approved by the State Construction Office, in that order (Article 19).

- k. **Field Order**, as used herein, shall mean a written approval for the CM to proceed with the work requested by Owner prior to issuance of a formal Change Order. The field order shall be signed by the CM, designer, Owner, and State Construction Office (SCO).
- l. **Field Change**, as used herein shall mean a written approval from the Owner for the CM to proceed with work requested by the Owner to be paid for from the CM Contingency or Owner's Project Reserve within the GMP.
- m. **Time of Completion**, as stated in the contract documents, is to be interpreted as consecutive calendar days measured from the date established in the written Notice to Proceed, or such other date as may be established herein (Article 23).
- n. **Liquidated damages**, as stated in the contract documents, is an amount reasonably estimated in advance to cover the consequential damages associated with the Owner's economic loss in not being able to use the Project for its intended purposes at the end of the contract's completion date as amended by change order, if any, by reason of failure of the CM to complete the work within the time specified. Liquidated damages does not include the Owner's extended contract administration costs (including but not limited to additional fees for architectural and engineering services, testing services, inspection services, commissioning services, etc.), such other damages directly resulting from delays caused solely by the CM, or consequential damages that the Owner identified in the bid documents that may be impacted by any delay caused solely by the CM (e.g., if a multi-phased project-subsequent phases, delays in start of other projects that are dependent on the completion of this Project, extension of leases and/or maintenance agreements for other facilities).
- o. **Surety**, as used herein, shall mean the bonding company or corporate body which is bound with and for the CM, and which engages to be responsible for the CM and his acceptable performance of the work.
- p. **Routine written communications between the Designer and the Construction Manager** are any communication other than a "request for information" provided in letter, memo, or transmittal format, sent by mail, courier, electronic mail, or facsimile. Such communications cannot be identified as "request for information".
- q. **Clarification or Request for information (RFI)** is a request from the CM seeking an interpretation or clarification by the Designer relative to the contract documents. The RFI, which shall be labeled (RFI), shall clearly and concisely set forth the issue or item requiring clarification or interpretation and why the response is needed. The RFI must set forth the CM's interpretation or understanding of the contract documents requirements in question, along with reasons for such an understanding.
- r. **Approval** means written or imprinted acknowledgement that materials, equipment or methods of construction are acceptable for use in the work.
- s. **Inspection** shall mean examination or observation of work completed or in progress to determine its compliance with contract documents.
- t. **"Equal to" or "approved equal"** shall mean materials, products, equipment, assemblies, or installation methods considered equal by the bidder in all characteristics (physical, functional, and aesthetic) to those specified in the contract documents. Acceptance of equal is subject to approval of the designer and owner.

- u. **“Substitution” or “substitute”** shall mean materials, products, equipment, assemblies, or installation methods deviating in at least one characteristic (physical, functional, or aesthetic) from those specified, but which in the opinion of the bidder would improve competition and/or enhance the finished installation. Acceptance of substitution is subject to the approval of the designer and owner.
- v. **Provide** shall mean furnish and install complete in place, new, clean, operational, and ready for use.
- w. **Indicated and shown** shall mean provide as detailed, or called for, and reasonably implied in the contract documents.
- x. **Special inspector** is one who inspects materials, installation, fabrication, erection or placement of components and connections requiring special expertise to ensure compliance with the approved construction documents and referenced standards.
- y. **Commissioning** is a quality assurance process that verifies and documents that building components and systems operate in accordance to the owner’s project requirements and the project design documents.
- z. **Designer Final Inspection** is the inspection performed by the design team to determine the completeness of the project in accordance with approved plans and specifications. This inspection occurs prior to SCO final inspection.
- aa. **SCO Final Inspection** is the inspection performed by the State Construction Office to determine the completeness of the project in accordance with NC Building Codes and approved plans and specifications.
- bb. **Beneficial Occupancy** is requested by the owner and is occupancy or partial occupancy of the building after all life safety items have been completed as determined by the State Construction Office. Life safety items include but not limited to fire alarm, sprinkler, egress and exit lighting, fire rated walls, egress paths and security.
- cc. **Final Acceptance** is the date in which the State Construction Office accepts the construction as totally complete. This includes the SCO Final Inspection and certification by the designer that all punch lists are completed.

## ARTICLE 2 - INTENT AND EXECUTION OF DOCUMENTS

- a. The drawings and specifications are complementary, one to the other. That which is shown on the drawings or called for in the specifications shall be as binding as if it were both called for and shown. The intent of the drawings and specifications is to establish the scope of all labor, materials, transportation, equipment, and any and all other things necessary to provide a complete job. In case of discrepancy or disagreement in the contract documents, the order of precedence shall be: Form of Contract, specifications, large-scale detail drawings, small-scale drawings.
- b. The wording of the specifications shall be interpreted in accordance with common usage of the language except that words having a commonly used technical or trade meaning shall be so interpreted in preference to other meanings.



- c. The CM shall execute each copy of the response to RFP, contract, performance bond and payment bond as follows:
  1. If the documents are executed by a sole Owner, that fact shall be evidenced by the word "Owner" appearing after the name of the person executing them.
  2. If the documents are executed by a partnership, that fact shall be evidenced by the word "Co-Partner" appearing after the name of the partner executing them.
  3. If the documents are executed on the part of a corporation, they shall be executed by either the president or the vice president and attested by the secretary or assistant secretary in either case, and the title of the office of such persons shall appear after their signatures. The seal of the corporation shall be impressed on each signature page of the documents.
  4. If the documents are made by a joint venture, they shall be executed by each member of the joint venture in the above form for sole Owner, partnership or corporation, whichever form is applicable to each particular member.
  5. All signatures shall be properly witnessed.
  6. If the construction manager's license is held by a person other than an Owner, partner or officer of a firm, then the licensee shall also sign and be a party to the contract. The title "Licensee" shall appear under his/her signature.
  7. The bonds shall be executed by an attorney-in-fact. There shall be attached to each copy of the bond a certified copy of power of attorney properly executed and dated.
  8. Each copy of the bonds shall be countersigned by an authorized individual agent of the bonding company licensed to do business in North Carolina. The title "Licensed Resident Agent" shall appear after the signature.
  9. The seal of the bonding company shall be impressed on each signature page of the bonds.
  10. The CM's signature on the performance bond and the payment bond shall correspond with that on the contract.

### **ARTICLE 3 - CLARIFICATIONS AND DETAIL DRAWINGS**

- a. In such cases where the nature of the work requires clarification by the designer, such clarification shall be furnished by the designer with reasonable promptness by means of written instructions or detail drawings, or both. Clarifications and drawings shall be consistent with the intent of contract documents, and shall become a part thereof.
- b. The CM and the Designer shall prepare, if deemed necessary, a schedule fixing dates upon which foreseeable clarifications will be required. The schedule will be subject to addition or change in accordance with progress of the work. The Designer shall furnish drawings or clarifications in accordance with that schedule. The CM shall not proceed with the work without such detail drawings and/or written clarifications.

### **ARTICLE 4 - COPIES OF DRAWINGS AND SPECIFICATIONS**

The Designer or owner shall furnish free of charge to the CM electronic copies of plans and specifications. If requested by the CM, up to 30 paper copies of plans and specifications will be

provide free of charge,, plus a clean set of black line prints on white paper of all appropriate drawings, upon which the CM shall clearly and legibly record all work-in-place that is at variance with the contract documents. Additional sets shall be furnished at cost, including mailing, to the CM at the request of the CM.

#### **ARTICLE 5 - SHOP DRAWINGS, SUBMITTALS, SAMPLES, DATA**

- a. Within fifteen (15) consecutive calendar days of the notice to proceed, a schedule for anticipated submission of all shop drawings, product data, samples, and similar submittals shall be prepared by the CM and provided to the designer. This schedule shall indicate the items, relevant specification sections, other related submittal data, and the date when these items will be furnished to the designer.
- b. The CM shall review, approve and submit to the Designer all Shop Drawings, Coordination Drawings, Product Data, Samples, Color Charts, and similar submittal data required or reasonably implied by the Contract Documents. Required Submittals shall bear the CM's stamp of approval, any exceptions to the Contract Documents shall be noted on the submittals, and copies of all submittals shall be of sufficient quantity for the Designer to retain up to three (3) copies of each submittal for his own use plus additional copies as may be required by the CM. Submittals shall be presented to the Designer in accordance with the schedule submitted in paragraph (a). so as to cause no delay in the activities of the Owner.
- c. The Designer shall review required submittals promptly, noting desired corrections if any, and retaining three (3) copies (1 for the Designer, 1 for the owner and 1 for SCO) for his use. The remaining copies of each submittal shall be returned to the CM not later than twenty (20) days from the date of receipt by the Designer, for the CM's use or for corrections and resubmittal as noted by the Designer. When resubmittals are required, the submittal procedure shall be the same as for the original submittals.
- d. Approval of shop drawings by the designer shall not be construed as relieving the CM from responsibility for compliance with the design or terms of the contract documents nor from responsibility of errors of any sort in the shop drawings, unless such error has been called to the attention of the designer in writing by the CM.

#### **ARTICLE 6 - WORKING DRAWINGS AND SPECIFICATIONS AT THE JOB SITE**

- a. The CM shall maintain, in readable condition at his job office, one complete set of working drawings and specifications for his work including all shop drawings. Such drawings and specifications shall be available for use by the Designer or his authorized representative, owner or State Construction Office.
- b. The CM shall maintain at the job office, a day-to-day record of work-in-place that is at variance with the contract documents. Such variations shall be fully noted on project drawings by the CM and submitted to the designer upon project completion and no later than thirty (30) days after acceptance of the project.
- c. The contractor shall maintain at the job office a record of all required tests that have been performed, clearly indicating the scope of work inspected and the date of approval or rejection.

## **ARTICLE 7 - OWNERSHIP OF DRAWINGS AND SPECIFICATIONS**

All drawings and specifications are instruments of service and remain the property of the Owner. The use of these instruments on work other than this contract without permission of the Owner is prohibited. All copies of drawings and specifications other than contract copies shall be returned to the Owner upon request after completion of the work.

## **ARTICLE 8 - MATERIALS, EQUIPMENT, EMPLOYEES**

- a. The CM shall, unless otherwise specified, supply & pay for all lighting, power, heat, sanitary facilities & water and shall require the Principal Trade and Specialty Contractors to, supply and pay for all labor, transportation, materials, tools, apparatus, scaffolding and incidentals necessary for the completion of his work, and to install, maintain and remove all equipment of the construction, other utensils or things, and be responsible for the safe, proper and lawful construction, maintenance and use of same. The CM shall construct in the best and most workmanlike manner, a complete job and everything incidental thereto, as shown on the plans, stated in the specifications, or reasonably implied there from, all in accordance with the contract documents.
- b. All materials shall be new and of quality specified, except where reclaimed material is authorized herein and approved for use. Workmanship shall at all times be of a grade accepted as the best practice of the particular trade involved, and as stipulated in written standards of recognized organizations or institutes of the respective trades except as exceeded or qualified by the specifications.
- c. Upon notice, the CM shall furnish evidence from the the Principal Trade and Specialty Contractors as to quality of materials.
- d. Products are generally specified by ASTM or other reference standard and/or by manufacturer's name and model number or trade name. When specified only by reference standard, the CM through the Principal Trade or Specialty Contractor may select any product meeting this standard, by any manufacturer. When several products or manufacturers are specified as being equally acceptable, the CM through the Principal Trade or Specialty Contractor has the option of using any product and manufacturer combination listed. However, the CM through the Principal Trade or Specialty Contractor shall be aware that the cited examples are used only to denote the quality standard of product desired and that they do not restrict bidders to a specific brand, make, manufacturer or specific name; that they are used only to set forth and convey to bidders the general style, type, character and quality of product desired; and that equivalent products will be acceptable. The CM shall be responsible for reviewing all substitution requests from Principal Trade or Specialty Contractors prior to submission to the Project Designer and Owner and shall track & monitor all such requests. Requests for substitution of materials, items, or equipment shall be submitted to the Project Designer for approval or disapproval; such approval or disapproval shall be made by the designer prior to the opening of bids. Alternate materials may be requested after award if it can clearly be demonstrated that it is an added benefit to the owner and the designer and the owner approves.
- e. The CM shall obtain written approval from the designer for the use of products, materials, equipment, assemblies or installation methods claimed as equal to those specified. Such approvals must be obtained as soon after contract awards as possible and before any materials are ordered.

- f. The Designer is the judge of equality for proposed substitution of products, materials or equipment.
- g. If at any time during the construction and completion of the work covered by these contract documents, the conduct of any workman of the various crafts be adjudged a nuisance to the Owner or Designer, or if any workman be considered detrimental to the work, the CM shall order such parties removed immediately from grounds.

## **ARTICLE 9 - ROYALTIES, LICENSES AND PATENTS**

It is the intention of the contract documents that the work covered herein will not constitute in any way infringement of any patent whatsoever unless the fact of such patent is clearly evidenced herein. The CM shall protect and save harmless the Owner against suit on account of alleged or actual infringement. The CM shall pay all royalties and/or license fees required on account of patented articles or processes, whether the patent rights are evidenced hereinafter.

## **ARTICLE 10 - PERMITS, INSPECTIONS, FEES, REGULATIONS**

- a. The CM shall give all notices and comply with all laws, ordinances, codes, rules and regulations bearing on the conduct of the work under this contract. If the CM observes that the drawings and specifications are at variance therewith, he shall promptly notify the Designer in writing. Any necessary changes required after contract award shall be made by change order in accordance with Article 19. If the CM performs any work or authorizes any work to be performed knowing it to be contrary to such laws, ordinances, codes, rules and regulations, and without such notice to the designer, he shall bear all cost arising there from. Additional requirements implemented after bidding will be subject to equitable negotiations.
- b. All work under this contract shall conform to the North Carolina State Building Code and other State, local and national codes as are applicable. The cost of all required inspections and permits shall be the responsibility of the CM unless otherwise specified.
- c. Projects constructed by the State of North Carolina or by any agency or institution of the State are not subject to inspection by any county or municipal authorities and are not subject to county or municipal building codes. The CM shall, however, cooperate with the county or municipal authorities by obtaining building permits. Permits shall be obtained at no cost.
- d. Projects involving local funding (Community Colleges) are also subject to county and municipal building codes and inspection by local authorities. The CM shall pay the cost of these permits and inspections unless otherwise specified.

## **ARTICLE 11 - PROTECTION OF WORK, PROPERTY AND THE PUBLIC**

- a. The CM shall be responsible for the entire site and the building or construction of the same and provide all the necessary protections, as required by the Owner or designer, and by laws or ordinances governing such conditions. The CM shall be responsible for any damage to the Owner's property or of that of others on the job, by them, their personnel, or their subcontractors, and shall make good such damages. The CM shall be responsible for and pay for any damages caused to the Owner. The CM shall have access to the project at all times.



- b. The CM shall be responsible to cover and protect all portions of the structure when the work is not in progress, provide and set all temporary roofs, covers for doorways, sash and windows, and all other materials necessary to protect all the work on the building. Any work damaged through the lack of proper protection or from any other cause, shall be repaired or replaced without extra cost to the Owner.
- c. No fires of any kind will be allowed inside or around the operations during the course of construction without special permission from the Designer.
- d. The CM shall ensure that all trees and shrubs designated to remain in the vicinity of the construction operations are protected in accordance with the requirements of the plans and specifications. All walks, roads, etc., shall be barricaded as directed by the designer to keep the public away from the construction. All trenches, excavations or other hazards in the vicinity of the work shall be well barricaded and properly lighted at night.
- e. The CM shall develop and implement a project safety plan that provides all necessary safety measures for the protection of all persons on the job, including the requirements of the A.G.C. *Accident Prevention Manual in Construction*, as amended, and shall fully comply with all state laws or regulations and North Carolina State Building Code requirements to prevent accident or injury to persons on or about the location of the work. The CM shall clearly mark or post signs warning of hazards existing, and shall barricade excavations, elevator shafts, stairwells and similar hazards. The CM shall insure that protection is provided against damage or injury resulting from falling materials and that all protective devices and signs be maintained throughout the progress of the work.
- f. The CM shall adhere to the rules, regulations and interpretations of the North Carolina Department of Labor relating to Occupational Safety and Health Standards for the Construction Industry (Title 29, Code of Federal Regulations, Part 1926, published in Volume 39, Number 122, Part II, June 24, 1974, *Federal Register*), and revisions thereto as adopted by N.C.G.S. 95-126 through 155.
- g. The CM shall designate a responsible person of his organization as safety officer/inspector to inspect the project site for unsafe health and safety hazards, to report these hazards to the contractor for correction, and whose duties also include accident prevention on the project, and to provide other safety and health measures on the project site as required by the terms and conditions of the contract. The name of the safety inspector shall be made known to the designer and owner at the time of the preconstruction conference and in all cases prior to any work starting on the project.
- h. In the event of an emergency affecting the safety of life, the protection of work, or the safety of adjoining properties, the CM is hereby authorized to act at his own discretion, without further authorization from anyone, to prevent such threatened injury or damage. Any compensation claimed by the CM on account of such action shall be determined as provided for under Article 19(b).
- i. Any and all costs associated with correcting damage caused to adjacent properties of the construction site or staging area shall be borne by the contractor. These costs shall include but not be limited to flooding, mud, sand, stone, debris, and discharging of waste products.

## **ARTICLE 12 - SEDIMENTATION POLLUTION CONTROL ACT OF 1973**

- a. Any land-disturbing activity performed by the CM or any Principal Trade or Specialty Contractor in connection with the project shall comply with all erosion control measures set

forth in the contract documents and any additional measures which may be required in order to ensure that the project is in full compliance with the Sedimentation Pollution Control Act of 1973, as implemented by Title 15, North Carolina Administrative Code, Chapter 4, Sedimentation Control, Subchapters 4A, 4B and 4C, as amended (15 N.C.A.C. 4A, 4B and 4C).

- b. Upon receipt of notice that a land-disturbing activity is in violation of said act, the CM shall be responsible for ensuring that all steps or actions necessary to bring the project in compliance with said act are promptly taken.
- c. The CM shall be responsible for defending any legal actions instituted pursuant to N.C.G.S. 113A-64 against any party or persons described in this article.
- d. To the fullest extent permitted by law, the CM shall indemnify and hold harmless the Owner, the designer and the agents, consultants and employees of the Owner and designer, from and against all claims, damages, civil penalties, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance of work or failure of performance of work, provided that any such claim, damage, civil penalty, loss or expense is attributable to a violation of the Sedimentation Pollution Control Act. Such obligation shall not be construed to negate, abridge or otherwise reduced any other right or obligation of indemnity which would otherwise exist as to any party or persons described in this article.

#### **ARTICLE 13 - INSPECTION OF THE WORK**

- a. It is a condition of this contract that the work shall be subject to inspection during normal working hours by the designer, designated official representatives of the Owner, State Construction Office and those persons required by state law to test special work for official approval. The CM shall therefore provide safe access to the work at all times for such inspections.
- b. All instructions to the CM will be made only by or through the designer or his designated project representative. Observations made by official representatives of the Owner shall be conveyed to the designer for review and coordination prior to issuance to the CM.
- c. The CM shall perform quality control inspections on the work of Principal Trade and Specialty Contractors to guard the Owner against defects and deficiencies in the work and shall coordinate this activity with the on-site duties of the Project Designer. The CM shall advise the Project Designer of any apparent variation and/or deviation from the intent of the Contract Documents and shall take the necessary action to correct such variations and deviations.
- d. All work shall be inspected by designer, special inspector and/or State Construction Office prior to being covered by the contractor. The CM shall give a minimum two weeks notice unless otherwise agreed to by all parties. If inspection fails, after the first re-inspection all costs associated with additional re-inspections shall be borne by the CM.
- e. Where special inspection or testing is required by virtue of any state laws, instructions of the designer, specifications or codes, the CM shall give adequate notice to the Project Designer of the time set for such inspection or test, if the inspection or test will be conducted by a party other than the Project Designer. Such special tests or inspections will be made in the presence of the Project Designer, or his authorized representative, and it shall be the CM's responsibility to serve ample notice of such tests.

- f. All laboratory tests shall be paid by the Owner unless provided otherwise in the contract documents except the CM shall pay for laboratory tests to establish design mix for concrete and for additional tests to prove compliance with contract documents where materials have tested deficient except when the testing laboratory did not follow the appropriate ASTM testing procedures.
- g. Should any work be covered up or concealed prior to inspection and approval by the Project Designer and/or (SCO) such work shall be uncovered or exposed for inspection, if so requested by the Project Designer or SCO in writing. Inspection of the work will be made promptly upon notice from the CM. All cost involved in uncovering, repairing, replacing, recovering and restoring to design condition, the work that has been covered or concealed will be paid by the CM.

#### **ARTICLE 14 - CONSTRUCTION SUPERVISION AND SCHEDULE**

- a. On-site representatives of the CM shall manage the work of the Principal Trade and Specialty Contractors and coordinate the work with the activities of the Owner and Project Designer to complete the project with the Owner's objectives of cost, time and quality. Throughout the progress of the work, the CM shall maintain a competent and adequate full-time staff approved by the Owner and Project Designer. It is understood that the designated and approved on-site representative of the CM will remain on the job and in responsible charge as long as those persons remain employed by the CM unless otherwise requested or agreed to by the Owner. The CM shall establish an on-site organization with appropriate lines of authority to act on behalf of the CM. Instructions, directions or notices given to the designated on-site authority shall be as binding as if given to the CM. However, directions, instructions, and notices shall be confirmed in writing.
- b. The CM shall examine and study the drawings and specifications and fully understand the project design, and shall provide constant and efficient supervision to the work. Should he discover any discrepancies of any sort in the drawings or specifications, he shall report them to the designer without delay. He will not be held responsible for discrepancies in the drawings and/or specifications, but shall be held responsible to report them should they become known to him.
- c. The CM shall call and preside over monthly job site progress conferences. All Principal Trade and Specialty Contractors shall be represented at these job progress conferences by both home office and project personnel. The CM shall require attendance from other subcontractors and material suppliers who can contribute toward maintaining required job progress. It shall be the principal purpose of these meetings, or conferences, to effect coordination, cooperation and assistance in every practical way toward the end of maintaining progress of the project on schedule and to complete the project within the specified contract time. The CM shall be prepared to assess progress of the work and to recommend remedial measures for correction of progress as may be appropriate. The CM with assistance from the Designer shall be the coordinator of the conferences and shall preside as chairman. The CM shall turn over a copy of his daily reports to the Designer and Owner at the job site progress conference. Owner will determine daily report format.
- d. The CM shall employ an engineer or a land surveyor licensed in the State of North Carolina to lay out the work and to establish a bench mark nearby in a location where same will not be disturbed and where direct instruments sights may be taken.

- e. Prior to bidding, it shall be the responsibility of the CM to prepare an electronic and paper copy of a preliminary critical path method (CPM) schedule and submit such schedule to the Project Designer for his review and comment in sufficient time to allow revisions prior to inserting said schedule into the Principal Trade and Specialty Contractors' bid packages. After contract award but prior to thirty (30) days from the date of the notice to proceed, the CM shall obtain from the Principal Trade and Specialty Contractors their respective work activities and integrate them into a project construction schedule in CPM form. The resulting CPM schedule shall show all salient features of the work required for construction of the project from start to finish within the time allotted by the contract. The time in days between the CM's early completion date and the contractual completion date is project float time and shall be used as such by the CM unless amended by change order. The CM shall submit to the Project Designer an electronic and paper copy of the final CPM schedule after contracts are executed but within fifteen (15) days prior to the written notice to proceed. The Project Designer after reviewing and commenting on the project CPM schedule shall submit it to the Owner for approval. No application for payment will be processed until the project CPM schedule is approved by the Owner. No monthly application for payment will be processed without the submission of an electronic and paper copy of the CPM schedule attached.
- f. The CPM schedule shall be a complete computer generated network analysis showing the complete sequence of construction activities, identifying the work of separate stages and other logically grouped activities, indicating early and late start and early and late finish dates, float duration and a complete logic. Monthly updates will show the estimated completion of each activity.
- g. The CM shall distribute to the principal trade and specialty contractors the approved project CPM schedule and shall display same at the job site.
- h. The CM shall maintain the project CPM schedule, making monthly adjustments, updates, corrections, etc., which are necessary to finish the project within the time allotted by the contract. In doing so, the CM shall keep the designer as well as all Principal Trade and Specialty Contractors fully informed as to all changes and updates to the schedule. The CM shall submit to the Project Designer a monthly report of the status of all work activities. The monthly status report shall show the actual work completed to date in comparison with the original amount of work scheduled. If the work is behind schedule, the CM must indicate in writing what measures are being taken to bring the work back on schedule and ensure that the contract completion date is not exceeded. If the work is greater than thirty (30) days behind schedule and no legitimate requests for time extensions are in process, then the CM shall prepare and submit to the Project Designer a recovery schedule for review and approval. Failure of the CM to abide by the directives in this paragraph will give the Owner cause to exercise the remedies set forth in Article 29 of the General Conditions and pursue any other legal remedies allowed it by law.

#### **ARTICLE 15 – {NOT USED}**

#### **ARTICLE 16 - PRINCIPAL TRADE AND SPECIALTY CONTRACTS AND CONTRACTORS**

- a. Principal Trade and Specialty Contractors shall be pre-qualified by the CM. The prequalification criteria shall be determined by the Owner and CM to address quality, performance, the time specified in the bids for performance of the contract, the cost of construction oversight, time for completion, capacity to perform, and any other factors deemed appropriate by the Owner and/or CM. Basic qualification information from Principal Trade and Specialty Contractors shall be requested on the standard State of North Carolina



Prequalification Form approved by the State Building Commission. Only pre-qualified contractors are allowed to bid to and contract with the CM on a project.

- b. All bids for Principal Trade and Specialty Contracts shall be publically advertised and shall be opened publically in a public venue, and once opened, shall be public records under N.C.G.S. 132. The CM shall award the contract to the lowest responsible, responsive bidder, taking into consideration quality, performance, the time specified in the bids for performance of the contract, the time for completion, compliance with N.C.G.S. 143-128.2, and other factors deemed appropriate by the Owner and advertised as part of the bid solicitation. When contracts are awarded pursuant to this section, the Owner shall provide for a dispute resolution procedure as provided by N.C.G.S. 143-128(f1). Once Principal Trade and Specialty Contractors are in place, the CM shall provide copies of the contracts to the Project Designer and also provide a list of equipment and material suppliers.
- c. A CM may perform a portion of the work only if (a) bidding produces no responsible, responsive bidder for that portion of the work, or (b) the lowest responsible, responsive bidder will not execute a contract for the bid portion of the work, or the Principal Trade or Specialty Contractor defaults and a prequalified replacement cannot be obtained in a timely manner, and (c) the Owner approves performance of the work by the CM.
- d. The Designer will furnish to any Principal Trade or Specialty Contractor, upon request, evidence regarding amounts of money paid to the CM on account of the work of the Principal Trade or Specialty Contractor.
- e. The CM is and remains fully responsible for his own acts or omissions as well as those of any Principal Trade or Specialty Contractor or of any employee of either. The CM agrees that no contractual relationship exists between the Principal Trade and Specialty Contractors and the Owner in regard to the contract, and that the Principal Trade and Specialty Contractors act on this work as an agent or employee of the CM.

## **ARTICLE 17 - CONSTRUCTION MANAGER AND SUBCONTRACTOR RELATIONSHIPS**

The CM agrees that the terms of these contract documents shall apply equally to each Principal Trade and Specialty Contractor as to the CM, and the CM agrees to take such action as may be necessary to bind each Principal Trade and Specialty Contractor to these terms. The CM further agrees to conform to the Code of Ethical Conduct as adopted by the Associated General Contractors of America, Inc., with respect to CM-subcontractor relationships, and that payments to Principal Trade and Specialty Contractors shall be made in accordance with the provisions of N.C.G.S. 143-134.1 titled "Interest on final payments due to prime contractors: payments to subcontractors".

- a. On all public construction contracts which are let by a board or governing body of the state government or any political subdivision thereof, except contracts let by the Department of Transportation pursuant to N.C. G.S. 136-28.1, the balance due the CM shall be paid in full within 45 days after respective prime contracts of the project have been accepted by the Owner, certified by the architect, engineer or designer to be completed in accordance with terms of the plans and specifications, or occupied by the Owner and used for the purpose for which the project was constructed, whichever occurs first. Provided, however, that whenever the architect or consulting engineer in charge of the project determines that delay in completion of the project in accordance with terms of the plans and specifications is the fault of the CM, the project may be occupied and used for the purposes for which it was constructed without payment of any interest on amounts withheld past the 45 day limit. Should final

payment to the CM beyond the date such contracts have been certified to be completed by the Project Designer, accepted by the Owner, or occupied by the Owner and used for the purposes for which the project was constructed, be delayed by more than 45 days, said CM shall be paid interest, beginning on the 46th day, at the rate of one percent (1%) per month or fraction thereof unless a lower rate is agreed upon on such unpaid balance as may be due. In addition to the above final payment provisions, periodic payments due the CM during construction shall be paid in accordance with the payment provisions of the contract documents or said CM shall be paid interest on any such unpaid amount at the rate stipulated above for delayed final payments. Such interest shall begin on the date the payment is due and continue until the date on which payment is made. Such due date may be established by the terms of the contract. Funds for payment of such interest on state-owned projects shall be obtained from the current budget of the owning department, institution or agency. Where a conditional acceptance of a contract exists, and where the Owner is retaining a reasonable sum pending correction of such conditions, interest on such reasonable sum shall not apply.

- b. Within seven days of receipt by the CM of each periodic or final payment, the CM shall pay the Principal Trade and Specialty Contractors based on work completed or service provided under their contract with the CM. Should any periodic or final payment to a Principal Trade or Specialty Contractor be delayed by more than seven days after receipt of periodic or final payment by the CM, the CM shall pay the Principal Trade or Specialty Contractor interest, beginning on the eighth day, at the rate of one percent (1%) per month or fraction thereof on such unpaid balance as may be due.
- c. The percentage of retainage on payments made by the CM to the Principal Trade and Specialty Contractors shall not exceed the percentage of retainage on payments made by the Owner to the CM. Any percentage of retainage on payments made by the CM to the Principal Trade or Specialty Contractors that exceeds the percentage of retainage on payments made by the Owner to the CM shall be subject to interest to be paid by the CM to the Principal Trade or Specialty Contractor at the rate of one percent (1%) per month or fraction thereof.
- d. Nothing in this section shall prevent the CM at the time of application and certification to the Owner from withholding application and certification to the Owner for payment to a Principal Trade or Specialty Contractor for unsatisfactory job progress; defective construction not remedied; disputed work; third-party claims filed or reasonable evidence that claim will be filed; failure of the Principal Trade or Specialty Contractor to make timely payments for labor, equipment and materials; damage to CM or another subcontractor; reasonable evidence that a Principal Trade or Specialty Contract cannot be completed for the unpaid balance of the subcontract sum; or a reasonable amount for retainage not to exceed the initial percentage retained by Owner.

## **ARTICLE 18 - DESIGNER'S STATUS**

- a. The Project Designer shall provide liaison and necessary inspection of the work to ensure compliance with plans and specifications. He is the agent of the Owner only for the purpose of constructing this work and to the extent stipulated in the contract documents. He has authority to stop work or to order work removed, or to order corrections of faulty work where such action may be necessary to assure successful completion of the work.
- b. The Project Designer is the impartial interpreter of the contract documents, and, as such, he shall exercise his powers under the contract to enforce faithful performance by both the Owner and the CM, taking sides with neither.

- c. Should the Project Designer cease to be employed on the work for any reason whatsoever, then the Owner shall employ a competent replacement who shall assume the status of the former Project Designer.
- d. The Project Designer will make periodic inspections of the project at intervals appropriate to the stage of construction. He will inspect the progress, the quality and the quantity of the work.
- e. The Project Designer and the Owner shall have access to the work whenever it is in preparation and progress during normal working hours. The CM shall provide facilities for such access so the Designer may perform his functions under the contract documents.
- f. Based on the Project Designer's inspections and evaluations of the project, the Project Designer shall issue interpretations, directives and decisions as may be necessary to assist the CM in the administration of the project. His decisions relating to artistic effect and technical matters shall be final, provided such decisions are within the limitations of the contract. The CM's decisions, however, relating to means and methods, and administration of the contracts the CM holds are final.

## ARTICLE 19 - CHANGES IN THE WORK

- a. The Owner may have changes made in the work covered by the contract. These changes will not invalidate and will not relieve or release the CM from any guarantee given by him pertinent to the contract provisions. These changes will not affect the validity of the guarantee bond and will not relieve the surety or sureties of said bond. All extra work shall be executed under conditions of the original contract.
- b. Except in an emergency endangering life or property, no change shall be made by the contractor except upon receipt of approved change order or written field order from the designer, countersigned by the owner and the state construction office authorizing such change. No claim for adjustments of the contract price shall be valid unless this procedure is followed.

A field order, transmitted by fax or hand-delivered, may be used where the change involved impacts the critical path of the work. A formal change order shall be issued as expeditiously as possible.

The CM may be requested to make a change to the work by the Project Designer and Owner where such work is to be funded by the CM Contingency or Project Reserve that is part of the GMP contract. Such a change must be documented in the same manner as a Change Order and must be authorized in writing by the Project Designer and Owner by a Field Change document.

In the event of emergency endangering life or property, the CM may be directed to proceed on a time and material basis whereupon the CM shall proceed and keep accurately on such form as may be required, a correct account of costs together with all proper invoices, payrolls and supporting data. Upon completion of the work the change order will be prepared as outlined under either Method "c(1)" or Method "c(2)" or both.

- c. In determining the values of changes, either additive or deductive, the CM and Principal Trade and Specialty Contractors are restricted to the use of the following methods:
  - 1. Where the extra work involved is covered by unit prices quoted in the proposal, the value of the change shall be computed by application of unit prices based on quantities,

estimated or actual as agreed of the items involved, except in such cases where a quantity exceeds the estimated quantity allowance in the contract by one hundred percent (100%) or more. In such cases, either party may elect to proceed under subparagraph c2 herein. If neither party elects to proceed under c2, then unit prices shall apply.

2. The contracting parties shall negotiate and agree upon the equitable value of the change prior to issuance of the change order, and the change order shall stipulate the corresponding lump sum adjustment to the contract price.
- d. Under Paragraph "b" and Methods "c(2)" above, the allowances for overhead and profit combined for a Principal Trade or Specialty Contractor and all multi-tier subcontractors shall not exceed fifteen percent (15%) of **net cost** of the work. No allowance for overhead and profit will be allowed for the CM until the change orders aggregate to a sum in excess of five percent (5%) of the Cost of the Work portion of the GMP. Once this threshold is met the CM may add an overhead & profit allowance not to exceed four percent (4%) of the net cost of the change order. Change orders to the GMP which authorize additional phases of a project without a change in scope of the originally intended project will not be considered in establishing the threshold for additional CM overhead & profit. Under Method "c (1)", no additional allowances shall be made for overhead and profit. In the case of deductible change orders, under Method "c(2)" and Paragraph (b) above, the contractor shall include no less than five percent (5%) profit, but no allowances for overhead.
- e. The term "net cost" as used herein shall mean the difference between all proper cost additions and deductions. The "cost" as used herein shall be limited to the following:
  1. The actual costs of materials and supplies incorporated or consumed as part of the project;
  2. The actual costs of labor expended on the project site;
  3. The actual costs of labor burden, limited to the costs of social security (FICA) and Medicare/Medicaid taxes; unemployment insurance costs; health/dental/vision insurance premiums; paid employee leave for holidays, vacation, sick leave, and/or petty leave, not to exceed a total of 30 days per year; retirement contributions; worker's compensation insurance premiums; and the costs of general liability insurance when premiums are computed based on payroll amounts; the total of which shall not exceed thirty percent (30%) of the actual costs of labor;
  4. The actual costs of rental for tools, excluding hand tools; equipment; machinery; and temporary facilities required for the project;
  5. The actual costs of premiums for bonds, insurance, permit fees and sales or use taxes related to the project.

Overtime and extra pay for holidays and weekends may be a cost item only to the extent approved by the Owner.

- f. Should concealed conditions be encountered in the performance of the work below grade, or should concealed or unknown conditions in an existing structure be at variance with the conditions indicated by the contract documents, the contract sum and time for completion may be equitably adjusted by change order upon claim by either party made within thirty (30) days after the condition has been identified. The cost of such change shall be arrived at by one of the foregoing methods.



All change orders shall be supported by a breakdown showing method of arriving at net cost as defined above.

- g. In all change orders, the procedure will be for the Project Designer to request proposals for the change order work in writing. The CM will require the Principal Trade and Specialty Contractors to provide such proposals and supporting data in suitable format and will review and approve such change orders prior to submission to the designer. The Project Designer shall verify correctness. Within fourteen (14) days after receipt of the CM's proposal, the Project Designer shall prepare the change order and forward to the CM for his signature or otherwise respond, in writing, to the CM's proposal. Within seven (7) days after receipt of the change order executed by the CM, the Project Designer shall, certify the change order by his signature, and forward the change order and all supporting data to the Owner for the Owner's signature. The Owner shall execute the change order and forward to the State Construction Office for final approval, within seven (7) days of receipt. The State Construction Office shall act on the change order within seven (7) days. Upon approval by the State Construction Office, one copy remains with the State Construction Office, and the remaining copies are sent to the Project Designer for distribution to the Owner(s), CM and the surety. In case of emergency or extenuating circumstances, approval of changes may be obtained verbally by telephone or field orders approved by all parties, then shall be substantiated in writing as outlined under normal procedure.
- h. At the time of signing a change order, the CM shall be required to certify as follows:

"I certify that my bonding company will be notified forthwith that my contract has been changed by the amount of this change order, and that a copy of the approved change order will be mailed upon receipt by me to my surety."
- i. A change order, when issued, shall be full compensation, or credit, for the work included, omitted or substituted. It shall show on its face the adjustment in time for completion of the project as a result of the change in the work.
- j. If, during the progress of the work, the Owner requests a change order and the CM's terms are unacceptable, the Owner, with the approval of the State Construction Office, may require the CM to perform such work on a time and material basis in accordance with paragraph "b" above. Without prejudice, nothing in this paragraph shall preclude the Owner from performing or to have performed that portion of the work requested in the change order.

## **ARTICLE 20 - CLAIMS FOR EXTRA COST**

- a. Should the CM consider that as a result of any instructions given in any form by the designer, he is entitled to extra cost above that stated in the contract, he shall give written notice thereof to the designer within seven (7) days without delay. The written notice shall clearly state that a claim for extra cost is being made and shall provide a detailed justification for the extra cost. The CM shall not proceed with the work affected until further advised, except in emergency involving the safety of life or property, which condition is covered in Article 19(b) and Article 11(h). No claims for extra compensation will be considered unless the claim is so made. The Designer shall render a written decision within seven (7) days of receipt of claim.
- b. The CM shall not act on instructions received by him from persons other than the Project Designer, and any claims for extra compensation or extension of time on account of such instruction will not be honored. The Project Designer will not be responsible for misunderstandings claimed by the CM of verbal instructions which have not been confirmed in writing, and in no case shall instructions be interpreted as permitting a departure from the

contract documents unless such instruction is confirmed in writing and supported by a properly authorized change order.

- c. Should a claim for extra compensation that complies with the requirements of (a) above by the CM be denied by the Project Designer or Owner, and cannot be resolved by a representative of the State Construction Office, the CM may request a mediation in connection with N.C.G.S. 143-128(f1) in the dispute resolution rules adopted by the State Building Commission (1 N.C.A.C. 30H .0101 through .1001). If the CM is unable to resolve its claims as a result of mediation, then the CM may pursue his claim in accordance with the provisions of N.C.G.S. 143-135.3, or G.S. 143-135.6 where Community Colleges are the owner, and the following:
  1. A CM who has not completed a contract with a state agency or institution for construction or repair work and who has not received the amount he claims is due under the contract may submit a verified written claim to the Director of the State Construction Office of the Department of Administration for the amount the CM claims is due. The Director may deny, allow or compromise the claim, in whole or in part. A claim under this subsection is not a contested case under N.C.G.S. Chapter 150B.
  2.
    - (a) A CM who has completed a contract with a State agency or institution for construction or repair work and who has not received the amount he claims is due under the contract may submit a verified written claim to the Director of the State Construction Office of the Department of Administration for the amount the CM claims is due. The claim shall be submitted within sixty (60) days after the CM receives a final statement of the board's disposition of his claim and shall state the factual basis for the claim.
    - (b) The Director shall investigate a submitted claim within ninety (90) days of receiving the claim, or within any longer time period upon which the Director and the CM agree. The CM may appear before the Director, either in person or through counsel, to present facts and arguments in support of his claim. The Director may allow, deny or compromise the claim, in whole or in part. The Director shall give the CM a written statement of the Director's decision on the CM's claim.
    - (c) A CM who is dissatisfied with the Director's decision on a claim submitted under this subsection may commence a contested case on the claim under Chapter 150B of the General Statutes. The contested case shall be commenced within sixty (60) days of receiving the Director's written statement of the decision.
    - (d) As to any portion of a claim that is denied by the Director, the CM may, in lieu of the procedures set forth in the preceding subsection of this section, within six (6) months of receipt of the Director's final decision, institute a civil action for the sum he claims to be entitled to under the contract by filing a verified complaint and the issuance of a summons in the Superior Court of Wake County or in the superior court of any county where the work under the contract was performed. The procedure shall be the same as in all civil actions except that all issues shall be tried by the judge, without a jury.

## **ARTICLE 21 - MINOR CHANGES IN THE WORK**

The Project Designer will have the authority to order minor changes in the work not involving an adjustment in the contract sum or time for completion, and not inconsistent with the intent of the contract documents. Such changes shall be effected by written order, copied to the State Construction Office, and shall be binding on the Owner and the CM.

## **ARTICLE 22 - UNCORRECTED FAULTY WORK**

Should the correction of faulty or damaged work be considered inadvisable or inexpedient by the Owner and the Project Designer, the Owner shall be reimbursed by the CM. A change order will be issued to reflect a reduction in the contract sum.

## **ARTICLE 23 - TIME OF COMPLETION, DELAYS, EXTENSION OF TIME**

- a. The final completion date will be as determined by the Owner, Designer and CM during the pre-construction phase of the project and will be incorporated into the contract for construction services between the Owner and the CM.
- b. The CM shall commence work to be performed under this agreement on a date to be specified in a written Notice to Proceed from the Project Designer and shall fully complete all work hereunder within the time of completion specified. For each day in excess of the above number of days, the CM shall pay the Owner the sum stated as liquidated damages reasonably estimated in advance to cover the losses to be incurred by the Owner by reason of failure of the CM to complete the work within the time specified, such time being in the essence of this contract and a material consideration thereof. Should the work be delayed by both the owner and contractor, liquidated damages shall be apportioned to reflect the delays of each party. In the case of concurrent delays, contractor caused delays shall be accounted for before owner and designer caused delays.
- c. If the CM is delayed at any time in the progress of his work by any act or negligence of the Owner or the Project Designer, or by any employee of either; by changes ordered in the work; by labor disputes at the project site; by abnormal weather conditions not reasonably anticipated for the locality where the work is performed; by unavoidable casualties; by any causes beyond the contractor's control; or by any other causes which the designer and Owner determine may justify the delay, then the contract time may be extended by change order for the time which the designer and Owner may determine is reasonable.

Time extensions will not be granted for rain, wind, snow or other natural phenomena of normal intensity for the locality where work is performed. For purpose of determining extent of delay attributable to unusual weather phenomena, a determination shall be made by comparing the weather for the contract period involved with the average of the preceding five (5) year climatic range during the same time interval based on the National Oceanic and Atmospheric Administration National Weather Service statistics for the locality where work is performed and on daily weather logs kept on the job site by the CM reflecting the effect of the weather on progress of the work and initialed by the designer's representative. No weather delays shall be considered after the building is dried in unless work claimed to be delayed is on the critical path of the baseline schedule or approved updated schedule. Time extensions for weather delays, acts of God, labor disputes, fire, delays in transportation, unavoidable casualties or other delays which are beyond the control of the Owner do not entitle the Contractor to compensable damages for delays. Any contractor claim for compensable damages for delays is limited to delays caused solely by the owner or its agents. Contractor caused delays shall be accounted for before owner or designer caused delays in the case of concurrent delays.

- d. Request for extension of time shall be made in writing to the designer, copies to the owner and SCO, within twenty (20) days following cause of delay. In case of continuing cause for delay, the CM shall notify the designer copies to the owner and SCO, of the delay within twenty (20) days of the beginning of the delay and only one claim is necessary.
- e. The CM shall notify his surety in writing of extension of time granted.
- f. No claim shall be allowed on account of failure of the Project Designer to furnish drawings or instructions until twenty (20) days after demand for such drawings and/or instructions. See Article 5c. Demand must be in written form clearly stating the potential for delay unless the drawings or instructions are provided. Any delay granted will begin after the twenty (20) day demand period is concluded.

## **ARTICLE 24 - PARTIAL UTILIZATION/BENEFICIAL OCCUPANCY**

- a. The Owner may desire to occupy or utilize all or a portion of the project when the work is substantially complete.
- b. Should the owner request a utilization of a building or portion thereof, the designer shall perform a designer final inspection of area after being notified by the contractor that the area is ready for such. After the contractor has completed designer final inspection punch list and the designer has verified, then the designer shall schedule a beneficial occupancy inspection at a time and date acceptable to the owner, contractor(s) and State Construction Office. If beneficial occupancy is granted by the State Construction Office, in such areas the following will be established:
  - 1. The beginning of guarantees and warranties period for the equipment necessary to support. in the area.
  - 2. The owner assumes all responsibilities for utility costs for entire building.
  - 3. Contractor will obtain consent of surety.
  - 4. Contractor will obtain endorsement from insurance company permitting beneficial occupancy.
- c. The Owner shall have the right to exclude the CM from any part of the project which the Project Designer has so certified to be substantially complete, but the Owner will allow the CM reasonable access to complete or correct work to bring it into compliance with the contract.
- d. Occupancy by the Owner under this article will in no way relieve the CM from his contractual requirement to complete the project within the specified time. The contractor will not be relieved of liquidated damages because of beneficial occupancy. The designer may prorate liquidated damages based on the percentage of project occupied.

## **ARTICLE 25 - FINAL INSPECTION, ACCEPTANCE, AND PROJECT CLOSEOUT**

- a. Upon notification from the CM that the project is complete and ready for inspection, the Project Designer shall make a designer final inspection to verify that the project is complete and ready for SCO final inspection. Prior to SCO final inspection, the CM shall ensure that all items requiring corrective measures noted at the designer final inspection are complete.



The Project Designer shall schedule an SCO final inspection at a time and date acceptable to the Owner, the CM and the State Construction Office.

- b. At the SCO final inspection, the designer and his consultants shall, if job conditions warrant, record a list of items that are found to be incomplete or not in accordance with the contract documents. At the conclusion of the SCO final inspection, the designer and State Construction Office representative shall make the following determinations:
  - 1. That the project is completed and accepted.
  - 2. That the project is accepted subject to the correction of the list of discrepancies (punch list). All punch list items must be completed within thirty (30) days of SCO final inspection or the Owner may invoke Article 28, Owner's Right to Do Work.
  - 3. That the project is not complete and another date for a final inspection will be established.
- c. Within fourteen (14) days of acceptance per Paragraph c1 or within fourteen (14) days after completion of punch list per Paragraph c2 above, the Project Designer shall certify the work and issue applicable certificate(s) of compliance.
- d. Any discrepancies listed or discovered after the date of SCO final inspection and acceptance under Paragraphs c1 or c2 above shall be handled in accordance with Article 42.
- e. The date of acceptance will establish the following:
  - 1. The beginning of guarantees and warranties period.
  - 2. The date on which the CM's insurance coverage for public liability, property damage and builder's risk may be terminated.
  - 3. That no liquidated damages (if applicable) shall be assessed after this date.
  - 4. The termination date of utility cost to the CM (if applicable).
- f. **Prior to issuance of final acceptance date, the contractor shall have his authorized representatives visit the project and give full instructions to the designated personnel regarding operating, maintenance, care, and adjustment of all equipment and special construction elements. In addition, the contractor shall provide to the owner a complete instructional video (media format acceptable to the owner) on the operation, maintenance, care and adjustment of all equipment and special construction elements.**

## **ARTICLE 26 - CORRECTION OF WORK BEFORE FINAL PAYMENT**

- a. Any work, materials, fabricated items or other parts of the work which have been condemned or declared not in accordance with the contract by the designer shall be promptly removed from the work site by the CM, and shall be immediately replaced by new work in accordance with the contract at no additional cost to the Owner. Work or property of the Owner, damaged or destroyed by virtue of such faulty work, shall be made good at the expense of the CM.
- b. Correction of condemned work described above shall commence within twenty-four (24) hours after receipt of notice from the Project Designer, and shall make satisfactory progress until completed.

- c. Should the CM fail to proceed with the required corrections, then the Owner may complete the work in accordance with the provisions of Article 28.

## **ARTICLE 27 - CORRECTION OF WORK AFTER FINAL PAYMENT**

See Article 35, Performance Bond and Payment Bond, and Article 42, Guarantee. Neither the final certificate, final payment, occupancy of the premises by the Owner, nor any provision of the contract, nor any other act or instrument of the Owner, nor the Project Designer, shall relieve the CM from responsibility for negligence, or faulty material or workmanship, or failure to comply with the drawings and specifications. The CM shall correct or make good any defects due thereto and repair any damage resulting therefrom, which may appear during the guarantee period following final acceptance of the work except as stated otherwise under Article 42, Guarantee. The Owner will report any defects as they may appear to the CM and establish a time limit for completion of corrections by the CM. The Owner will be the judge as to the responsibility for correction of defects.

## **ARTICLE 28 - OWNER'S RIGHT TO DO WORK**

If, during the progress of the work or during the period of guarantee, the CM fails to prosecute the work properly or to perform any provision of the contract, the Owner, after seven (7) days written notice sent by certified mail, return receipt requested, to the CM from the designer, may perform or have performed that portion of the work. The cost of the work may be deducted from any amounts due or to become due to the CM, such action and cost of same having been first approved by the Project Designer. Should the cost of such action of the Owner exceed the amount due or to become due the CM, then the CM or his surety, or both, shall be liable for and shall pay to the Owner the amount of said excess.

## **ARTICLE 29 - ANNULMENT OF CONTRACT**

If the CM fails to begin the work under the contract within the time specified or fails to establish a GMP or obtain bids from or enter into contracts with qualified Principal Trade or Specialty Contractors within the GMP, or the progress of the work is not maintained on schedule, or the work is not completed within the time above specified, or fails to perform the work with sufficient workmen and equipment or with sufficient materials to ensure the prompt completion of said work, or shall perform the work unsuitably or shall discontinue the prosecution of the work, or if the CM shall become insolvent or be declared bankrupt or commit any act of bankruptcy or insolvency, or allow any final judgment to stand against him unsatisfied for a period of forty-eight (48) hours, or shall make an assignment for the benefit of creditors, or for any other cause whatsoever shall not carry on the work in an acceptable manner, the Owner may give notice in writing, sent by certified mail, return receipt requested, to the CM and his surety of such delay, neglect or default, specifying the same, and if the CM within a period of seven(7) days after such notice shall not proceed in accordance therewith, then the Owner shall, declare this contract in default, and, thereupon, the surety shall promptly take over the work and complete the performance of this contract in the manner and within the time frame specified. In the event the surety shall fail to take over the work to be done under this contract within seven(7) days after being so notified and notify the Owner in writing, sent by certified mail, return receipt requested, that he is taking the same over and stating that he will diligently pursue and complete the same, the Owner shall have full power and authority, without violating the contract, to take the prosecution of the work out of the hands of said CM, to appropriate or use any or all contract materials and equipment on the grounds as may be suitable and acceptable and may enter into an agreement, either by public letting or negotiation, for the completion of said contract according to the terms and provisions thereof or use such other methods as in his opinion shall be required for the completion of said contract in an acceptable manner. All costs and charges incurred by the Owner, together with the costs of completing the

work under contract, shall be deducted from any monies due or which may become due said CM and surety. In case the expense so incurred by the Owner shall be less than the sum which would have been payable under the contract, if it had been completed by said CM, then the said CM and surety shall be entitled to receive the difference, but in case such expense shall exceed the sum which would have been payable under the contract, then the CM and the surety shall be liable and shall pay to the Owner the amount of said excess.

#### **ARTICLE 30 – CONSTRUCTION MANAGER’S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT**

- a. Should the work be stopped by order of a court having jurisdiction, or by order of any other public authority for a period of three months, due to cause beyond the fault or control of the CM, or if the Owner should fail or refuse to make payment on account of a certificate issued by the designer within forty-five (45) days after receipt of same, then the CM, after fifteen (15) days' written notice sent by certified mail, return receipt requested, to the Owner and the designer, may suspend operations on the work or terminate the contract.
- b. The Owner shall be liable to the CM for the cost of all materials delivered and work performed on this contract plus ten (10) percent overhead and profit and shall make such payment. The designer shall be the judge as to the correctness of such payment.

#### **ARTICLE 31 - REQUEST FOR PAYMENT**

- a. Not later than the fifth day of the month, the CM shall submit to the designer a request for payment for work done during the previous month. The request shall be in the form agreed upon between the CM and the designer, but shall show substantially the value of work done and materials delivered to the site during the period since the last payment, and shall sum up the financial status of the contract with the following information:
  1. Total of contract including change orders.
  2. Value of work completed to date.
  3. Less five percent (5%) retainage, provided however, that after fifty percent (50%) of the CM's work has been satisfactorily completed on schedule, with approval of the owner and the State Construction Office and written consent of the surety, further requirements for retainage will be waived only so long as work continues to be completed satisfactorily and on schedule.
  4. Less previous payments.
  5. Current amount due.
- b. Prior to submitting the first payment request, the CM shall prepare a schedule showing a breakdown of the contract price into values of the various parts of the GMP contract. The Cost of the Work breakdown will be arranged so as to facilitate payments to the Principal Trade and Specialty Contractors in accordance with Article 17. The combined CM Construction Management Fee, Bonds & Insurance, CM Contingency, and Project Reserve (if any) will be shown on the Schedule of values as separate lines. The values for the CM Contingency and Project Reserve (if any) will move to appropriate lines within the Cost of the Work as those funds are committed and expended. This schedule of values will be submitted to & approved by the designer and Owner within 30 days of the Notice to Proceed.

The schedule of values shall be prepared in such form and supported by such data to substantiate its accuracy as the designer and Owner may require.

- c. Applications for payment shall be in a form agreed upon by the CM, designer and Owner and shall be prepared and supported by such data to substantiate the accuracy of the request as the designer may require.
- d. Subject to other provisions of the contract documents, the amount of each progress payment shall be computed as follows:
  - 1. Take that portion of the GMP properly allocable to completed work as determined by multiplying the percentage completion of each portion Cost of the Work by the share of the GMP allocated to that portion of the work in the schedule of values.
  - 2. Add that portion of the GMP properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the work or if approved in advance by the Owner, suitably stored off site at a location agreed upon in writing.
  - 3. Subtract the aggregate of previous payments made by the Owner.
  - 4. Subtract the amount, in any, by which the CM has been previously overpaid, as evidenced by the Owner's review of the CM's documentation.
  - 5. Subtract amounts, if any, for which the Project Designer has withheld or nullified a certificate of payment.
  - 6. Subtract retainage as per paragraph (h) below.
  - 7. Add the amount due for the CM Construction Management Fee calculated on the basis the percentage completion of the project or on a schedule of payment negotiated with the Owner less fifteen percent (15%) and less previous payments for CM Construction Management Fee.
- e. Payment allocated to Principal Trade and Specialty Contractors shall be subject to five percent (5%) retainage, provided, however that after fifty percent (50%) of the Cost of the Work has been satisfactorily completed on schedule, with the approval of the Owner and the State Construction Office and with written consent of the surety, further requirements for retainage will be waived only so long as work continues to be completed satisfactorily and on schedule. The balance of the CM Construction Management Fee shall be held by the Owner until satisfactory completion and close out of the project. Satisfactory completion and close out of the project means that the Owner and Project Designer are satisfied that the project has been completed in accordance with the plans and specifications and within the GMP, all general conditions of the contract pertaining to close out have been satisfied, and all Principal Trade and Specialty Contractors have satisfactorily completed their respective contracts. No retainage will be held for the cost of Bonds and Insurance
- f. When payment is made on account of stored materials and equipment, such materials must be stored on the owner's property, and the requests for payments shall be accompanied by invoices or bills of sale or other evidence to establish the owner's title to such materials and equipment. Such payments will be made only for materials that have been customized or fabricated specifically for this project. Raw materials or commodity products including but not limited to piping, conduit, CMU, metal studs and gypsum board may not be submitted. Responsibility for such stored materials and equipment shall remain with the CM regardless



of ownership title. Such stored materials and equipment shall not be removed from the owner's property. Should the space for storage on-site be limited, the CM, at his option, shall be permitted to store such materials and/or equipment in a suitable space off-site. Should the CM desire to include any such materials or equipment in his application for payment, they must be stored in the name of the owner in an independent, licensed, bonded warehouse approved by the designer, owner and the State Construction Office and located as close to the site as possible. The warehouse selected must be approved by the CM's bonding and insurance companies; the material to be paid for shall be assigned to the owner and shall be inspected by the designer. Upon approval by the designer, owner and SCO of the storage facilities and materials and equipment, payment therefore will be certified. Responsibility for such stored materials and equipment shall remain with the CM. Such stored materials and equipment shall not be moved except for transportation to the project site. Under certain conditions, the designer may approve storage of materials at the point of manufacture, which conditions shall be approved by the designer, the owner and the State Construction Office prior to approval for the storage and shall include an agreement by the storing party which unconditionally gives the State absolute right to possession of the materials at anytime. Bond, security and insurance protection shall continue to be the responsibility of the CM.

- g. In the event of beneficial occupancy, retainage of funds due the CM may be reduced with the approval of the State Construction Office to an equitable amount to cover the list of items to be completed or corrected. Retainage may not be reduced to less than two and one-half (2 1/2) times the estimated value of the work to be completed or corrected. Reduction of retainage must be with the consent and approval of the CM's bonding company.

## **ARTICLE 32 - CERTIFICATES OF PAYMENT AND FINAL PAYMENT**

- a. Within five (5) days from receipt of request for payment from the CM, the designer shall issue and forward to the Owner a certificate for payment. This certificate shall indicate the amount requested or as approved by the designer. If the certificate is not approved by the designer, he shall state in writing to the CM and the Owner his reasons for withholding payment.
- b. No certificate issued or payment made shall constitute an acceptance of the work or any part thereof. The making and acceptance of final payment shall constitute a waiver of all claims by the Owner except:
  - 1. Claims arising from unsettled liens or claims against the CM.
  - 2. Faulty work or materials appearing after final payment.
  - 3. Failure of the contractor to perform the work in accordance with drawings and specifications, such failure appearing after payment.
  - 4. As conditioned in the performance bond and payment bond.
- c. The making and acceptance of final payment shall constitute a waiver of all claims by the CM except those claims previously made and remaining unsettled (Article 20(c)).
- d. Prior to submitting request for final payment to the designer for approval, the CM shall fully comply with all requirements specified in the "project closeout" section of the specifications. These requirements include but not limited to the following:
  - 1. Submittal of Product and Operating Manuals, Warranties and Bonds, Guarantees, Maintenance Agreements, As-Built Drawings, Certificates of Inspection or Approval

from agencies having jurisdiction. (The designer must approve the Manuals prior to delivery to the Owner).

2. Transfer of required attic stock material and all keys in an organized manner.
  3. Record of Owner's training.
  4. Resolution of any final inspection discrepancies.
  5. Granting access to Contractor's records, if Owner's internal auditors have made a request for such access pursuant to Article 52.
- e. The CM shall forward to the designer, the final application for payment along with the following documents:
1. List of minority business subcontractors and material suppliers showing breakdown of contracts amounts and total actual payments to subcontractors and material suppliers.
  2. Affidavit of Release of Liens.
  3. Affidavit from CM of payment to material suppliers and subcontractors. (See Article 36).
  4. Consent of Surety to Final Payment.
  5. Certificates of state agencies required by state law.
- f. The designer will not authorize final payment until the work under contract has been certified by Project Designer, certificates of compliance issued, and the CM has complied with the closeout requirements. The designer shall forward the CM's final application for payment to the Owner along with respective certificate(s) of compliance required by law.

### **ARTICLE 33 - PAYMENTS WITHHELD**

- a. The designer with the approval of the State Construction Office may withhold payment for the following reasons:
1. Faulty work not corrected.
  2. The unpaid balance on the contract is insufficient to complete the work in the judgment of the designer.
  3. To provide for sufficient contract balance to cover liquidated damages that will be assessed against the CM.
- b. The Secretary of the Department of Administration may authorize the withholding of payment for the following reasons:
1. Claims filed against the CM or evidence that a claim will be filed.
  2. Evidence that Principal Trade or Specialty Contractors have not been paid.

- c. The Owner may withhold all or a portion of CM's Project Management Fee costs set forth in the approved schedule of values, if CM has failed to comply with: (1) a request to access its records by Owner's internal auditors pursuant to Article 52; (2) a request for a plan of action and/or recovery schedule under Article 14.j or provide The Owner; (3) a request to provide an electronic copies of Contractor's baseline schedule, updates with all logic used to create the schedules in the original format of the scheduling software; and (4) Contractor's failure to have its Superintendent on the Project full-time.
- d. When grounds for withholding payments have been removed, payment will be released. Delay of payment due the CM without cause will make owner liable for payment of interest to the CM in accordance with G.S. 143-134.1. As provided in G.S.143-134.1(e) the owner shall not be liable for interest on payments withheld by the owner for unsatisfactory job progress, defective construction not remedied, disputed work, or third-party claims filed against the owner or reasonable evidence that a third-party claim will be filed.

## **ARTICLE 34 - MINIMUM INSURANCE REQUIREMENTS**

The work under this contract shall not commence until the CM has verified to the Owner that all required insurance and verifying certificates of insurance have been obtained and approved in writing by the Owner. These certificates shall contain a provision that coverage's afforded under the policies will not be cancelled, reduced in amount or coverage's eliminated until at least thirty (30) days after mailing written notice, by certified mail, return receipt requested, to the insured and the Owner of such alteration or cancellation.

### **a. Worker's Compensation and Employer's Liability**

The CM shall ensure that it and all Principal Trade and Specialty Contractors shall provide and maintain, during the life of the contract, workmen's compensation insurance, as required by law, as well as employer's liability coverage with minimum limits of \$100,000.

### **b. Public Liability and Property Damage**

The CM shall ensure that it and all Principal Trade and Specialty Contractors shall provide and maintain, during the life of the contract, comprehensive general liability insurance, including coverage for premises operations, independent contractors, completed operations, products and contractual exposures, as shall protect such contractors from claims arising out of any bodily injury, including accidental death, as well as from claims for property damages which may arise from operations under this contract, whether such operations be by the contractor or by any subcontractor, or by anyone directly or indirectly employed by either of them and the minimum limits of such insurance shall be as follows:

Bodily Injury:	\$500,000 per occurrence
Property Damage:	\$100,000 per occurrence / \$300,000 aggregate

In lieu of limits listed above, a \$500,000 combined single limit shall satisfy both conditions.

Such coverage for completed operations must be maintained for at least two (2) years following final acceptance of the work performed under the contract.

### **c. Property Insurance (Builder's Risk/Installation Floater)**

The CM shall ensure that it and all Principal Trade and Specialty Contractors shall purchase and maintain property insurance during the life of this contract, upon the entire work at the

site to the full insurable value thereof. This insurance shall include the interests of the Owner, the CM, and subcontractors in the work and shall insure against the perils of fire, extended coverage, and vandalism and malicious mischief. If the Owner is damaged by failure of the CM to purchase or maintain such insurance, then the CM shall bear all reasonable costs properly attributable thereto; the CM shall effect and maintain similar property insurance on portions of the work stored off the site when request for payment per articles so includes such portions.

**d. Deductible**

Any deductible, if applicable to loss covered by insurance provided, is to be borne by the CM and/or the Principal Trade or Specialty Contractor as applicable.

**e. Other Insurance**

The CM shall ensure that it and all Principal Trade and Specialty Contractors shall obtain such additional insurance as may be required by the Owner or by the General Statutes of North Carolina including motor vehicle insurance, in amounts not less than the statutory limits.

**f. Proof of Carriage**

The CM shall ensure that it and all Principal Trade and Specialty Contractors shall furnish the Owner with satisfactory proof of carriage of the insurance required before written approval is granted by the Owner.

## **ARTICLE 35 - PERFORMANCE BOND AND PAYMENT BOND**

- a. The CM shall furnish a performance bond and payment bond executed by a surety company authorized to do business in North Carolina. The bonds shall be in the full contract amount, which shall be in the amount of the GMP for the entire project. Bonds shall be executed in the form bound with the specifications
- b. All bonds shall be countersigned by an authorized agent of the bonding company who is licensed to do business in North Carolina.

## **ARTICLE 36 - CONTRACTOR'S AFFIDAVIT**

The final payment of retained amount due the CM on account of the contract shall not become due until the CM has furnished to the Owner through the designer an affidavit signed, sworn and notarized to the effect that all payments for materials, services or subcontracted work to Principal Trade and Specialty Contractors in connection with his contract have been satisfied, and that no claims or liens exist against the CM in connection with this contract. In the event that the CM cannot obtain similar affidavits from the Principal Trade and Specialty Contractors to protect the CM and the Owner from possible liens or claims against the subcontractor, the CM shall state in his affidavit that no claims or liens exist against any subcontractor to the best of his (the CM's) knowledge, and if any appear afterward, the CM shall save the Owner harmless.

## **ARTICLE 37 - ASSIGNMENTS**

The CM shall not assign any portion of this contract nor subcontract in its entirety. Except as may be required under terms of the performance bond or payment bond, no funds or sums of money due or become due the CM under the contract may be assigned.



## **ARTICLE 38 - USE OF PREMISES**

- a. The CM shall confine his apparatus, the storage of materials and the operations of his workmen to limits indicated by law, ordinances, permits or directions of the designer and shall not exceed those established limits in his operations.
- b. The CM shall not load or permit any part of the structure to be loaded with a weight that will endanger its safety.
- c. The CM shall enforce the designer's and owner's instructions regarding signs, advertisements, fires and smoking.
- d. No firearms, any type of alcoholic beverages or drugs (other than those prescribed by a physician) will be permitted at the job site.

## **ARTICLE 39 - CUTTING, PATCHING AND DIGGING**

- a. The CM shall ensure that all cutting, fitting or patching that may be required to make the work come together properly and fit it to receive or be received by work of other contractors shown upon or reasonably implied by the drawings and specifications for the completed structure, as the designer may direct.
- b. Any cost brought about by defective or ill-timed work shall be borne by the party responsible therefor.
- c. No Principal Trade or Specialty Contractor shall endanger any work of another such contractor by cutting, digging or other means, nor shall he cut or alter the work of any other such contractor without the consent of the designer and the affected contractor(s).

## **ARTICLE 40 - UTILITIES, STRUCTURES, SIGNS**

- a. The CM shall provide necessary and adequate facilities for water, electricity, gas, oil, sewer, and other utility services, which may be necessary and required for completion of the project. If the Owner specifies that the CM is to pay all utilities, any permanent meters installed shall be listed in the CM's name until his work is fully accepted by the Owner. As stipulated in the Supplementary General Conditions, the Owner may: (1) pay utilities cost directly, (2) require the CM to pay all utilities cost, (3) or reimburse the CM for the actual cost of utilities. The Owner or CM, as applicable, may recover actual costs of metered utilities from the responsible party should delays occur in project completion. Coordination of the work of the utility companies during construction is the sole responsibility of the CM.
- b. If applicable Meters shall be relisted in the Owner's name on the day following completion and acceptance of the CM's work, and the Owner shall pay for services used after that date.
- c. Prior to the operation of permanent systems, the CM will provide temporary power, lighting, water, and heat to maintain space temperature above freezing, as required for construction operations.
- d. The CM shall ensure that the permanent building systems are in sufficient readiness for furnishing temporary climatic control at the time a building is enclosed and secured. The HVAC systems shall maintain climatic control throughout the enclosed portion of the building sufficient to allow completion of the interior finishes of the building. A building shall be considered enclosed and secured when windows, doorways (exterior, mechanical, and

electrical equipment rooms), and hardware are installed; and other openings have protection, which will provide reasonable climatic control. The appropriate time to start the mechanical systems and climatic condition shall be jointly determined by the CM and the designer. Use of the equipment in this manner shall in no way affect the warranty requirements of the CM.

- e. The CM shall coordinate the work so that the building's permanent power wiring distribution system shall be in sufficient readiness to provide power as required by the HVAC contractor for temporary climatic control.
- f. The CM shall coordinate the work so that the building's permanent lighting system shall be ready at the time interior painting and finishing begins and shall provide adequate lighting in those areas where interior painting and finishing is being performed.
- g. The CM shall be responsible for his permanently fixed service facilities and systems in use during progress of the work. The following procedures shall be strictly adhered to:
  - 1. Prior to acceptance of work by the State Construction Office, the CM shall coordinate the removal and replacement of any parts of the permanent building systems damaged through use during construction.
  - 2. Temporary filters as recommended by the equipment manufacturer in order to keep the equipment and ductwork clean and free of dust and debris shall be installed in each of the heating and air conditioning units and at each return grille during construction. New filters shall be installed in each unit prior to the Owner's acceptance of the work.
  - 3. Extra effort shall be maintained to keep the building and the site adjacent to the building clean and under no circumstances shall air systems be operated if finishing and site work operations are creating dust in excess of what would be considered normal if the building were occupied.
  - 4. It shall be understood that any warranty on equipment presented to the Owner shall extend from the day of final acceptance by the Owner. The cost of warranting the equipment during operation in the finishing stages of construction shall be borne by the contractor whose system is utilized.
  - 5. The CM shall ensure that all lamps are in proper working condition at the time of final project acceptance.
- h. The CM shall provide, if required and where directed, a shed for toilet facilities and shall furnish and install in this shed all water closets required for a complete and adequate sanitary arrangement. These facilities will be available to other contractors on the job and shall be kept in a neat and sanitary condition at all times. Chemical toilets are acceptable.
- i. The CM shall, if required by the Supplementary General Conditions and where directed, erect a temporary field office, complete with lights, telephone, heat and air conditioning. A portion of this office shall be partitioned off, of sufficient size, for the use of a resident inspector, should the designer so direct.
- j. On multi-story construction projects, the CM shall either provide or ensure that temporary elevators, lifts, or other necessary special equipment is available for the general use of all contractors. The cost for such elevators, lifts or other special equipment and the operation thereof shall either be included in the CM Construction Management Fee or specified as part of the work of a Principal Trade or Specialty Contractor and paid for as a part of the Cost of the Work.

- k. The CM will erect one sign on the project if required. The sign shall be of sound construction, and shall be neatly lettered with black letters on white background. The sign shall bear the name of the project, and the CM's name, and the name of the designer and consultants. Directional signs may be erected on the Owner's property subject to approval of the Owner with respect to size, style and location of such directional signs. Such signs may bear the name of the contractor and a directional symbol. No other signs will be permitted except by permission of the Owner.

#### **ARTICLE 41 - CLEANING UP**

- a. The CM shall ensure that the building and surrounding area is reasonably free from rubbish at all times, and shall remove debris from the site on a timely basis or when directed to do so by the designer. The CM shall provide an on-site refuse container(s) for the use of all Principal Trade and Specialty Contractors. The CM shall ensure that each Principal Trade and Specialty Contractor removes their rubbish and debris from the building on a daily basis. The CM shall ensure that the building is broom cleaned as required to minimize dust and dirt accumulation.
- b. The CM shall provide and maintain suitable all-weather access to the building.
- c. Before final inspection and acceptance of the building, the CM shall ensure that all portions of the work are clean, including glass, hardware, fixtures, masonry, tile and marble (using no acid), clean and wax all floors as specified, and completely prepare the building for use by the Owner, with no cleaning required by the Owner.

#### **ARTICLE 42 - GUARANTEE**

- a. The CM shall unconditionally guarantee materials and workmanship against patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve (12) months following the date of final acceptance of the work or beneficial occupancy and shall replace such defective materials or workmanship without cost to the Owner.
- b. Where items of equipment or material carry a manufacturer's warranty for any period in excess of twelve (12) months, then the manufacturer's warranty shall apply for that particular piece of equipment or material. The CM shall replace such defective equipment or materials, without cost to the Owner, within the manufacturer's warranty period.
- c. Additionally, the Owner may bring an action for latent defects caused by the negligence of the CM, which is hidden or not readily apparent to the Owner at the time of beneficial occupancy or final acceptance, whichever occurred first, in accordance with applicable law.
- d. Guarantees for roof, equipment, materials, and supplies shall be stipulated in the specifications sections governing such roof, equipment, materials, or supplies.

#### **ARTICLE 43 - CODES AND STANDARDS**

Wherever reference is given to codes, standard specifications or other data published by regulating agencies including, but not limited to, national electrical codes, North Carolina State Building Codes, federal specifications, ASTM specifications, various institute specifications, etc., it shall be understood that such reference is to the latest edition including addenda published prior to the date of the contract documents.

## ARTICLE 44 - INDEMNIFICATION

To the fullest extent permitted by law, the CM shall indemnify and hold harmless the Owner, the designer and the agents, consultants and employees of the Owner and designer, from and against all claims, damages, losses and expenses, including, but not limited to, attorneys' fees, arising out of or resulting from the performance or failure of performance of the work, provided that any such claim, damage, loss or expense (1) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including the loss of use resulting therefrom, and (2) is caused in whole or in part by any negligent act or omission of the CM, the CM's subcontractor, or the agents of either the CM or the CM's subcontractor. Such obligation shall not be construed to negate, abridge or otherwise reduce any other right or obligation of indemnity which would otherwise exist as to any party or person described in this article.

## ARTICLE 45 - TAXES

- a. Federal excise taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3442(3)).
- b. Federal transportation taxes do not apply to materials entering into state work (Internal Revenue Code, Section 3475(b) as amended).
- c. North Carolina sales tax and use tax, as required by law, do apply to materials entering into state work and such costs shall be included in the bid proposal and contract sum.
- d. Local option sales and use taxes, as required by law, do apply to materials entering into state work as applicable and such costs shall be included in the bid proposal from Principal Trade and specialty Contractors and contract sum.
- e. Accounting Procedures for Refund of County Sales & Use Tax

Amount of county sales and use tax paid per CM's statements:

CM's performing contracts for state agencies shall ensure that the Principal Trade and Specialty Contractors provide information to allow the CM to give the state agency for whose project the materials, supplies, fixtures and/or equipment was purchased a signed statement containing the information listed in N.C.G.S. 105-164.14(e).

The Department of Revenue has agreed that in lieu of obtaining copies of sales receipts from contractors, an agency may obtain a certified statement from the contractors setting forth the date, the type of property and the cost of the property purchased from each vendor, the county in which the vendor made the sale and the amount of local sales and use taxes paid thereon. If the property was purchased out-of-state, the county in which the property was delivered should be listed. The contractor should also be notified that the certified statement may be subject to audit.

In the event the contractors make several purchases from the same vendor, such certified statement must indicate the invoice numbers, the inclusive dates of the invoices, the total amount of the invoices, the counties, and the county sales and use taxes paid thereon.

Name of taxing county: The position of a sale is the retailer's place of business located within a taxing county where the vendor becomes contractually obligated to make the sale. Therefore, it is important that the county tax be reported for the county of sale rather than the county of use.



When property is purchased from out-of-state vendors and the county tax is charged, the county should be identified where delivery is made when reporting the county tax.

Such statement must also include the cost of any tangible personal property withdrawn from the contractor's warehouse stock and the amount of county sales or use tax paid thereon by the CM.

Contractors are not to include any tax paid on supplies, tools and equipment which they use to perform their contracts and should include only those building materials, supplies, fixtures and equipment which actually become a part of or annexed to the building or structure.

#### **ARTICLE 46 - EQUAL OPPORTUNITY CLAUSE**

The non-discrimination clause contained in Section 202 (Federal) Executive Order 11246, as amended by Executive Order 11375, relative to equal employment opportunity for all persons without regard to race, color, religion, sex or national origin, and the implementing rules and regulations prescribed by the Secretary of Labor, are incorporated herein.

#### **ARTICLE 47 - EMPLOYMENT OF INDIVIDUALS WITH DISABILITIES**

The CM agrees not to discriminate against any employee or applicant for employment because of physical or mental handicap in regard to any position for which the employee or applicant is qualified. The CM agrees to take affirmative action to employ, advance in employment and otherwise treat qualified handicapped individuals without discrimination based upon their physical or mental handicap in all employment practices.

#### **ARTICLE 48 - ASBESTOS-CONTAINING MATERIALS (ACM)**

The State of North Carolina has attempted to address all asbestos-containing materials that are to be disturbed in the project. However, there may be other asbestos-containing materials in the work areas that are not to be disturbed and do not create an exposure hazard. Construction Managers are reminded of the requirements of instructions under General Conditions of the Contract, titled Examination of Conditions. Statute 130A, Article 19, amended August 3, 1989, established the Asbestos Hazard Management Program that controls asbestos abatement in North Carolina. The latest edition of *Guideline Criteria for Asbestos Abatement* from the State Construction Office is to be incorporated in all asbestos abatement projects for the Capital Improvement Program.

#### **ARTICLE 49 - MINORITY BUSINESS PARTICIPATION**

N.C.G.S. 143-128.2 establishes a ten percent (10%) goal for participation by minority businesses in total value of work for each State building project and requires documentation of good faith efforts for meeting that goal. The document, *Guidelines for Recruitment and Selection of Minority Businesses for Participation in State Construction Contracts* including Affidavits and Appendix F are hereby incorporated into and made a part of this contract.

The CM shall identify and define contract packages (the value of which shall total to at least ten percent (10%) of the GMP) that remove barriers to participation commonly experienced by Historically Underutilized Businesses and Minority Business Enterprises as those terms are defined in North Carolina General Statute 143-128.2, hereinafter referred to as Reduced Barrier Packages (RBP). Such contract packages will be submitted to the Owner for review. As an example, RBP's may require no performance or payment bond, or may offer the participation of the CM as a guarantor or surety in the financing of material purchases by the Principal Trade and/or Specialty Contractors, provided that the CM may condition such financing participation upon the

issuance of joint checks or other similar arrangements to allow the CM to verify that timely payments are made to suppliers furnishing credit. The CM may propose other and/or additional provisions for reducing barriers to participation.

The Owner shall require the CM to submit a plan for compliance with N.C.G.S.143-128.2 by approval by the Owner prior to soliciting bids for the Principal Trade and Specialty Contracts. The CM and Principal Trade and Specialty Contractors shall make a good faith effort to recruit and select minority businesses for participation in contracts pursuant to N.C.G.S. 143-128.2.

## **ARTICLE 50 – CONTRACTOR EVALUATION**

The CM's overall work performance on the project shall be fairly evaluated in accordance with the State Building Commission policy and procedures, for determining qualifications to compete for future capital improvement projects for institutions and agencies of the State of North Carolina. In addition to final evaluation, interim evaluation may be prepared during the progress of project. The document, Construction Manager Evaluation Procedures, is hereby incorporated and made a part of this contract. The Owner may request the CM's comments to evaluate the designer.

## **ARTICLE 51 – GIFTS**

Pursuant to N.C. Gen. Stat. § 133-32, it is unlawful for any vendor or contractor ( i.e. architect, bidder, contractor, construction manager, design professional, engineer, subcontractor, supplier, vendor, etc.), to make gifts or to give favors to any State employee. This prohibition covers those vendors and contractors who: (1) have a contract with a governmental agency; or (2) have performed under such a contract within the past year; or (3) anticipate bidding on such a contract in the future. For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review G.S. Sec. 133-32.

During the construction of the Project, the Contractor is prohibited from making gifts to any of the Owner's employees, Owner's project representatives (architect, engineers, construction manager and their employees), employees of the State Construction Office and/or any other State employee that may have any involvement, influence, responsibilities, oversight, management and/or duties that pertain to and/or relate to the contract administration, financial administration and/or disposition of claims arising from and/or relating to the Contract and/or Project.

## **ARTICLE 52 – AUDITING-ACCESS TO PERSONS AND RECORDS**

In accordance with N.C. General Statute 147-64.7, the State Auditor shall have access to Contractor's officers, employees, agents and/or other persons in control of and/or responsible for the Contractor's records that relate to this Contracts for purposes of conducting audits under the referenced statute. The Owner's internal auditors shall also have the right to access and copy the Contractor's records relating to the Contract and Project during the term of the Contract and within two years following the completion of the Project/close-out of the Contract to verify accounts, accuracy, information, calculations and/or data affecting and/or relating to Contractor's requests for payment, requests for change orders, change orders, claims for extra work, requests for time extensions and related claims for delay/extended general conditions costs, claims for lost productivity, claims for loss efficiency, claims for idle equipment or labor, claims for price/cost

escalation, pass-through claims of subcontractors and/or suppliers, and/or any other type of claim for payment or damages from Owner and/or its project representatives.

## **ARTICLE 53 – NORTH CAROLINA FALSE CLAIMS ACT**

The North Carolina False Claims Act (“NCFCA”), N.C Gen. Stat. § 1-605 through 1-618, applies to this Contract. The Contractor should familiarize itself with the entire NCFCA and should seek the assistance of an attorney if it has any questions regarding the NCFCA and its applicability to any requests, demands and/or claims for payment its submits to the State through the contracting state agency, institution, university or community college.

The purpose of the NCFCA “is to deter persons from knowingly causing or assisting in causing the State to pay claims that are false or fraudulent and to provide remedies in the form of treble damages and civil penalties when money is obtained from the State by reason of a false or fraudulent claim.” (Section 1-605(b).) A contractor’s liability under the NCFCA may arise from, but is not limited to: requests for payment, invoices, billing, claims for extra work, requests for change orders, requests for time extensions, claims for delay damages/extended general conditions costs, claims for loss productivity, claims for loss efficiency, claims for idle equipment or labor, claims for price/cost escalation, pass-through claims of subcontractors and/or suppliers, documentation used to support any of the foregoing requests or claims, and/or any other request for payment from the State through the contracting state agency, institution, university or community college. The parts of the NCFCA that are most likely to be enforced with respect to this type of contract are as follows:

- A “claim” is “[a]ny request or demand, whether under a contract or otherwise, for money or property and whether or not the State has title to the money or property that (i) is presented to an officer, employee, or agent of the State or (ii) is made to a contractor ... if the money or property is to be spent or used on the State's behalf or to advance a State program or interest and if the State government: (a) provides or has provided any portion of the money or property that is requested or demanded; or (b) will reimburse such contractor ... for any portion of the money or property which is requested or demanded.” (Section 1-606(2).)
- "Knowing" and "knowingly." – Whenever a person, with respect to information, does any of the following: (a) Has actual knowledge of the information; (b) Acts in deliberate ignorance of the truth or falsity of the information; and/or (c) Acts in reckless disregard of the truth or falsity of the information. (Section 1-606(4).) Proof of specific intent to defraud is not required. (Section 1-606(4).)
- "Material" means having a natural tendency to influence, or be capable of influencing, the payment or receipt of money or property. (Section 1-606(4).)
- Liability. – “Any person who commits any of the following acts shall be liable to the State for three times the amount of damages that the State sustains because of the act of that person[:] ... (1) Knowingly presents or causes to be presented a false or fraudulent claim for payment or

approval. (2) Knowingly makes, uses, or causes to be made or used, a false record or statement material to a false or fraudulent claim. (3) Conspires to commit a violation of subdivision (1), (2) ...” (Section 1-607(a)(1), (2).)

- The NCFCA shall be interpreted and construed so as to be consistent with the federal False Claims Act, 31 U.S.C. § 3729, et seq., and any subsequent amendments to that act. (Section 1-616(c).)

Finally, the contracting state agency, institution, university or community college may refer any suspected violation of the NCFCA by the Contractor to the Attorney General’s Office for investigation. Under Section 1-608(a), the Attorney General is responsible for investigating any violation of NCFCA, and may bring a civil action against the Contractor under the NCFCA. The Attorney General’s investigation and any civil action relating thereto are independent and not subject to any dispute resolution provision set forth in this Contract. (See Section 1-608(a).)

#### **ARTICLE 54 – TERMINATION FOR CONVENIENCE**

- a. Owner may at any time and for any reason terminate CM’s services and work at Owner's convenience. Upon receipt of such notice, CM shall, unless the notice directs otherwise, immediately discontinue the work and placing of orders for materials, facilities and supplies in connection with the performance of this Agreement.
- b. Upon such termination, CM shall be entitled to payment only as follows: (1) the actual cost of the work completed in conformity with this Agreement; plus, (2) such other costs actually incurred by CM as are permitted by the prime contract and approved by Owner; (3) plus ten percent (10%) of the cost of the work referred to in subparagraph (1) above for overhead and profit. There shall be deducted from such sums as provided in this subparagraph the amount of any payments made to CM prior to the date of the termination of this Agreement. CM shall not be entitled to any claim or claim of lien against Owner for any additional compensation or damages in the event of such termination and payment.



## **TRADE PACKAGE SCOPE OF WORK**

### **04A MASONRY SUBCONTRACT**

Furnish all labor, materials, tools, taxes, safety, insurances, equipment, hoisting, cranes, supervision, and all other incidentals necessary to accomplish all **Masonry** Work in accordance with all Contract Documents and as defined within **Trade Package General Scope Requirements** and this Scope of Work.

**Subcontractors/Suppliers performing work on multiple portions of the project site (i.e., buildings, parking area, site, etc.) shall provide separate equipment, hoisting, cranes, supervision including, but not limited to management, superintendent, foreman, tradesman, laborers, etc. for each portion unless agreed to otherwise in writing by the General Contractor. If the project needs and schedule are not being met to the satisfaction of the General Contractor, written approval will be rescinded, and the original staffing requirements shall be provided by the Subcontractor.**

Project Specifications for the Masonry Scope of Work are listed below. This Subcontractor or Supplier shall carefully examine all specification sections and drawings within the Contract Documents and be responsible for all work described within this Scope of Work and as required on the project.

### **PROJECT SPECIFICATIONS**

This Subcontractor is responsible for all Division 1 - General Requirements as listed below prepared by the Architect, Design Consultants, and/or General Contractor or as designated elsewhere within the Technical Specifications or Drawings as applicable to this Trade Package Scope of Work.

<b>DIVISION 1 – GENERAL REQUIREMENTS</b>	
<b>GC Req.</b>	<b>General Requirements Manual</b>
<b>GC Req.</b>	<b>Trade Package Scope Manual</b>
<b>GC Req.</b>	<b>Trade Package General Scope Requirements</b>

### **Primary Responsibility**

**This Subcontractor is responsible for all Primary Specification Responsibilities listed below unless this Scope of Work specifically states otherwise.**

<b>PRIMARY TECHNICAL SPECIFICATION RESPONSIBILITIES (PROJECT MANUAL)</b>	
	<b>Specifications are included on the Drawings</b>
042000	Unit Masonry
042000.01	Unit Masonry Assemblies – Burn Building and Training Tower
079200	Joint Sealants

### **Secondary Responsibility**

**This Subcontractor is responsible for all Secondary Specification Responsibilities listed below to the extent applicable, or defined, within this Scope of Work.**

<b>SECONDARY TECHNICAL SPECIFICATION RESPONSIBILITIES</b>	
	<b>Specifications are included on the Drawings</b>
00 & 01	All division 00 and 01 specifications
033000	Cast-in-Place Concrete
051200	Structural Steel
055000	Metal Fabrications
055000.01	Metal Fabrications – Burn Building, Training Tower, and Drafting Pit
070001	Thermal Lining System – Burn Building
079200	Joint Sealants
081113	Hollow Metal Doors and Frames

### **Primary Responsibility**

**This Subcontractor is responsible for all Primary Specification Responsibilities listed below unless this Scope of Work specifically states otherwise.**

<b>PRIMARY TECHNICAL SPECIFICATION RESPONSIBILITIES (DRAWINGS)</b>		
<b>DRAWING NO.</b>	<b>DRAWING NAME</b>	<b>SPECIFIC ITEM</b>
BID DOCUMENTS	ALL DRAWINGS	<p>This Subcontractor shall furnish and install a complete turnkey of Work for <b>BP-04A-MASONRY</b>, per the Contract Documents to include, but not limited to: including all accessories and incidentals for a complete job with no exceptions.</p> <p>This Subcontractor shall coordinate with other trades as applicable to complete this Scope of Work including</p>
All	All	Subcontractor owns all drawings and notes as it relates to the Masonry scope. The items listed below are intended to add clarification. Notes or drawings not included below does not alleviate the subcontractor from ownership.
All	Notes, General Notes, Key Notes, and specifications	All concrete notes/specs and items as it relates to masonry and associated joint sealants and items to be coordinated with other trades.

The Masonry Subcontractor shall be responsible for complying with the requirements of each Scope of Work Description / Clarification Section listed below, **even if** those requirements are not shown within the Specification Sections listed above.

This Subcontractor shall be responsible for all Primary Specification Responsibilities identified above in their entirety. All costs associated with Primary Specification Responsibilities shall be included in this Subcontractor's Scope of Work and reflected in bid amount.

This Subcontractor shall be at least partially responsible for Secondary Specification Responsibilities identified above. The Secondary Specifications identify work scopes for which this Subcontractor is not wholly responsible but shall be applicable as it relates to the execution of Primary Specification Responsibilities. This may include a varying degree of responsibility from simple coordination to performing entire portions of work. The Secondary Specifications are not intended to be all inclusive and shall not limit the Subcontractor in any way with regards to installation of work identified in Primary Specification Responsibilities.

The Masonry Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work. If for some reason an item of scope is included inadvertently in this scope of work and another trade package scope of work, this Subcontractor shall be responsible for including the subject scope of work within its base bid proposal regardless.

#### **4.0 MASONRY SCOPE OF WORK DESCRIPTION**

- 4.0.1 This Subcontractor's scope of work is for a **"turnkey" Masonry Scope of Work**, generally including but not limited to the following items and as further described herein at all structures.
- A. Concrete Masonry Units (CMU)
  - B. Horizontal and vertical reinforcement
  - C. Grout and mortar fill inside brick and block
  - D. Scaffolding and Hoisting
  - E. Mortar and mixing
  - F. Seismic requirements
  - G. Sample panels and mockups
  - H. Bond Beams/concrete precast lintels
  - I. Integral and applied Water Repellant for Masonry Units and Mortar
  - J. Masonry Sealers
  - K. Masonry Cleaners
- 4.0.2 This Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work. If for some reason an item of scope is included inadvertently in this scope of work and another trade package

scope of work, this Subcontractor shall be responsible for including the subject scope of work within its base bid proposal.

- 4.0.3 Unit Masonry - This Work shall include a complete Unit Masonry System, including but not be limited to, shop drawings, scaffolds, material lifts, masonry units, special shapes as required, mortar, colored mortar (if specified), masonry sand, etc., concrete grout fill, horizontal joint reinforcement, adjustable brick wall ties and anchoring devices, control and expansion joints, block sealer, chases, recesses, pockets and openings in masonry to be used for installation by others, through wall flashing material, masonry damp proofing, where specified, associated adhesives, where specified, miscellaneous masonry accessories, tie beams, weeps, special masonry cuts, masonry cleaning at new work, protection of other work and repair, patching, rubbing and pointing of mortar joints and new masonry surfaces at all exposed surfaces to receive paint.
- 4.0.4 This Subcontractor includes shaping, cutting, and sawing of masonry units as required. Provide desired finish/striking of any shaping, cuts, and sawing.
- 4.0.5 Fire Brick – Scope to be provided by trade package 13A
- 4.0.6 Masonry subcontractor to coordinate its work with the Fire Brick Scope (BP-13A) as required by the project documents. This includes any notes and clarifications associated with tolerances, placement, sequencing, and installation of this BP-04A scope.
- 4.0.7 Reinforcement – This Subcontractor shall be responsible for all reinforcement and anchorage associated with, and required by, its Scopes of Work, including but not limited to reinforcing steel, tie spacing, seismic wall brick wall ties, joint reinforcement, wall reinforcement, rebar poisoners, anchors, reinforced hollow unit masonry/bond beams lintels per the Contract Documents.
- 4.0.8 Subcontractor to abide by rebar locations/positions as called out in the project documents.
- 4.0.9 Subcontractor shall coordinate all Items by others that are installed into masonry such as access doors, door frames, anchors, sleeves and inserts to be embedded into masonry, leveling plates, misc metals, metal shutters, steel doors, scuppers. etc..
- 4.0.10 Furnished by others, installed by BP-04A Masonry
  - .0.10.1 Hollow Metal Door Frames – Furnished by BP-08A – Mason owns a complete installation of all hollow metal door frames and grouting of frames where required.
  - .0.10.2 Structural Steel Leveling plates/bearing plates in masonry – Furnished by BP-05A – Mason owns installation of bearing plates and grouting installed in masonry. Welding by BP-05A
- 4.0.11 Precast Masonry – This Work shall include furnishing and installation of all Precast



Masonry, including but not limited to, precast concrete lintels, and ~~refractory concrete lintels~~. **Refractory concrete lintels to be provided by BP-13A.**

- 4.0.12 The Masonry Subcontractor shall be responsible for furnishing and installing all reinforcing steel dowels in existing footings and slabs. These dowels shall be of the size indicated by wall type and be embedded as required into existing footings and epoxy grouted in place or installed per plans and specifications. Follow manufacturer instructions for proper installation of epoxy. Reference plans for locations and installation of dowels.
- 4.0.13 The Masonry Subcontractor shall include patching around all piping, ductwork, conduits, and penetrations through masonry as required.
- 4.0.14 Weather Protection - The Masonry Subcontractor shall provide hot and cold-weather protection following Masonry Industry Standards. Further, this Subcontractor shall protect on-site materials from adverse weather conditions whether the materials are installed or otherwise. Material installed each day must be protected at the end of each day. Any material supplied and installed under this Scope of Work damaged by weather from a failure by this Subcontractor to protect their Work shall be replaced at no cost to the Construction Manager or Owner. This Subcontractor is responsible for the services of a professional engineer where required by specification or for means and methods related to this Subcontractor's scope of work.
- 4.0.15 This Subcontractor shall be responsible for all layout associated with this scope of work from a single N/S and E/W Control line for each building area.
- 4.0.16 This Subcontractor shall protect all floors, walls, adjacent surfaces during its work. It is understood this subcontractor shall be responsible for cleanup including removing all motor drips and splashes timely to not allow them to cure onto other unintended surfaces.
- 4.0.17 This Subcontractor includes the required tooling or finishing of joints.
- 4.0.18 Subcontractor shall furnish and install all compressible joint fillers, preformed control-joint gaskets, and bond breakers where required as per the contract documents.
- 4.0.19 Masonry Cleaning – This Work shall include providing Masonry Cleaning by washing and cleaning all items installed under this Scope of Work and adjacent dissimilar materials (i.e., aluminum glazed framing components, including windows, etc., hollow metal door/window frames, metal stairs, etc. before the finish trades, etc. starting their work), including but not be limited to, removal of dirt, stains, mortar splatter, droppings, etc. Cleaning materials used shall be compatible with the masonry materials and finishes so that the appearance, color, etc. of masonry work and the adjoining surfaces are not compromised. Areas shall be ready to receive finish paint, wall covering, sealer, etc. as

specified.

- 4.0.20 Masonry Subcontractor is responsible for providing all access required to complete this scope of work such as but not limited to scaffolding, staging, lifts, ect.
- 4.0.21 This Subcontractor includes maintaining a competent person appropriately trained for any scaffold system being used to be on-site during hours the scaffolding is in use and is responsible to maintain appropriate tagging of scaffold systems.
- 4.0.22 This Subcontractor shall provide temporary bracing and shoring of all walls as necessary and shall comply with all applicable Building Codes, OSHA regulations and ANSI standards.
- 4.0.23 Masonry subcontractor shall be responsible for all required fall protection as required per OSHA and Samet's Safety plan. Subcontractor shall be responsible for installation, maintenance, and removal of fall protection. Subcontractor to install all fall protection at exterior openings created by subcontractor such as shutters and doors. Toe kick, mid-rail, and top-rail. Subcontractor to perform any required patching of CMU and concrete required after removal.
- 4.0.24 This subcontractor shall be responsible for scheduling and coordinating deliveries, etc. with the Construction Manager and the Owner.
- 4.0.25 Warranty to begin at date of project final completion unless specified otherwise in the contract documents.
- 4.0.26 This Subcontractor as part of the base bid is required to review the contract documents for incomplete design, scope gaps, etc. Each subcontractor shall include in their base bid all items related to their scope of work that can be inferred from the contract documents. Change Orders will not be issued for these items.
- 4.0.27 This Subcontractor shall include all mobilizations as required to complete this scope of work. Subcontractor acknowledges and agrees to comply with the following requirements of the project schedule as part of this scope of work.
- 4.0.28 This Subcontractor is required to attend all weekly Subcontractor meetings. Failure to attend will result in a \$500 fine for each missed meeting.
- 4.0.29 All submittals, close-out documentation, etc. should be submitted via hard copies and electronic copies, as requested by the Construction Manager.
- 4.0.30 If contract documents and scopes of work conflict, the most stringent requirements shall apply and be provided by this Subcontractor.

- 4.0.31 This subcontractor is responsible for Quality Control of their work and or their subcontractor's work and includes providing a punch list toward the end of their scope prior to the Construction Manager punching out the work.
- 4.0.32 This project is based on a mandatory (5) days per week (Monday through Friday), with eight (8) hour days minimum work week. Additional shifts and weekends being used for make-up days for inclement weather and Holidays. Subcontractors are required and agree to provide adequate manpower and supervision acceptable to the Construction Manager to comply with the Project Schedule.
- 4.0.33 Coordinate testing requirements according to the statement of special inspections and project documents.

## **7.0 THERMAL AND MOISTURE PROTECTION SCOPE OF WORK DESCRIPTION**

- 7.0.1 Provide a full and complete expansion/sealant joint system at all locations required for completion of this scope. This work shall include all masonry-to-masonry joints, masonry-to-concrete joints and masonry-to-steel joints.

## **39.0 SCOPE OF WORK CLARIFICATIONS AND/OR OTHER REQUIREMENTS**

- 39.0.1 The intent of this section is to clarify the assignment of the Trade Work, and not to alter or change the specifications and design requirements.
- 39.0.2 All correspondence and/or communication must be directed through General Contractor. All construction directives must come through General Contractor. Do NOT contact the Owner, Owner Consultant, or Architect directly without the consent of General Contractor.
- 39.0.3 The scope items listed in this Exhibit are to be used only as a guide and in no way limits the Scope of Work to those items listed.
- 39.0.4 It is recognized and understood that this Subcontractor was selected for their expertise and knowledge of this specialized work, and it is expected that the subcontractor did and has included in their scope of work all items and quality control required to carry out the intent of the Contract Documents to completion.
- 39.0.5 This Subcontractor shall provide, but not limited to the following items which may or may not be clearly defined in the Contract Documents as being within the Scope of Work of this Subcontract Agreement: standards, certifications, testing, cleaning, inspecting, field quality control, close-out procedures, labels, field measurements and verifications, coordination with other trades, shop drawings and submittals, as-built drawings (PDF set), operating and maintenance instruction manuals, etc.

- 39.0.6 Each Subcontractor is responsible for inspecting the work that precedes its work and reporting any deficiencies which will affect its work to the Contractor prior to commencing with the new work. Once the new work has been installed over preceding work, the Contractor shall consider this action as the Subcontractor installing the new work as acceptance of all preceding work.
- 39.0.7 In cases where Division One Specifications contain conflicting information with Documents made a part of this Subcontract, the provisions, terms, conditions, etc. the more stringent shall take precedence.
- 39.0.8 Subcontractor shall be responsible for all freight, delivery, equipment, loading, unloading, rigging, and hoisting, as required to perform this Work. All costs associated with delivery of materials and equipment to perform the Scope of Work is included.
- 39.0.9 Extra Materials – This work shall include providing extra materials (attic stock) as specified.
- 39.0.10 Multiple mobilizations will be required for the completion of this Scope of Work. No additional compensation will be provided for multiple mobilization requirements. Samet will make every effort to limit the number of mobilizations. Roof installation will be based upon the construction schedule.
- 39.0.11 This Subcontractor shall NOT include the cost for their Payment and Performance Bonds in their bid amount, however if requested by the General Contractor, this Subcontractor shall provide a Performance and Payment Bond at Cost if awarded the Subcontract.
- 39.0.12 It is understood there may be utilities (new or existing), equipment, or other trades potentially in the way during operations performed by this Subcontractor. This Subcontractor agrees to coordinate as necessary to work around all obstacles to meet the requirements of the schedule.
- 39.0.13 The project site shall be open for subcontractor work from 7:00am-5:00pm, Monday-Friday, unless otherwise directed by the Construction Manager. The site will be open on Saturdays and Sundays for make-up days only on a pre-approved basis. No work, deliveries, pickups, or subcontractor presence shall be allowed outside of normal site hours without prior approval from the Construction Management Team. Note that the availability of Samet supervisory coverage may impact this approval process.
- 39.0.14 This Subcontractor will be responsible for all required cleanup of their excess materials and equipment on a daily basis. This Subcontractor is also responsible for protection of its work. All cost associated with this required cleanup and protection is to be included in their base proposal including but not limited to weather protection for all roofing work as needed to maintain the requirements of the Contract Documents.
- 39.0.15 While completing this Subcontractors Scope of Work, this Subcontractor is responsible for



daily cleanup of their materials. All trash and debris generated by this Subcontractor should be disposed of in the provided onsite dumpster.

- 39.0.16 This Subcontractor shall submit a site-specific safety plan before beginning work. A template will be provided by the Construction Manager at the pre-install meeting.
- 39.0.17 This Subcontractor shall submit SDS forms before beginning work.
- 39.0.18 This Subcontractor shall submit a QA/QC plan before beginning work. A template will be provided by the Construction Manager at the pre-install meeting.
- 39.0.19 All workers under this Subcontract shall attend a Samet Site Orientation meeting on their first day on this project BEFORE beginning work. New workers should report to Samet staff upon arrival to the site.
- 39.0.20 This Subcontractor shall complete all Samet required safety and job reports DAILY by 9am. Electronic and hard copies of all needed forms will be supplied to this Subcontractor at the Pre-Install meeting. Forms will include a Daily Report and a Pre-Task Plan at a minimum with other safety forms submitted as required by daily activities.
- 39.0.21 This Subcontractor shall reference scope clarification drawings included in the trade scope manual for specific directions on additions and deletions regarding this Scope of Work.
- 39.0.22 Labor and material prices are guaranteed through the duration of the project. Escalation costs are prohibited. The contract price shall not be increased for any coordination work related to conflict resolution, miscellaneous or incidental items required for the work to meet the intent of the Owner, architect's and engineer's design, the Contract Documents, plans, or specifications.
- 39.0.23 Maintenance of controlled access zones and fall protection as required by OSHA, for the safety of the Subcontractor's employees or others during the Work is included. This Subcontractor to provide any barricades, caution tape, spotters, and/or safety equipment necessary to protect the public, employees, and the property.
- 39.0.24 Subcontractor shall have a qualified foreman and/or superintendent onsite at all times during the performance of the Work and be capable of directing crews. This individual must be fluent in written and spoken English and be reasonably acceptable to the Contractor as a supervisor. The Subcontractor's onsite foreman and/or superintendent shall always be equipped with a cellular telephone during working hours and provide the Contractor with Emergency Contact Information for non-working hours.
- 39.0.25 Subcontractor shall be responsible to coordinate and work with each other to eliminate conflicts during the installation of the Work. No change orders will be accepted by the Contractor for relocation and/or replacement of the Work due to the Subcontractor's lack

of coordination in performing their respective scopes of work.

39.0.26 Manufactured items shall be installed in strict accordance with the manufacturer's printed directions, specifications and/or recommendations for installation of highest quality. All working parts shall be properly adjusted after installation and left in new working order.

39.0.27 Temporary electricity supplied by the Electrical Contractor will include minimal wattage single phase for small electric hand tools and basic construction temporary lighting only in accordance with OSHA guidelines. Any specific power requirements for welding, task lighting or other operations are to be provided by this Subcontractor.

39.0.28 If temporary "task" lighting is required to complete the Subcontractor's work, then the Trade Subcontractor requiring the temporary "task" lighting in order to complete its work shall provide its own temporary lighting at its own expense.

39.0.29 All stored materials must be protected from moisture, temperature, weather elements, theft, and vandalism, and stored at locations as not to interfere with the performance of other subcontractors. Any damages or theft resulting from the storing of materials are the responsibility of the Subcontractor. Re-handling of onsite materials that interfere with the work of other subcontractors shall be at no cost to the Contractor.

39.0.30 Each Subcontractor will remove all excess materials from the site at the time work has been completed. Failure to do so the General Contractor will give the Subcontractor a 24-hour notice at the end of this 24 hours the General Contractor will make arrangements to have the material removed. This work and the supervision of this work will be at the cost of this Subcontractor.

39.0.31 Subcontractor shall be responsible for cold and hot weather protection as required to perform the Work so not to delay the Project Construction Schedule.

39.0.32 Each Trade Subcontractor shall be responsible for notifying the City Inspectors and/or County Inspectors and/or State Inspectors when their services or inspections are required. Expedite notification to insure proper lead-time. The Trade Subcontractor shall notify the General Contractor in writing twenty-four (24) hours prior to any inspection.

39.0.33 This Subcontractor is responsible for all Contract Documents for this project. No allowance will be made for lack of knowledge of other subcontractor's work or existing conditions required in connection with HVAC, plumbing, electrical and other Subcontractors, including Owner furnished equipment.

39.0.34 Subcontractors entitlement to additional overhead and profit as a result of such changes, if any, shall not exceed a combined total of fifteen percent (15%) of the value of the Work to be self-performed.

**—OTHER SCHEDULE SUMMARY INFORMATION—**

The Substantial Completion date for the Masonry Subcontractor is as reflected within the Construction Schedule. Special attention should be directed to the Construction Schedule for project sequencing requirements which are a requirement of this Scope of Work. Reference Schedule Milestone Table extracted from the Project Schedule below for other specifics related to this Scope of Work.

<b>SCHEDULE MILESTONE TABLE</b>		
ACTIVITY NO.	ACTIVITY DESCRIPTION	COMPLETION DATE OR DURATION
BB1040	CMU Exterior Walls (Burn Building)	35 days
BB1080	CMU Interior Walls (Burn Building)	40 days
A8510	Exterior and Interior CMU Walls (training Tower)	45 days
PC1040	Final Approval – C of O	8/24/2026

**—ALLOWANCES—**

Allowances shall cover the cost of all materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses associated with stated allowance amounts shall be included in the Subcontract Amount but not in the allowances. Whenever costs are more than or less than an allowance amount, the Subcontract Amount shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual costs and the allowances.

<b>ALLOWANCES</b>		
ALLOWANCE NO.	ALLOWANCE DESCRIPTION	AMOUNT

**—UNIT PRICES—**

To the extent that some or all of the Subcontractor's Work is to be performed on a unit price basis, the Subcontract Amount shall be computed in accordance with the unit prices set forth below. Unit prices are deemed to include all costs related to Subcontractor's performance of the Work, including, but not limited to, costs of labor, supervision, services, materials, equipment, tools, scaffolds, hoisting, transportation, storage, insurance, and taxes, and all overhead and profit. Quantities shall be measured by means acceptable to Owner, General Contractor and Subcontractor, and if applicable, an independent testing firm hired by Owner.

<b>UNIT PRICES</b>			
UNIT NO.	UNIT PRICE DESCRIPTION	UNIT PRICE	UNIT MEASURE
L1	Laborer Rate		Hour
L2	Mason Rate		
L3	Foreman Rate		

—ALTERNATES—

Each alternate designated below has been separated into the following three categories:

- “Accepted” – Alternate was accepted by General Contractor and the dollar value for the alternate is included within the Subcontractor Amount.
- “Pending” – Alternate is pending award by General Contractor with the decision being deferred until the date defined within each applicable Alternate. This cost is NOT included in the Subcontractor Amount.
- “Declined” – Alternate was NOT accepted by General Contractor and the dollar value for the alternate is NOT included within the Subcontractor Amount. By declining the alternate, all requirements applicable thereof are deleted from the contract documents.

ALTERNATES			
ALTERNATE NO.	ALTERNATE DESCRIPTION	VALUE	STATUS
P1	Payment and Performance Bond		Pending

If requested, the cost of the Performance and Payment Bonds (amount as provided) will be reimbursed to the Subcontractor based on the following revised contract revision noted below:

Subcontractor shall provide Performance and Payment Bonds, if required, each with a penal amount equal to 100% of the Subcontract Amount, on forms acceptable to the General Contractor. The premium for these bonds shall be paid by Subcontractor and the cost thereof shall be invoiced separately to the General Contractor based on the Subcontractor providing an actual paid receipt from its surety agent. The value of the Performance and Payment bond in all cases shall not be more than the Subcontractor’s bid alternate amount submitted for these bonds. If the bond(s) value is more than the bid amount submitted for these bonds, the Subcontractor shall pay the difference to its surety agent at its cost.

**END OF SECTION**  
**TRADE PACKAGE SCOPE OF WORK:**  
**04A MASONRY SUBCONTRACT**



## **TRADE PACKAGE SCOPE OF WORK**

### **31A SITEWORK SUBCONTRACT**

Furnish all labor, materials, tools, taxes, safety, insurances, equipment, hoisting, cranes, supervision, and all other incidentals necessary to accomplish all **Sitework** Work in accordance with all Contract Documents and as defined within **Trade Package General Scope Requirements** and this Scope of Work.

**Subcontractors/Suppliers performing work on multiple portions of the project site (i.e., buildings, parking area, site, etc.) shall provide separate equipment, hoisting, cranes, supervision including, but not limited to management, superintendent, foreman, tradesman, laborers, etc. for each portion unless agreed to otherwise in writing by the General Contractor. If the project needs and schedule are not being met to the satisfaction of the General Contractor, written approval will be rescinded, and the original staffing requirements shall be provided by the Subcontractor.**

Project Specifications for the Sitework Scope of Work are listed below. This Subcontractor or Supplier shall carefully examine all specification sections and drawings within the Contract Documents and be responsible for all work described within this Scope of Work and as required on the project.

### **PROJECT SPECIFICATIONS**

This Subcontractor is responsible for all Division 1 - General Requirements as listed below prepared by the Architect, Design Consultants, and/or General Contractor or as designated elsewhere within the Technical Specifications or Drawings as applicable to this Trade Package Scope of Work.

<b>DIVISION 1 – GENERAL REQUIREMENTS</b>	
<b>GC Req.</b>	<b>General Requirements Manual</b>
<b>GC Req.</b>	<b>Trade Package Scope Manual</b>
<b>GC Req.</b>	<b>Trade Package General Scope Requirements</b>

### **Primary Responsibility**

**This Subcontractor is responsible for all Primary Specification Responsibilities listed below unless this Scope of Work specifically states otherwise.**

<b>PRIMARY TECHNICAL SPECIFICATION RESPONSIBILITIES (PROJECT MANUAL)</b>	
	<b>Specifications are included on the Drawings</b>
221113	Facility Water Distribution Piping
221116	Domestic Water Distribution Piping
221313	Facility Sanitary Sewers
311000	Site Clearing
312000	Earth Moving
321216	Asphalt Paving
321313	Concrete Paving



321723	Pavement Markings
330500	Common Work Results for Utilities
334100	Storm Utility Drainage Piping

#### **Secondary Responsibility**

**This Subcontractor is responsible for all Secondary Specification Responsibilities listed below to the extent applicable, or defined, within this Scope of Work.**

<b>SECONDARY TECHNICAL SPECIFICATION RESPONSIBILITIES</b>	
	<b>Specifications are included on the Drawings</b>
033000	Cast-in-Place Concrete
033000.01	Cast-in-place Concrete – Burn Building, Training Tower, and Drafting Pit
221316	Sanitary Waste and Vent Piping

#### **Primary Responsibility**

**This Subcontractor is responsible for all Primary Specification Responsibilities listed below unless this Scope of Work specifically states otherwise.**

<b>PRIMARY TECHNICAL SPECIFICATION RESPONSIBILITIES (DRAWINGS)</b>		
<b>DRAWING NO.</b>	<b>DRAWING NAME</b>	<b>SPECIFIC ITEM</b>
BID DOCUMENTS	ALL DRAWINGS	<p>This Subcontractor shall furnish and install a complete turnkey of Work for <b>BP-31A - Sitework</b>, per the Contract Documents to include, but not limited to: including all accessories and incidentals for a complete job with no exceptions.</p> <p>This Subcontractor shall coordinate with other trades as applicable to complete this Scope of Work including</p>

The Sitework Subcontractor shall be responsible for complying with the requirements of each Scope of Work Description / Clarification Section listed below, **even if** those requirements are not shown within the Specification Sections listed above.

This Subcontractor shall be responsible for all Primary Specification Responsibilities identified above in their entirety. All costs associated with Primary Specification Responsibilities shall be included in this Subcontractor's Scope of Work and reflected in bid amount.

This Subcontractor shall be at least partially responsible for Secondary Specification Responsibilities identified above. The Secondary Specifications identify work scopes for which this Subcontractor is not wholly responsible but shall be applicable as it relates to the execution of Primary Specification Responsibilities. This may include a varying degree of responsibility from simple coordination to performing entire portions of work. The Secondary Specifications are not intended to be all inclusive and shall not limit

the Subcontractor in any way with regards to installation of work identified in Primary Specification Responsibilities.

The Sitework Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work. If for some reason an item of scope is included inadvertently in this scope of work and another trade package scope of work, this Subcontractor shall be responsible for including the subject scope of work within its base bid proposal regardless.

### **31.0 EARTHWORK SCOPE OF WORK DESCRIPTION**

- 31.0.1 This Subcontractor shall furnish all labor, supervision, equipment, transportation, and material necessary to complete the **BP-05A-Sitework** package.
- 31.0.2 Permits - As Applicable. This Subcontractor includes all equipment transport permits, traffic control, city permits, etc., if necessary, to bring any rigging, materials, equipment etc. The Subcontractor is responsible to obtain permits, licenses, pay fees, charges and obtain all necessary approvals in a timely fashion in order to maintain the schedule and progress of the Work, and in accordance with all legal requirements. The Building Permit will be paid by the Owner at no cost to the Trade Subcontractor(s).
- 31.0.3 This Subcontractor understands and agrees that all work is to be performed in accordance with sequencing, inspections, and approvals required by the local, state, and federal jurisdiction.
- 31.0.4 This Subcontractor shall provide complete turnkey erosion control and maintenance as required per the contract documents. This includes but is not limited to sediment barriers, silt fencing, baffles, gravel, silt ditch, matting, construction entrances, diversion swales, check dams, inlet protection, stone, skimmers, skimmer traps, silt-sacks, sediment traps, temporary slope drains, energy dissipaters, orange construction fencing, rip-rap, piping, flex piping, diversion berms, temporary seeding/mulching of ponds and site, filter fabric, posts, liners, pond kits, anti-float blocks, grading, excavation, mucking, risers, sediment cleanout, plantings etc. for a complete erosion and sediment control package. This Subcontractor shall be responsible for coordinating all requirements for NCDEQ and USACE, including all reporting as specified within the contract documents. Erosion control work is phased and requires approval by NCDEQ prior to beginning next phase. This agreement includes the continued maintenance for the duration of the project and removal of all devices upon acceptance by NCDEQ, Samet, design team and all governing authorities. This Subcontractor shall not be responsible for damages to the erosion control measures damaged by others.
- 31.0.5 This subcontract includes temporary storm drainage systems, as well as temporary drainage piping, drainage swales, etc. not shown on the drawings, but is required to facilitate a naturally draining site condition.
- 31.0.6 This Subcontractor shall complete construction and maintenance of work per sequence

outlined in contract documents. Any stop work-order issued due to improper erosion control measure due to fault of this Subcontractor will be the sole responsibility of this Subcontractor, including any fees for violations and recovery of lost time. Failures due to the design of the erosion control measures are not the responsibility of this Subcontractor. This Subcontractor shall endeavor to identify any concerns and/or potential failures to Samet, upon immediate recognition of concern.

- 31.0.7 This Subcontractor shall confirm the entire site is stabilized with respect to controlling erosion which includes the establishment of a satisfactory vegetative cover (i.e. grassing, etc.) at all disturbed site locations. All required erosion control measures shall be validated with a copy of the erosion control inspection by state authority prior to commencing with on site clearing, stripping, grading operations and maintain all erosion control measures throughout every phase of the project from the day the project is started to the day the project reaches final completion.
- 31.0.8 This subcontractors owns all site protections identified in project documents such as tree protection.
- 31.0.9 This Subcontractor shall be responsible for ensuring the driveways and roadways are kept free of mud and debris during the course of completing work required by this subcontract. Should mud, dirt, or debris be generated and deposited onto the adjacent roadways, this Subcontractor shall be responsible for removing the mud, dirt, or debris from the applicable roadway at its expense and to the satisfaction of the governing authorities and Samet Corporation. A water truck and/or water connection along with a pressure washer will be provided on site by this Subcontractor as needed to prevent mud or debris from making it into the roadway from all trades.
- 31.0.10 This Subcontractor shall provide its own traffic control including flagmen, signage, barricades, cones, barrels, etc. as required by all governing authorities when its work is being performed within a road right-of-way as part of this agreement. All ROW/road work is to be coordinated through the Construction Manager and NCDOT or Wendell for prior approval. This includes temporary signage for pedestrian and traffic control and detours.
- 31.0.11 This subcontractor shall provide (2) locations for temp water connections on site for use by the other trades. (1) on the west end of the site and another on the East end of the site. Locations of these water connections will be within 25' of a water source/main.
- 31.0.12 Furnish and install of (2) 30' telephone pole for mounting of site security cameras.
- 31.0.13 This subcontractor shall provide a temp access road and temp parking lot as shown on the project logistics plan. Installation, maintenance, and removal shall be included in this subcontractors base bid.
- 31.0.14 This subcontractor shall include an allowance in their base bid for the placement and



removal of 1000tn of stone above and beyond the previously listed temp access road and temp parking lot. Stone will be used for other temp roadways, parking, and pathways. To be used at CM's decision. Unused funds will be returned to the CM.

- 31.0.15 This Subcontractor shall verify existing contours are in conformance with the information reflected on the contract documents. Samet Corporation shall be notified in writing of the Subcontractor's acceptance or rejection of the existing topographical information prior to commencement of any mass grading operations. Failure to check the existing contours, etc. once the sitework mass grading operations begin, this Subcontractor shall forfeit the right to make any claim for existing conditions which may differ from those illustrated on the contract drawings. This agreement includes providing certified subgrade elevations prior to building construction and/or site construction.
- 31.0.16 This Subcontractor is responsible for turn-key surveying package including but not limited to all surveying, layout, grade staking, field engineering, etc. for this scope of work is included in this agreement. This Subcontractor shall be responsible for protection of staking and restoring the same if any stakes are damaged, removed, etc. at no additional cost to Contractor. This agreement includes providing certified as-builts for all surveying work completed by this subcontract.
- 31.0.17 This Subcontractor shall be responsible for all clearing and demolition work as required per the contract documents, including but not limited to clearing and grubbing of site. This Subcontractor is responsible for all clean-up and leaving area free of hazards. All debris shall be removed and disposed of properly off-site. No on-site burning will be allowed.
- 31.0.18 Earthwork – All earthwork and site grading work as required will be per the contract documents, including but not limited to all cutting and filling, rough grading, surface roughening, dust control measures, along with all water pumping and dewatering work as required for this scope of work to maintain the project schedule and complete this scope of work. This includes backfilling and grading where subgrade has been disturbed by this Trade. No changes to building or road elevations will be accepted to balance the site.
- 31.0.19 In all areas receiving fill materials, the soil shall be proof-rolled and approved by the Independent Testing Laboratory (ITL) prior to the placement of any fill material. All fill material is to be tested and compaction approved as the work is placed and completed.
- 31.0.20 This subcontract includes excavating, trenching, cutting, filling, compacting, and grading of all parking lots, retaining walls, ramps, sidewalks, aprons, curb & gutter, site concrete, exterior of building slabs, exterior of building structures, etc. as required per the contract documents.
- a) This subcontractor owns all grading/fine grading aside from the items listed below.
  - b) Fine grading of porous fill under concrete slabs by BP-03A.

- c) Fine grading of ~~ABS~~ ABC stone under heavy/light duty concrete paving by BP-32A
- d) Fine grading of ~~ABS~~ ABC stone under Asphalt & Curb/Gutter by BP-32C
- e) Fine grading of topsoil by BP-32E

31.0.21 This subcontractor shall perform all undercut of unsuitable soils, rock removal, and replacement with suitable borrow material as required on the project based on the third-party ITL field inspection(s) and reports. All unsuitable soils are to be disposed of onsite or offsite based on the direction of the Construction Manager/Design Team in conformance with the project documents and allowances. The third-party inspector and/or geotechnical consultant shall be the responsible party in determining whether materials are suitable or unsuitable. Prior to placement or borrow material, the third-party inspector shall verify said material meets contract document requirements.

31.0.22 When placing material courses included in this agreement, this Subcontractor shall be responsible for placement in lifts as specified within the contract documents. All necessary equipment and hand-tamping is included in this agreement.

31.0.23 Strip, screen, and stockpile all topsoil required for project. Place all topsoil as final grading is achieved and as directed by Construction Manager.

31.0.24 This Subcontractor understands and agrees that they are to remove net spoils that are generated by this Subcontractor off site. In the event that topsoil and/or dirt stockpiles are created by on this site, it is the responsibility of this Subcontractor to install and maintain erosion control measures, per NCDEQ standards of erosion control. This does not include stockpiles generated by other subcontractors, and/or erosion control measures necessary to maintain stockpiles generated by other subcontractors. Stockpile locations will be designated by the Samet Superintendent. This Subcontractor may remove and store topsoil off site to be used later, but it shall be coordinated prior to the removal offsite with the Samet Project Team and documented in writing

31.0.25 All removal and disposal of spoils generated by other trade contractors is included in this subcontract.

31.0.26 This Subcontractor shall provide complete and operable site utility services as required per the contract documents. This includes but is not limited to taps into existing structures, sub drains, drop inlets, RCP, PVC, and DIP, for a complete site utility package, including domestic water, FDC, sanitary, and storm utility services as required per the contract documents. This includes all accessory materials and components such as fittings, tees, bends, flanges, valves, sleeves, valve boxes, precast boxes & manholes, structures, plugs, pipe extensions, adapters, meter bases & setters, check-valves, bypasses, hot-boxes, grates, headwalls, manholes, inlets, rip-rap, clean-outs, hydrants, test-clock, thrust blocking, concrete, concrete cradles, masonry, concrete support, hardware, reducers, bypass valves, reduce pressure assemblies, piping, PIVs, bedding, stone, excavation, compaction, fill, backflow assemblies, blowoffs, connection to roof drain assemblies, PVC

boots, tapping sleeves, pits, heaters, tracing tape/wire, and all other necessary components for a complete installation. Any necessary concrete encasements, etc., including reinforcing steel for concrete work required within this Scope of Work and any cast-in-place concrete work associated with this Trades' scope of work is included in this agreement.

- 31.0.27 The domestic/fire water system piping installation shall be installed so that final connection location/inverts are provided to Samet Corporation to ensure that the domestic/fire water systems perform as designed.
- 31.0.28 All chlorination, bacteriological and pressure testing as required by contract documents and governing authorities is included in this agreement. It is the responsibility of this Subcontractor to provide all flushing certificates. Provide a copy of all such testing reports promptly to governing authorities and Samet Corporation.
- 31.0.29 This Subcontractor shall coordinate connection of services with other trades in order to provide complete operable systems. This subcontractor shall bring all owned utilities to within 5' of the buildings in which they serve. BP-021A Fire Protection and BP-022A shall take it from that point and into the buildings.
- 31.0.30 This Subcontractor shall schedule, with applicable local and state health officials and/or agencies, a final inspection of the water and fire water distribution systems no later than two (2) weeks prior to the time the system is to be put into operation. This Subcontractor shall have approved results of water tests, taken under this Subcontract, available for the officials/agencies upon arrival on-site. This Subcontractor shall provide Contractor's Material & Test Certificate to Samet Corporation upon successfully completing a fire water main flow test.
- 31.0.31 This subcontract includes a complete storm drainage system including all trench bedding, piping work, curb inlets and piping, grate inlets, drop inlets, storm drain outlet protection, permanent connections to existing storm drainage structures and piping, stone, where required. This includes concrete work applicable to the storm drainage system, head walls, concrete flared-end sections, rip-rap, diversion ditches, junction boxes, and associated temporary seeding for areas disturbed by this Scope of Work, where required, and any other incidentals which may be required for a completely functional storm drainage system as required per the contract documents.
- 31.0.32 Tops, Frames and Grates – This Work shall include all tops, steel frames and grates and hoods for each respective structure/manhole requiring a specific type of top and grate being provided as part of this Scope of Work. All tops, frames, grates, and hoods are to meet NCDOT requirements for water flow. This Subcontractor is responsible for confirming that the type of structures being provided meet the proper jurisdictional requirements.
- 31.0.33 Turn-Key Storm Drainage Maintenance and Cleaning – This Subcontractor shall perform

interim and final cleaning of storm drainage pipes, grate inlets, drop inlets, curb inlets, etc. and remove all mud and debris prior to final acceptance. This Subcontractor shall be responsible for the maintenance and final cleaning of storm drainage system until final project acceptance. This Subcontractor is responsible to test the lines to ensure that they are obstruction-free. This Subcontractor is to camera stormwater lines at the conclusion of the project and repair any damages as necessary at no additional cost to Contractor.

31.0.34 Stream crossing – This subcontractor shall perform this scope of work and associated crossing utilities in its entirety to complete the crossing per the contract documents, NCDOT, USACE, 404 and 401 permitting requirements and sequencing. This work includes but is not limited to erosion control, earth moving, stone, soil, concrete, culverts, Piping, utilities, structures, boxes, and drainage. Subcontractor shall carry in their base bid the temporary stream crossing identified on drawing D-102. Bridge matting may be an acceptable alternate to the detail if submitted and approved by the design team.

- A. Scope performed by other trades at this area;
  - 1. Electrical and conduit and structures
  - 2. Paving & curb and gutter

31.0.24

### **39.0 SCOPE OF WORK CLARIFICATIONS AND/OR OTHER REQUIREMENTS**

- 39.0.1 The intent of this section is to clarify the assignment of the Trade Work, and not to alter or change the specifications and design requirements.
- 39.0.2 All correspondence and/or communication must be directed through General Contractor. All construction directives must come through General Contractor. Do NOT contact the Owner, Owner Consultant, or Architect directly without the consent of General Contractor.
- 39.0.3 The scope items listed in this Exhibit are to be used only as a guide and in no way limits the Scope of Work to those items listed.
- 39.0.4 It is recognized and understood that this Subcontractor was selected for their expertise and knowledge of this specialized work, and it is expected that the subcontractor did and has included in their scope of work all items and quality control required to carry out the intent of the Contract Documents to completion.
- 39.0.5 This Subcontractor shall provide, but not limited to the following items which may or may not be clearly defined in the Contract Documents as being within the Scope of Work of this Subcontract Agreement: standards, certifications, testing, cleaning, inspecting, field quality control, close-out procedures, labels, field measurements and verifications, coordination with other trades, shop drawings and submittals, as-built drawings (PDF set), operating and maintenance instruction manuals, etc.



- 39.0.6 Each Subcontractor is responsible for inspecting the work that precedes its work and reporting any deficiencies which will affect its work to the Contractor prior to commencing with the new work. Once the new work has been installed over preceding work, the Contractor shall consider this action as the Subcontractor installing the new work as acceptance of all preceding work.
- 39.0.7 In cases where Division One Specifications contain conflicting information with Documents made a part of this Subcontract, the provisions, terms, conditions, etc. the more stringent shall take precedence.
- 39.0.8 Subcontractor shall be responsible for all freight, delivery, equipment, loading, unloading, rigging, and hoisting, as required to perform this Work. All costs associated with delivery of materials and equipment to perform the Scope of Work is included.
- 39.0.9 Extra Materials – This work shall include providing extra materials (attic stock) as specified.
- 39.0.10 Multiple mobilizations will be required for the completion of this Scope of Work. No additional compensation will be provided for multiple mobilization requirements. Samet will make every effort to limit the number of mobilizations. Roof installation will be based upon the construction schedule.
- 39.0.11 This Subcontractor shall NOT include the cost for their Payment and Performance Bonds in their bid amount, however if requested by the General Contractor, this Subcontractor shall provide a Performance and Payment Bond at Cost if awarded the Subcontract.
- 39.0.12 It is understood there may be utilities (new or existing), equipment, or other trades potentially in the way during operations performed by this Subcontractor. This Subcontractor agrees to coordinate as necessary to work around all obstacles to meet the requirements of the schedule.
- 39.0.13 The project site shall be open for subcontractor work from 7:00am-5:00pm, Monday-Friday, unless otherwise directed by the Construction Manager. The site will be open on Saturdays and Sundays for make-up days only on a pre-approved basis. No work, deliveries, pickups, or subcontractor presence shall be allowed outside of normal site hours without prior approval from the Construction Management Team. Note that the availability of Samet supervisory coverage may impact this approval process.
- 39.0.14 This Subcontractor will be responsible for all required cleanup of their excess materials and equipment on a daily basis. This Subcontractor is also responsible for protection of its work. All cost associated with this required cleanup and protection is to be included in their base proposal including but not limited to weather protection for all roofing work as needed to maintain the requirements of the Contract Documents.
- 39.0.15 While completing this Subcontractors Scope of Work, this Subcontractor is responsible for

daily cleanup of their materials. All trash and debris generated by this Subcontractor should be disposed of in the provided onsite dumpster.

- 39.0.16 This Subcontractor shall submit a site-specific safety plan before beginning work. A template will be provided by the Construction Manager at the pre-install meeting.
- 39.0.17 This Subcontractor shall submit SDS forms before beginning work.
- 39.0.18 This Subcontractor shall submit a QA/QC plan before beginning work. A template will be provided by the Construction Manager at the pre-install meeting.
- 39.0.19 All workers under this Subcontract shall attend a Samet Site Orientation meeting on their first day on this project BEFORE beginning work. New workers should report to Samet staff upon arrival to the site.
- 39.0.20 This Subcontractor shall complete all Samet required safety and job reports DAILY by 9am. Electronic and hard copies of all needed forms will be supplied to this Subcontractor at the Pre-Install meeting. Forms will include a Daily Report and a Pre-Task Plan at a minimum with other safety forms submitted as required by daily activities.
- 39.0.21 This Subcontractor shall reference scope clarification drawings included in the trade scope manual for specific directions on additions and deletions regarding this Scope of Work.
- 39.0.22 Labor and material prices are guaranteed through the duration of the project. Escalation costs are prohibited. The contract price shall not be increased for any coordination work related to conflict resolution, miscellaneous or incidental items required for the work to meet the intent of the Owner, architect's and engineer's design, the Contract Documents, plans, or specifications.
- 39.0.23 Maintenance of controlled access zones and fall protection as required by OSHA, for the safety of the Subcontractor's employees or others during the Work is included. This Subcontractor to provide any barricades, caution tape, spotters, and/or safety equipment necessary to protect the public, employees, and the property.
- 39.0.24 Subcontractor shall have a qualified foreman and/or superintendent onsite at all times during the performance of the Work and be capable of directing crews. This individual must be fluent in written and spoken English and be reasonably acceptable to the Contractor as a supervisor. The Subcontractor's onsite foreman and/or superintendent shall always be equipped with a cellular telephone during working hours and provide the Contractor with Emergency Contact Information for non-working hours.
- 39.0.25 Subcontractor shall be responsible to coordinate and work with each other to eliminate conflicts during the installation of the Work. No change orders will be accepted by the Contractor for relocation and/or replacement of the Work due to the Subcontractor's lack

of coordination in performing their respective scopes of work.

- 39.0.26 Manufactured items shall be installed in strict accordance with the manufacturer's printed directions, specifications and/or recommendations for installation of highest quality. All working parts shall be properly adjusted after installation and left in new working order.
- 39.0.27 Temporary electricity supplied by the Electrical Contractor will include minimal wattage single phase for small electric hand tools and basic construction temporary lighting only in accordance with OSHA guidelines. Any specific power requirements for welding, task lighting or other operations are to be provided by this Subcontractor.
- 39.0.28 If temporary "task" lighting is required to complete the Subcontractor's work, then the Trade Subcontractor requiring the temporary "task" lighting in order to complete its work shall provide its own temporary lighting at its own expense.
- 39.0.29 All stored materials must be protected from moisture, temperature, weather elements, theft, and vandalism, and stored at locations as not to interfere with the performance of other subcontractors. Any damages or theft resulting from the storing of materials are the responsibility of the Subcontractor. Re-handling of onsite materials that interfere with the work of other subcontractors shall be at no cost to the Contractor.
- 39.0.30 Each Subcontractor will remove all excess materials from the site at the time work has been completed. Failure to do so the General Contractor will give the Subcontractor a 24-hour notice at the end of this 24 hours the General Contractor will make arrangements to have the material removed. This work and the supervision of this work will be at the cost of this Subcontractor.
- 39.0.31 This Subcontractor shall be responsible for cold and hot weather protection as required to perform the Work so not to delay the Project Construction Schedule.
- 39.0.32 Each Trade Subcontractor shall be responsible for notifying the City Inspectors and/or County Inspectors and/or State Inspectors when their services or inspections are required. Expedite notification to ensure proper lead-time. The Trade Subcontractor shall notify the General Contractor in writing twenty-four (24) hours prior to any inspection.
- 39.0.33 This Subcontractor is responsible for all Contract Documents for this project. No allowance will be made for lack of knowledge of other subcontractors' work or existing conditions required in connection with HVAC, plumbing, electrical and other Subcontractors, including Owner furnished equipment.
- 39.0.34 Subcontractors entitlement to additional overhead and profit as a result of such changes, if any, shall not exceed a combined total of fifteen percent (15%) of the value of the Work to be self-performed.

**—OTHER SCHEDULE SUMMARY INFORMATION—**

The Substantial Completion date for the Sitework Subcontractor is as reflected within the Construction Schedule. Special attention should be directed to the Construction Schedule for project sequencing requirements which are a requirement of this Scope of Work. Reference Schedule Milestone Table extracted from the Project Schedule below for other specifics related to this Scope of Work.

<b>SCHEDULE MILESTONE TABLE</b>		
<b>ACTIVITY NO.</b>	<b>ACTIVITY DESCRIPTION</b>	<b>COMPLETION DATE OR DURATION</b>
A8380	Construction Entrance/Temp Stream Crossing/Erosion Control	15 days
A8390	Remaining Erosion Control Measures and Temp Diversions for Diversion pond	10 days
A8400	Diversion Pond	15 days
A8410	Remaining Tree Clearing and Site Grading	25 days
A8540	Permanent Stream Crossing with Utilities	10 days
A8550	Site Utilities (Sewer, Storm, Electric, Water at entrance road)	45 days
A8450	Prep Parking lot area	10 days
A8560	Install Site Water lines	20 days
PC1040	Final Approval – C of O	8/24/26





**—ALLOWANCES—**

Allowances shall cover the cost of all materials and equipment delivered at the site and all required taxes, less applicable trade discounts. Costs for unloading and handling at the site, labor, installation costs, overhead, profit and other expenses associated with stated allowance amounts shall be included in the Subcontract Amount but not in the allowances. Whenever costs are more than or less than an allowance amount, the Subcontract Amount shall be adjusted accordingly by Change Order. The amount of the Change Order shall reflect the difference between actual costs and the allowances.

<b>ALLOWANCES</b>		
<b>ALLOWANCE NO.</b>	<b>ALLOWANCE DESCRIPTION</b>	<b>AMOUNT</b>
Allowance No. A	Unsuitable Soil – On-Site Disposal and Backfill with On-Site Suitable Soils: 100 CY	
Allowance No. B	Unsuitable Soil – On-site disposal and Backfill with off Site Source Suitable Soils. 100 CY	
Allowance No. C	Unsuitable soil – Off-site disposal and Backfill with On-Site Source Suitable Soils: 50 CY	
Allowance No. D	Unsuitable Soil – Off-site disposal and Backfill with Off-Site Source Suitable Soils: 50 CY	
Allowance No. E	Unsuitable Trench Soil – On-site disposal and Backfill with On-Site Suitable Soils: 50 CY	
Allowance No. F	Unsuitable Trench Soil – On-Site Disposal and Backfill with Off Site Source Suitable Soils: 50 CY	
Allowance No. G	Unsuitable Trench Soil – Off-Site Disposal and Backfill With On-Site Source Suitable Soils: 50 CY	
Allowance No. H	Unsuitable Trench Soil – Off-Site Disposal and Backfill with Off-Site Source Suitable Soils: 50CY	
Allowance No. I	Stream Crossing – Off-Site Disposal and Backfill with Class B or Class A Rip-Rap: 500 CY	
Allowance No. J	Stream Crossing – Off-Site Disposal and Backfill with #4 and/or #57 Stone: 200 CY	
Allowance No K: Stream Crossing	Stream Crossing – Type 4 Geotextile Fabric: 1,500 SF	

**—UNIT PRICES—**

To the extent that some or all of the Subcontractor's Work is to be performed on a unit price basis, the Subcontract Amount shall be computed in accordance with the unit prices set forth below. Unit prices are deemed to include all costs related to Subcontractor's performance of the Work, including, but not limited to, costs of labor, supervision, services, materials, equipment, tools, scaffolds, hoisting, transportation, storage, insurance, and taxes, and all overhead and profit. Quantities shall be measured by means acceptable to Owner, General Contractor and Subcontractor, and if applicable, an independent testing firm hired by Owner.



UNIT PRICES			
UNIT NO.	UNIT PRICE DESCRIPTION	UNIT PRICE	UNIT MEASURE
Allowance No. A	Unsuitable Soil – On-Site Disposal and Backfill with On-Site Suitable Soils:		CY
Allowance No. B	Unsuitable Soil – On-site disposal and Backfill with off Site Source Suitable Soils.		CY
Allowance No. C	Unsuitable soil – Off-site disposal and Backfill with On-Site Source Suitable Soils:		CY
Allowance No. D	Unsuitable Soil – Off-site disposal and Backfill with Off-Site Source Suitable Soils:		CY
Allowance No. E	Unsuitable Trench Soil – On-site disposal and Backfill with On-Site Suitable Soils:		CY
Allowance No. F	Unsuitable Trench Soil – On-Site Disposal and Backfill with Off Site Source Suitable Soils:		CY
Allowance No. G	Unsuitable Trench Soil – Off-Site Disposal and Backfill With On-Site Source Suitable Soils:		CY
Allowance No. H	Unsuitable Trench Soil – Off-Site Disposal and Backfill with Off-Site Source Suitable Soils:		CY
Allowance No. I	Stream Crossing – Off-Site Disposal and Backfill with Class B or Class A Rip-Rap:		CY
Allowance No. J	Stream Crossing – Off-Site Disposal and Backfill with #4 and/or #57 Stone:		CY
Allowance No. K: Stream Crossing	Stream Crossing – Type 4 Geotextile Fabric:		SF
L1	Laborer Rate		Hr
L2	Operator Rate		Hr
L3	Foreman Rate		Hr

#### —ALTERNATES—

Each alternate designated below has been separated into the following three categories:

- “Accepted” – Alternate was accepted by General Contractor and the dollar value for the alternate is included within the Subcontractor Amount.
- “Pending” – Alternate is pending award by General Contractor with the decision being deferred until the date defined within each applicable Alternate. This cost is NOT included in the Subcontractor Amount.
- “Declined” – Alternate was NOT accepted by General Contractor and the dollar value for the alternate is NOT included within the Subcontractor Amount. By declining the alternate, all requirements applicable thereof are deleted from the contract documents.

ALTERNATES			
ALTERNATE NO.	ALTERNATE DESCRIPTION	VALUE	STATUS
P1	Payment and Performance Bond		Pending

If requested, the cost of the Performance and Payment Bonds (amount as provided) will be reimbursed to the Subcontractor based on the following revised contract revision noted below:

Subcontractor shall provide Performance and Payment Bonds, if required, each with a penal amount equal to 100% of the Subcontract Amount, on forms acceptable to the General Contractor. The premium for these bonds shall be paid by Subcontractor and the cost thereof shall be invoiced separately to the General Contractor based on the Subcontractor providing an actual paid receipt from its surety agent. The value of the Performance and Payment bond in all cases shall not be more than the Subcontractor's bid alternate amount submitted for these bonds. If the bond(s) value is more than the bid amount submitted for these bonds, the Subcontractor shall pay the difference to its surety agent at its cost.

**END OF SECTION**  
**TRADE PACKAGE SCOPE OF WORK:**  
**31A - SITEWORK SUBCONTRACT**

## **TRADE PACKAGE SCOPE OF WORK**

### **32C ASPHALT PAVING/CURB AND GUTTER SUBCONTRACT**

Furnish all labor, materials, tools, taxes, safety, insurances, equipment, hoisting, cranes, supervision, and all other incidentals necessary to accomplish all **Asphalt Paving/Curb and Gutter** Work in accordance with all Contract Documents and as defined within **Trade Package General Scope Requirements** and this Scope of Work.

**Subcontractors/Suppliers performing work on multiple portions of the project site (i.e., buildings, parking area, site, etc.) shall provide separate equipment, hoisting, cranes, supervision including, but not limited to management, superintendent, foreman, tradesman, laborers, etc. for each portion unless agreed to otherwise in writing by the General Contractor. If the project needs and schedule are not being met to the satisfaction of the General Contractor, written approval will be rescinded, and the original staffing requirements shall be provided by the Subcontractor.**

Project Specifications for the Asphalt Paving/Curb and Gutter Scope of Work are listed below. This Subcontractor or Supplier shall carefully examine all specification sections and drawings within the Contract Documents and be responsible for all work described within this Scope of Work and as required on the project.

### **PROJECT SPECIFICATIONS**

This Subcontractor is responsible for all Division 1 - General Requirements as listed below prepared by the Architect, Design Consultants, and/or General Contractor or as designated elsewhere within the Technical Specifications or Drawings as applicable to this Trade Package Scope of Work.

<b>DIVISION 1 – GENERAL REQUIREMENTS</b>	
<b>GC Req.</b>	<b>General Requirements Manual</b>
<b>GC Req.</b>	<b>Trade Package Scope Manual</b>
<b>GC Req.</b>	<b>Trade Package General Scope Requirements</b>

### **Primary Responsibility**

**This Subcontractor is responsible for all Primary Specification Responsibilities listed below unless this Scope of Work specifically states otherwise.**

<b>PRIMARY TECHNICAL SPECIFICATION RESPONSIBILITIES (PROJECT MANUAL)</b>	
	<b>Specifications are included on the Drawings</b>
321216	Asphalt Paving
321313	Concrete Paving
321723	Pavement Markings



### **Secondary Responsibility**

**This Subcontractor is responsible for all Secondary Specification Responsibilities listed below to the extent applicable, or defined, within this Scope of Work.**

<b>SECONDARY TECHNICAL SPECIFICATION RESPONSIBILITIES</b>	
	<b>Specifications are included on the Drawings</b>
311000	Site Clearing
312000	Earth Moving
330500	Common Work Results for Utilities
334100	Storm Utility Drainage Piping

### **Primary Responsibility**

**This Subcontractor is responsible for all Primary Specification Responsibilities listed below unless this Scope of Work specifically states otherwise.**

<b>PRIMARY TECHNICAL SPECIFICATION RESPONSIBILITIES (DRAWINGS)</b>		
<b>DRAWING NO.</b>	<b>DRAWING NAME</b>	<b>SPECIFIC ITEM</b>
All Dwgs	All Dwgs	All Dwgs
BID DOCUMENTS	ALL DRAWINGS	<p>This Subcontractor shall furnish and install a complete turnkey of Work for <b>BP-32C Asphalt Paving and Curb &amp; Gutter</b>, per the Contract Documents to include, but not limited to: including all accessories and incidentals for a complete job with no exceptions.</p> <p>This Subcontractor shall coordinate with other trades as applicable to complete this Scope of Work including</p>
All	All	Subcontractor owns all drawings and notes as it relates to the Asphalt Paving and Curb & Gutter scope. The items listed below are intended to add clarification. Notes or drawings not included below does not alleviate the subcontractor from ownership.
All	Notes, General Notes, Key Notes, and specifications	All notes/specs and items as it relates to Asphalt Paving and Curb & Gutter and associated joint sealants and items to be coordinated with other trades.

The Asphalt Paving/Curb and Gutter Subcontractor shall be responsible for complying with the requirements of each Scope of Work Description / Clarification Section listed below, **even if** those requirements are not shown within the Specification Sections listed above.

This Subcontractor shall be responsible for all Primary Specification Responsibilities identified above in their entirety. All costs associated with Primary Specification Responsibilities shall be included in this Subcontractor's Scope of Work and reflected in bid amount.

This Subcontractor shall be at least partially responsible for Secondary Specification Responsibilities identified above. The Secondary Specifications identify work scopes for which this Subcontractor is not wholly responsible but shall be applicable as it relates to the execution of Primary Specification Responsibilities. This may include a varying degree of responsibility from simple coordination to performing entire portions of work. The Secondary Specifications are not intended to be all inclusive and shall not limit the Subcontractor in any way with regards to installation of work identified in Primary Specification Responsibilities.

The Cast in Place Concrete Subcontractor is responsible for all Work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work. If for some reason an item of scope is included inadvertently in this scope of work and another trade package scope of work, this Subcontractor shall be responsible for including the subject scope of work within its base bid proposal regardless.

### **31.0 EARTHWORK SCOPE OF WORK DESCRIPTION**

31.0.1 Graded Aggregate Stone Base - This Work shall include furnishing and installing a graded and compacted aggregate stone base/porous fill underneath ~~concrete~~ **Asphalt and Curb & Gutter** as indicated on contract documents.

31.0.2 This Subcontractor shall be responsible all fine grading associated with this scope of work.

### **32.0 EXTERIOR IMPROVEMENTS SCOPE OF WORK DESCRIPTION**

32.0.1 Turn-Key Asphalt and Curb-and-Gutter – This subcontract includes a complete turnkey asphalt paving package, including all subgrade verification, fine grading, stone, curb and gutter, binder, asphalt, striping and markings, and milling / overlay of existing asphalt as required per the contract documents. This Work shall include but not be limited to all specified concrete wheel stops, painted directional lane markings, painted handicap markings, line striping, miscellaneous painted markings, traffic, handicap signage, posts, etc., including all necessary layout and signage foundation work as required to complete this Scope of Work. Curb and gutter will be installed to NCDOT standards to include compacted stone base.

32.0.2 This Subcontractor shall provide asphalt and/or concrete pavement removal and patch back work including all necessary traffic control work as required by the local or state governing authority at all utility connection tie-in locations(s) designated on the Contract Drawings. If asphalt or concrete pavement cannot be removed and subsequently patched as determined by the governing utility, DOT or Owner, the Site Utilities Subcontractor shall jack and bore across the applicable obstacle in order to complete this scope of work at no additional cost.

32.0.3 Permits: As Applicable. This Subcontractor includes all equipment transport permits, traffic control, city permits, etc., if necessary, to bring any rigging, materials, equipment etc. The

Subcontractor is responsible to obtain permits, licenses, pay fees, charges and obtain all necessary approvals in a timely fashion in order to maintain the schedule and progress of the Work, and in accordance with all legal requirements. The Building Permit and Demolition Permit will be paid by the Owner at no cost to the Trade Subcontractor(s).

- 32.0.4 This Subcontractor is responsible for all work described herein and below unless specifically noted otherwise to be part of another Subcontractor's Scope of Work.
- 32.0.5 This Subcontractor understands and agrees that all work is to be performed in accordance with sequencing, inspections, and approvals required by the local, state, and federal jurisdiction.
- 32.0.6 This Subcontractor is to provide mechanical broom cleaning, pressure washing, etc. of the asphalt binder or wear course previously installed in order to receive the final asphalt surface wear course, line striping, etc. as part of this Scope of Work.
- 32.0.7 This Subcontractor shall clean all curb and gutter prior to final acceptance by the Owner. All asphalt shall be properly cleaned between courses for proper adhesion, before striping for proper application and prior to final acceptance by the Owner. This work shall be scheduled in advance with the Construction Manager.
- 32.0.8 Subcontractor to provide all striping, symbols, and signage in all areas. Refer to C-101.
- 32.0.9 This Subcontractor shall leave all areas of the project in a condition that will naturally drain at the end of the day. If water accumulates, this Subcontractor shall be responsible for dewatering as required to maintain the construction schedule. Additionally, as a wet weather prevention measure, this Subcontractor shall compact, drum roll and slick off all work areas each day to seal off the graded substrate to help keep water from penetrating into the soil which may impede construction work due to inclement weather. Dewatering due to winter weather, i.e. snow, sleet, and ice, and/or 4" or more of rain within a 24-hour time period, shall be addressed utilizing the unit rate provided in Exhibit E.A

### **39.0 SCOPE OF WORK CLARIFICATIONS AND/OR OTHER REQUIREMENTS**

- 39.0.1 The intent of this section is to clarify the assignment of the Trade Work, and not to alter or change the specifications and design requirements.
- 39.0.2 All correspondence and/or communication must be directed through General Contractor. All construction directives must come through General Contractor. Do NOT contact the Owner, Owner Consultant, or Architect directly without the consent of General Contractor.
- 39.0.3 The scope items listed in this Exhibit are to be used only as a guide and in no way limits the Scope of Work to those items listed.

- 39.0.4 It is recognized and understood that this Subcontractor was selected for their expertise and knowledge of this specialized work, and it is expected that the subcontractor did and has included in their scope of work all items and quality control required to carry out the intent of the Contract Documents to completion.
- 39.0.5 This Subcontractor shall provide, but not limited to the following items which may or may not be clearly defined in the Contract Documents as being within the Scope of Work of this Subcontract Agreement: standards, certifications, testing, cleaning, inspecting, field quality control, close-out procedures, labels, field measurements and verifications, coordination with other trades, shop drawings and submittals, as-built drawings (PDF set), operating and maintenance instruction manuals, etc.
- 39.0.6 Each Subcontractor is responsible for inspecting the work that precedes its work and reporting any deficiencies which will affect its work to the Contractor prior to commencing with the new work. Once the new work has been installed over preceding work, the Contractor shall consider this action as the Subcontractor installing the new work as acceptance of all preceding work.
- 39.0.7 In cases where Division One Specifications contain conflicting information with Documents made a part of this Subcontract, the provisions, terms, conditions, etc. the more stringent shall take precedence.
- 39.0.8 Subcontractor shall be responsible for all freight, delivery, equipment, loading, unloading, rigging, and hoisting, as required to perform this Work. All costs associated with delivery of materials and equipment to perform the Scope of Work is included.
- 39.0.9 Extra Materials – This work shall include providing extra materials (attic stock) as specified.
- 39.0.10 Multiple mobilizations will be required for the completion of this Scope of Work. No additional compensation will be provided for multiple mobilization requirements. Samet will make every effort to limit the number of mobilizations. Roof installation will be based upon the construction schedule.
- 39.0.11 This Subcontractor shall NOT include the cost for their Payment and Performance Bonds in their bid amount, however if requested by the General Contractor, this Subcontractor shall provide a Performance and Payment Bond at Cost if awarded the Subcontract.
- 39.0.12 It is understood there may be utilities (new or existing), equipment, or other trades potentially in the way during operations performed by this Subcontractor. This Subcontractor agrees to coordinate as necessary to work around all obstacles to meet the requirements of the schedule.
- 39.0.13 The project site shall be open for subcontractor work from 7:00am-5:00pm, Monday-Friday,



unless otherwise directed by the Construction Manager. The site will be open on Saturdays and Sundays for make-up days only on a pre-approved basis. No work, deliveries, pickups, or subcontractor presence shall be allowed outside of normal site hours without prior approval from the Construction Management Team. Note that the availability of Samet supervisory coverage may impact this approval process.

- 39.0.14 This Subcontractor will be responsible for all required cleanup of their excess materials and equipment on a daily basis. This Subcontractor is also responsible for protection of its work. All cost associated with this required cleanup and protection is to be included in their base proposal including but not limited to weather protection for all roofing work as needed to maintain the requirements of the Contract Documents.
- 39.0.15 While completing this Subcontractors Scope of Work, this Subcontractor is responsible for daily cleanup of their materials. All trash and debris generated by this Subcontractor should be disposed of in the provided onsite dumpster.
- 39.0.16 This Subcontractor shall submit a site-specific safety plan before beginning work. A template will be provided by the Construction Manager at the pre-install meeting.
- 39.0.17 This Subcontractor shall submit SDS forms before beginning work.
- 39.0.18 This Subcontractor shall submit a QA/QC plan before beginning work. A template will be provided by the Construction Manager at the pre-install meeting.
- 39.0.19 All workers under this Subcontract shall attend a Samet Site Orientation meeting on their first day on this project BEFORE beginning work. New workers should report to Samet staff upon arrival to the site.
- 39.0.20 This Subcontractor shall complete all Samet required safety and job reports DAILY by 9am. Electronic and hard copies of all needed forms will be supplied to this Subcontractor at the Pre-Install meeting. Forms will include a Daily Report and a Pre-Task Plan at a minimum with other safety forms submitted as required by daily activities.
- 39.0.21 This Subcontractor shall reference scope clarification drawings included in the trade scope manual for specific directions on additions and deletions regarding this Scope of Work.
- 39.0.22 Labor and material prices are guaranteed through the duration of the project. Escalation costs are prohibited. The contract price shall not be increased for any coordination work related to conflict resolution, miscellaneous or incidental items required for the work to meet the intent of the Owner, architect's and engineer's design, the Contract Documents, plans, or specifications.
- 39.0.23 Maintenance of controlled access zones and fall protection as required by OSHA, for the safety of the Subcontractor's employees or others during the Work is included. This

Subcontractor to provide any barricades, caution tape, spotters, and/or safety equipment necessary to protect the public, employees, and the property.

- 39.0.24 Subcontractor shall have a qualified foreman and/or superintendent onsite at all times during the performance of the Work and be capable of directing crews. This individual must be fluent in written and spoken English and be reasonably acceptable to the Contractor as a supervisor. The Subcontractor's onsite foreman and/or superintendent shall always be equipped with a cellular telephone during working hours and provide the Contractor with Emergency Contact Information for non-working hours.
- 39.0.25 Subcontractor shall be responsible to coordinate and work with each other to eliminate conflicts during the installation of the Work. No change orders will be accepted by the Contractor for relocation and/or replacement of the Work due to the Subcontractor's lack of coordination in performing their respective scopes of work.
- 39.0.26 Manufactured items shall be installed in strict accordance with the manufacturer's printed directions, specifications and/or recommendations for installation of highest quality. All working parts shall be properly adjusted after installation and left in new working order.
- 39.0.27 Temporary electricity supplied by the Electrical Contractor will include minimal wattage single phase for small electric hand tools and basic construction temporary lighting only in accordance with OSHA guidelines. Any specific power requirements for welding, task lighting or other operations are to be provided by this Subcontractor.
- 39.0.28 If temporary "task" lighting is required to complete the Subcontractor's work, then the Trade Subcontractor requiring the temporary "task" lighting in order to complete its work shall provide its own temporary lighting at its own expense.
- 39.0.29 All stored materials must be protected from moisture, temperature, weather elements, theft, and vandalism, and stored at locations as not to interfere with the performance of other subcontractors. Any damages or theft resulting from the storing of materials are the responsibility of the Subcontractor. Re-handling of onsite materials that interfere with the work of other subcontractors shall be at no cost to the Contractor.
- 39.0.30 Each Subcontractor will remove all excess materials from the site at the time work has been completed. Failure to do so the General Contractor will give the Subcontractor a 24-hour notice at the end of this 24 hours the General Contractor will make arrangements to have the material removed. This work and the supervision of this work will be at the cost of this Subcontractor.
- 39.0.31 This Subcontractor shall be responsible for cold and hot weather protection as required to perform the Work so not to delay the Project Construction Schedule.
- 39.0.32 Each Trade Subcontractor shall be responsible for notifying the City Inspectors and/or

County Inspectors and/or State Inspectors when their services or inspections are required. Expedite notification to ensure proper lead-time. The Trade Subcontractor shall notify the General Contractor in writing twenty-four (24) hours prior to any inspection.

39.0.33 This Subcontractor is responsible for all Contract Documents for this project. No allowance will be made for lack of knowledge of other subcontractors' work or existing conditions required in connection with HVAC, plumbing, electrical and other Subcontractors, including Owner furnished equipment.

39.0.34 Subcontractors entitlement to additional overhead and profit as a result of such changes, if any, shall not exceed a combined total of fifteen percent (15%) of the value of the Work to be self-performed.

**—OTHER SCHEDULE SUMMARY INFORMATION—**

The Substantial Completion date for the Asphalt Paving/Curb and Gutter Subcontractor is as reflected within the Construction Schedule. Special attention should be directed to the Construction Schedule for project sequencing requirements which are a requirement of this Scope of Work. Reference Schedule Milestone Table extracted from the Project Schedule below for other specifics related to this Scope of Work.

SCHEDULE MILESTONE TABLE		
ACTIVITY NO.	ACTIVITY DESCRIPTION	COMPLETION DATE OR DURATION
A8470	Asphalt Binder Parking lot	3 days
A8480	Road Prep and Curb & Gutter (multi-trade)	5 Days
A8580	Asphalt Paving (light duty and heavy duty)	15 days
A8590	Striping, Markings, and Road Signage	5 Days
PC1040	Final Approval – C of O	8/21/2026

**—ALTERNATES—**

Each alternate designated below has been separated into the following three categories:

- “Accepted” – Alternate was accepted by General Contractor and the dollar value for the alternate is included within the Subcontractor Amount.
- “Pending” – Alternate is pending award by General Contractor with the decision being deferred until the date defined within each applicable Alternate. This cost is NOT included in the Subcontractor Amount.
- “Declined” – Alternate was NOT accepted by General Contractor and the dollar value for the alternate is NOT included within the Subcontractor Amount. By declining the alternate, all requirements applicable thereof are deleted from the contract documents.



ALTERNATES			
ALTERNATE NO.	ALTERNATE DESCRIPTION	VALUE	STATUS
P1	Payment and performance Bond		Pending

If requested, the cost of the Performance and Payment Bonds (amount as provided) will be reimbursed to the Subcontractor based on the following revised contract revision noted below:

Subcontractor shall provide Performance and Payment Bonds, if required, each with a penal amount equal to 100% of the Subcontract Amount, on forms acceptable to the General Contractor. The premium for these bonds shall be paid by Subcontractor and the cost thereof shall be invoiced separately to the General Contractor based on the Subcontractor providing an actual paid receipt from its surety agent. The value of the Performance and Payment bond in all cases shall not be more than the Subcontractor's bid alternate amount submitted for these bonds. If the bond(s) value is more than the bid amount submitted for these bonds, the Subcontractor shall pay the difference to its surety agent at its cost.

**END OF SECTION**  
**TRADE PACKAGE SCOPE OF WORK:**  
**32C ASPHALT PAVING/CURB AND GUTTER SUBCONTRACT**



PRECONSTRUCTION REQUEST FOR INFORMATION

Samet Project N 23-878  
Project Name: Wake Tech Fire & Rescue Training Center  
Location: Wendell, NC

RFI No.	Question	Dwg Ref	Spec Ref	Assignee Discipline	Date Initiated	Response	Resp. Date	Updated in Design?
BID-01	<b>IFC Document Set Issues - Spec Section provided in Project Manual, but not listed on Table of Contents: 10 26 00 Wall and Door Protection (9 sheets provided)</b> Please clarify whether 10 26 00 was supposed to be provided / confirm 10 26 00 scope is required in the project and, if yes, add this section to the Project Manual Table of Contents.	N/A	10 26 00	Architectural	3/28/2025	No wall and door protection included, delete this section, see Addendum #1	4/18/2025	Addendum #1
BID-02	<b>IFC Document Set Issues - Spec Section listed on Project Manual Table of Contents, but not provided in Project Manual: 22 11 26 Domestic Water Pumps</b> Please provide missing spec section 22 11 26 <b>OR</b> clarify that is not required and remove from the Project Manual Table of Contents.	N/A	22 11 26	Plumbing Eng.	3/28/2025	Delete from project manual, not required delete this section, see Addendum #1	4/18/2025	Addendum #1
BID-03	<b>IFC Document Set Issues - Drawing provided in IFC Set, but not listed on Drawing List on G000: C-302 PROPOSED GAS DISTRIBUTION LAYOUT</b> Please add C-302 to the Drawing List on G000.	G000, C-302	N/A	Architectural	3/28/2025	Add C-302 PROPOSED GAS DISTRIBUTION LAYOUT to the drawing index on G000, The Drawing index will be updated in a future addendum.	4/18/2025	Pending
BID-04	<b>IFC Document Set Issues - Drawing provided in IFC Set, but not listed on Drawing List on G000: D-111 STORM WATER DETAILS</b> Please add D-111 to the Drawing List on G000.	G000, D-111	N/A	Architectural	3/28/2025	Add D-111 STORM WATER DETAILS to the drawing index on G000. The Drawing index will be updated in a future addendum.	4/18/2025	Pending
BID-05	<b>IFC Document Set Issues - Drawing provided in IFC Set, but not listed on Drawing List on G000: TT003 TRAINING TOWER - LIFE SAFETY PLAN</b> Please add TT003 to the Drawing List on G000.	G000, TT003	N/A	Architectural	3/28/2025	Add TT003 TRAINING TOWER - LIFE SAFETY PLAN to the drawing index on G000. The Drawing index will be updated in a future addendum.	4/18/2025	Pending
BID-06	<b>IFC Document Set Issues - Drawings listed on Drawing List on G000, but not provided in IFC Set: E003 SITE PLAN PHOTOMETRICS</b> Please provide dwg E003 <b>OR</b> clarify that is not required and remove from the Drawing List on G000.	G000, E003	N/A	Electrical Eng.	3/28/2025	Delete from set, not provided. The Drawing index will be updated in a future addendum.	4/18/2025	Pending
BID-07	<b>IFC Document Set Issues - Drawing previously provided in earlier sets, but not provided in IFC Set nor listed on IFC Drawing List on G000: BB003 BURN BUILDING - LIFE SAFETY PLAN</b> Please provide IFC version of missing drawing BB003 and add BB003 to the Drawing List on G000.	G000, BB003	N/A	Specialty Engineer	4/3/2025	BB003 Burn Building - Life Safety Plan issued as part of Addendum #1. The Drawing index will be updated in a future addendum.	4/18/2025	Addendum #1
BID-08	<b>IFC Document Set Issues - Two (2) different Spec Sections provided that are both numbered “22 11 16”</b> Please clarify which version of specification 22 11 16 is to be used for domestic water distribution piping, since two (2) versions are included in IFC Project Manual.	N/A	22 11 16	Plumbing Eng.	4/3/2025	221116 Domestic Water Distribution Piping is for water distribution inside the building, as indicated in the Scope. Section 221116 Facility Water Distribution Piping is for water distribution piping outside the building, as described in the summary. To avoid confusion, Facility Water Distribution Piping was renumbered/renamed to 221117 Site Water Distribution Piping and issued as part of Addendum 1.	4/18/2025	Addendum #1

PRECONSTRUCTION REQUEST FOR INFORMATION

Samet Project N 23-878  
Project Name: Wake Tech Fire & Rescue Training Center  
Location: Wendell, NC

RFI No.	Question	Dwg Ref	Spec Ref	Assignee Discipline	Date Initiated	Response	Resp. Date	Updated in Design?
BID-09	<p><b>Training Tower Elevator Shaft Opening - Fall Protection Gate Detail Mark</b> Training Tower Fourth Floor Plan Keyed Note #8 shown on Detail 2/TT202 states, "ELEVATOR DOOR PER DETAIL 5/TT606".</p> <p>Navigating to referenced Detail 5/TT606, we find a plan, a section and a sill detail for the simulated elevator shaft opening location, and the detail also points to an elevation marked 6/TT206 and states "FALL PROTECTION GATE PER DETAIL 6/TT606", but we do not find Detail 6/TT606 in the IFC Set. It appears the detail should be called out as 7/TT606.</p> <p><b>Please confirm the correct detail for the fall protection gate at location in question is Detail 7/TT606 in lieu of Detail 6/TT606 or else otherwise clarify.</b></p>	2/TT202, 5/TT606, missing 6/TT606	N/A	Specialty Engineer	4/15/2025	Reference to detail updated, detail on TT606 changed from 7 to 6, see Addendum #1	4/18/2025	Addendum #1
BID-10	<p><b>Warranties Requested for Open Air Bldgs</b> Both the Restroom Building/Shade Structure and the Burn Materials Covered Storage buildings are open structures / open to elements. However, the roofing specifications for these open air buildings call for a long-term roofing weathertightness warranty (ref. 07 41 13 Part C.).</p> <p>Specifically, the specs call for a manufacturer's "Special Weathertightness Warranty" lasting for 10 years after Final Completion, which is not going to be worthwhile to provide due to the fact that the subject buildings are open structures.</p> <p>They material vendors will still sell the warranty as specified and it will cost thousands despite being used on non-weathertight structures.</p> <p>Will the design Team (AOR) and Owner consider reviewing and potentially modifying the specified roofing warranty?</p> <p>If acceptable to Design and Owner, our bidders suggest changing the specified warranty to a 2- or 5- year weathertight warranty (or less / or none)?</p>	N/A	07 41 13	Architectural	4/17/2025	The Special Weathertightness Warranty has been reduced to a term of 5 years from the date of Final Completion.	5/2/2025	Addendum #2

PRECONSTRUCTION REQUEST FOR INFORMATION

Samet Project N 23-878  
Project Name: Wake Tech Fire & Rescue Training Center  
Location: Wendell, NC

RFI No.	Question	Dwg Ref	Spec Ref	Assignee Discipline	Date Initiated	Response	Resp. Date	Updated in Design?
BID-11	<p><b>TT Overhead Door Specification</b> For the overhead door required at the Training Tower (Door "EXT-100B"), a Basis of Design is provided on sheet TT603 in DOOR SCHEDULE NOTE #9, but no narrative specification section is provided in the Project Manual.</p> <p>Typically, NC SCO projects require at least three (3) options for materials / equipment for competitive bidding, and we typically receive narrative specification sections for all products.</p> <p><b>Please advise if a written specification can be provided for the overhead door scope inclusive of a minimum of three (3) manufacturer options / product options. If not, please advise how we should proceed with competitive bidding for this scope element.</b></p>	1/TT201, 1/TT302, TT603	None Provided	Specialty Engineer	4/23/2025	As stated, the Basis of Design shall be used to set quality standards. Manufacturers that can provide products equal to or better than the specified manually operated galvanized steel rolling service door Series 610 by Overhead Door Corporation are welcome to bid.	5/2/2025	N/A
BID-12	<p><b>Fire Alarm Scope / Dwgs / Specs for Project:</b> Several Electrical bidders have asked about the lack of Fire Alarm design information in the project design documents, so we wanted to confirm for the bidding market that no additional information is required for pricing.</p> <p>There are not any Fire Alarm Specifications listed under Division 28 and no information on Fire Alarm systems found on the drawings.</p> <p><b>Please confirm that there is not any Fire Alarm scope / systems / devices / etc. required for this project and that any fire protection valves, tamper switches, and flows switches do not need monitoring. Otherwise, please clarify the Div 28 scope that should be priced.</b></p>	All	Division 28 (None Provided)	Electrical Eng.	4/23/2025	There is no fire alarm scope for this project	5/2/2025	N/A
BID-13	<p><b>EV Charger Circuit Scope Dependent on Information Not in Bid Docs</b> Sheet E002 Keynote 6 indicates to provide circuits for Electric Vehicle Chargers.</p> <p>There are not any specifications for Electric Vehicle Chargers nor any details related to the EV chargers.</p> <p>Please confirm that the Owner will furnish and install the EV Chargers, EV Apparatus Chargers and associated concrete bases. Otherwise, clarify scope to be included by CMAR and their EC, and provide associated product data and details required to bid the scope.</p>	E002	None Provided	Electrical Eng.	4/23/2025	The EV and apparatus chargers are provided and installed by the owner	5/2/2025	N/A

PRECONSTRUCTION REQUEST FOR INFORMATION

Samet Project N 23-878  
Project Name: Wake Tech Fire & Rescue Training Center  
Location: Wendell, NC

RFI No.	Question	Dwg Ref	Spec Ref	Assignee Discipline	Date Initiated	Response	Resp. Date	Updated in Design?
BID-14	<p><b>Permanent Security Camera / CCTV Scope Clarification Requested</b> Sheet E002 Keynote 7 indicates to "...provide camera compatible with Salient Security System..."</p> <p>There are not any specifications provided for the cameras.</p> <p><b>Please confirm that the Owner will subcontract directly to furnish and install the cameras, and therefore the cameras shall not part of the scope of Bid Package 26A Electrical. Otherwise, please provide design information for competitive bidding process (e.g. narrative spec with multiple product options).</b></p>	E002	None Provided	Electrical Eng.	4/23/2025	Cameras are by the contractor. Note revised on site plan to include preferred product. Specification section 282301 added.	5/2/2025	Addendum #2
BID-15	<p><b>Camera Circuits &amp; Weatherproof Enclosure Clarification Requested</b> Sheet E002 Keynote 7 indicates to "...provide weatherproof enclosure for network switch, by Owner."</p> <p><b>Please confirm that the Owner will subcontract directly to furnish and install the weatherproof enclosure and network switches, and that these elements shall not be part of the scope of Bid Package 26A Electrical. Otherwise, please clarify who is to furnish and install (a) the circuit (requires camera information...see RFI BID-14...) and who is to furnish and install (b) the weatherproof enclosure (need design information if by CMAR/EC).</b></p>	E002	None Provided	Electrical Eng.	4/23/2025	The weatherproof enclosures and circuits are by the contractor. See new detail 8/E511 included in this addendum for more information about sizing and mounting the box. Network switches are provided and installed by the owner.	5/2/2025	Addendum #2
BID-16	<p><b>Camera Raceways &amp; Fiber Cabling Scope Clarifications Requested</b> Sheet E002 Keynote 7 indicates to "...provide 1" raceway for fiber, by Owner..."</p> <p><b>Please confirm that the CMAR should only provide the empty 1" conduit and that the Owner will subcontract directly to furnish and install the fiber cabling, and the fiber cabling shall not be part of the scope of Bid Package 26A Electrical.</b></p> <p><b>Does Bid Package 26A need to provide a separate empty 1" Conduit from each pole back to Restroom Building or can they be combined?</b></p>	E002	None Provided	Electrical Eng.	4/23/2025	Fiber is provided by the owner. Conduits to each pole shall be dedicated. Conduits to the burn building and training tower for the future BDA shall not be combined.	5/2/2025	N/A



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RFI No.	Question	Dwg Ref	Spec Ref	Assignee Discipline	Date Initiated	Response	Resp. Date	Updated in Design?
BID-17	<p><b>Site Light Pole Fixtures "SL1" &amp; "SL2" &amp; Related Pole Bases RFI</b></p> <p>Sheet E002 Keynote 11 and the notes/comments for both Type "SL1" &amp; "SL2" on sheet E501 indicates to submit provisions and calculations for light poles to support floodlights, solar panels, receptacles, cameras, network switches, and lighting control devices as required.</p> <p>Details 2 &amp; 3 on drawing E501 show the design requirements of the pole bases.</p> <p>Design information regarding Cameras and Network switches is not provided.</p> <p><b>Please confirm that the Engineer of Record will advise of any necessary changes to the pole bases design upon review of submittals. Otherwise, please provide further information to assist with current competitive bid process based on this question (i.e. lack of info on what will go on the poles...).</b></p>	E002, E501	N/A	Electrical Eng.	4/23/2025	Verbaige will be included in addendum to treat this as a delegated design. The contractor will engage a structural engineer from the pole manufacturer to detail out the pole design.	5/2/2025	Addendum #2
BID-18	<p><b>Pole Mount Flood Light Fixture "FL" RFI</b></p> <p>Light Fixture "FL" is shown on drawing E002 to be mounted on the Type "SL2" Pole Lights.</p> <p>However, in the comments on the Lighting Fixture Schedule on E501, it is indicated to be mounted on the Type "SL1" Fixtures.</p> <p><b>Please confirm whether "FL" fixtures are to be mounted on the Type "SL2" Pole as indicated on drawing E002 or on the Type "SL1" Pole as indicated on drawing E501. Please clarify the "FL" scope for bidders.</b></p>	E002, E501	N/A	Electrical Eng.	4/23/2025	Mount flood lights to poles as shown on sheet E002. See response to BID-17.	5/2/2025	N/A
BID-19	<p><b>"SL2" Poles with "FL" Fixtures Design Intent RFI</b></p> <p>The Type "SL2" Pole lights are shown to have the light fixture top mounted (ref. S501 "Image").</p> <p><b>Where the Type "FL" fixtures are shown on the Type "SL2" Poles, are they to be Tenon-mounted below the fixture that comes with the "SL2" pole?</b></p> <p><b>The "Image" for "FL" on E501 shows the "FL" to be top mounted as well, so we need clarification on the design intent / direction.</b></p>	E002, E501	N/A	Electrical Eng.	4/23/2025	Mount flood lights to the poles to avoid casting shadows.	5/2/2025	N/A

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BID-20	<p><b>Erosion Control "Slope Drains" Piping Size(s) Needed</b></p> <p>"Slope drains" are called for at four (4) locations around the Wet Pond 01 area as a part of the scope shown on C-400, but no pipe size(s) are provided.</p> <p><b>Please provide the size(s) of piping for the "slope drains" shown on sheet C-400.</b></p> <p><b>If there are different sizes for specific locations/uses, clarify each location individually.</b></p>	C-400	N/A	Civil Engineer	4/25/2025	Slope Drains sizes have been identified on Sheet C-400.	5/2/2025	Addendum #2
BID-21	<p><b>Missing RIM &amp; INV Elevations</b></p> <p><b>Please provide RIM and INV elevations for CB-42, CB-43, and FES-41 shown on C-200, as RIM and INV elevations for these items are not found on sheet C-201 with the rest of the RIM and INV elevations for the project.</b></p>	C-200, C-201	N/A	Civil Engineer	4/25/2025	<p>The missing RIM and INV elevations have been added to the Storm Drainage Table on C-201.</p> <p><b>Please note, the INV elevations have been revised for several of the storm structures to ensure sufficient cover is provided over the pipe.</b></p>	5/2/2025	Addendum #2
BID-22	<p><b>DI-23 and/or CB-23 Scope Clarification Requested</b></p> <p>Sheet C-200 includes a DI-23, but no CB-23.</p> <p>On the other hand, Sheet C-201 includes a CB-23, but no DI-23</p> <p><b>Should the CB-23 shown on drainage table of C-201 be labeled DI-23? Or should DI-23 on C-200 be labeled CB-23? Or otherwise? Please clarify this issue.</b></p>	C-200, C-201	N/A	Civil Engineer	4/25/2025	Storm Table has been revised to DI-23.	5/2/2025	Addendum #2
BID-23	<p><b>DI-9 and/or DI-11 Scope Clarification Requested</b></p> <p>Sheet C-200 includes a DI-11, but no DI-9.</p> <p>On the other hand, Sheet C-201 includes a DI-9, but no DI-11</p> <p><b>Should the DI-9 shown on drainage table of C-201 be labeled DI-11? Or should DI-11 on C-200 be labeled DI-9? Or otherwise? Please clarify this issue.</b></p>	C-200, C-201	N/A	Civil Engineer	4/25/2025	<p>The missing RIM and INV elevations have been added to the Storm Drainage Table on C-201.</p> <p><b>Please note, the INV elevations have been revised for several of the storm structures to ensure sufficient cover is provided over the pipe.</b></p>	5/2/2025	Addendum #2

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BID-24	<p><b>Concrete Sidewalk Subbase Clarification</b> Detail T-30.01.1 on sheet C-105 is the standard City of Raleigh Concrete Sidewalk detail.</p> <p>The detail indicates two (2) options for the subbase below the sidewalk concrete: (a) compacted ABC stone OR (b) soil compacted to a density of no less than 95%.</p> <p><b>For competitive bid process, please advise which option should be included in bid proposals, stone or compacted soil? If ABC stone is required, please clarify qty / depth required.</b></p>	C-105	N/A	Civil Engineer	4/25/2025	The Detail T-20.01.1 on Sheet C-105 has been revised with ABC as the only option.	5/2/2025	Addendum #2
BID-25	<p><b>Specified Mirror Size Issue</b> Please reference specification section 10 28 00 – Toilet, Bath, &amp; Laundry Accessories, 2.1, Q. <b>Mirror Unit 102800.16</b>, which are shown in Details 5 &amp; 9 on sheet A511.</p> <p>The basis of design mirror, Bobrick B-292, with welded stainless steel frame, satin finish with shelf, is not available in 24” wide x 40” tall as called for in the specification and as shown in the drawings.</p> <p>The closest size available from Bobrick is 24” wide x 36” tall.</p> <p><b>Please advise if a different size (e.g. 24"W x 36"T by Bobrick) will be acceptable or else update the specifications to provide mfr options that come in the desired 24"W x 40"T size.</b></p>	Det. 5 & 9 / A511	10 28 00 Part 2.1 Q.	Architectural	4/25/2025	Bobrick B-292 24" x 36" as Basis of Design or approved equal is acceptable	5/2/2025	N/A

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BID-26	<p><b>Wireless Access Point(s) for Wi-Fi Scope Clarification</b> Keyed Note #2 in Detail 2/E511 notes that the contractor is to provide cabling to location(s) of WAP(s) for the project.</p> <p>From review of the E-plans, it seems that there is a singular WAP for the project, which appears to be located/shown on the west face of the RR Bldg per Detail 1/E111 [although the "WAP" symbol used on E111 does not match symbol for WAP on E001, so we are not certain of the WAP count/scope/location(s)].</p> <p>It is not clear who is to provide the WAP(s) on the project, as no specs are provided nor complete scope responsibility notes for the equipment (By CMAR? By Owner / Others?).</p> <p><b>Please clarify the intended scope for any/all Wireless Access Point(s) ("WAPs") for Wi-Fi service within this project, including location(s) for WAPs and scope responsibilities*.</b></p> <p>*In response, be clear about CMAR scope responsibilities (scope to include in competitive bids) versus the scope responsibilities of Owner / Owner Vendors / Others (scope to exclude from competitive bids).</p>	"Electrical Symbols" on E001  1/E111  Keyed Note #2 on 2/E511	None Provided	Electrical Eng.	4/25/2025	Please refer to schedule on 2/E511 for WAP symbol description. The contractor shall provide the cable and conduit, the owner will provide the WAP device itself.	5/2/2025	Addendum #2
BID-27	<p><b>Access Control Scope Clarification</b> Door Schedule for the Restroom Building/Shade Structure is found on A001. Door Schedule for the Burn Building is found on BB605. Door Schedule for the Training Tower is found on TT603.</p> <p>No access control scope (keypads / "KP", card readers / "CR", panic buttons / "PB", etc.) is shown/called for on the Door Schedules nor on the Elec plans nor elsewhere in the Bid Documents that we can locate.</p> <p><b>Please confirm there is no access control scope on the project or else clarify the scope that should be included in competitive bids.</b></p>	A001, BB605, TT603, Elec Plans	None Provided	Architectural	4/25/2025	As stated during PreCon, no Access Controls are included in this project scope.	5/2/2025	N/A
BID-28	<p><b>FES-13 Clarification Requested</b> Please confirm RIM/INV elevations for FES-13.</p> <p>Some bidders have inquired / questioned the (-) negative RIM elevation of -6.88' as shown in the table on sheet C-201, wanting to make sure that this is correct / as intended.</p> <p><b>Please confirm or clarify FES-13 RIM/INV elevations.</b></p>	C-201	N/A	Civil Engineer	5/2/2025			



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May 2, 2025

RFI No.	Question	Dwg Ref	Spec Ref	Assignee Discipline	Date Initiated	Response	Resp. Date	Updated in Design?
BID-29	<p><b>Pavement Detail for Rescuer Road Extension - Clarify Dwg Discrepancy</b> Sheet C-102 is the Pavement Materials Plan, which shows heavy duty asphalt paving for the entire Rescuer Road extension from start of project location to entry into the new site parking area.</p> <p>On the other hand, sheet C-301 Stream Crossing Plan has a different pavement section detail for the entrance road.</p> <p><b>Please clarify: For the Rescuer Road extension from start of project location to entry into the new site parking area, are we to use the pavement section detail from C-102 or from C-301?</b></p>	C-102, C-301	N/A	Civil Engineer	5/2/2025			