

SECTION 905 -- PROPOSAL (CONTINUED)

I (We) hereby certify by execution of the Section 905 proposal below, that all certifications, disclosures and affidavits incorporated herein are deemed to be duly executed in the aggregate, fully enforceable and binding upon delivery of the bid proposal. I (We) further acknowledge that this certification shall not extend to the bid bond or alternate security which must be separately executed for the benefit of the Commission. This signature does not cure deficiencies in any required certifications, disclosures and/or affidavits. I (We) also acknowledge the right of the Commission to require full and final execution on any certification, disclosure or affidavit contained in the proposal at the Commission's election upon award. Failure to so execute at the Commission's request within the time allowed in the Standard Specifications for execution of all contract documents will result in forfeiture of the bid bond or alternate security.

Bidder acknowledges receipt of and has added to and made a part of the proposal and contract documents the following addendum (addenda):

ADDENDUM NO. 1 DATED 10/18/2017 ADDENDUM NO. _____ DATED _____
 ADDENDUM NO. 2 DATED 11/7/2017 ADDENDUM NO. _____ DATED _____

Number	Description
1	Postponed; Amendment EBS Download Required.
2	Revised Advertisement; Revised NTB No. 416; Documents in SP 907-242-1 has been Revised; Revised or Added Plan Sheet Nos.1-2, 28-30, 32-35, 39-40, 43, 57, & 77; Amendment EBS Download Required.

TOTAL ADDENDA: 2
 (Must agree with total addenda issued prior to opening of bids)

Respectfully Submitted,

DATE _____

 Contractor

BY _____

Signature

TITLE _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____

FAX _____

E-MAIL _____

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of _____ and the names, titles and business addresses of the executives are as follows:

 President Address

 Secretary Address

 Treasurer Address

The following is my (our) itemized proposal.

BWO-5231-51(001)/ 503006301000 & LWO-5001-51(008)/ 503006302000

Newton County(ies)

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 901 - ADVERTISEMENT

Sealed bids will be received by the Mississippi Transportation Commission in the Office of the Contract Administration Engineer, Room 1013, Mississippi Department of Transportation Administration Building, 401 North West Street, Jackson, Mississippi, until 10:00 o'clock A.M., Tuesday, November 28, 2017, and shortly thereafter publicly opened on the Sixth Floor for:

Construction of District 5 Warehouse, known as State Project Nos. BWO-5231-51(001) & LWO-5001-51(008) / 503006301 & 302 in Newton County.

The attention of bidders is directed to the predetermined minimum wage rate set by the U. S. Department of Labor under the Fair Labor Standards Act.

The Mississippi Department of Transportation hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, age, disability, religion or national origin in consideration for an award.

Plans and specifications are on file in the offices of the Mississippi Department of Transportation.

Bid proposals must be purchased online at <https://shopmdot.ms.gov>. Specimen proposals may be viewed and downloaded online at no cost at <http://mdot.ms.gov> or purchased online. Proposals are available at a cost of Ten Dollars (\$10.00) per proposal plus a small convenience fee. Cash or checks will not be accepted as payment.

Plans must be purchased online at <https://shopmdot.ms.gov>. Costs of plans will be on a per sheet basis plus a small convenience fee. If you have any questions, you can contact the MDOT Plans Print Shop at (601) 359-7460, or e-mail at plans@mdot.state.ms.us. Plans will be shipped upon receipt of payment. Cash or checks will not be accepted as payment.

Bid bond, signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent, with Power of Attorney attached, a Cashier's check or Certified Check for five (5%) percent of bid, payable to STATE OF MISSISSIPPI, must accompany each proposal.

The attention of bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.

MELINDA L. MCGRATH
EXECUTIVE DIRECTOR

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 416

CODE: (SP)

DATE: 11/7/2017

SUBJECT: Contract Time

**PROJECT: BWO-5231-51(001)/ 503006301 & LWO-5001-51(008)/ 503006302 –
Newton County**

The calendar date for completion of work to be performed by the Contractor for this project shall be **May 15, 2019** which date or extended date as provided in Subsection 108.06 shall be the end of contract time. It is anticipated that the Notice of Award will be issued no later than **December 12, 2017** and the effective date of the Notice to Proceed / Beginning of Contract Time will be **March 15, 2018**.

Should the Contractor request a Notice to Proceed earlier than **March 15, 2018** and it is agreeable with the Department for an early Notice to Proceed, the requested date will become the new Notice to Proceed date.

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PROJECT: DISTRICT 5 WAREHOUSE 2017

PROJECT NUMBER: BWO-5231-51(001) 503006
 LWO-5001-51(008) 503006

DATE: OCTOBER 25, 2017

DESCRIPTION A: This Work shall consist of minor site work and all construction work necessary in constructing a Warehouse for District Five at Newton, Newton County, Mississippi, Project No. BWO-5231-51(001) 503006, in accordance with these Specifications and conforming to the Drawings.

The Site Improvements portion of this Work shall consist of site work outside and adjacent to the Work described for construction of the building or structures for District Five at Newton, Newton County, Mississippi, Project No. LWO-5001-51(008) 503006. See Civil Drawings and Special Provisions for extent of this portion of the Work.

It is the intention of these Specifications to provide the necessary items and instruction for a complete building including all code compliance. Omission of items or instruction necessary or considered standard good practice for the proper installation and construction of the building shall not relieve the Contractor of furnishing and installing such items and conforming to the building codes having jurisdiction.

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00 21 13	INSTRUCTION TO BIDDERS	6
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01 32 00	CONSTRUCTION PROGRESS DOCUMENTATION	3
01 32 33	PHOTOGRAPHIC DOCUMENTATION	2
01 33 00	SUBMITTAL PROCEDURES	10
01 40 00	QUALITY REQUIREMENTS	9
01 42 00	REFERENCES	6
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	DIVISION 04 – MASONRY (Not Used)	
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08 43 13	ALUMINUM-FRAMED STOREFRONTS	6 **
08 71 00	DOOR HARDWARE	9
08 80 00	GLAZING	6
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09 05 15	COLOR DESIGN	3
09 29 00	GYP SUM BOARD	5
09 31 13	THIN-SET CERAMIC TILING	5
09 51 00	ACOUSTICAL CEILINGS	5
09 65 13	RESILIENT BASE AND ACCESSORIES	3
09 68 18	TEXTILE COMPOSITE FLOORING	7
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10 26 13	CORNER GUARDS	2
10 28 13	TOILET ACCESSORIES	3
10 43 15	DEFIBRILLATORS AND CABINETS	2
10 44 16	FIRE EXTINGUISHERS	2
10 56 13	METAL STORAGE SHELVING	2 **
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10 56 30	PALLET STORAGE SYSTEM	2 **
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(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET
 OF SECTION 905 AS ADDENDA)

** Indicates changed/added Sections in Addendum No. Two

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**ADDENDUM No. 2
DOCUMENT 00 91 13-B**

DATE: OCTOBER 25, 2017

PROJECT: DISTRICT FIVE WAREHOUSE AT NEWTON, NEWTON COUNTY,
MISSISSIPPI

PROJECT NUMBERS: BWO-5231-51(001) 503006
LWO-5001-51(008) 503006

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Bidders are hereby advised that the following changes are to be made to this Contract. Addendum No. Two contains 3 pages plus 45 pages for a total of 48 pages and attached 14 Drawings as listed below.

1.02 SPECIFICATIONS

- A. Document Number 00 01 10 – Table of Contents, has been revised to include Section 11 13 00 - Loading Dock Equipment. Delete Document 00 01 10 – Table of Contents and replace with attached Document 00 01 10 – Table of Contents with Revised date of 10-25-2017 (5 pages).
- B. Section 05 51 00 – Metal Stairs, has been revised to delete reference to railings attached to metal stairs and attached to walls adjacent to metal stairs and to add Related Section. Delete Section 05 51 00 – Metal Stairs and replace with Section 05 51 00 – Metal Stairs with Revised date of 10-25-2017 (5 pages).
- C. Section 08 43 13 – Aluminum-Framed Storefronts, has been revised to edit framing members. Delete Section 08 43 13 – Aluminum-Framed Storefronts and replace with Section 08 43 13 – Aluminum-Framed Storefronts with Revised date of 10-25-2017 (6 pages).
- D. Section 10 56 13 – Metal Storage Shelving, has been revised to include Bin Storage and Battery Racks. Delete Section 10 56 13 – Metal Storage Shelving and replace with attached Section 10 56 13 – Metal Storage Shelving with Revised date of 10-25-2017 (2 pages).
- E. Section 10 56 15 – Heavy Duty Metal Storage Shelving, has been revised to indicate quantity. Delete Section 10 56 15 – Heavy Duty Metal Storage Shelving and replace with attached Section 10 56 15 – Heavy Duty Metal Storage Shelving with Revised date of 10-25-2017 (2 pages).
- F. Section 10 56 30 – Pallet Storage System, has been revised to indicate quantities of pallet storage system components and revised to include Tire Racks. Delete Section 10 56 30 – Pallet Storage System and replace with Section 10 56 30 – Pallet Storage System with Revised date of 10-25-2017 (2 pages).

- G. Add the attached Section 11 13 00 – Loading Dock Equipment (5 pages) to the Specifications.
- H. Section 13 34 19 – Metal Building Systems, has been revised. Delete Section 13 34 19 – Metal Building Systems and replace with attached Section 13 34 19 Metal Building Systems with revised date of 10-25-2017 (8 pages).
- I. Section 28 01 30 – Surveillance System, has been revised. Delete Section 28 01 30 – Surveillance System and replace with Section 28 01 30 – Surveillance System with Revised date of 10-25-2017 (10 pages).

1.03 DRAWINGS

- A. Sheet No. 1 – Title Sheet, revised notes in permit block. Delete Sheet No. 1 – Title Sheet and replace with Sheet No. 1 – Title Sheet with Revision 1 dated 10-25-2017.
- B. Working No. A001, Material Referencing Table has been deleted. Delete Working No. A001 and replace with Working No. A001 with Revision 1 dated 10-25-2017.
- C. Working No. A200, revised layout of warehouse storage, revised names of storage racks, added references to specification sections, revised general notes. Delete Working No. A200 and replace with Working No. A200 with Revision 2 dated 10-25-2017.
- D. Working No. A201, revised name of Parts Room shelving and added reference to metal storage shelving specification section. Delete Working No. A201 and replace with Working No. A201 with Revision 2 dated 10-25-2017
- E. Working No. A210, revised reference to railing specification section. Delete Working No. A210 and replace with Working No. A210 with Revision 1 dated 10-25-2017
- F. Working No. A300, revised East Elevation to show Loading Dock Edge Leveler and revised references to bollard and railing specification sections. Delete Working No. A300 and replace with Working No. A300 with Revision 1 dated 10-25-2017.
- G. Working No. A400, revised handrail in stair section, revised reference to railing specification section, and revised reference to metal rebounding bollard specification section. Delete Working No. A400 and replace with Working No. A400 with Revision 1 dated 10-25-2017.
- H. Working No. A401, revised handrail in stair details and revised reference to railing specification section. Delete Working No. A401 and replace with Working No. A401 with Revision 1 dated 10-25-2017.
- I. Working No. A600, revised detail callouts. Delete Working No. A600 and replace with Working No. A600 with Revision 2 dated 10-25-2017.
- J. Working No. S200, revised foundation plan. Delete Working No. S200 and replace with Working No. S200 with Revision 1 dated 10-25-2017.
- K. Working No. S210, revised mezzanine framing plan. Delete Working No. S210 and replace with Working No. S210 with Revision 1 dated 10-25-2017.
- L. Working No. S301, revised to add loading dock leveler. Delete Working No. S301 and replace with Working No. S301 with Revision 1 dated 10-25-2017.

- M. Working No. E101, revised to add Note #4 and clarify existing and new conduit. Delete Working No. E101 and replace with Working No. E101 with Revision 1 dated 10-20-2017.
- N. Working No. E401, revised Power Connections Schedule. Delete Working No. E401 and replace with Working No. E401 with Revision 1 dated 10-20-2017.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION

SECTION 05 51 00 METAL STAIRS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Preassembled steel stairs with concrete-filled treads.
2. Supplementary items required for proper installation.

B. Related Sections:

1. Section 05 50 00 Metal Fabrications for railings attached to metal stairs and attached to walls adjacent to metal stairs.
2. Section 09 05 15 Color Design for selected paint colors.
3. Section 09 90 00 Painting and Coating for finish painting.

1.2 ACTION SUBMITTALS

A. Product Data: For metal pan stairs.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

C. Delegated-Design Submittal: For installed products indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.3 QUALITY ASSURANCE

A. NAAMM Stair Standard: Comply with "Recommended Voluntary Minimum Standards for Fixed Metal Stairs" in NAAMM AMP 510, "Metal Stairs Manual," for class of stair designated, unless more stringent requirements are indicated.

1. Preassembled Stairs: Commercial class.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. 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:

1. Alfab, Inc., Enterprise, AL. Tel. (334) 347-9516.
2. American Stair, Inc., Willow Springs, IL. Tel. (312) 839-5880.
3. Sharon Companies Ltd. (The), Medina, OH. Tel. (800) 792-0129.

B. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements

2.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design metal stairs, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- B. Structural Performance of Stairs: Metal stairs shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.
 - 1. Uniform Load: 100 lbf/sq. ft..
 - 2. Concentrated Load: 300 lbf applied on an area of 4 sq. in..
 - 3. Uniform and concentrated loads need not be assumed to act concurrently.
 - 4. Stair Framing: Capable of withstanding stresses resulting from railing loads in addition to loads specified above.
 - 5. Limit deflection of treads, platforms, and framing members to L/360 or 1/4 inch, whichever is less.
- C. Structural Performance of Railings: Railings shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated.
 - 1. Handrails and Top Rails of Guards:
 - a. Uniform load of 50 lbf/ ft. applied in any direction.
 - b. Concentrated load of 200 lbf applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 2. Infill of Guards:
 - a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..
 - b. Infill load and other loads need not be assumed to act concurrently.
- D. Seismic Performance: Metal stairs shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
 - 1. Component Importance Factor is 1.5.

2.3 METALS

- A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For components exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.
- B. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.
- C. Steel Plates, Shapes, and Bars: ASTM A 36
- D. Steel Tubing: ASTM A 500 (cold formed) or ASTM A 513.
- E. Rolled-Steel Floor Plate: ASTM A 786, rolled from plate complying with ASTM A 36 or ASTM A 283, Grade C or D.
- F. Steel Bars for Grating Treads: ASTM A 303 steel strip, ASTM A 1011 or ASTM A 1018.
- G. Wire Rod for Grating Crossbars: ASTM A 510.
- H. Cast Iron: Either gray iron, ASTM A 48, or malleable iron, ASTM A 47, unless otherwise indicated.

- I. Uncoated, Cold-Rolled Steel Sheet: ASTM A 1008, either commercial steel, Type B, or structural steel, Grade 25, unless another grade is required by design loads; exposed.
- J. Uncoated, Hot-Rolled Steel Sheet: ASTM A 1011, either commercial steel, Type B, or structural steel, Grade 30, unless another grade is required by design loads.

2.4 MISCELLANEOUS MATERIALS

- A. Provide anchors for embedding units in concrete, either integral or applied to units, as standard with manufacturer.
- B. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187. Apply bituminous paint to concealed surfaces of cast-metal units set into concrete.
- C. Apply clear lacquer to concealed surfaces of extruded units set into concrete.
- D. Fasteners: Provide zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941, Class Fe/Zn 12 for exterior use, and Class Fe/Zn 5 where built into exterior walls. Select fasteners for type, grade, and class required.
- E. Shop Primers: Provide primers that comply with Section 09 90 00 "Painting and Coatings".
- F. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.
- G. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.
- H. Concrete Materials and Properties: Comply with requirements in Section 03 30 00 "Cast-in-Place Concrete" for normal-weight, air-entrained, ready-mix concrete with a minimum 28-day compressive strength of 3000 psi unless otherwise indicated.
- I. Welded Wire Fabric: ASTM A 185, 6 by 6 inches, W1.4 by W1.4, unless otherwise indicated.
- J. Precast Concrete Treads: Comply with requirements in Section 03 30 00 "Cast-in-Place Concrete" for normal-weight, ready-mixed concrete with a minimum 28-day compressive strength of 5000 psi and a total air content of not less than 4 percent or more than 6 percent. Reinforce with galvanized, welded wire fabric, 2 by 2 inches by 0.062-inch- diameter wire; comply with ASTM A 185 and ASTM A 82, except for minimum wire size.

2.5 FABRICATION, GENERAL

- A. Provide complete stair assemblies, including metal framing, hangers, struts, railings, clips, brackets, bearing plates, and other components necessary to support and anchor stairs and platforms on supporting structure.
 - 1. Join components by welding unless otherwise indicated.
 - 2. Use connections that maintain structural value of joined pieces.
- B. Preassembled Stairs: Assemble stairs in shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges. Remove sharp or rough areas on exposed surfaces.
- D. Form bent-metal corners to smallest radius possible without impairing work.
- E. Weld connections 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. Weld exposed corners and seams continuously unless otherwise indicated.
 - 5. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for [Type 1 welds: no evidence of a welded joint. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners where possible. Locate joints where least conspicuous.
- F. Fabricate joints that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

2.6 STEEL-FRAMED STAIRS

- A. NAAMM Stair Standard: Comply with "Recommended Voluntary Minimum Standards for Fixed Metal Stairs" in NAAMM AMP 510, "Metal Stairs Manual," Commercial Class, unless more stringent requirements are indicated.
- B. Stair Framing:
 - 1. Fabricate stringers of steel plates or channels. Provide closures for exposed ends of channel stringers.
 - 2. Construct platforms of steel plate or channel headers and miscellaneous framing members as needed to comply with performance requirements.
 - 3. Weld or bolt stringers to headers; weld or bolt framing members to stringers and headers. If using bolts, fabricate and join so bolts are not exposed on finished surfaces.
 - 4. Where stairs are enclosed by gypsum board shaft-wall assemblies, provide hanger rods or struts to support landings from floor construction above or below.
 - 5. Where masonry walls support metal stairs, provide temporary supporting struts designed for erecting steel stair components before installing masonry.
- C. Metal-Pan Stairs: Form risers, subtread pans, and subplatforms to configurations shown from steel sheet of thickness needed to comply with performance requirements but not less than 0.067 inch.
 - 1. At Contractor's option, provide stair assemblies with metal-pan subtreads filled with reinforced concrete during fabrication. (or)
 - 2. Provide epoxy-resin-filled treads, reinforced with glass fibers, with slip-resistant, abrasive surface.

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Finish metal stairs after assembly.
- C. Preparation for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning" or SSPC-SP 3, "Power Tool Cleaning" as standard with manufacturer.
- D. Apply shop primer to uncoated surfaces of metal stair components. Comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal stairs. Set units accurately in location, alignment, and elevation, measured from established lines and levels and free of rack.
- B. Install metal stairs by welding stair framing to steel structure or to weld plates cast into concrete unless otherwise indicated.
- C. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints. Do not weld, cut, or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication.
- D. Field Welding: Comply with requirements for welding in "Fabrication, General" Article.
- E. Place and finish concrete fill for treads and platforms to comply with Section 03 30 00 "Cast-in-Place Concrete."
- F. Install precast concrete treads with adhesive supplied by manufacturer.

3.2 ADJUSTING AND CLEANING

- A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

END OF SECTION

SECTION 08 43 13

ALUMINUM-FRAMED STOREFRONTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Aluminum-framed storefront system with tubular aluminum sections with supplementary internal support framing as required, shop fabricated, factory finished, glass and glazing, intermediate rails / muntins, related flashing, anchorage and attachment devices.
- B. Related Sections:
 - 1. Section 08 80 00 - Glazing.
 - 2. Section 09 05 15 - Color Design.
 - 3. Section 12 21 31 - Horizontal Louver Blinds: Attachments to framing member.

1.02 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

1.03 ACTION SUBMITTALS

- A. Product Data: For each type of product. Submit component dimensions; describe components within assembly, anchorage, fasteners, and glass.
- B. Shop Drawings: Include plans, elevations, sections, full-size details, and attachments to other work.
 - 1. Show connection to and continuity with adjacent thermal, weather, air, and vapor barriers.
- C. Samples: For each exposed finish required.
- D. Delegated-Design Submittal: For aluminum-framed storefronts indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.04 INFORMATIONAL SUBMITTALS

- A. Energy Performance Certificates: NFRC-certified energy performance values from manufacturer.
- B. Product test reports.
- C. Field quality-control reports.
- D. Sample warranties.

1.05 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.06 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. Design structural support framing components under direct supervision of a professional engineer experienced in design of this Work and licensed at the place where the Project is located.
- C. Testing Agency Qualifications: Qualified according to ASTM E 699 for testing indicated.
- D. Product Options: Information on Drawings and in Specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
 - 1. Do not change intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If changes are proposed, submit comprehensive explanatory data to Architect for review.

1.07 DELIVERY, STORAGE, AND PROTECTION

- A. Deliver, store, protect, and handle products to and on project site per manufacturer's instructions.
- B. Store products on minimum 4-inch high wood blocking and cover. Do not use non-vented plastic or canvas that could create a humidity chamber.

1.08 FIELD CONDITIONS

- A. Ambient Conditions: Do not install sealant or glazing materials when ambient temperature is less than 40 degrees F during and 48 hours after installation.

1.09 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of aluminum-framed entrances and storefronts that do not comply with requirements or that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Two years from Date of Final Completion.
- B. Special Finish Warranty: Standard form in which manufacturer agrees to repair finishes or replace aluminum that shows evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Warranty Period: 20 years from Date of Final Completion.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 01 40 00 "Quality Requirements," to design aluminum-framed storefronts.

- B. General Performance: Comply with performance requirements specified, as determined by testing of aluminum-framed storefronts representing those indicated for this Project without failure due to defective manufacture, fabrication, installation, or other defects in construction.
 - 1. Aluminum-framed storefronts shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
 - 2. Failure also includes the following:
 - a. Thermal stresses transferring to building structure.
 - b. Glass breakage.
 - c. Noise or vibration created by wind and thermal and structural movements.
 - d. Loosening or weakening of fasteners, attachments, and other components.
- C. Wind Loads: Provide framing system; include anchorage, capable of withstanding wind load design pressure as required by IBC 2012 Building Code and local Authorities having jurisdiction, whichever are more stringent.
- D. Air Infiltration: The test specimen shall be tested in accordance with ASTM E 283. Air infiltration rate shall not exceed 0.06 cfm/ft² at a static air pressure differential of 6.24 psf.
- E. Water Resistance: The test specimen shall be tested in accordance with ASTM E 331. There shall be no leakage at a minimum static air pressure differential of 8 psf as defined in AAMA 501.
- F. Uniform Load: A static air design load based on loads shown on Structural Drawings (without steel reinforcing) shall be applied in the positive and negative direction in accordance with ASTM E 330. There shall be no deflection in excess of 1/180 of the span of any framing member. At a structural test load equal to 1.5 times the specified design load, no glass breakage or permanent set in the framing members in excess of 0.4 percent of their clear spans shall occur.

2.02 MANUFACTURERS

- A. Manufacturers: Drawings and Specifications are based on products manufactured by Kawneer Co., Inc., 555 Guthridge Court, Norcross, GA 30092. Tel. (770) 449-5555.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. EFCO Corporation, Monett, MO. Tel. (800) 221-4169.
 - 2. Oldcastle Building Envelope, Terrell, TX. Tel. (866) 653-2278.
 - 3. Traco, Cranberry Township, PA. Tel. (724) 776-7000.
- C. Substitutions shall fully comply with specified requirements and Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.

2.03 MATERIALS

A. Framing Members: Aluminum Storefront Framing: Equal to Kawneer Trifab VG 451, 2 inches by 4-1/2 inches nominal dimensions; Screw Spline Fabrication

1. Material Standard: ASTM B 221; 6063-T6 alloy and temper
2. Member Wall Thickness: Each framing member shall provide structural strength to meet specified performance requirements.
3. Tolerances: Reference to tolerances for wall thickness and other cross-sectional dimensions of storefront members are nominal and in compliance with AA Aluminum Standards and Data.

B. Accessories:

1. Fasteners-Storefront: Shall be 300 Series Stainless Steel.
2. Gaskets: Exterior Glazing gaskets shall be extruded EPDM rubber. Interior Spacer shall be compatible with Silicone Sealant.
3. Perimeter Anchors: Aluminum. When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.
4. Intermediate Rails / Muntins: As indicated on Drawings.

C. Aluminum Framing and Components:

1. Material Standard: Extruded Aluminum; ASTM B221; 6063-T6 alloy for extruded structural members.
2. Member Wall Thickness: Each framing member shall provide structural strength to meet specified performance requirements.
3. Glass: Specified in Section 08 80 00.
4. Glazing Materials: Specified in Section 08 80 00.
5. Flashing: Minimum 0.032-inch-thick aluminum.
6. Sealant and Backing Materials:
 - a. Sealant used within system (Not Used for Glazing): Manufacturer's standard materials to achieve weather, moisture, and air infiltration requirements.
 - b. Perimeter Sealant: Specified in Section 07 92 00.

2.04 FABRICATION

A. General:

1. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
2. Accurately fit and secure joints and corners. Make joints flush, hairline, and weatherproof.
3. Prepare components to receive anchor devices. Fabricate anchors.
4. Arrange fasteners and attachments to conceal from view.
5. Reinforce interior horizontal head rail to receive blind track brackets and attachments.
6. Reinforce framing members for imposed loads.

2.05 ALUMINUM FINISHES

- A. High-Performance Organic Finish: Two-coat fluoropolymer (Kynar 500) finish complying with AAMA 2605 and containing not less than 70 percent PVDF resin by weight in color coat.
 - 1. Color and Gloss: As selected by MDOT Architect from manufacturer's full range of standard colors. Refer to Section 09 05 15 - Color Design. For color selection.
- B. Extent of Finish:
 - 1. Apply factory coating to all surfaces exposed at completed assemblies.
 - 2. Apply finish to surface cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.
 - 3. Apply touch-up materials recommended by coating manufacturer for field application to cut ends and minor damage to factory applied finish.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. General:
 - 1. Comply with manufacturer's written instructions.
 - 2. Do not install damaged components.
 - 3. Fit joints to produce hairline joints free of burrs and distortion.
 - 4. Rigidly secure non-movement joints.
 - 5. Install anchors with separators and isolators to prevent metal corrosion and electrolytic deterioration and to prevent impeding movement of moving joints.
 - 6. Seal perimeter and other joints watertight unless otherwise indicated.
- B. Metal Protection:
 - 1. Where aluminum is in contact with dissimilar metals, protect against galvanic action by painting contact surfaces with materials recommended by manufacturer for this purpose or by installing nonconductive spacers.
 - 2. Where aluminum is in contact with concrete or masonry, protect against corrosion by painting contact surfaces with bituminous paint.
- C. Set continuous sill members and flashing in full sealant bed as specified in Section 07 92 00 "Joint Sealants" to produce weathertight installation.
- D. Install components plumb and true in alignment with established lines and grades.
- E. Install operable units level and plumb, securely anchored, and without distortion. Adjust weather-stripping contact and hardware movement to produce proper operation.
- F. Install glazing as specified in Section 08 80 00 "Glazing."

3.02 FIELD QUALITY CONTROL

- A. Manufacturer's Field Services: Upon Owner's request, provide manufacturer's field service consisting of product use recommendations and periodic site visit for inspection of product installation in accordance with manufacturer's instructions.

3.03 PROTECTION AND CLEANING

- A. Protection: Protect installed product's finish surfaces from damage during construction. Protect aluminum storefront system from damage from grinding and polishing compounds, plaster, lime, acid, cement, or other harmful contaminants.
- B. Cleaning: Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.

END OF SECTION

SECTION 10 56 13

METAL STORAGE SHELVING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Metal Shelving, Bin Storage, Axle Racks, Battery Racks and Safety Cabinets as show on the Drawings.

1.02 SUBMITTALS

- A. Submit manufacturer's technical data and installation instructions for each material and component part, including data substantiating that materials comply with requirements.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Equivalent products by the following manufacturers are acceptable:
 - 1. Lyon Metal Products, Aurora, IL. Tel. (603) 892-8941.
 - 2. Eagle Manufacturing Company, Wellsburg, WV. Tel. (304) 737-3171.
 - 3. Penco Products Inc., Oaks, PA. Tel. (610) 666-0500.
 - 4. Stanley Storage Systems, Allentown, PA. Tel. (800) 523-9462.
 - 5. Western Pacific Storage Solutions, San Dimas, CA., Tel. (800) 732-9777.
 - 6. Global Industrial Suppliers
- B. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.

2.02 STORAGE SHELVING,

- A. Storage Shelving: Equal to Penco Products Closed Clipper Heavy Duty Steel Shelving Unit Model No. 1H8026, 36 inches wide, 36 inches deep, and 87 inches high with 6 shelves. Quantity: Units to align all walls in Parts Room 105 as show on drawings.
- B. Bin Storage: Equal to Western Pacific Bin Storage Racks as supplied by Global Industrial Suppliers. Shelves to be 36 inches wide, 18 inches deep and 39 inches high WB6034xx. Color of bins to be selected from full range of colors. Units located as shown on drawings in Warehouse area. Quantities:
 - 1. WB603436 24(G4) and 12(I4) 10 units
 - 2. WB603438 48(G4) 5 units
 - 3. WB603435 30(H4) 5 units
- C. Axle Racks: Equal to Jarke Brand model CR-7, height 7 feet, arm length 16 inches, capacity per arm 1000 pounds, number of arms: 24, base length: 45 inches, capacity per unit: 24,000 pounds.. Quantity (8) required, 4 pair back to back as indicated on the Drawings.
- D. Battery Racks: Equal to Western Pacific WBB485961 (64 capacity per rack) as supplied by Global Industrial Suppliers. Part of Secure Storage on drawings. Quantity of two (2) racks.

- E. Finish: Manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
 - 1. Color: Color to be selected from standard color chart by Project Engineer / MDOT Architect. Refer to Section 09 05 15 – Color Design for color selected.

2.03 SAFETY CABINET

- A. Safety Cabinet: Equal to Eagle Manufacturing 90 Gallon Tower™ Safety Cabinet model 1992LEGS. Cabinets shall meet OSHA, NFPA Code 30 and FM approval. Part of Secure Storage on Drawings. Quantity of two (2) cabinets.
 - 1. Shelves: 2 shelves 30 inches deep.
 - 2. Legs: 4 inches high.
 - 3. Finish Color: Yellow.
 - 4. Dimensions: 43 inches wide by 34 inches deep by 69 inches high.
 - 5. Door Style: 2 manual close.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install units plumb and level, in locations and with mountings as shown.
- B. Securely attach all components together in accordance with manufacturer's installation instructions.
- C. Securely attach units to adjacent units and to wall as required to not move or fall.

3.02 CLEANING AND PROTECTION

- A. At completion of installation, clean surfaces in accordance with manufacturer's instructions. Protect units from damage until acceptance by Owner.

END OF SECTION

SECTION 10 56 15 HEAVY DUTY METAL STORAGE SHELVING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Metal storage shelving as indicated on the Drawings.

1.2 ACTION SUBMITTALS

- A. Product Data: Manufacturer's technical data and installation instructions for each material and component part, including data substantiating that materials comply with requirements.
- B. Color Charts: For (3 copies) each exposed product.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. 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:
 - 1. Lyon Metal Products, Aurora, IL. Tel. (603) 892-8941.
 - 2. Eagle Manufacturing Company, Wellsburg, WV. Tel. (304) 737-3171.
 - 3. Penco Products Inc., Oaks, PA. Tel. (610) 666-0500.
 - 4. Stanley Storage Systems, Allentown, PA. Tel. (800) 523-9462.

- B. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.

2.2 STORAGE SHELVING

- A. Shelving Unit: Heavy Duty Hi-Performance open type prefinished metal shelving complete with hardware and end kit. Equal to Penco Model No. 1H7095, 48 inches wide, 24 inches deep, and 87 inches high with 5 shelves. Quantity: Twenty (20) units as shown for Open Shelving in Warehouse 111.
- B. Finish: Manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
 - 1. Color will be selected from standard color chart by Project Engineer / MDOT Architect. Refer to Section 09 05 15 – Color Design for color selected.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install units plumb and level, in locations and with mountings as indicated.
- B. Securely attach all components together in accordance with manufacturer's installation instructions.
 - 1. Securely fasten units to adjacent units and to wall or floor as required so that units will not move or fall.

3.2 CLEANING AND PROTECTION

- A. Upon completion of installation, clean surfaces in accordance with manufacturer's instructions.
- B. Protect units from damage until acceptance by Owner.

END OF SECTION

SECTION 10 56 30 PALLET STORAGE SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Metal pallet storage system and tire storage racks as shown on the Drawings.
- B. Related Sections: Section 09 05 15 – Color Design.

1.02 ACTION SUBMITTALS

- A. Product Data: Manufacturer's technical data and installation instructions for each material and component part, including data substantiating that materials comply with requirements.
- B. Color Charts: For (3 copies) each exposed product.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Drawings and Specifications are based on products manufactured by Interlake Material Handling and Nashville Wire Products. Local supplier is MSC Industrial Supply Co., Jackson, MS. Tel. (800) 844-3971.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. C & H Distributors, LLC, Milwaukee, WI. Tel. (800) 558-9966.
 - 2. Penco Products Inc., Oaks, PA. Tel. (610) 666-0500.
 - 3. Wireway / Husky, Denver, NC. Tel. (800) 438-5629.
 - 4. Western Pacific (Tire Rack Manufacturer)
 - 5. Ohio Tire Racks (Tire Rack Manufacturer)
 - 6. Ridg-U-Racks (Tire Rack Manufacturer)
- C. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.

2.02 PALLET STORAGE SYSTEM

- A. Pallet Rack Upright: Pre-finished metal columns and braces complete with required accessories and hardware, Product No. SF4-4814, 45,000 lbs. capacity, 14'-0" high, by 4'-0" deep.
- B. Pallet Rack Beam: Pre-finished metal beams complete with required accessories and hardware, Product No, 2SB5-120-248, 11,000 lbs. capacity, 10'-0" wide by 4'-0" deep.
- C. Pallet Supports for 5 inch Beams: Pre-finished metal supports complete with required accessories and hardware: Product No. SPEC-SCS5-48-C3, 1,700 lbs. capacity, 4'-0" deep.

- D. Welded Wire Decking: Galvanized metal welded wire decking complete with required accessories and hardware, 3100 lb capacity, 48 inches by 46 inches.
- E. Quantity: Provide sixty-eight (68) 14'-0" H by 10'-0" W by 4'-0" D units as specified. Each unit will have two (2) uprights, six (6) beams, and twelve (12) pallet supports complete with all accessories and hardware for each of the 68 units.
- F. Finish: Manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
 - 1. Color will be selected from standard color chart by Project Engineer / MDOT Architect. Refer to Section 09 05 15 – Color Design for color selected.

2.03 TIRE RACK STORAGE

- A. Two (2) Tier Double Entry Tire Racks, 5'-0" W by 4'-0" D by 5'-0" H, Base Unit T97B486014 with Add On Units T97B486018 as manufactured by Western Pacific and supplied by Global Industries. Quantity of ten (10) double entry units as shown on Drawings.
- B. Two (2) Tier Single Entry Tire Racks, 5'-0" W by 2'-0" D by 5'-0" H, T97B485964 as manufactured by Western Pacific and supplied by Global Industries. Quantity of eleven (11) single entry units as shown on the Drawings.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install units plumb and level, in locations and with mountings as indicated or as directed by the Project Engineer.
- B. Securely attach all components together in accordance with manufacturer's installation instructions.
 - 1. Securely fasten units to adjacent units and to wall or floor as required so that units will not move or fall.
- C. Repair and refinish damaged products. Restore finishes so there is no evidence of corrective Work. Return items to shop that cannot be satisfactorily repaired or refinished in field, make required alterations and refinish entire unit, or provide new units, at Contractor's option.

3.02 CLEANING AND PROTECTION

- A. At completion of installation, clean surfaces in accordance with manufacturer's instructions.
- B. Protect units from damage until acceptance by Owner.

END OF SECTION

SECTION 11 13 00 LOADING DOCK EQUIPMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Dock levelers.
- B. Related Sections:
 - 1. Section 033000 "Cast-in-Place Concrete" for concrete work for recessed loading dock equipment.

1.2 DEFINITIONS

- A. Operating Range: Maximum amount of travel above and below the loading dock level.
- B. Working Range: Recommended amount of travel above and below the loading dock level for which loading and unloading operations can take place.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for loading dock equipment. Include rated capacities, operating characteristics, electrical characteristics, and furnished specialties and accessories.
- B. Shop Drawings: For loading dock equipment. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
 - 2. Show anchorage, critical installation clearances, connections and accessory items.
 - 3. Provide location template drawings for items supported or anchored to permanent construction.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Welding Qualifications: Qualify procedures and personnel according to the following:
 - 1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
 - 2. AWS D1.3, "Structural Welding Code - Sheet Steel."

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store and handle dock in a manner to avoid significant or permanent damage to fabric or frame.
 - 1. Comply with manufacturer's written instructions for minimum and maximum temperature requirements for storage.

1.6 PROJECT CONDITIONS

- A. Field Measurements: Verify actual dimensions of construction contiguous with loading dock equipment, including slopes of driveways, by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Steel Plates, Shapes, and Bars: ASTM 36/A 36M.
- B. Rolled-Steel Floor Plate: ASTM A 786/A 786M, rolled from steel plate complying with ASTM A 572/A 572M, Grade 55.
- C. Steel Tubing: ASTM A 500, cold formed.
- D. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

2.2 EDGE-OF-DOCK LEVELERS

- A. General: Surface-mounted, hinged-lip-type, edge-of-dock levelers designed for permanent installation on face of loading dock platform; of type, function, operation, capacity, size, and construction indicated; and complete with controls, safety devices, and accessories required.
 - 1. Manufacturers: Equal to Copperloy, by JH Industries, 1981 E. Aurora Road, Twinsburg, Ohio. 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. Beacon Industries, Inc.
 - b. Blue Giant Equipment Corporation.
 - c. Ellis Industries, Inc.
 - d. Vestil Manufacturing Company.
 - e. Bluff Manufacturing
- B. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.
- C. Standard: Comply with ANSI MH 30.1, except for structural testing to establish rated capacity.

- D. Rated Capacity: Capable of supporting total gross load of 20,000 lbs without permanent deflection or distortion.
- E. Platform Deck: 20,000 lb unit safety checker plate steel.
- F. Steel bumper blocks with 4 inches by 10 inches by 13 inches rubber bumpers on steel embedded channel.
- G. Platform Ramp Width: 84 inches.
- H. Hinged Lip: 12-inch standard extension beyond bumper, not less than 1/2-inch- thick, nonskid steel tread plate.
 - 1. Hinge: Full width, piano-type hinge with heavy-wall hinge tube and greased fittings, with gussets on lip and ramp for support.
- I. Function: Dock levelers shall compensate for differences in height between truck bed and loading platform.
 - 1. Vertical Travel: Operating range above platform level of sufficient height to enable lip to extend and clear truck bed before contact with the following minimum working range:
 - a. Above Adjoining Platform: 5 inches.
 - b. Below Adjoining Platform: 5 inches.
 - 2. Automatic Vertical Compensation: Floating travel of ramp with lip extended and resting on truck bed shall compensate automatically for upward or downward movement of truck bed during loading and unloading.
 - 3. Automatic Lateral Compensation: Tilting of ramp with lip extended and resting on truck bed shall compensate automatically for canted truck beds of up to 3 inches over width of ramp.
 - 4. Lip Operation: Manufacturer's standard mechanism that automatically extends and supports hinged lip on ramp edge with lip resting on truck bed over dock leveler's working range, allows lip to yield under impact of incoming truck, and automatically retracts lip when truck departs.
 - a. Length of Lip Extension: 17 inches
- J. Mechanical Operating System: Manual control; counterbalance and spring operation. Spring-operated raising and walk-down lowering of unloaded ramp. Equip leveler with a torsion-spring counterbalancing mechanism controlled by a hold-down device.
 - 1. Lever Handle: Self-storing lever handle for raising unloaded ramp with minimal lifting force by pulling lever back to extend lip and pushing lever forward to lower ramp and lip.
 - 2. Removable Lifting Handle: For raising unloaded ramp by lifting action.

- K. Construction: Fabricate dock-leveler frame, platform supports, and lip supports from structural- and formed-steel shapes. Weld platform and hinged lip to supports. Fabricate entire assembly to withstand deformation during both operating and stored phases of service. Chamfer lip edge to minimize obstructing wheels of material-handling vehicles.
 - 1. Cross-Traffic Support: Manufacturer's standard method of supporting ramp at platform level in stored position with lip retracted. Provide a means to release supports to allow ramp to descend below platform level.
 - 2. Maintenance Strut: Integral strut to positively support ramp in up position during maintenance of dock leveler.
- L. Dock-Leveler Finish: Painted, color selected by Project Engineer / MDOT Architect from manufacturer's full range of colors.

2.3 GENERAL FINISH REQUIREMENTS

- A. Finish loading dock equipment after assembly and testing.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of loading dock equipment.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Coordinate size and location of loading dock equipment indicated to be attached to or recessed into concrete or masonry, and furnish anchoring devices with templates, diagrams, and instructions for their installation.
- B. Place self-forming pan system for edge-of-dock levelers in proper relation to loading platform before pouring concrete.

3.3 INSTALLATION

- A. General: Install loading dock equipment, including as required for a complete installation.
- B. Top-of-Dock Levelers: Attach dock levelers to loading dock platform in a manner that complies with requirements indicated for arrangement and position relative to top of platform.
 - 1. Weld anchor holes in contact with continuous embedded loading dock edge channel. Weld or bolt bumper blocks to face of loading dock.
- C. Dock Bumpers: Attach dock bumpers to face of loading dock in a manner that complies with requirements indicated for spacing, arrangement, and position relative to top of platform and anchorage. Comply with manufacturer's instructions.

3.4 ADJUSTING

- A. Adjust loading dock equipment to function smoothly and safely, and lubricate as recommended by manufacturer.
- B. Test dock levelers for vertical travel within operating range indicated.
- C. After completing installation of exposed, factory-finished loading dock equipment, inspect exposed finishes and repair damaged finishes.

3.5 DEMONSTRATION

- A. Train Owner's maintenance personnel to adjust, operate, and maintain loading dock equipment.

END OF SECTION

SECTION 13 34 19 METAL BUILDING SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Building Type: The building is a single-story, single-span, rigid-frame-type pre-engineered metal building of the nominal length, width eave height, and roof pitch indicated.
2. Exterior Walls: Insulated panels with vapor seal cavity and concealed clips attached to framing.
3. Roof system: Standing-seam roof with insulated panels, and concealed clips.
4. Components and Accessories: Manufacturer's standard building components and accessories may be used, provided components, accessories, and complete structure conform to design indicated and specified requirements.

B. Related Sections:

1. Plywood wainscot is specified in Section 06 10 00.
2. Cellulose thermal insulation is specified in Section 07 21 28.
3. Personnel doors and frames and finish hardware are specified in Sections 08 11 13 and 08 71 00.
4. Overhead service doors, including operators, are specified in Sections 08 33 23.
5. Colors are specified in Section 09 05 15 - Color Design.
6. Painting for ferrous metal exposed to view is specified in Section 09 90 00 - Painting and Coating.
7. Canopies are specified in Section 10 73 16.

1.02 STRUCTURAL FRAMING AND ROOF AND SIDING PANELS

- A. Design anchor bolts, structural members, and exterior covering for applicable loads and combinations of loads in accordance with the MBMA's "Design Practices Manual."
- B. Structural Steel: Comply with AISC's "Specifications for the Design, Fabrication, and Erection of Structural Steel for Buildings" for design requirements and allowable stresses.
- C. Light Gage Steel: Comply with AISI's "Specification for the Design of Cold-Formed Steel Structural Members" and "Design of Light Gage Steel Diaphragms" for design requirements and allowable stresses.
- D. Welded Connections: Comply with AWS's "Standard Code for Arc and Gas Welding in Building Construction" for welding procedures.
- E. Metal Roofing: Comply with SMACNA Architectural Sheet Metal Manual.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's sample warranty and product information for building components, accessories and color chart.

- B. Shop Drawings: Submit Shop Drawings for anchor bolts, structural framing system, roofing and siding panels, and components and accessories not fully detailed or dimensioned in manufacturer's product data.
 - 1. Structural Framing: Furnish erection drawings. Include fabrication and assembly details. Show anchor bolts' settings and sidewall, end-wall, and roof framing.
 - 2. Siding Panels: Provide panel layouts and details of edge conditions, joints, corners, custom profiles, supports, anchorage, trim, flashing, closures, and special details.
 - 3. Sheet Metal Accessories and Roofing: 1/4-inch-scale layouts and 1-1/2-inch-scale details of accessories; show profiles, methods of joining to system components and dissimilar building materials, flashing of each condition for roof penetrations, and anchorage.
- C. Certification prepared, signed, and sealed by a Professional Engineer registered in the State of Mississippi, verifying that anchor bolts, structural framing and covering panels meet loading requirements and codes (IBC 2012), including design calculations.
- D. Installer certificates signed by Contractor certifying that welders comply with requirements specified under "Quality Assurance" article.
- E. Submit sample copies of the Paint Finish Guarantee and Weather Tightness Warranty prior to fabrication and installation for MDOT Architect's approval. DO NOT start roofing installation without MDOT Architect's approval of Guarantee and Warranty. Refer to Division 00 Sections for State of Mississippi requirements.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer, with 5 years minimum experience, who specializes in erection of building similar to that required and is certified by the building manufacturer as qualified for erection of the manufacturer's products.
- B. Manufacturer's Qualifications: Provide buildings manufactured by a firm with 10 years experience in manufacturing buildings similar to those indicated. The manufacturer shall be IAS Accredited (Class MB).
- C. Welders' Qualifications: Qualify welding processes and welding operations in accordance with the AWS D1.1 "Structural Welding Code".
 - 1. Certify that each welder employed in unit of work of this section has satisfactorily passed AWS qualification tests for welding processes involved and, if pertinent, has undergone re-certification.
 - 2. Testing for re-certification is Contractor's responsibility.

1.05 WARRANTIES

- A. Paint Finish: Paint finish shall have a 20-year guarantee against cracking, peeling and fade (Not to exceed 5 NBS vertical / 6 NBS non-vertical units per ASTM D2244-93).
- B. Weather Tightness: The entire installation (sub-framing, clips, panels, fasteners, rakes, eaves, ridge/valley flashing conditions, penetrations, roof to wall conditions as well as all materials specified as supplied by the manufacturer) shall be guaranteed weather tight for a minimum of 20 YEARS. This warranty shall be identified as neither Non-Depreciating, Non-prorated nor have exclusions that identify, valleys, curbs, and flashings. Provide written warranty, signed by the manufacturer and his authorized installer / dealer, agreeing to replace / repair defective materials and workmanship with NO COST (NDL) to the Owner during the warranty period. Warranty period begins at the Date of Completion as determined by MDOT.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Drawings and specifications are based on products manufactured by Ceco Building Division, P. O. Box 6500, Columbus, MS 39703. Tel. (662) 328-6722.
- B. Equivalent products by the following manufacturers are acceptable:
 - 1. ACI Building Systems, Inc., Batesville, MS Tel. 662-563-4574.
 - 2. Kirby Building Systems, Starkville, MS. Tel.: (662) 323-8021.
 - 3. MBCI, Hernando, MS. Tel. (800) 206-6224
 - 4. VP Buildings, Memphis, TN. Tel. (800) 238-3246.
- C. Substitutions that fully meet or exceed the specified requirements may be considered under provisions of Section 01 25 00 - Substitution Procedures and Section 01 60 00 - Product Requirements.

2.02 METAL MATERIALS

- A. Hot-Rolled Structural Steel Shapes: ASTM A 36 or A 529.
- B. Steel Members Fabricated from Plate or Bar Stock: ASTM A 529, A 570, or A 572. Provide 42,000 psi minimum yield strength.
- C. Steel Members Fabricated by Cold Forming: ASTM A 607, Grade 50.
- D. Cold-Rolled Carbon Steel Sheet: ASTM A 366 or ASTM A 568.
- E. Hot-Rolled Carbon Steel Sheet: ASTM A 568 or ASTM A 569.
- F. Structural Quality Zinc-Coated (Galvanized) Steel Sheet: ASTM A 446 with G90 coating complying with ASTM A 525.
- G. Aluminum-Zinc Alloy Coated (Galvalume) Steel Sheet: ASTM A792.
- H. Aluminum Sheets: ASTM B 209 for Alclad alloy 3003 or 3004 temper required to suit forming operations.
- I. Bolts for Structural Framing: ASTM A 307 or ASTM A 325 as necessary for design loads and connection details.
- J. Mastic: Non-staining saturated vinyl polymer as recommended by panel manufacturer for sealing laps.

2.03 PAINT MATERIALS

- A. Comply with performance requirements of federal specifications indicated.
- B. Shop Primer for Ferrous Metal: Fast-curing, lead-free, universal primer. Comply with Federal Specification TT-P-645.
- C. Shop Primer for Galvanized Metal Surfaces: Zinc dust- zinc oxide primer. Comply with Federal Specification TT-P-641.

- D. Unpainted Galvalume: Unpainted Galvalume shall conform to ASTM A792-89 with a coating class of AZ- 55, chemically treated and lightly oiled. All 24 gage unpainted Galvalume used for roof applications shall be grade 80, except when used for trim it shall be grade 50B. All unpainted Galvalume 24-gage and thicker shall be grade 50B.
- E. Painted Galvalume: Galvalume used as a substrate for factory applied baked on paint shall conform to ASTM A792-89 with a coating class of AZ-50 or heavier, minimum spangle, chemically treated and lightly oiled, as specified by the coater. All painted Galvalume shall be grade 50B.
 - 1. The paint system shall be applied as follows: Topcoat shall consist of a primer 0.20 - 0.25 mil thick and a top coat 0.70 - 0.80 mil thick, for total film thickness of 1.0 mil. The reverse coat shall consist of a primer 0.20 - 0.25 mil thick and a wash coat backer 0.30 - 0.40 mil thick, for a total film thickness of 0.50 - 0.65 mil.
 - 2. Finish system shall conform to all tests for adhesion, flexibility, and longevity as specified by the finish supplier.

2.04 STRUCTURAL FRAMING

- A. Rigid Frames: Factory welded, shop painted, built-up slightly tapered shape or open-web type consisting of tapered or parallel flange beams and slightly tapered columns with attachment plates, bearing plates, and splice members. Factory drilled for field-bolted assembly. Provide length of span and spacing indicated.
- B. Primary End-wall Framing: Provide expandable rigid frame endwall with slightly tapered columns with attachment plates, bearing plates, and splice members.
 - 1. End-wall Columns: Shop-painted, built-up factory-welded "I"-shape or cold-formed "C" sections, fabricated from 14-gage (0.0747-inch) steel.
- C. Secondary Framing: Provide the following:
 - 1. Roof Purlins, Sidewall and Endwall Girts: 16 -gage (0.598-inch) shop-painted roll-formed steel "C" or "Z" sections. Fabricate purlin spacers from 14-gage cold-formed galvanized steel sections. Purlins to be 8 inches deep minimum. Girts to be 8-1/2 inches deep by-pass girts.
 - 2. Eave Struts: Unequal flange 16-gage (0.0598-inch) shop-painted roll-formed steel "C" sections formed to provide adequate backup for both wall and roof panels.
 - 3. Flange and Sag Bracing: 1-5/8 inch by 1-5/8 inch angles fabricated from 16-gage (0.0598-inch) shop-painted roll- formed steel.
 - 4. Base or Sill Angles: 14-gage (0.747-inch) cold-formed galvanized steel sections.
 - 5. Secondary endwall structural members, except columns and beams, shall be fabricated from 14-gage (0.0747-inch) shop-painted roll- formed steel.
- D. Wind Bracing: Provide horizontal and vertical wind x-bracing bracing at rigid frame members. Use manufacturer's standard detail. Design of wind bracing is the responsibility of the pre-engineered metal building supplier.
- E. Bolts: Provide zinc- or cadmium-plated bolts when structural framing components are in direct contact with roofing and siding panels. In other cases provide shop-painted bolts.
- F. Extra Materials: Furnish 5 percent excess over required amount of nuts, bolts, screws, washers, and other required fasteners for each building. Pack in cartons labeled to identify contents and store on site where directed.

- G. Shop Painting: Clean surfaces of loose mill scale, rust, dirt, oil, grease, and other matter. Follow procedures of SSPC-SP3 for power-tool cleaning, SSPC-SP7 for brush-off blast cleaning, and SSPC-SP1 for solvent cleaning.
1. Prime framing members with rust-inhibitive primer.
 2. Prime galvanized members after phosphoric acid pretreatment with zinc dust-zinc oxide primer.

2.05 ROOFING AND SIDING PANELS

- A. Roof Panel: IBL (Insulated BattenLok®) Metal Roof Panel formed as an insulated panel system with the following properties:

1. Panel Thickness: 4 inches
2. R-values by ASTM C518 at 40 degrees F: R = 31.8
3. Panel Widths: 42 inches
4. Panel Lengths: As indicated on Drawings.
5. Insulation Material: Non-CFC foamed-in-place Polyurethane foam cured to achieve a minimum density of 2.0 pcf as determined by ASTM D 1622
6. Joint Configuration: Concealed Clips
7. Panel Exterior Face: 24 gage Galvalume®
8. Panel Interior Face: 26 gage Galvalume®
9. Exterior Profile: 2 inches high standing seam with a Mesa profile between seams
9. Coatings: fluoropolymer two-coat design series color system with 70 percent PVDF
10. Color: Standard colors from manufacturer's full range of colors to be selected by Project Engineer / MDOT Architect
11. Accessories: Fasteners, Sealants, Standard and Custom Trim as required for a complete system.

- B. Wall Panel: (CF Flute Insulated Metal Wall Panel) formed as an insulated panel system with the following properties:

1. Panel Thickness: 2-1/2 inches
2. R-values by ASTM C518 at 40 degrees F: R = 19.9
3. Panel Widths: 42 inches
4. Panel Lengths: As indicated on Drawings.
5. Insulation Material: Non-CFC foamed-in-place Polyurethane foam cured to achieve a minimum density of 2.0 pcf as determined by ASTM D 1622
6. Joint Configuration: Concealed Clips
7. Panel Exterior Face: 26 gage Galvalume®
8. Panel Interior Face: 26 gage Galvalume®
9. Coatings: fluoropolymer two-coat design series color system with 70 percent PVDF
10. Color: Standard colors from manufacturer's full range of colors to be selected by Project Engineer / MDOT Architect
11. Accessories: Fasteners, Sealants, Standard and Custom Trim as required for a complete system.

2.06 STRUCTURAL FRAMING

- A. Shop-fabricate framing components to indicated size and section with base plates, bearing plates, and other plates required for erection welded in place. Provide holes for anchoring or connections shop-drilled or punched to template dimensions.

- B. Shop Connections: Power-riveted, bolted, or welded shop connections.

- C. Field Connections: Provide bolted field connections.

2.07 FLASHING AND TRIM

- A. Flashing and trim shall be furnished at eaves, rake, corners, base, framed openings, and wherever necessary to seal against the weather and provide a finished appearance.
- B. Pipe flashing units shall be made of flexible rubber compound (EPDM or equal) formulated to provide maximum weathertightness. Unit shall be pre-molded to form a pipe collar. Bonded to base of collar shall be a 1/32 inch (plus or minus) thick, moldable aluminum ring. Pipe flashing shall be furnished with necessary sealant and screw fasteners to attach unit to roof panels and provide a weathertight assembly.

2.08 SHEET METAL ACCESSORIES

- A. Provide gutters formed in sections not less than 20 feet in length complete with required special pieces. Join sections with riveted and soldered or sealed joints. Provide required expansion joints with cover plate. Provide gutter supports spaced at maximum 48 inches on center, constructed of same metal as gutters. Provide aluminum wire ball strainers at each outlet. Gutters shall be, 26-gage, roll formed, galvanized steel, ASTM A653 with G90 coating and Kynar 500 (70 percent PVDF) finish. Color shall match roof fascia and rake. Gutters are box-shaped with face profile shaped to match rake trim.
- B. Provide downspouts formed in full-length sections complete with required special pieces. Downspouts shall be, 26-gage, roll formed (smooth, not corrugated), galvanized steel, ASTM A653 with G90 coating and Kynar 500 (70 percent PVDF) finish. Color shall match roof fascia and rake. Downspouts are rectangular-shaped and shall have a 45 degrees elbow at the bottom. Straps shall be spaced 5 feet on center maximum (minimum of 3 required per downspout) and be the same material and finish as downspout. Strap edges shall be rolled or smooth.
- C. Roof Curbs (for equipment) shall be prefabricated using minimum 18 gage AZ 55 prime galvalume steel, or heavier gage (as required). Fully mitered and welded corners. Integral base plates and water cricket or diverter. All welds prime painted after fabrication. Internally reinforced with steel angle on curbs on sides longer than 3'-0". Factory insulated curbs with 1-1/2 inches thick, 3 pounds density fiberglass insulation.
 - 1. Minimum height of curb shall be 8 inches above finished roof.
 - 2. Slope roof curb to match roof pitch and provide a level top

2.09 FASTENERS

- A. Wall and roof fasteners shall comply with manufacturer's recommendations for proper application and wind loads as required by code or AHJ.

PART 3 - EXECUTION

3.01 ERECTION

- A. Primary Framing: Erect framing required true to line, plumb, level, rigid, and secure. Level base plates to true even plane with full bearing to supporting structures, set with double-nutted anchor bolts. Use non-shrinking grout to obtain uniform bearing and maintain level baseline elevation. Moist-cure grout for 7 days after placement.

- B. Purlins and Girts: Rake or gable purlins shall have tight-fitting closure channels and fascias. Locate and space girts to suit door and window arrangements and heights. Secure purlins and girts to structural framing and hold rigidly to straight line by sag rods.
- C. Bracing: Use movement-resisting frames in lieu of sidewall rod bracing. Rod bracing allowable in roof.
- D. Framed Openings: Provide shapes of design and size to reinforce openings and carry loads and vibrations imposed, including equipment furnished under mechanical and electrical Work. Securely attach to building structural frame.
- E. Siding: Arrange and nest sidelap joints so prevailing winds blow over, not into, lapped joints. Apply panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line. Protect factory finishes from damage.
- F. Field cutting of exterior panels by torch is not permitted.
- G. Wall Sheets: Apply elastomeric sealant continuously between metal base channel and concrete and where necessary for waterproofing. Apply sealant and back up in accordance with the sealant manufacturer's recommendations. Shim up from concrete shelf 1/2 inch for wall panels, and remove shims after panels have been securely fastened.
 - 1. Align bottom of wall panels and fasten with blind rivets, bolts or self-tapping screws. Fasten flashiness, trim around openings, and similar elements with self-tapping screws. Fasten window and door frames with machine screws or bolts. When building height requires two rows of panels at gable ends, align lap of gable panels over wall panels at eave height.
 - 2. Attach panels using manufacturer's standard Concealed clips and fasteners, spaced in accordance with approved Shop Drawings.
 - 3. Install screw fasteners with power tools having controlled torque to compress neoprene washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
 - 4. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.
- H. Sheet Metal Accessories: Install gutters, downspouts, and other accessories for positive anchorage to building and weathertight mounting. Adjust operating mechanism for precise operation.

- I. Roof Panels: Comply with manufacturers standard instructions and conform to standards set forth in the Architectural Sheet Metal Manual published by SMACNA, in order to achieve a watertight installation.
 1. Install panels in such a manner that horizontal lines are true and level and vertical lines are plumb. Coordinate with mechanical and electrical so that all penetrations through roof occur in flat portion of panel with sufficient space adjacent to penetration to be properly flashed and waterproofed.
 2. Attach panels using manufacturer's standard concealed clips and fasteners, spaced in accordance with approved Shop Drawings.
 3. Provide weatherseal under ridge cap. Flash and seal roof panels at eave and rake with rubber, neoprene, or other closures to exclude weather.
 4. Install sealants for preformed roofing panels as specified on Shop Drawings.
 5. Do not allow traffic on completed roof. If required, provide cushioned walk boards.
 6. Protect installed roof panels and trim from damage caused by adjacent construction until completion of installation.
 7. Remove and replace panels or components that are damaged beyond successful repair.

3.02 CLEANING AND TOUCH-UP

- A. Clean component surfaces. Touch up abrasions, marks, skips, or other defects to shop-primed surfaces with same material as shop primer.

END OF SECTION

SECTION 28 01 30 SURVEILLANCE SYSTEM

PART 1 - GENERAL

1.01 SUMMARY

- A. This section includes: Surveillance System.
- B. The Surveillance System shall incorporate the following:
 - 1. Cameras
 - 2. Camera Mounts/Brackets/Housings
 - 3. Monitors
 - 4. POE Network Switch
 - 5. Digital Video Recorder
 - 6. Cabling System
- C. The Contractor shall provide all labor, materials, equipment, tools, utilities, construction equipment and machinery, transportation and other facilities and services necessary for the proper execution, operation and completion of the Work.

1.02 REFERENCES

- A. NFPA 70 – National Electrical Code
- B. UL 1449 – Surge Protective Devices
- C. ANSI/EIA/TIA Cabling Standards

1.03 SYSTEM DESCRIPTION

- A. System shall include the installation of surveillance cameras where indicated on the drawings, camera mounts/brackets/housings, network switch(es), digital video recorder, monitors and interconnecting cabling systems.
- B. System will have local video storage which shall be capable of sharing video information with the MDOT state wide security system.
- C. System shall be compatible with the MDOT security standard.
- D. The Surveillance System shall be controlled from the District Security Center with video transfer capability over the MDOT WAN to the MDOT security center in Jackson.

1.04 SUBMITTALS

- A. Product Data: Submit electronic file of manufactures supplied data. Each file shall contain:
 - 1. Specification/cut sheets for equipment provided
 - 2. Design guides
 - 3. Installation and operating instructions

- B. Shop Drawings: Submit electronic copy of each submittal.
 - 1. Diagrams of cable layout with system labeling schedule.
 - 2. Wiring diagrams.
- C. Field quality-control test report showing all cameras and digital video recorders / devices are installed / tested and are functioning correctly.
- D. Project Record Drawings:
 - 1. The purpose of Project Record Drawings is to provide factual information regarding aspects of the Work, to enable future service, modifications, and additions to the Work
 - 2. Project Record Drawings are an important element of this Work. Contractor shall accurately maintain Project Record Drawings throughout the course of this project.
 - 3. Project Record Drawings shall include documentation of Work, including the camera locations, setup perimeters, equipment, wiring, and cable runs.
 - 4. The contractor will be furnished with two (2) sets of site plans for Contractor's use in preparing Project Record Drawings. One set shall be used as a working set, the other shall be used to prepare the final record set.
 - 5. Project Record Drawings shall accurately show the physical placement of the following:
 - a. Cameras, power supplies, and digital video recorders.
 - b. Cable runs
 - c. Pull box locations.
 - a. Project Record Drawings shall show the physical placement of each camera and conduit to be accurate to within one foot (1') of the nearest landmark. Where the site plan conflicts with actual conditions, Contractor shall amend site plan as required. Indicate exact description of conduit runs and cable tray runs
 - d. Project Record Drawings shall show wire and cable runs, camera zone numbers, electrical panel/circuit breaker numbers from which equipment is powered, and splice points. Such information may be shown on the site plans.
 - e. Upon completion of Work, and prior to Final Acceptance, Contractor shall prepare and submit final record set of Project Record Drawings. This set shall reflect the installed work.
 - f. Final Project Record Drawings shall be provided to the MDOT or MDOT's representative.
 - 6. Closeout Submittals:
 - a. Provide a set Project Record Drawings to the Project Engineer including:
 - 1) Project Record Drawings
 - 2) Product Data
 - 3) Installation Manuals
 - 4) Operating Manuals
 - 5) Maintenance/Service Manuals

1.05 QUALITY ASSURANCE

A. Contractor Minimum Qualifications

1. Contractor shall be an installation and service contractor regularly engaged in the sale, installation, maintenance and service of Surveillance Systems.
2. Contractor shall have five (5) years experience with the installation, start-up and programming of systems of a similar size and complexity to the one proposed.
3. Contractor shall be licensed by the State of Mississippi for the installation of Surveillance Systems.

B. Supervision of Work: Contractor shall employ a competent Foreman to be in responsible charge of the Work. The Foreman shall be on the project site daily during the execution of the Work. The Foreman shall be a regular employee, principle, or officer of the Contractor, who is thoroughly experienced in managing projects of a similar size and type. Contractor shall not use contract employees or Subcontractors as Foremen.

C. Qualifications of Technicians

1. Electronic systems Work shall be performed by electronic technicians thoroughly trained in the installation and service of Surveillance Systems.
2. Journeyman Wireman electrical workers may be used to install conduit, raceways, wiring, and the like, provided that final termination, hook-up, programming, and testing is performed by a qualified electronic technician, and that all such Work is supervised by the Contractor's Foreman.
3. Incidental Work, such as cutting and patching, lock hardware installation, painting, carpentry, and the like, shall be accomplished by skilled crafts persons regularly engaged in such type of work. Work shall comply with the highest standards applicable to that respective industry or craft.
4. 120 VAC power wiring and connections are to be performed by a qualified Journeyman Wireman, licensed to perform such Work.

D. Regulatory Requirements and Permits

1. Work shall conform to applicable building, fire, and electrical codes and ordinances. In case of conflict between the Drawings / Specifications and codes, the codes shall govern. Inform the Professional of any such conflicts.
2. Secure and pay for licenses, permits, plan reviews, engineering certifications, and inspections required by regulatory agencies. Prepare, at Contractor's expense, any documents, including drawings, that may be required by regulatory agencies.
3. Make application for and obtain any permits required by federal, state, county, city, or other authority having jurisdiction over the work.

E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

F. Comply with NFPA 70, "National Electrical Code."

G. Cabling installation shall comply with the ANSI/EIA/TIA standards and recommendations.

1.06 COMMISSIONING

- A. After Work is completed, and prior to requesting the Acceptance test, conduct a final inspection, and pre-test equipment and system features. Correct any deficiencies discovered as the result of the inspection and pre-test.
- B. During Acceptance test, demonstrate video equipment and system features to the Professional and MDOT personnel. Any portions of the Work found to be deficient or not in compliance with the Project Drawings and Specifications may be rejected.
- C. Promptly correct deficiencies.

1.07 MAINTENANCE

- A. Provide full procedures for testing video quality and alignment.
- B. Provide full procedures for any other tasks that must be performed to ensure the warranty remains intact.

PART 2 - PRODUCTS

2.02 EQUIPMENT AND MATERIALS

- A. Drawings and Specifications indicate major system components, and may not show every component, connector, module, or accessory that may be required to support the operation specified. Provide components needed for complete and satisfactory operation.
- B. Products shall be new and unused and shall be of manufacturer's current and standard production.
- C. Where two or more equipment items of the same kind are provided, they shall be identical and provided by the same manufacturer.
- D. Product Availability:
 - 1. Prior to submitting a proposal, determine product availability and delivery time, and include such considerations into proposed Contract Time.
 - 2. Certain products specified may only be available through factory authorized dealers and distributors. Verify ability to procure the products specified prior to submitting a proposal.

2.03 CAMERAS

- A. Available Manufacturers:
 - 1. COHU
 - 2. Hitachi Visual Technologies.
 - 3. Honeywell
 - 4. JVC Professional Products.
 - 5. Panasonic Security Systems Group.
 - 6. Pelco.
 - 7. Philips Communication, Security & Imaging; Philips Electronics N.V.
 - 8. Samsung Opto-Electronics America, Inc.

9. Sensormatic Electronics Corporation.
10. Toshiba Security Products.
11. Vicon Industries, Inc.
12. Watec America Corporation.

B. Color Fixed Camera (All Interior Installations)

1. Type:
 - a. Normal Color Camera
 - b. Day Night camera with retractable IR cut filter for night operation
2. Imaging Device: 1/3 inch
3. Minimum Picture Elements:
 - a. Normal Color Camera: 1080p or 1920 X 1080
 - b. Day Night Color Camera: 1080p or 1920 X 1080
 - c. Scanning System: 2:1 Interlace.
4. Minimum Horizontal Resolution: 1944 pixels
5. Signal-to-Noise Ratio: Not less than 50 dB, with the camera AGC off.
6. Sensitivity:
 - a. Normal Camera: .3 lux
 - b. Day Night Camera:
 - 1) Day (color): 0.8 lux
 - 2) Night (B/W) .08 lux
7. Sensitivity: Camera shall deliver 1-V peak-to-peak video signal at the minimum specified light level. The illumination for the test shall be with lamps rated at approximately 2200-K color temperature, and with the camera AGC off.
8. Manually selectable modes for backlight compensation or normal lighting.
9. White Balance: Auto-tracing white balance, with manually settable fixed balance option.
10. Power Over Ethernet (POE).

C. Color Dome: (All Exterior Installations)

D. Assembled and tested as a manufactured unit, containing a dome assembly, color camera, zoom lens, and receiver / driver.

1. Horizontal Resolution: 1944 pixels
2. Signal-to-Noise Ratio: Not less than 50 dB, with the camera AGC off. With AGC, manually selectable on or off.
3. Sensitivity: Camera indicated shall be combination day/night cameras.
4. Sensitivity: Camera shall deliver 1-V peak-to-peak video signal at the minimum specified light level. The illumination for the test shall be with lamps rated at approximately 2200-K color temperature, and with the camera AGC off.
5. Manually selectable modes for backlight compensation or normal lighting.
6. White Balance: Auto-tracing white balance, with manually settable fixed balance option.
7. Software: Shall include the vendor supplied software necessary to control the Zoom features.

E. Lenses: Optical-quality coated optics, designed specifically for video surveillance applications, and matched to specified camera. Provide lenses for camera manufacture if available.

F. Camera Mounting:

1. Parapet wall mount – Pelco model PP350 or equal
2. Parapet rooftop mount – Pelco model PP351 or equal

3. Wall mount – Pelco model WM2000 or equal
4. Corner mount adaptor for WM2000 – Pelco model CM100 or equal.

2.04 POE NETWORK SWITCHES

- A. Each core or edge switch shall have the minimum specifications as follows:
1. 24 - 100 megabit switch ports with power over Ethernet (PoE) with a 190W power budget.
 2. Two dedicated SFP 1 gigabit uplink ports capable of supporting either fiber or copper media.
 3. Rack mountable
 4. The switch must provide the following Layer 2 services:
 - a. Block unknown Multicast
 - b. IGMP Snooping
 - c. DOS Network Storm Protection
 - d. RADIUS Accounting
 5. The switch must support the following IEEE protocols:
 - a.. IEEE 802.3 Ethernet
 - b. IEEE 802.3i 10BASE-T
 - c. IEEE 802.3u 100BASE-T
 - d. IEEE 802.3ab 1000BASE-T
 - e. IEEE 802.1Q VLAN Tagging
 - f. IEEE 802.3x full-duplex flow control
 - g. IEEE 802.3z Gigabit Ethernet 1000BASE-SX/LX
 - h. IEEE 802.3ad Trunking (LACP)
 - i. IEEE 802.1AB LLDP with ANSI/TIA-1057 (LLDP-MED)
 - j. IEEE 802.1p Class of Service
 - k. IEEE 802.3 af (PoE)
 - l. IEEE 802.1D Spanning Tree (STP)
 - m. IEEE 802.1s Multiple Spanning Tree
 - n. IEEE 802.1w Rapid Spanning Tree (RSTP)
 - o. IEEE 802.1x (MD5) Radius network access control
 6. Surveillance Systems switch(es) shall be dedicated to the System.
 7. 10 year minimum manufacturer's warranty.

2.05 DIGITAL VIDEO RECORDERS

- A. Available Manufacturers:
1. Dedicated Micros USA.
 2. Everfocus
 3. Honeywell
 4. Integral
 5. JVC Professional Products.
 6. Panasonic Security Systems Group.
 7. Pelco.
 8. Philips Communication, Security & Imaging; Philips Electronics N.V.
 9. Samsung Opto-Electronics America, Inc.
- B. Requirements:
1. Camera Inputs 16 Analog
 2. Video input: 1 V p-p at 75 Ohm
 3. Monitor Out: 1 BNC Composite 1 V p-p at 75 Ohm.
 4. Video Format: NTSC

5. Recording Rate: 480 FPS (NTSC)
6. Compression: MPEG-4 or MJPEG
7. Storage of 500 GB minimum.
8. Storage External:
 - a. SCSI connector
 - b. Hot swapping
 - c. Capacity Minimum 4 position for 2 TB drives
9. Display Resolution: 720 by 480
10. Display Format: 1, 4 and 8 Multiscreen display.
11. Network Interface: Ethernet RJ-45 network connection
12. Intelligent motion detection with programmable area and programmable sensitivity.
13. Time and Date Generator: Records time (hr:min:sec) and date legend of each frame.
14. Watermark time and date stamp for exported files.
15. Title: Minimum 12 characters for each camera.

2.06 LCD MONITORS

- A. Type: Flat panel LCD
- B. Size: 19 inches minimum
- C. Input: VGA
- D. Resolution: Supports up to 1280 X 1024 for SXGA input
- E. Brightness: adjustable to 300 cd/m²
- F. Minimum Contrast Ratio: 500:1
- G. Maximum Response Time: 12 ms
- H. Industrial rated for 24 hour x7 days a week operation
- I. Power: 120 V ac @ 50 Watts

2.07 WIRE AND CABLE

- A. General: Provide wire and cable required to install systems as indicated.
 1. Video cable shall be sized to provide adequate video signal at the recording equipment. The maximum cable length are as follows:
 - a. CAT 6 - 300 feet for network applications
 2. Wire and cable shall be sized to provide adequate signal for the worst case distance.
- B. Cables shall be specifically designed for their intended use.
- C. Comply with equipment manufacturers recommendations for wire and cable size and type.
- D. Comply with all applicable codes and ordinances.

2.08 JUNCTION AND PULL BOXES

- A. Interior Boxes: Sheet Metal Outlet Boxes: Sizes to be determined in accordance with code requirements for conductor fill. No box shall be smaller than a single gang 1-1/2 inches deep. Provide box covers as required.
- B. Exterior Boxes: Exterior boxes shall NEMA 4 or NEMA 3R, watertight and dust-tight.
- C. Interior and exterior boxes shall have their covers fastened using security screws.

PART 3 - EXECUTION

3.01 FIELD INSTALLATION

- A. Field locate equipment where indicated.
- B. Provide and connect cameras and specified equipment including connecting cables as indicated.
- C. Align cameras as indicted.
- D. Set focal length (variable focal length (VFL) lenses) as required to encompass indicated view.
- E. Set back light compensation. Use neutral density filters to simulate darkness to set with iris full open.
- F. Set focus and depth of field. Set focus to give desired depth of field in lowest light level.
- G. Field locate cable and other elements for compliance with space allocations, installation tolerances, hazards to cable installation, and other adverse conditions affecting installation.

3.02 EXAMINATION

- A. Junction and Pull Boxes
 - 1. Interior Boxes: Sheet Metal Outlet Boxes: Sizes to be determined in accordance with code requirements for conductor fill. No box shall be smaller than a single gang 1-1/2 inches deep. Provide box covers as required.
 - 2. Exterior Boxes: Exterior boxes shall be NEMA 4 or NEMA 3R, watertight and dust-tight
 - 3. Interior and exterior boxes shall have their covers fastened using security screws.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.03 CABLING

- A. Layout, size, and plan new wire and cable runs as required.
- B. Wire and cable passing through metalwork shall be sleeved by an approved grommet or bushing.

- C. Identify all wire and cable at terminations (both ends) and at every junction box. Identification shall be made with an approved permanent label, Brady or equal.
- D. Wiring Method: Install wiring in raceway except within consoles, cabinets, desks, and counters and except in accessible ceiling spaces and in gypsum board partitions where unenclosed wiring method may be used. Conceal raceway and cables except in unfinished spaces.
- E. Install LAN cables using techniques, practices, and methods that are consistent with Category 6 rating of components and that ensure Category 6 performance of completed and linked signal paths, end to end.
- F. Install cables without damaging conductors, shield, or jacket.
- G. Wire and Cable Terminations
 - 1. Identify all inputs and outputs on terminal strips with permanent marking labels.
 - 2. Neatly dress and tie all wiring. The length of conductors within enclosures shall be sufficient to neatly train the conductor to the terminal point with no excess. Run all wire and cable parallel or normal to walls, floors and ground.
 - 3. Install connectors as required by equipment manufacturers.
 - 4. Do not obstruct equipment controls or indicators with wire or cable.
 - 5. Route wire and cable away from heat producing components such as resistors, regulators, and the like.
 - 6. Comply with EIA/TIA-569, "Commercial Building Standard for Telecommunications Pathways and Spaces."
 - 7. Cable application requirements are minimum requirements and shall be exceeded if recommended or required by manufacturer of system hardware.
- H. Conduit and Raceway Installation
 - 1. Lay-out, size and plan conduit and raceway systems as indicated or as required which ever will allow for the greatest number of cables.
 - 2. Route exposed conduit and raceway parallel and perpendicular to walls and adjacent piping.
 - 3. Maintain minimum six (6) inch clearance between conduit and piping.
 - 4. Group conduit in parallel runs where practical and use conduit rack constructed of steel channel with conduit straps or clamps.
 - 5. Use conduit bodies to make sharp changes in direction, as around beams. Fasten conduits and raceways to structural steel using approved spring clips or clamps.
 - 6. No exposed conduit, raceway, or junction box shall be installed within any populated area.
 - 7. Install boxes, card reader, intercoms and push buttons straight and plumb.
 - 8. Do not support conduit from mechanical, plumbing, or fire sprinkler systems.
 - 9. Do not use flexible conduit in lengths longer than six (6) feet.
- I. Penetrations: When penetrating a fire wall for passage of cables and/or conduit, provide a fire-stop system that complies with code and the local authority having jurisdiction.
- J. Camera
 - 1. Install number of conductor pairs recommended by manufacturer for the functions specified.
 - 2. Install UTP cable form the camera to the DVR where required.

3.04 IDENTIFICATION

- A. Label both ends of each cable. Use unique, alphanumeric designation for each cable, and label cable and jacks, connectors, and terminals to which it connects with same designation. Use logical and systematic designations for facility's architectural arrangement.
- B. Label each terminal strip and screw terminal or coax cable connector in each cabinet, rack, or panel.
 - 1. Wiring conductors connected to terminal strips shall be individually numbered, and each cable or wiring group being extended from a panel or cabinet to a building-mounted device shall be identified with the name and number of the particular device as shown.
- C. At completion, cable and asset management software shall reflect as-built conditions.

3.05 SYSTEM SOFTWARE

- A. Provide and install the DVR software and the camera software. Configure software to the project requirements. Assign software licenses to MDOT.

3.06 FIELD QUALITY CONTROL

- A. Provide wiring diagrams and labeling charts to properly identify all wiring.
- B. Provide a screen capture of each camera view.
- C. If corrections are needed, the Contractor shall perform the needed corrections in a timely fashion.

3.07 DEMONSTRATION - TRAINING

- A. Engage authorized service representative to train MDOT's maintenance personnel to adjust, operate, and maintain Surveillance System.

END OF SECTION

STATE OF MISSISSIPPI
MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**PLAN OF PROPOSED
DISTRICT 5 WAREHOUSE 2017
STATE PROJECT NO(S) BWO-5231-51(001), LWO-5001-51(008)**

NEWTON COUNTY

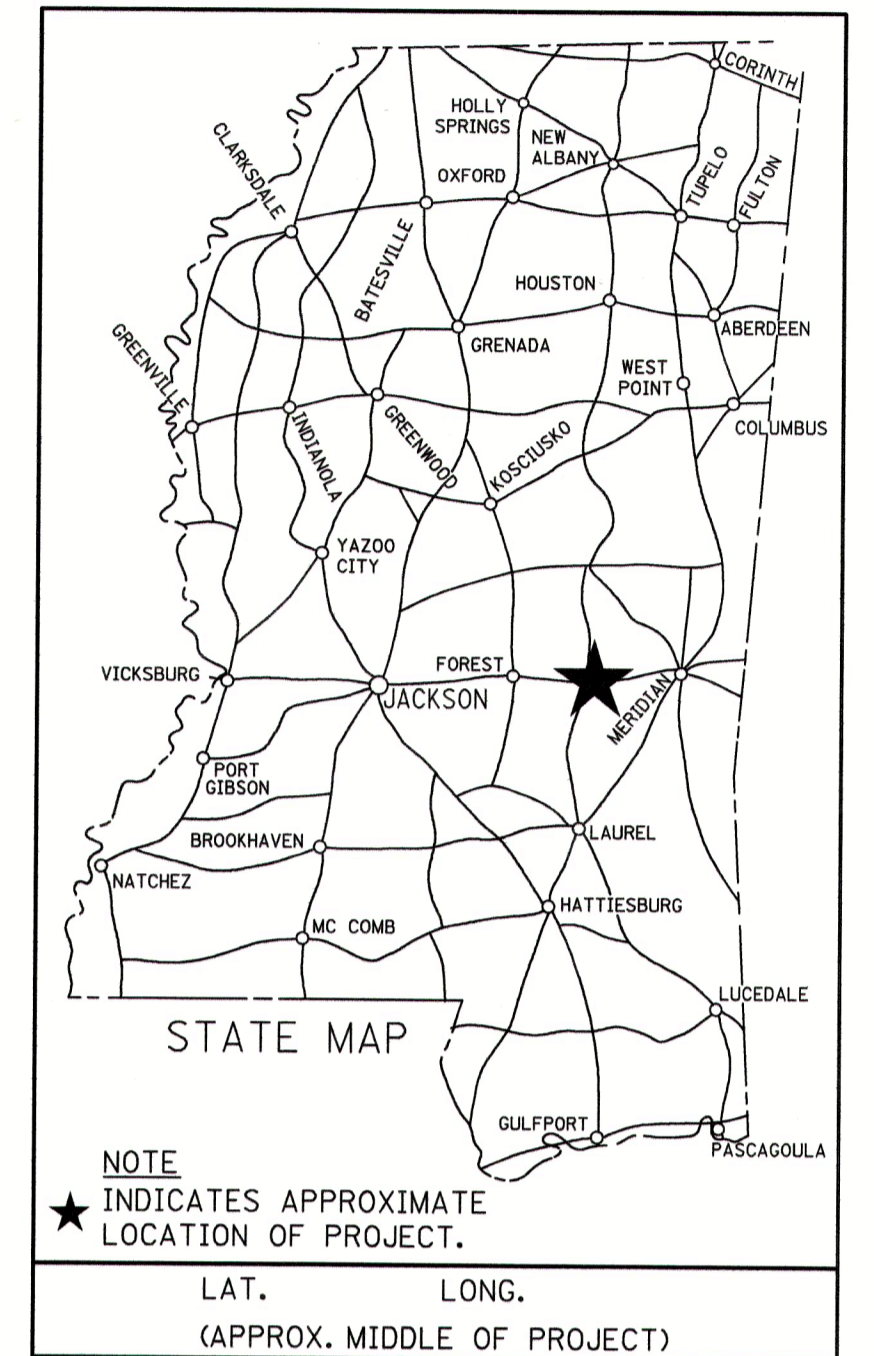
FMS. CONST. NO.
503006/301000
503006/302000

NEW WAREHOUSE BUILDING
7759 HWY 80 WEST

SCALES
PLAN: 1 IN. = 100 FT.



STATE	PROJECT NUMBER	SHEET NO.
MISSISSIPPI	BWO-5231-51(001), LWO-5001-51(008)	1



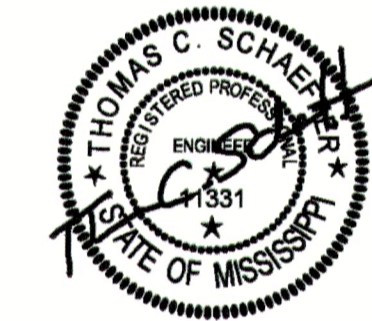
JBHM
Architecture

Architectural



NEEL-SCHAFFER
Solutions you can build upon

Civil



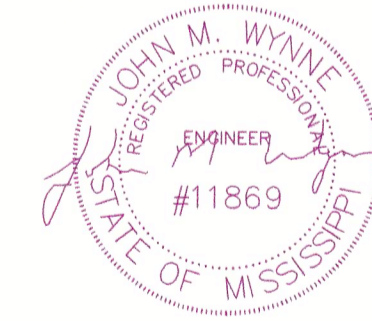
Structural Design Group

Structural



GSK
MECHANICAL

Mechanical / Plumbing



Schultz & Wynne
Consulting Electrical Engineers
A PROFESSIONAL ASSOCIATION


Electrical

PERMITS ACQUIRED BY MDOT		
WETLANDS AND WATERS PERMITS		
	WATERS	WETLANDS
NATIONWIDE #14	N	N
NATIONWIDE (OTHER)*	N	N
GENERAL*	N	N
INDIVIDUAL (404)*	N	N
STORMWATER PERMIT [S]		
Y	REQUIRED SCNOI SUBMITTED BY MDOT (DISTURBED AREA = 5 ACRES)	
S	REQUIRED SCNOI TO BE SUBMITTED BY CONTRACTOR (1 TO 4.99 ACRES)	
N	NO STORMWATER PERMIT REQUIRED (<1 ACRE)	
APPROVED BY: _____		

CONVENTIONAL SYMBOLS

- COUNTY LINE
- TOWN CORPORATION LINE
- SECTION LINE
- EXISTING ROAD OR TRAVELED WAY - - - - -
- PROPOSED ROAD OR TRAVELED WAY _____
- RAILROAD
- SURVEY LINE
- BRIDGES

8/16/2017 15:44 NEWTON.DGN MISSISSIPPI DEPARTMENT OF TRANSPORTATION

REVISIONS	DATE	BY	REVISIONS
P S & E DATE: 8/11/2017			
APPROVED: _____			
DEPUTY EXECUTIVE DIRECTOR / CHIEF ENGINEER			
EXECUTIVE DIRECTOR			
 MISSISSIPPI DEPARTMENT OF TRANSPORTATION			

STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)

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CLG-1	Chain Link Fence Gate	6168

PROJECT TEAM

OWNER
Mississippi Department of Transportation

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Fax: 601.982.7685
Email: mwynne@sweems.com

PS & E PLANS-DATE. 08/11/2017		
FMS CON. # 503006/ 301000 503006/ 302000		
REVISIONS		
DATE	SHEET NO.	BY
8/29/17	28,29,35	CDJ
9/27/17	5,15,20	DMR
10/25/17	1-2,28-30,32-35,39-40,43,57,77	CJ/MW/TS

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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 5 WAREHOUSE
NEWTON
Index of Drawings/ Materials Referencing
BWO-5231-51(001) &
LWO-5001-51(008)
COUNTY: NEWTON

10/25/17	REMOVE MATERIAL REFERENCES	CDJ	BY	
DATE	REVISION	DATE	DATE	DATE

WORKING NUMBER
A001

SHEET NUMBER
2

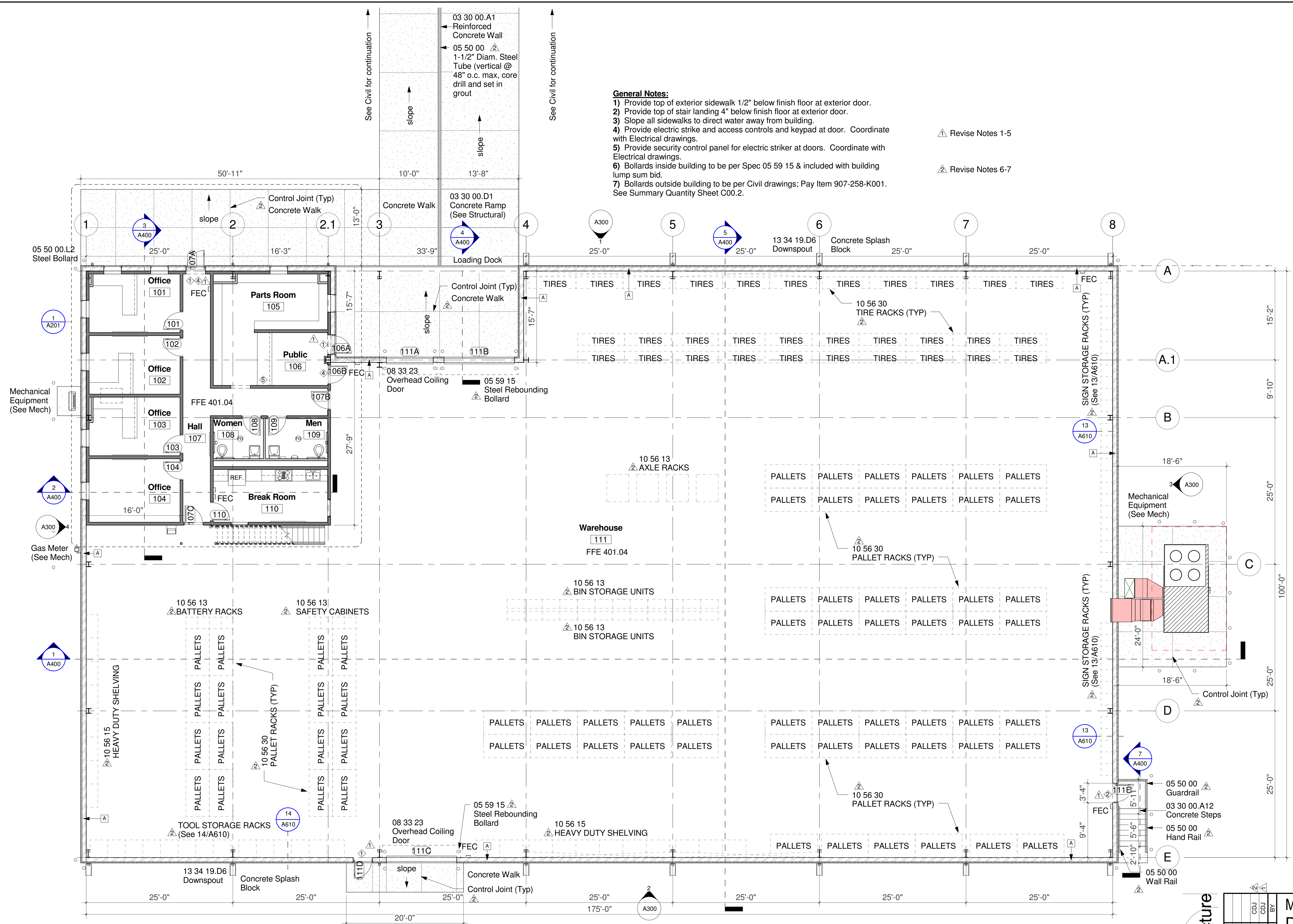
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DESIGN TEAM CJ/ NW/ MP CHECKED NW DATE 08/11/2017

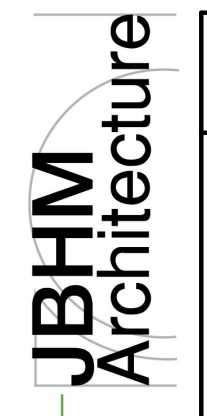
STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)

- General Notes:**
- 1) Provide top of exterior sidewalk 1/2" below finish floor at exterior door.
 - 2) Provide top of stair landing 4" below finish floor at exterior door.
 - 3) Slope all sidewalks to direct water away from building.
 - 4) Provide electric strike and access controls and keypad at door. Coordinate with Electrical drawings.
 - 5) Provide security control panel for electric striker at doors. Coordinate with Electrical drawings.
 - 6) Bollards inside building to be per Spec 05 59 15 & included with building lump sum bid.
 - 7) Bollards outside building to be per Civil drawings; Pay Item 907-258-K001. See Summary Quantity Sheet C00.2.

△ Revise Notes 1-5
 △ Revise Notes 6-7



1 Floor Plan
 1/8" = 1'-0"

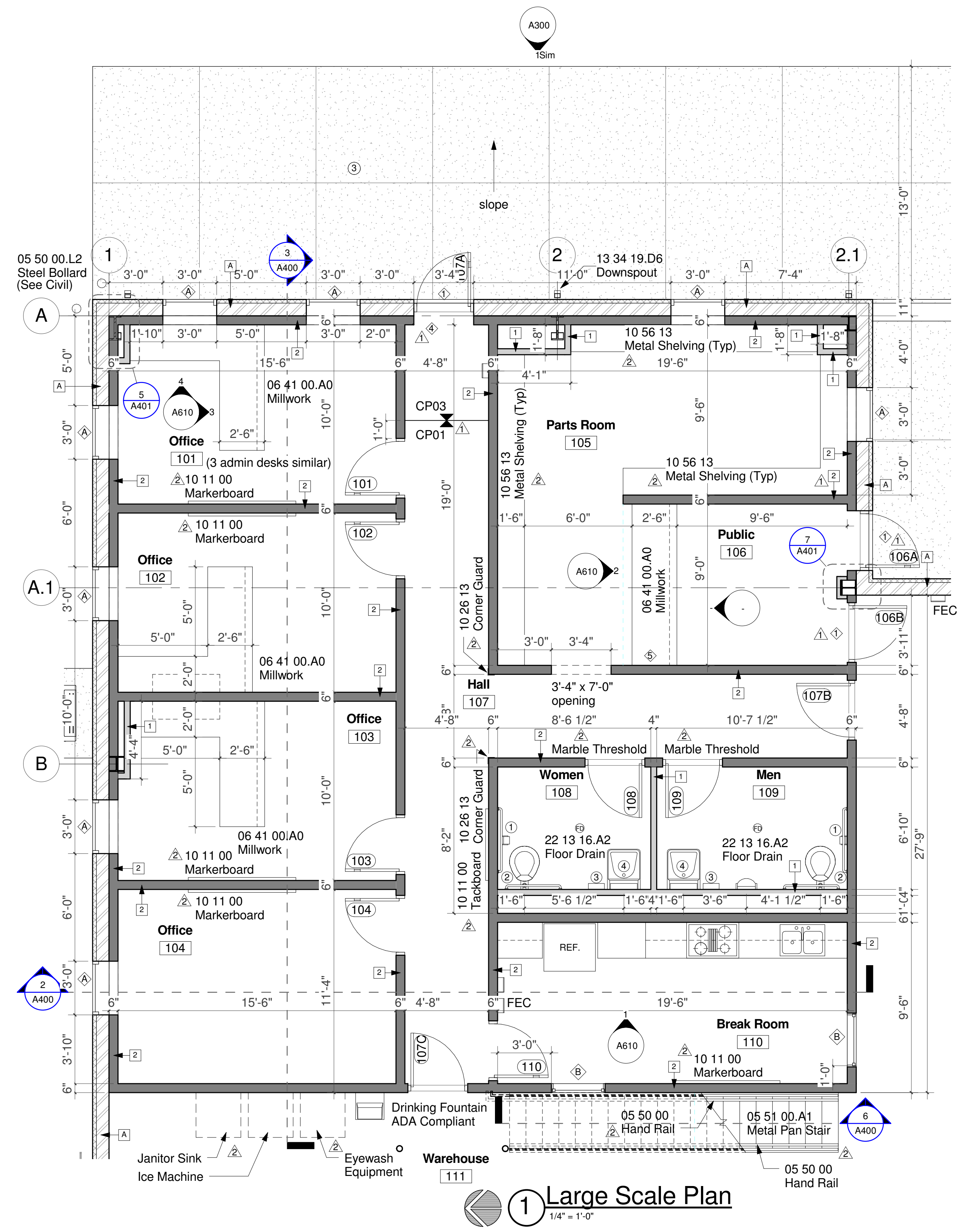


MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON Floor Plan	
BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON	
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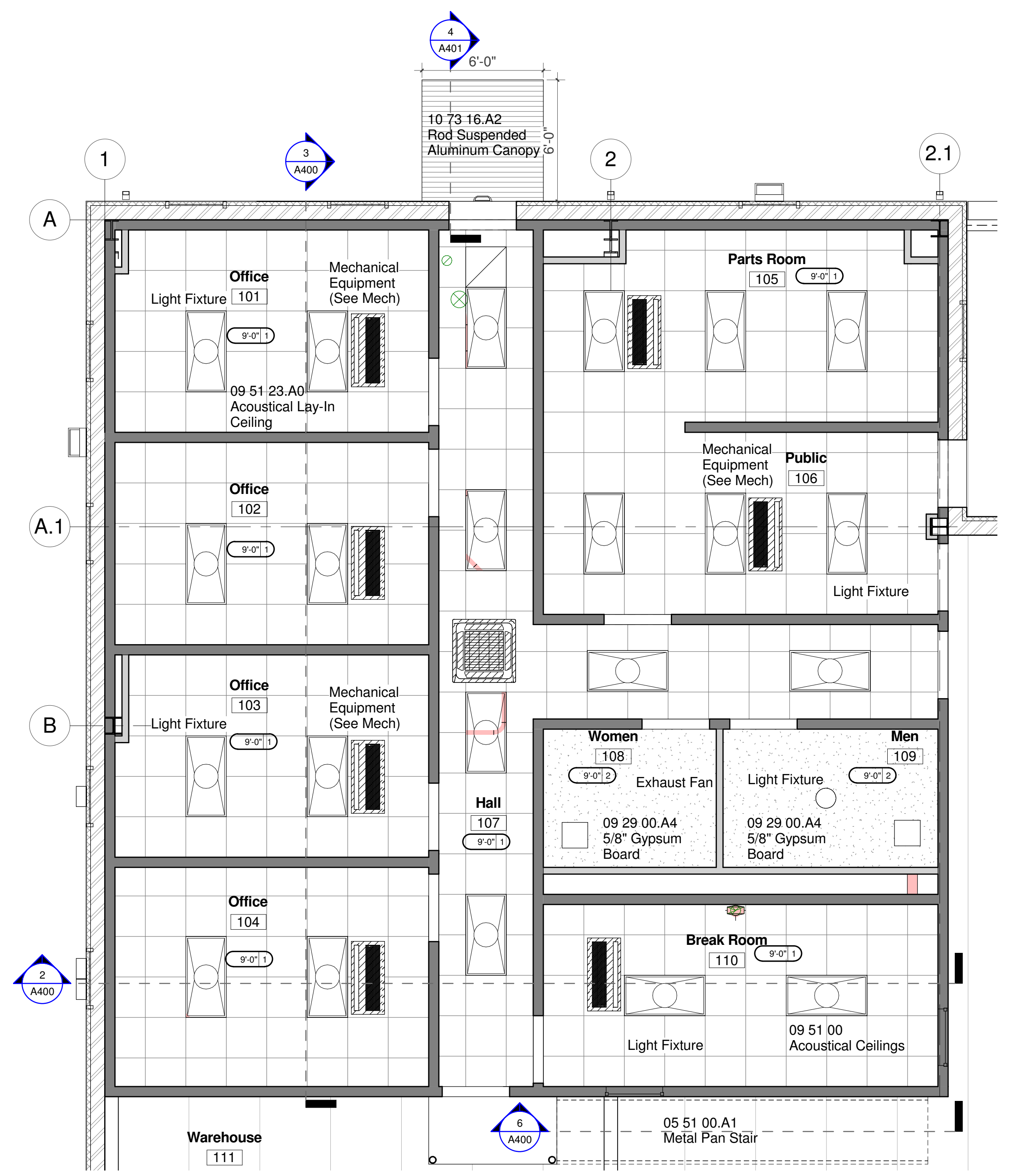


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STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)



1 Large Scale Plan
1/4" = 1'-0"



2 Partial Ceiling Plan
1/4" = 1'-0"

Finish Schedule						
Room No.	Room Name	Floor	Base	Wall	Ceiling	Notes
101	Office	CP01	RB01	PT01		Lay In Tile
102	Office	CP01	RB01	PT01		Lay In Tile
103	Office	CP01	RB01	PT01		Lay In Tile
104	Office	CP01	RB01	PT01		Lay In Tile
105	Parts Room	CP01	RB01	PT01, PT02 behind shelving		Lay In Tile
106	Public	CP03	RB01	PT01		Lay In Tile
107	Hall	CP01, CP03 at entry	RB01	PT01		Lay In Tile
108	Women	FT01	WT01	WT01		Painted Gyp. Wall tile to be full height
109	Men	FT01	WT01	WT01		Painted Gyp. Wall tile to be full height
110	Break Room	CP02	RB01	PT02, WT01 at backsplash		Lay In Tile
111	Warehouse	Sealed Concrete	Plywood	Plywood/Painted		Exposed to Structure
112	Mezzanine	Painted Plywood	N/A	Exposed to Structure		Exposed to Structure

Toilet Accessories Legend		
Mark	Description	Specification #
1	Toilet Tissue Dispenser	10 28 13
2	Grab Bar	10 28 13
3	Paper Towel Dispenser	10 28 13
4	ADA Mirror	10 28 13

- General Notes:**
- 1) Provide top of exterior sidewalk 1/2" below finish floor at exterior door.
 - 2) Provide top of stair landing 4" below finish floor at exterior door.
 - 3) Slope all sidewalks to direct water away from building.
 - 4) Provide electric strike and access controls and keypad at door. Coordinate with Electrical drawings.
 - 5) Provide security control panel for electric striker at doors. Coordinate with Electrical drawings.
 - 6) Bollards inside building to be per Spec 05 51 15 & included with building lump sum bid.
 - 7) Bollards outside building to be per Civil drawings; Pay Item 907-258-K001. See Summary Quantity Sheet C00.2.

△ Revise Notes 1-5
△ Revise Notes 6-7



JBHM Architecture

MISSISSIPPI DEPARTMENT OF TRANSPORTATION
DISTRICT 5 WAREHOUSE
NEWTON
Large Scale Plans

BWO-5231-51(001) &
LWO-5001-51(008)
COUNTY: NEWTON

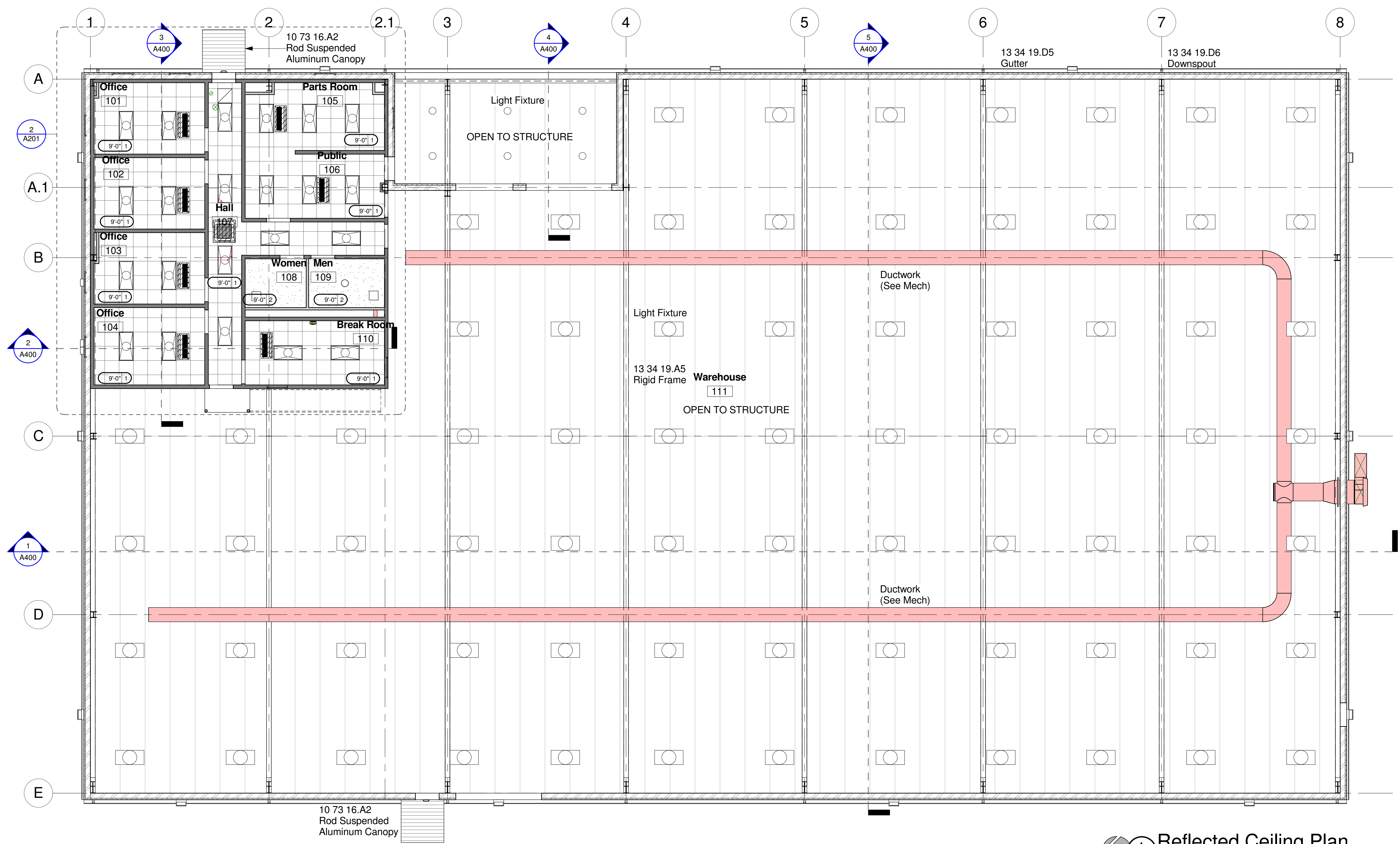
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DESIGN TEAM C/J/NW/MP CHECKED NW DATE 08/11/2017

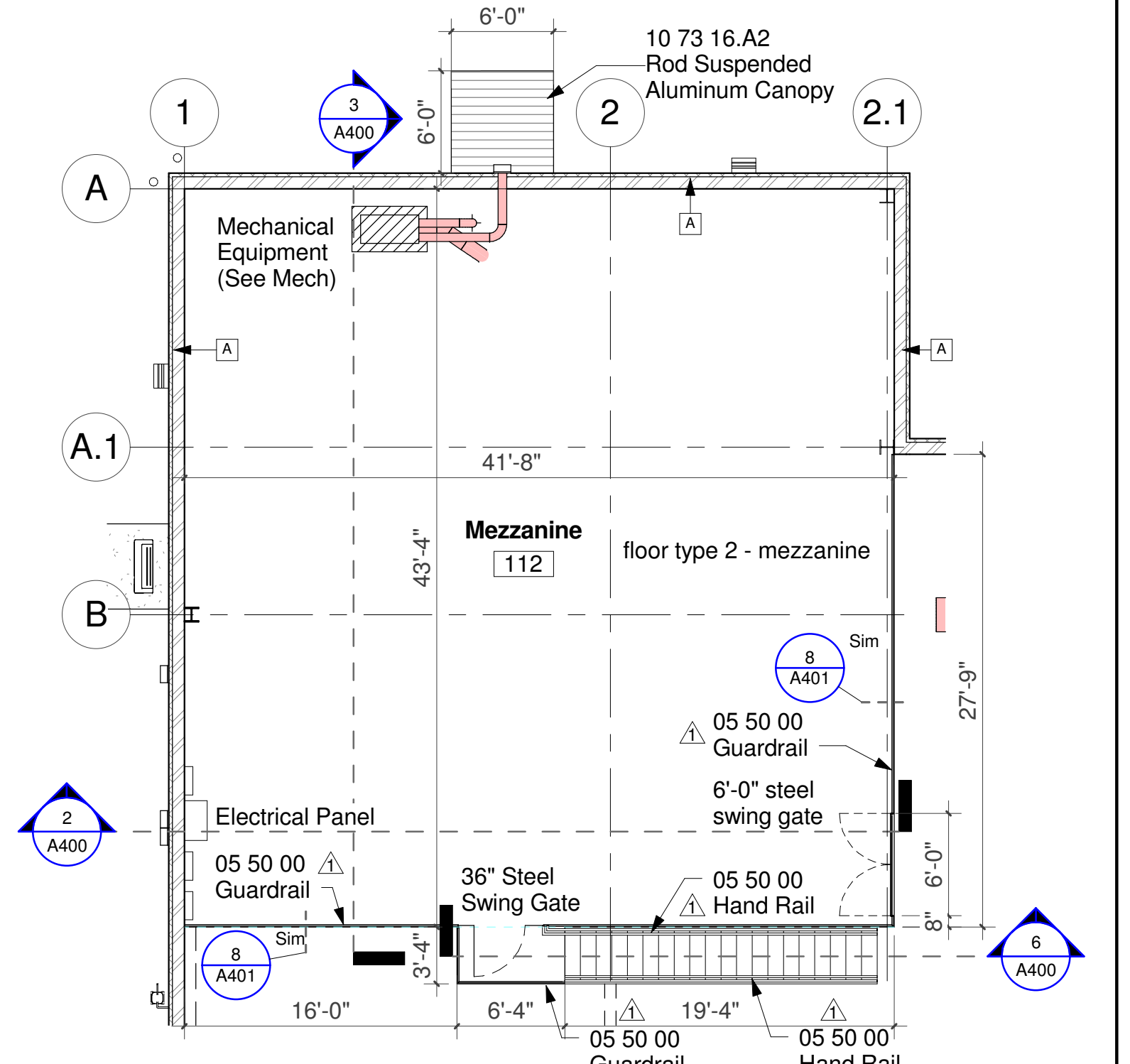
DATE 10/25/17 REVISED GEN NOTES & ITEM TAGS
08/28/17 REVISED FLOOR FINISH

SHEET NUMBER
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STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)

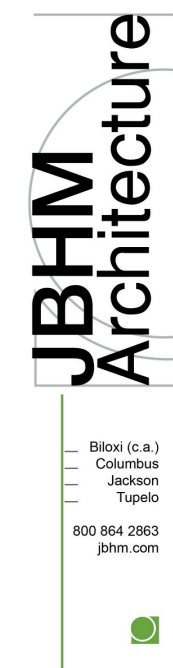


1 Reflected Ceiling Plan
1/8" = 1'-0"



2 Mezzanine Plan
1/8" = 1'-0"

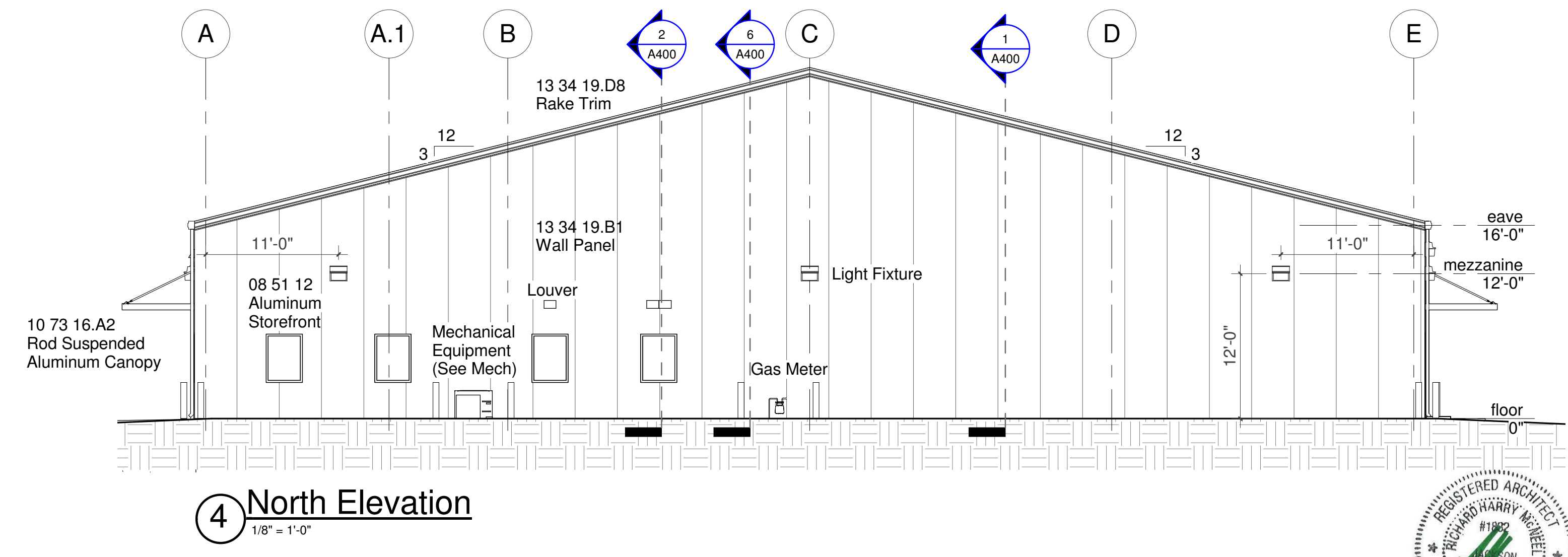
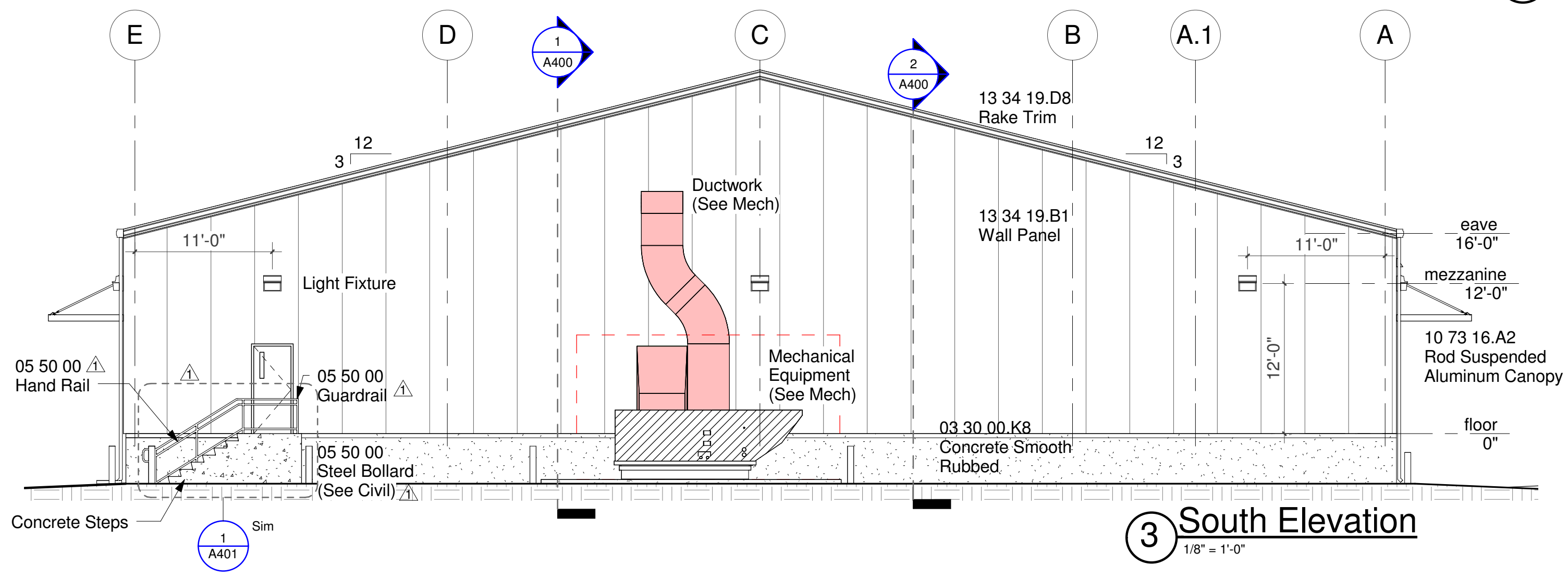
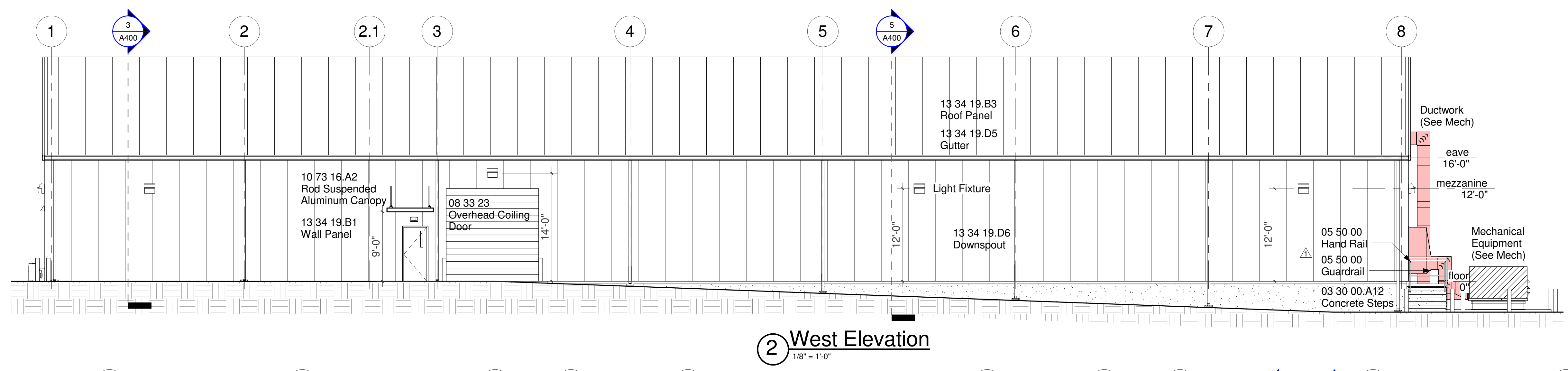
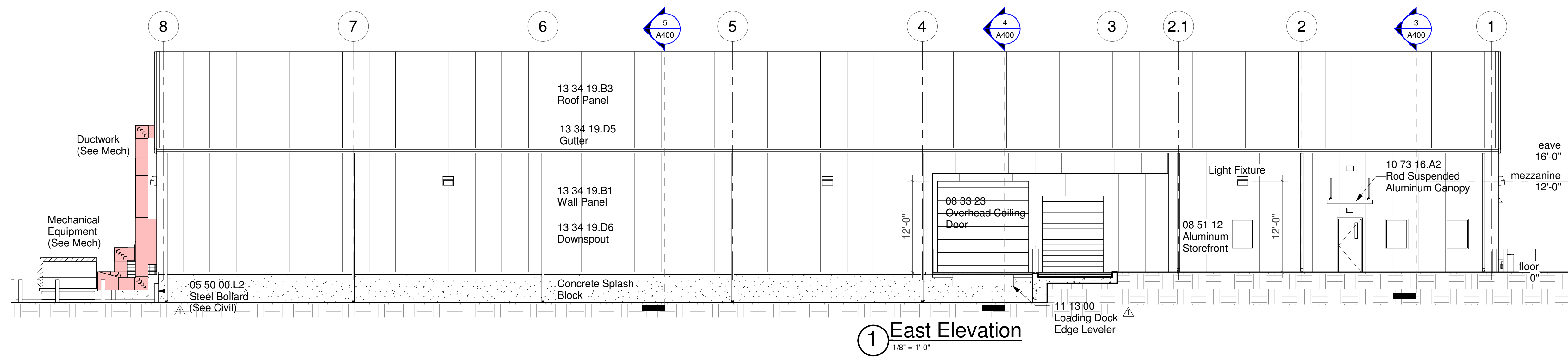
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MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON Reflected Ceiling Plan		
BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON		
WORKING NUMBER A210	SHEET NUMBER 30	
FILENAME: JBHM P.N. 16051.00 DESIGN TEAM C/J/NW/MP CHECKED NW DATE 08/11/2017		



STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)

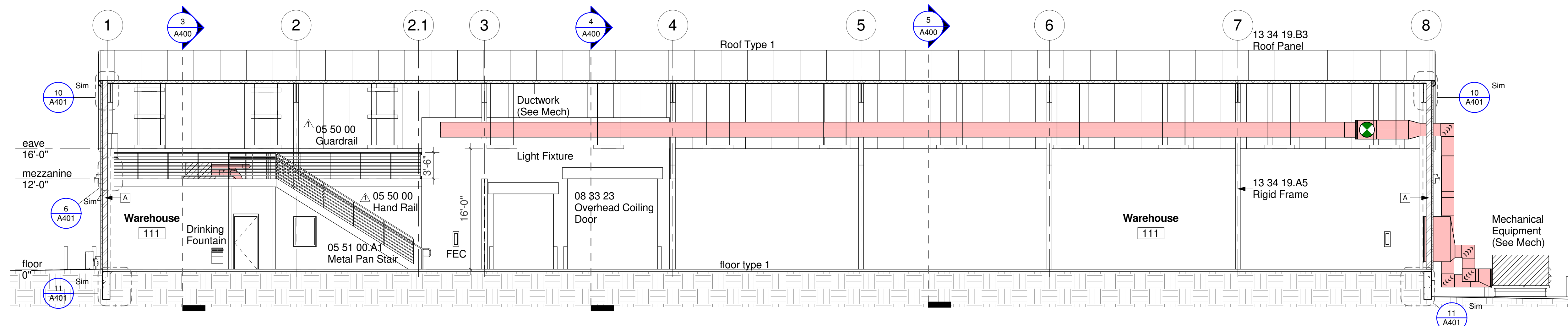


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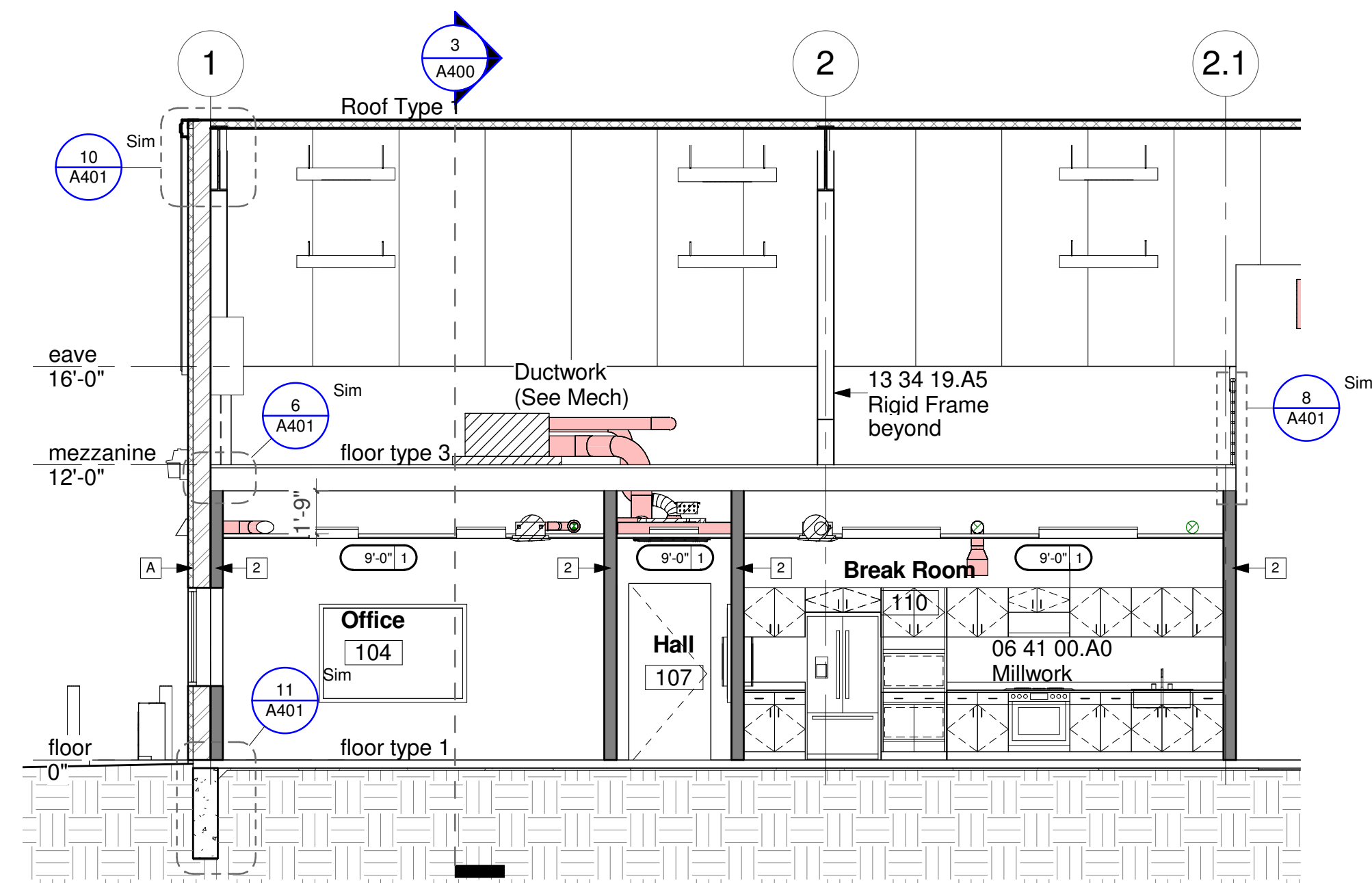


JBHM Architecture Blair (c) s.1 Columbia Jackson Trenton 800.954.2953 jbhm.com	MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON Exterior Elevations BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON	REGISTERED ARCHITECT RICHARD HARRY MOORE #1882 STATE OF MISSISSIPPI
	WORKING NUMBER A300 SHEET NUMBER 32	
FILENAME: JBHM.P.N. 16051.00 DESIGN TEAM: C/J/ NW/ MP CHECKED: NW DATE: 08/11/2017	DATE: 10/25/17 REVISION: 1 DATE: REVISION:	

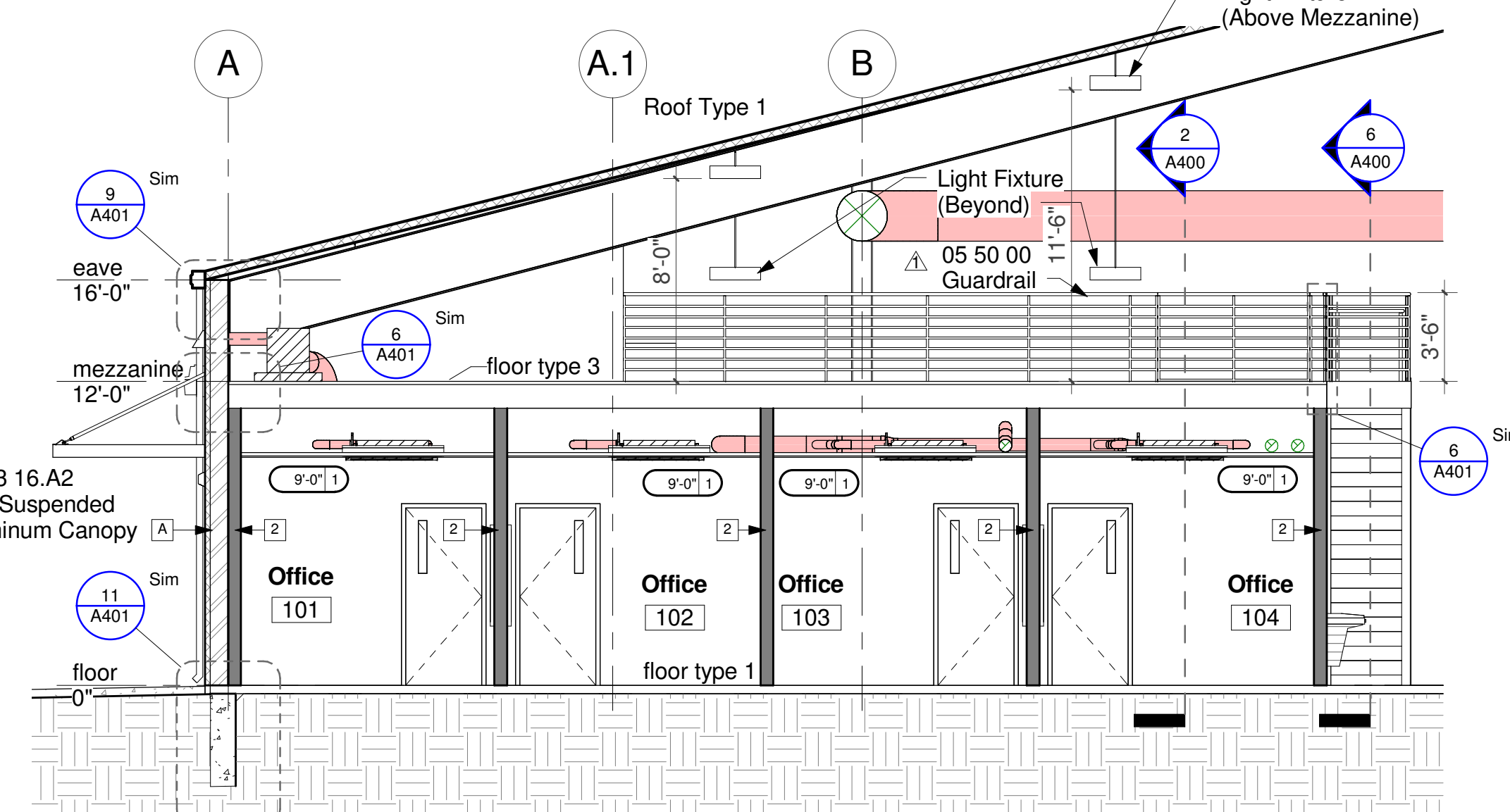
STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)



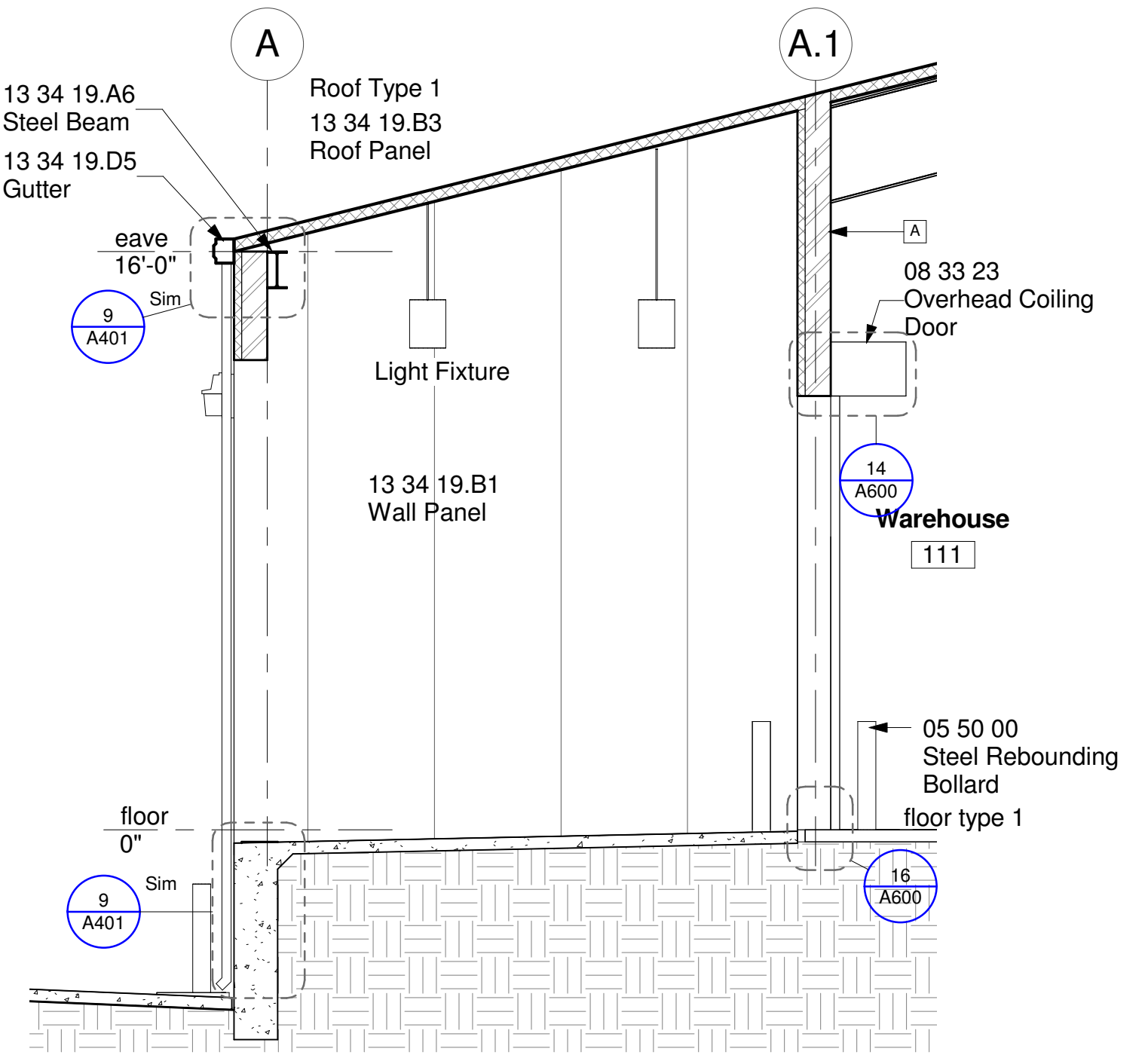
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1/8" = 1'-0"



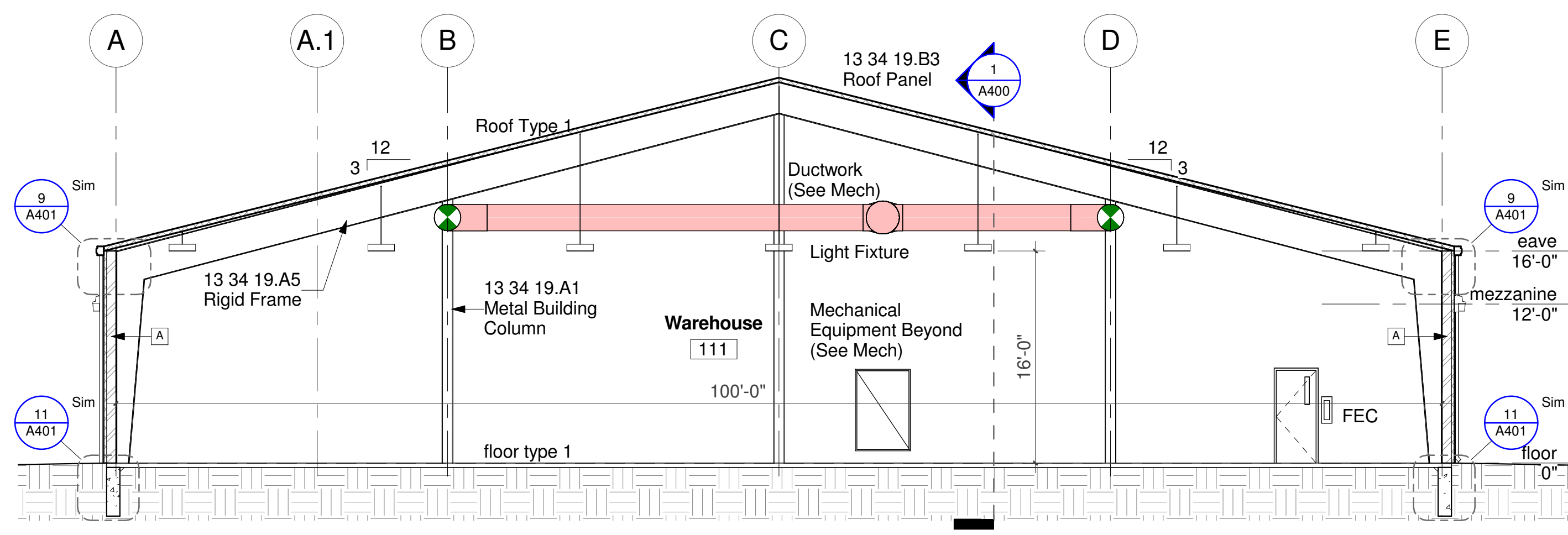
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3/16" = 1'-0"



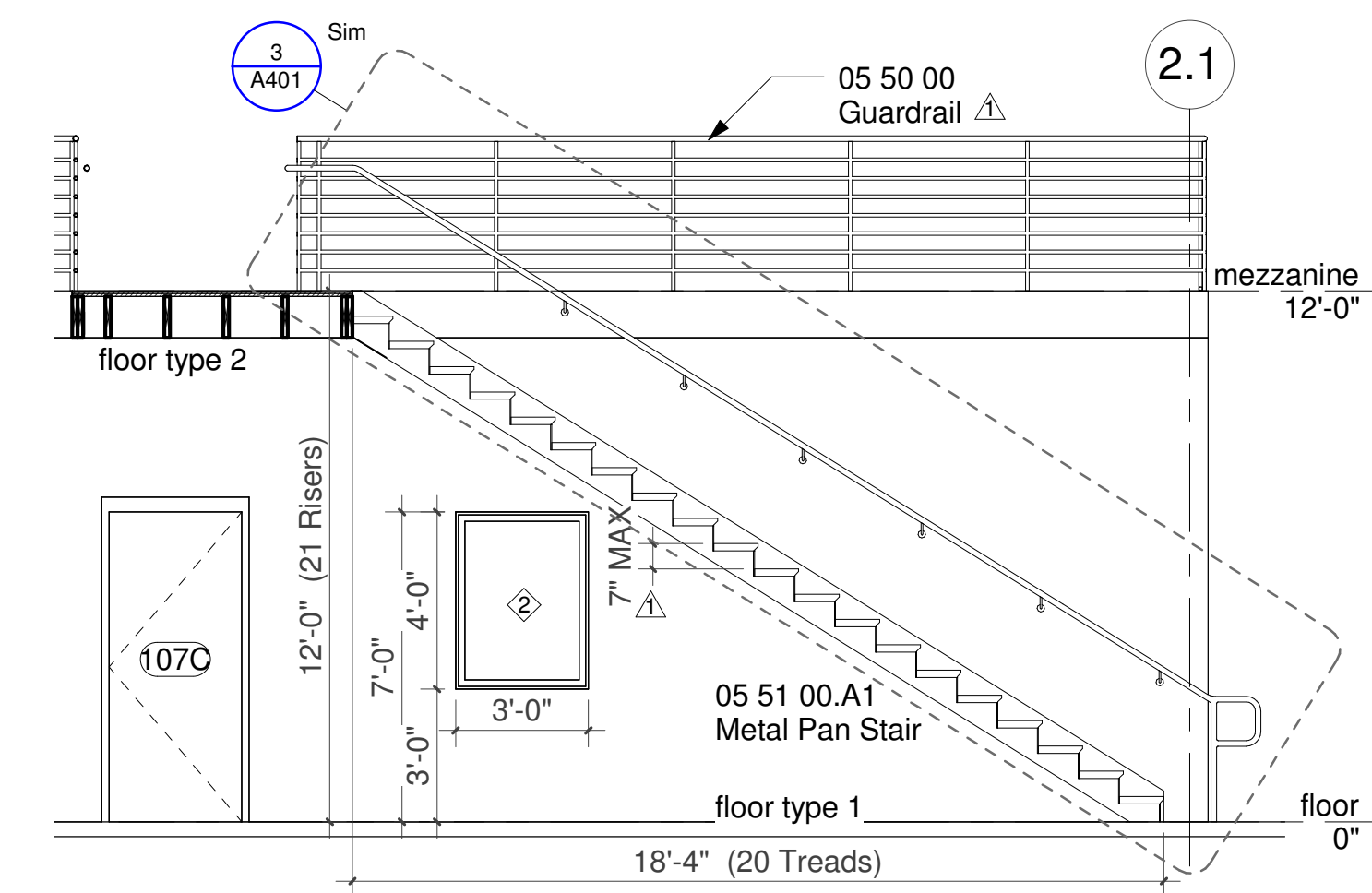
3 Building Section
3/16" = 1'-0"



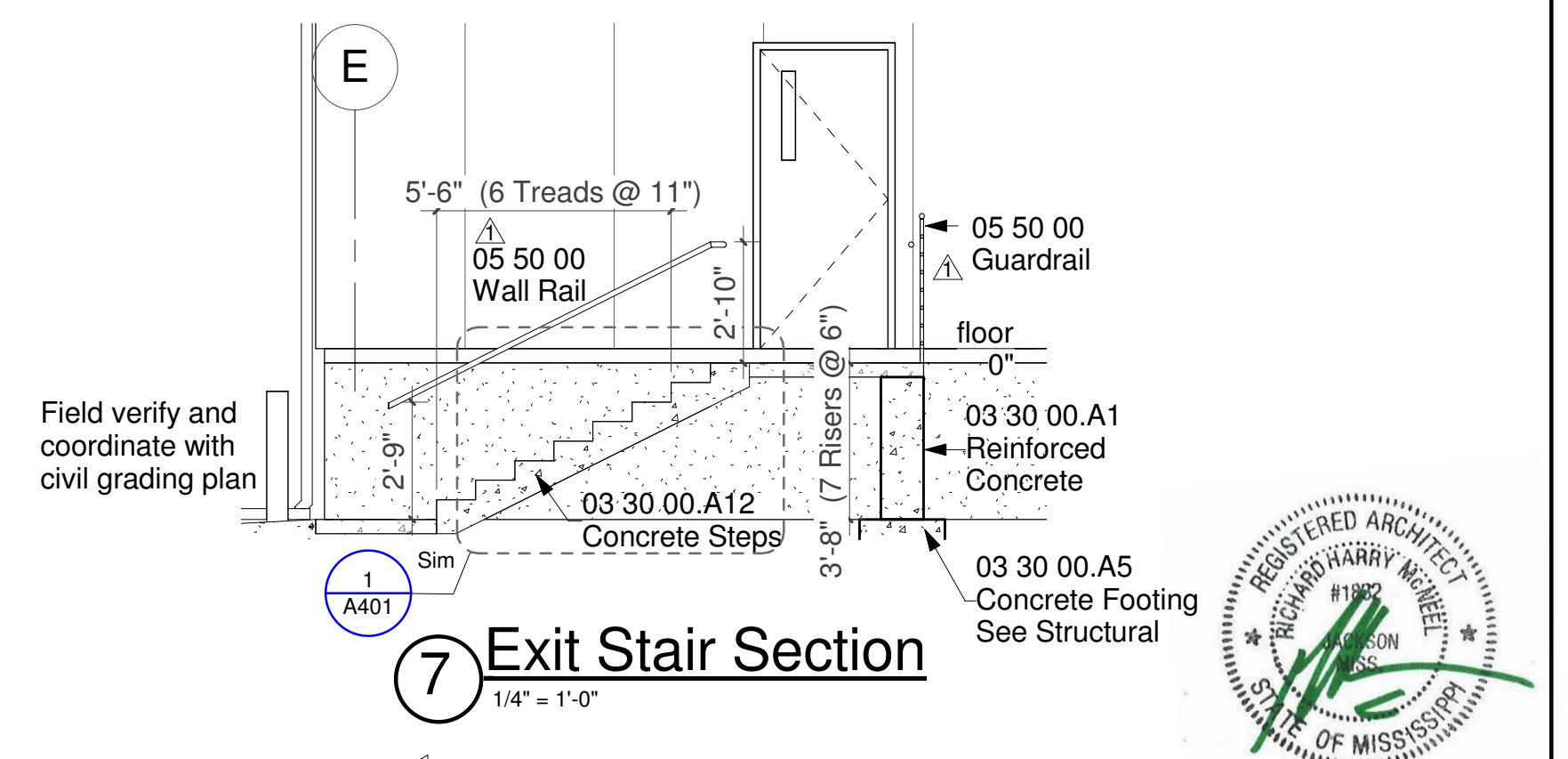
4 Dock Section
1/4" = 1'-0"



5 Building Section
1/8" = 1'-0"



6 Stair Section
1/4" = 1'-0"



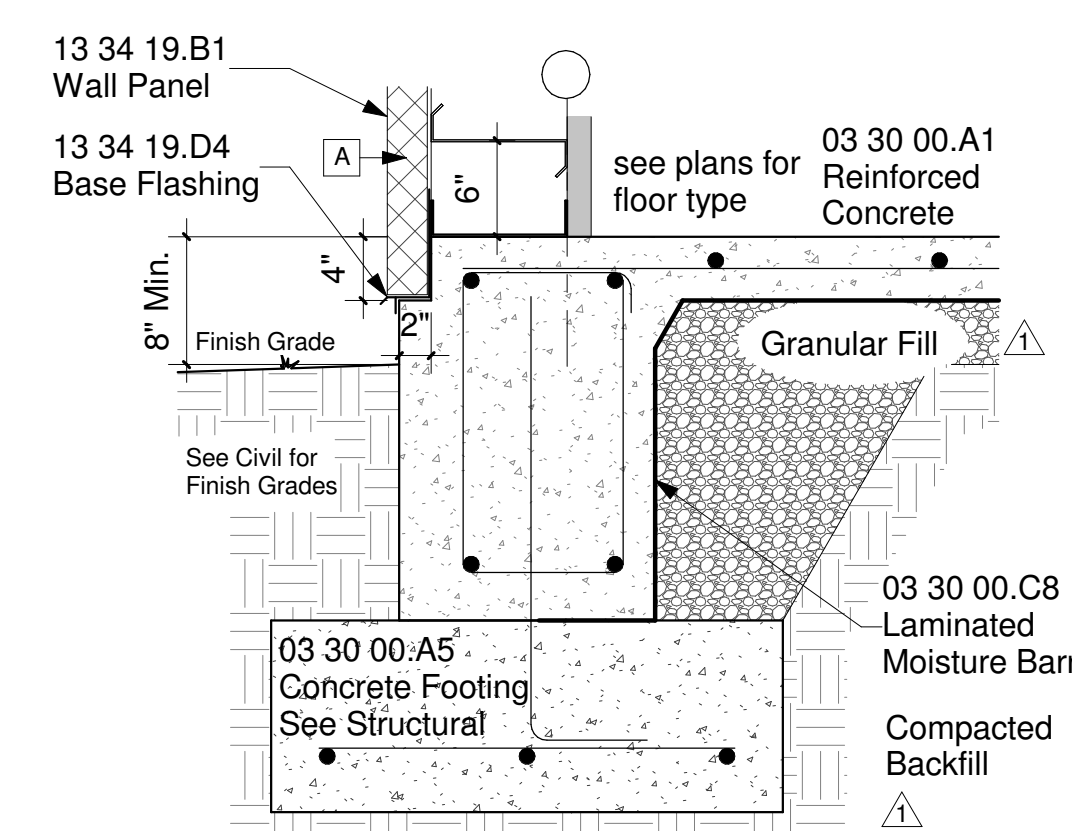
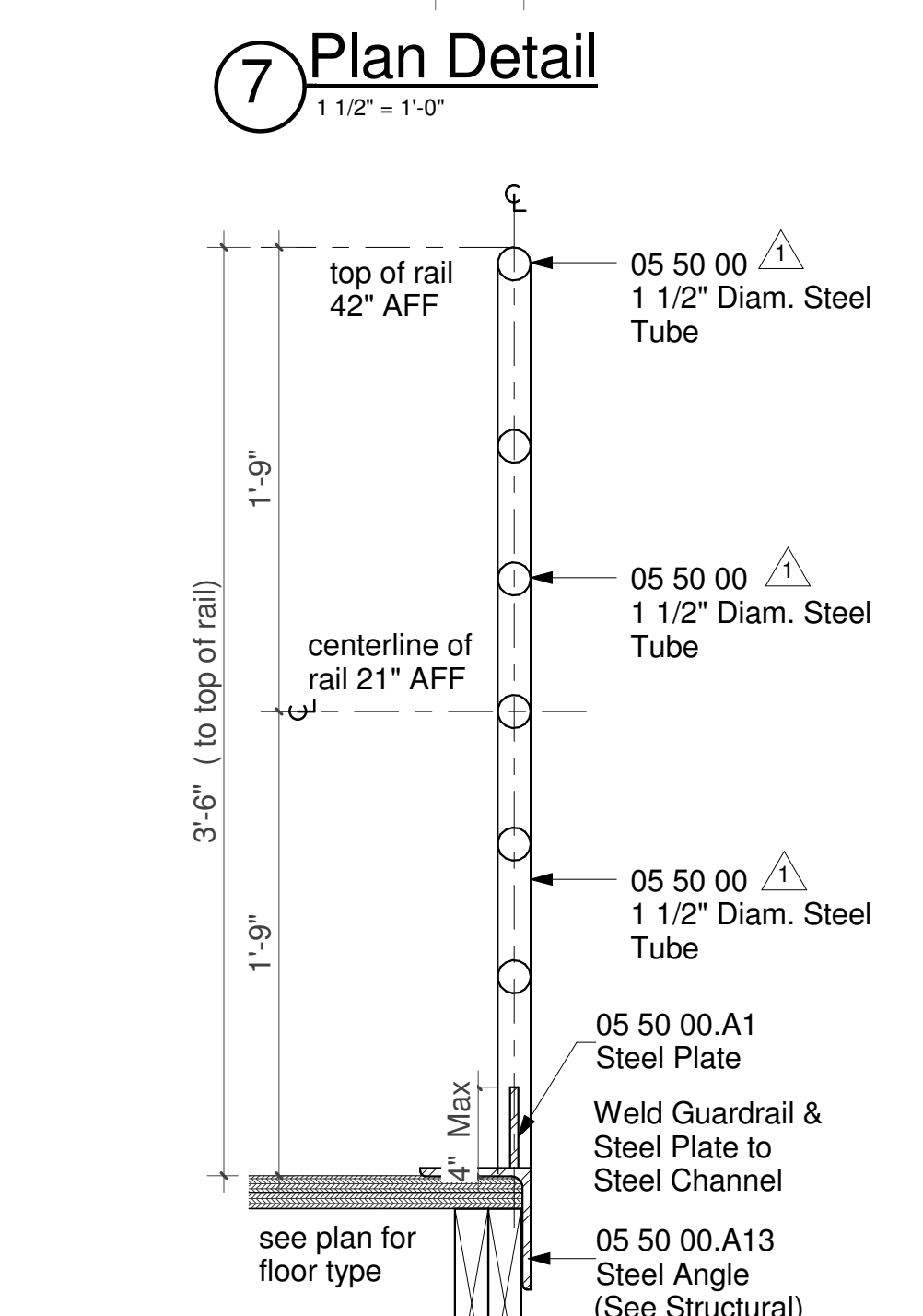
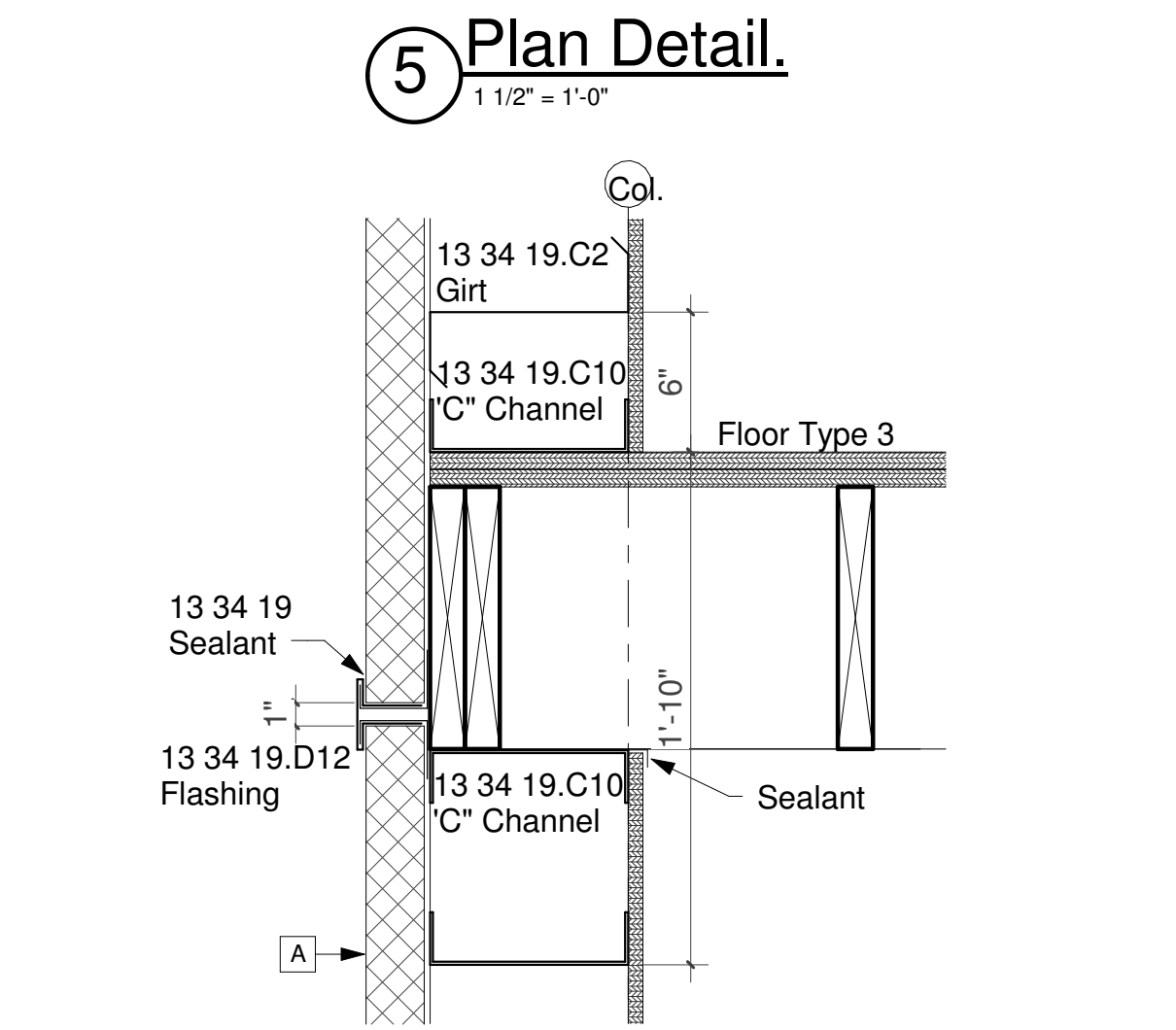
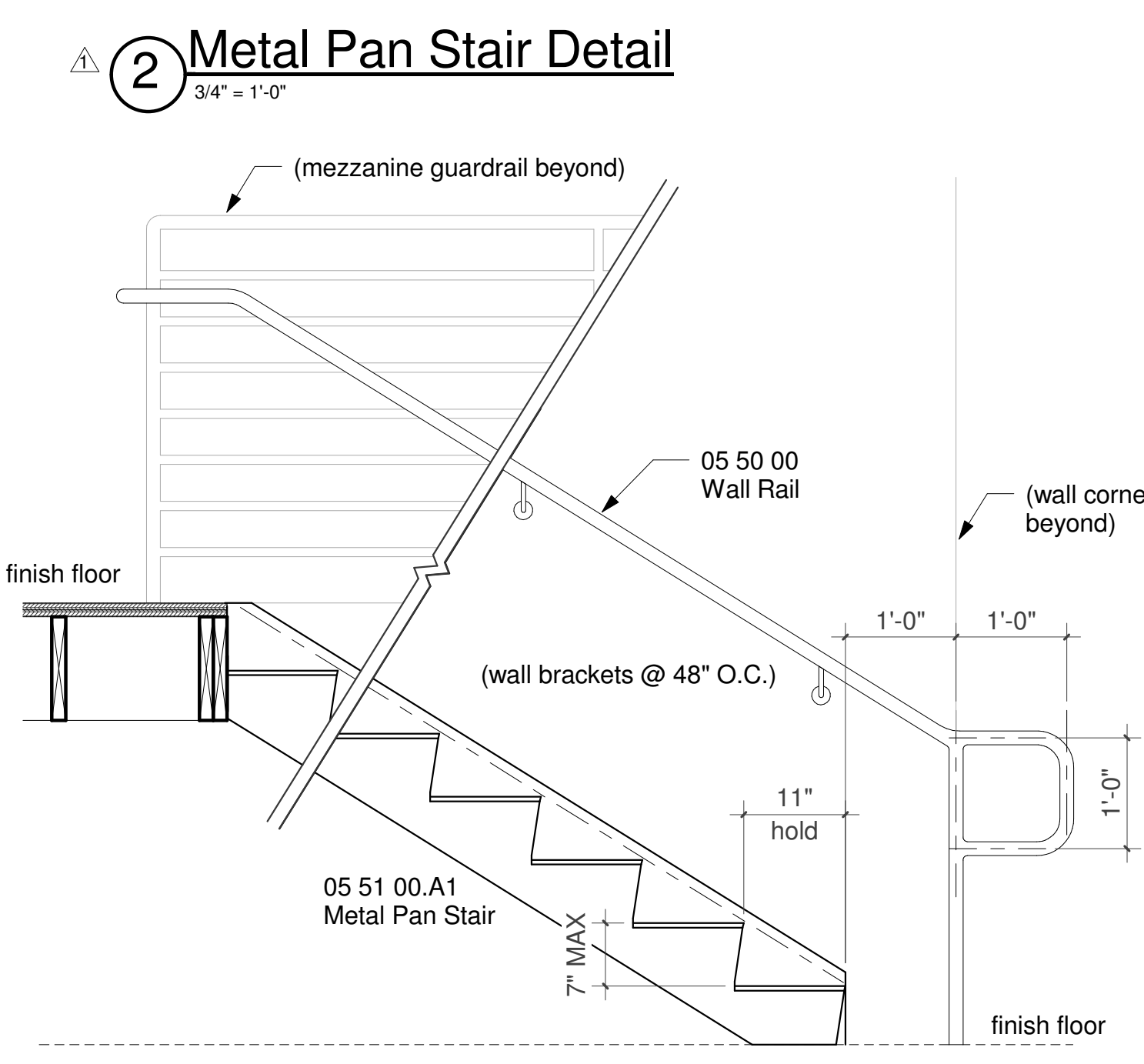
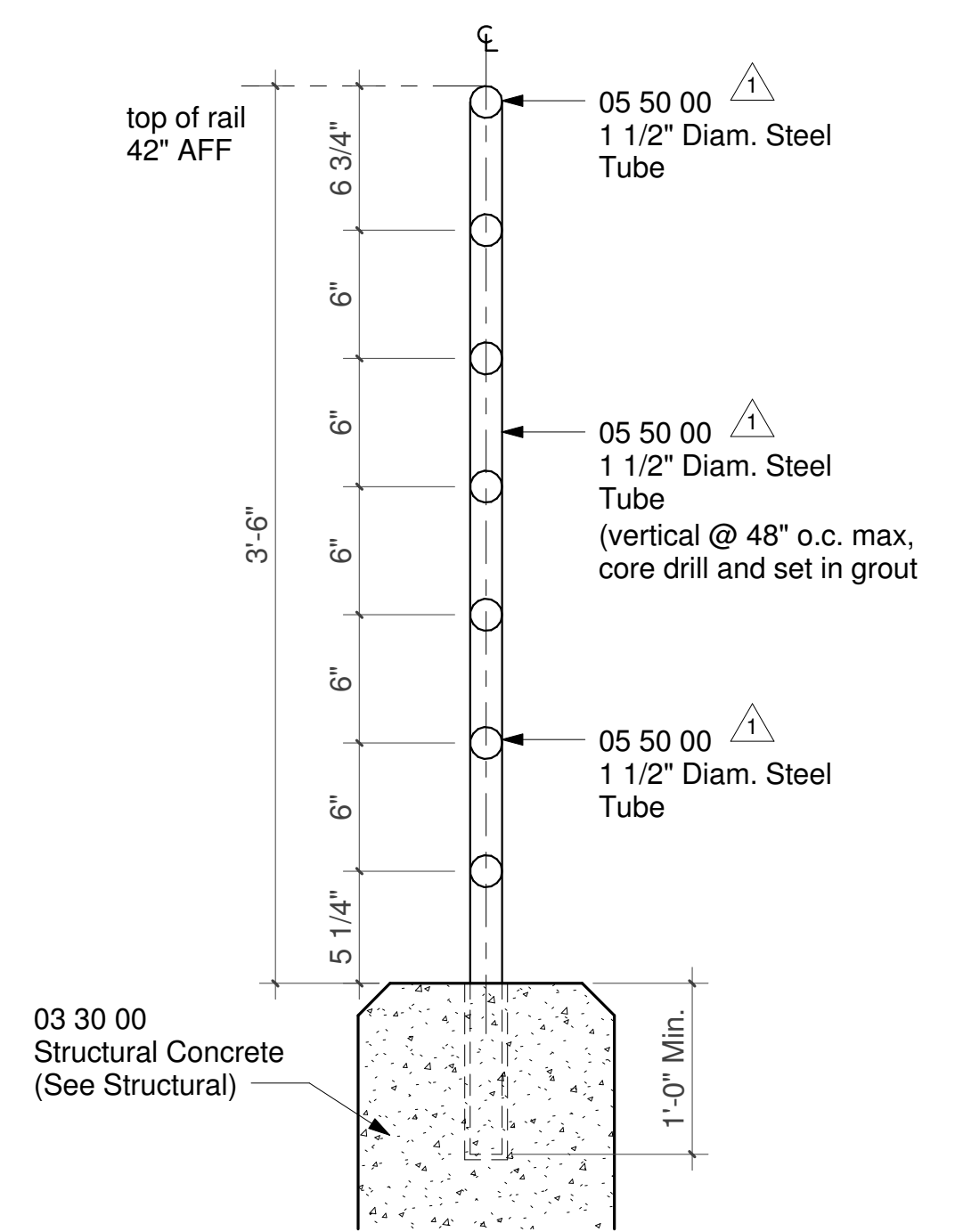
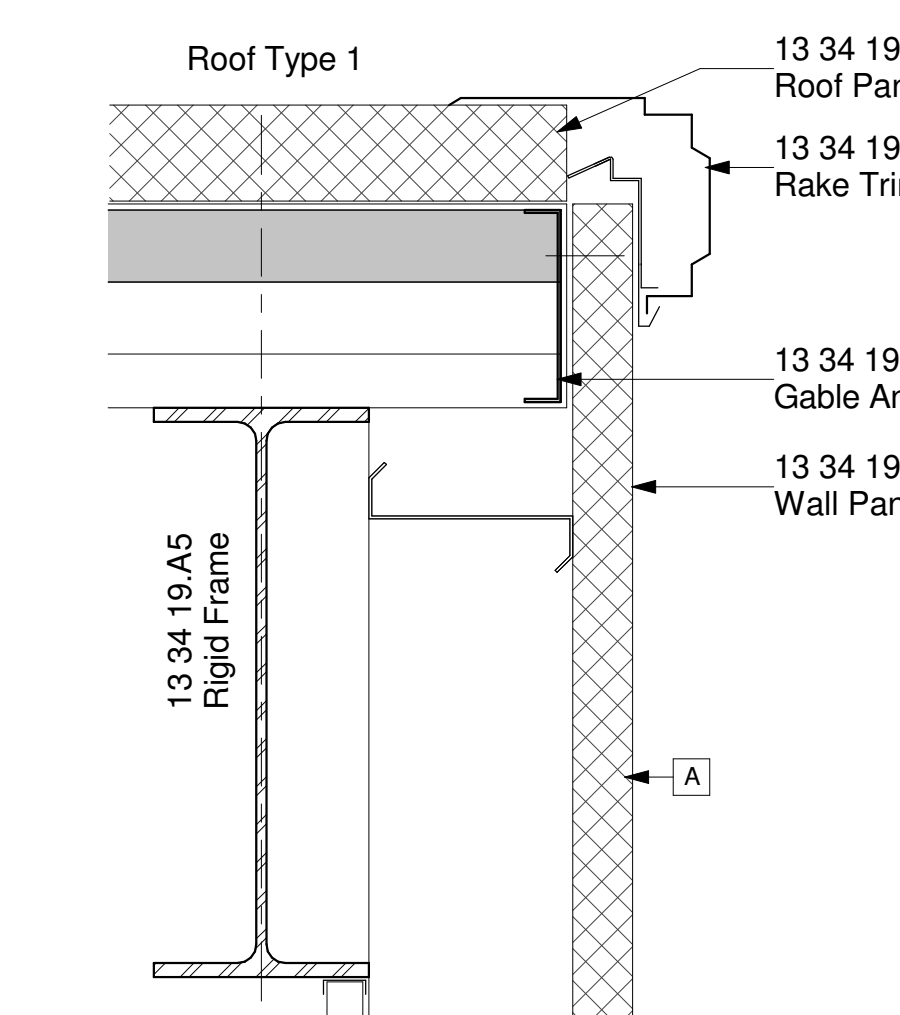
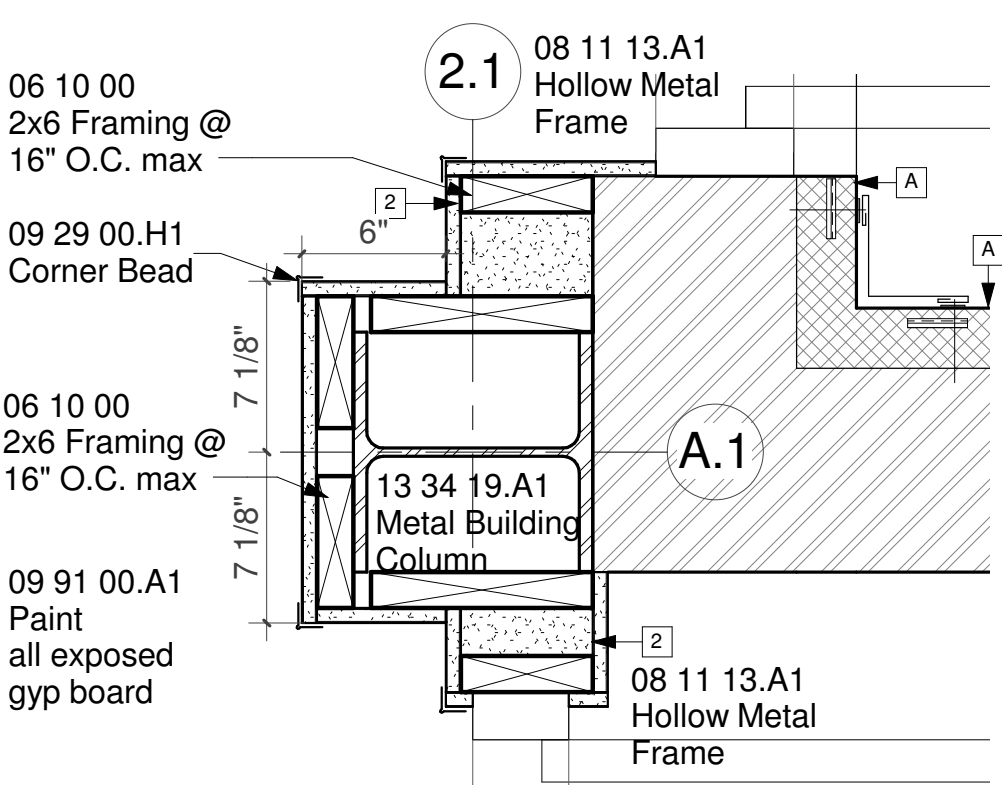
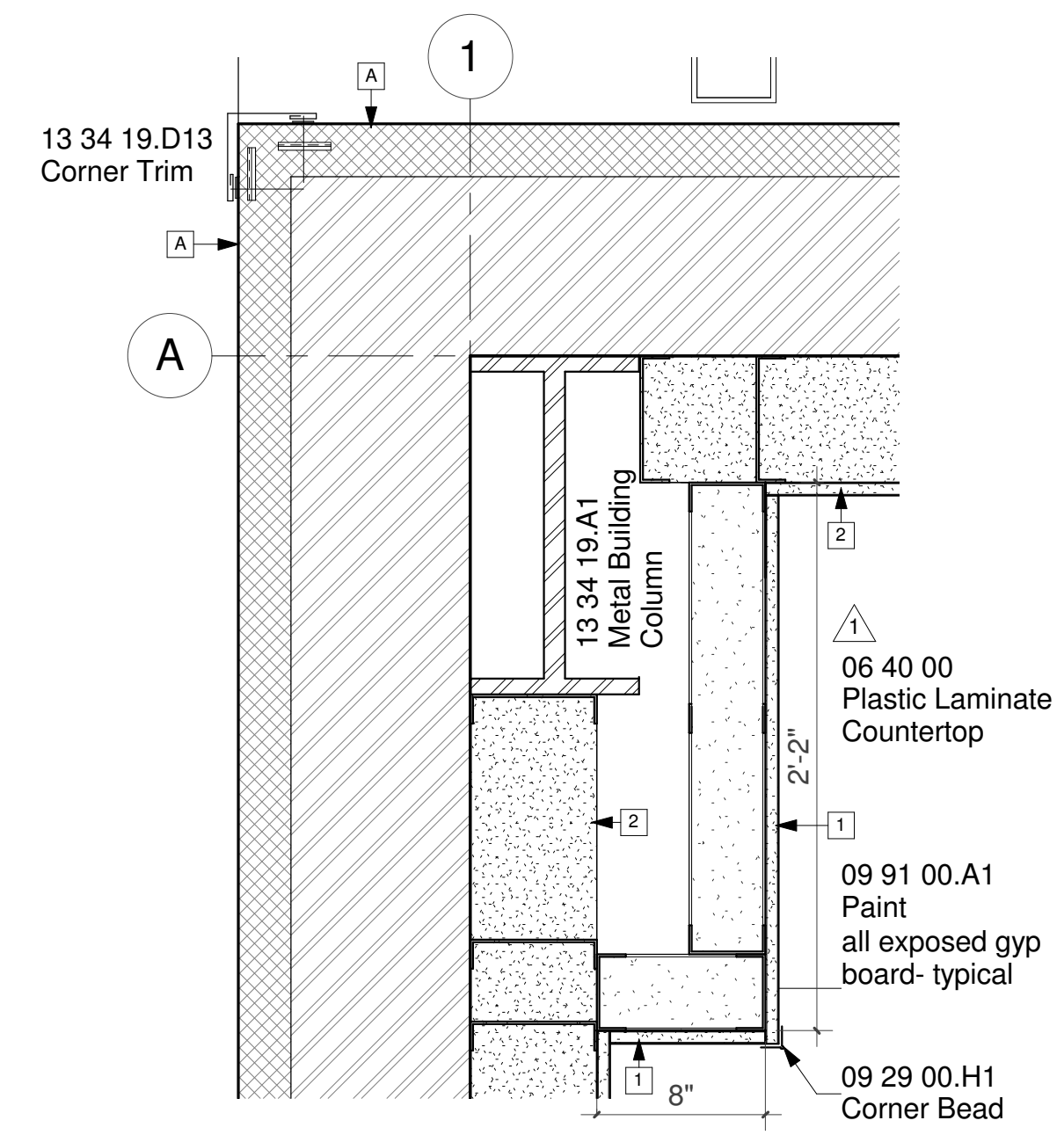
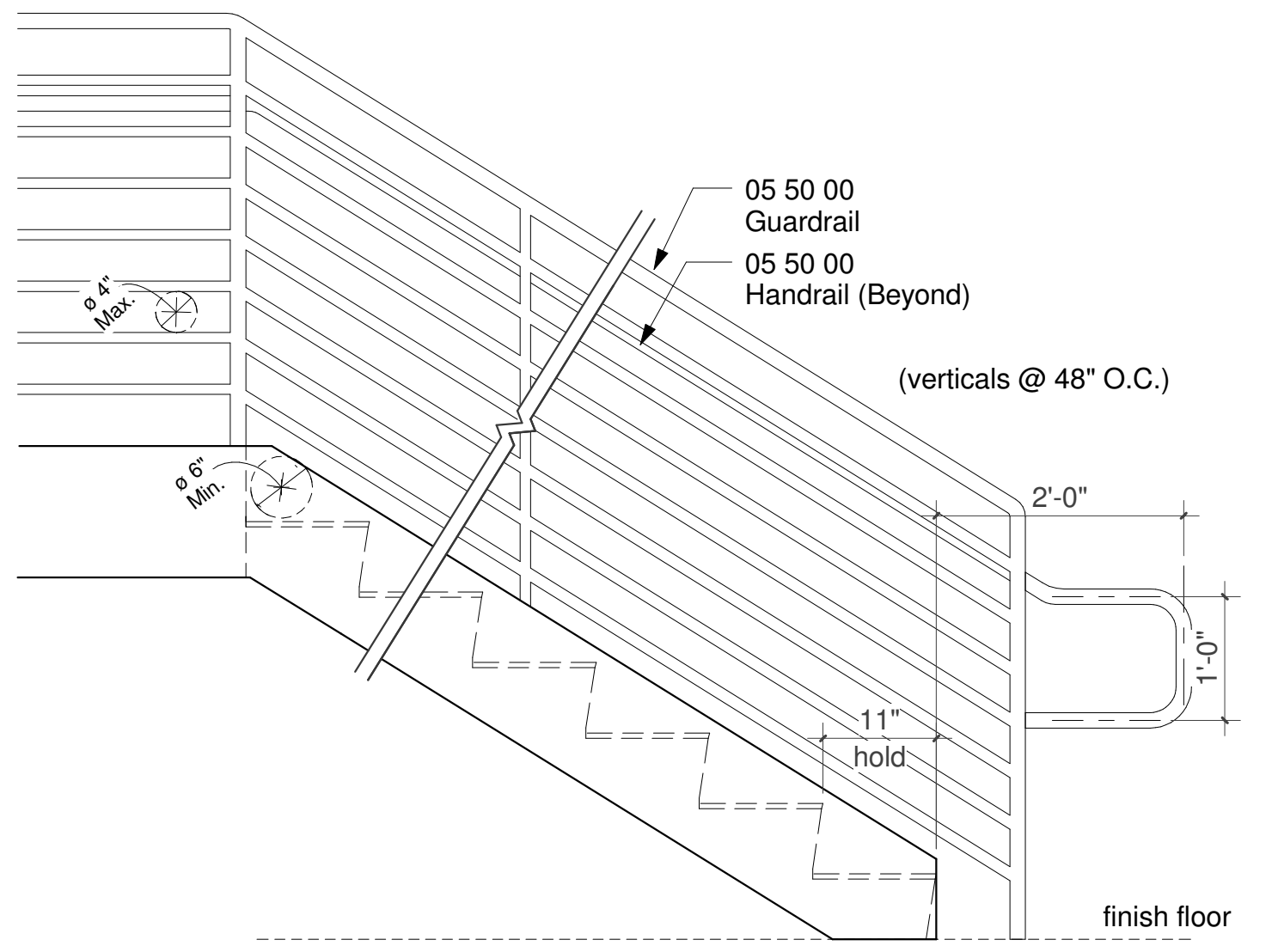
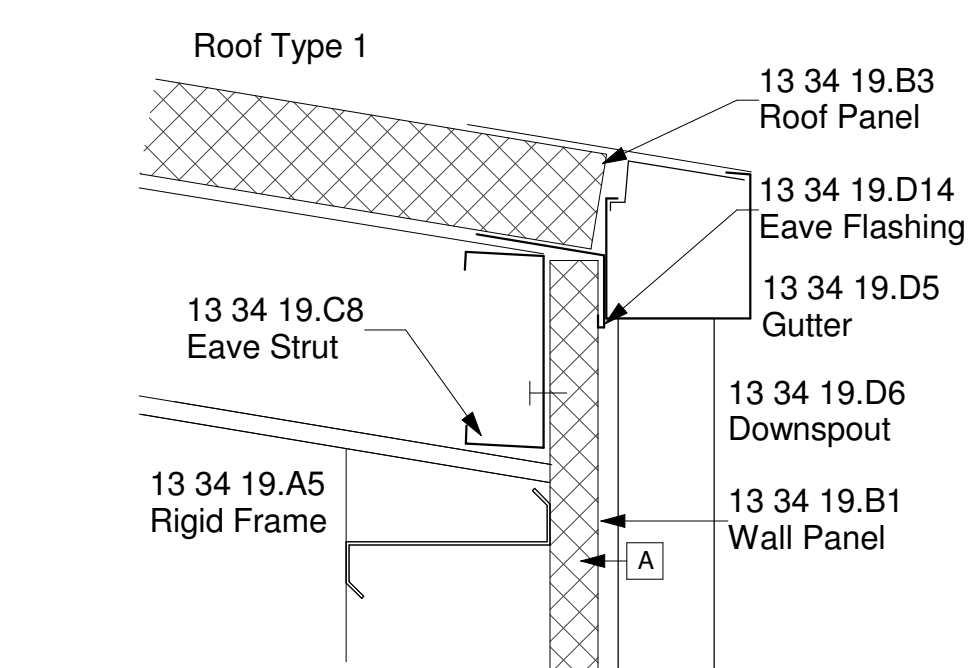
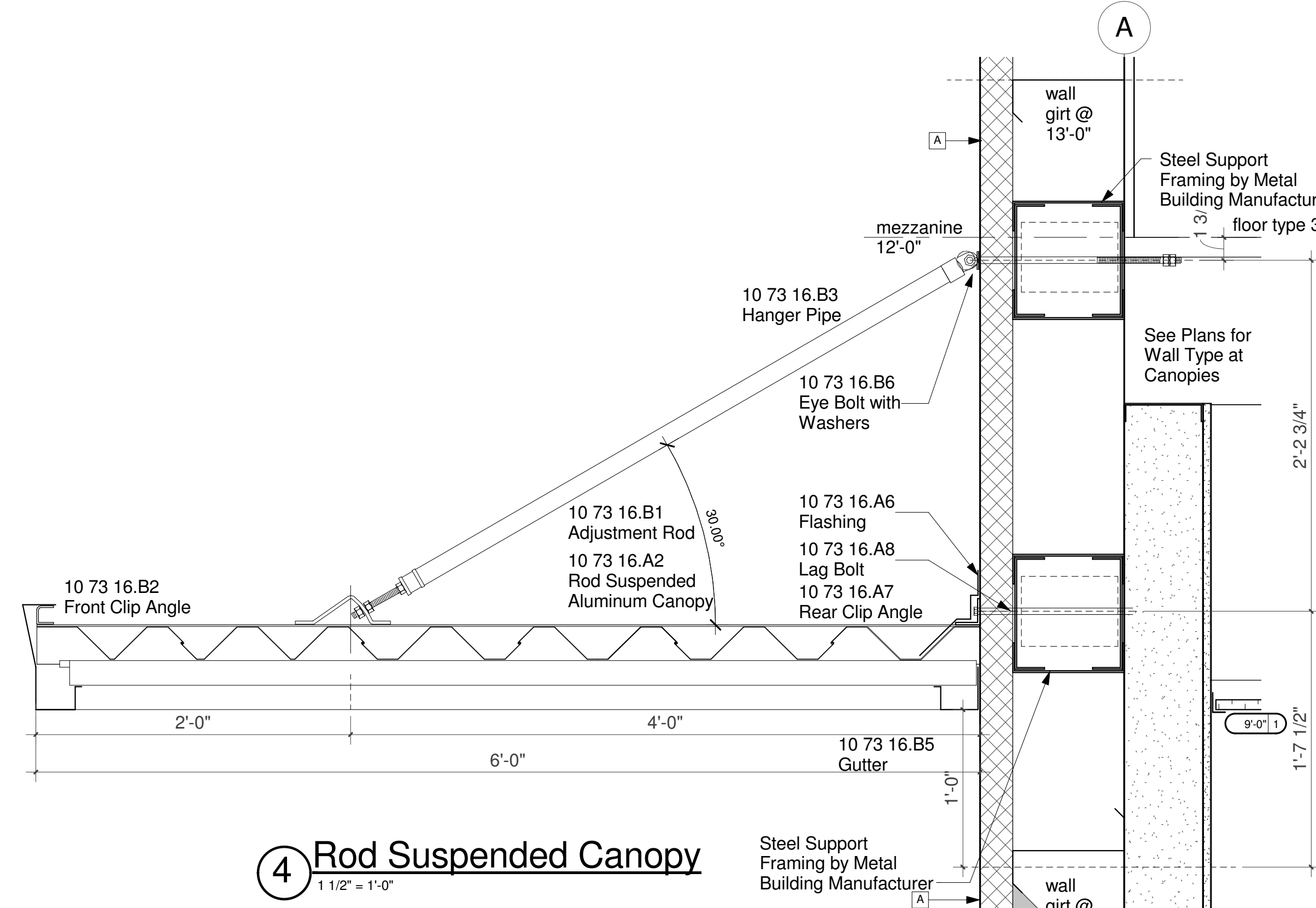
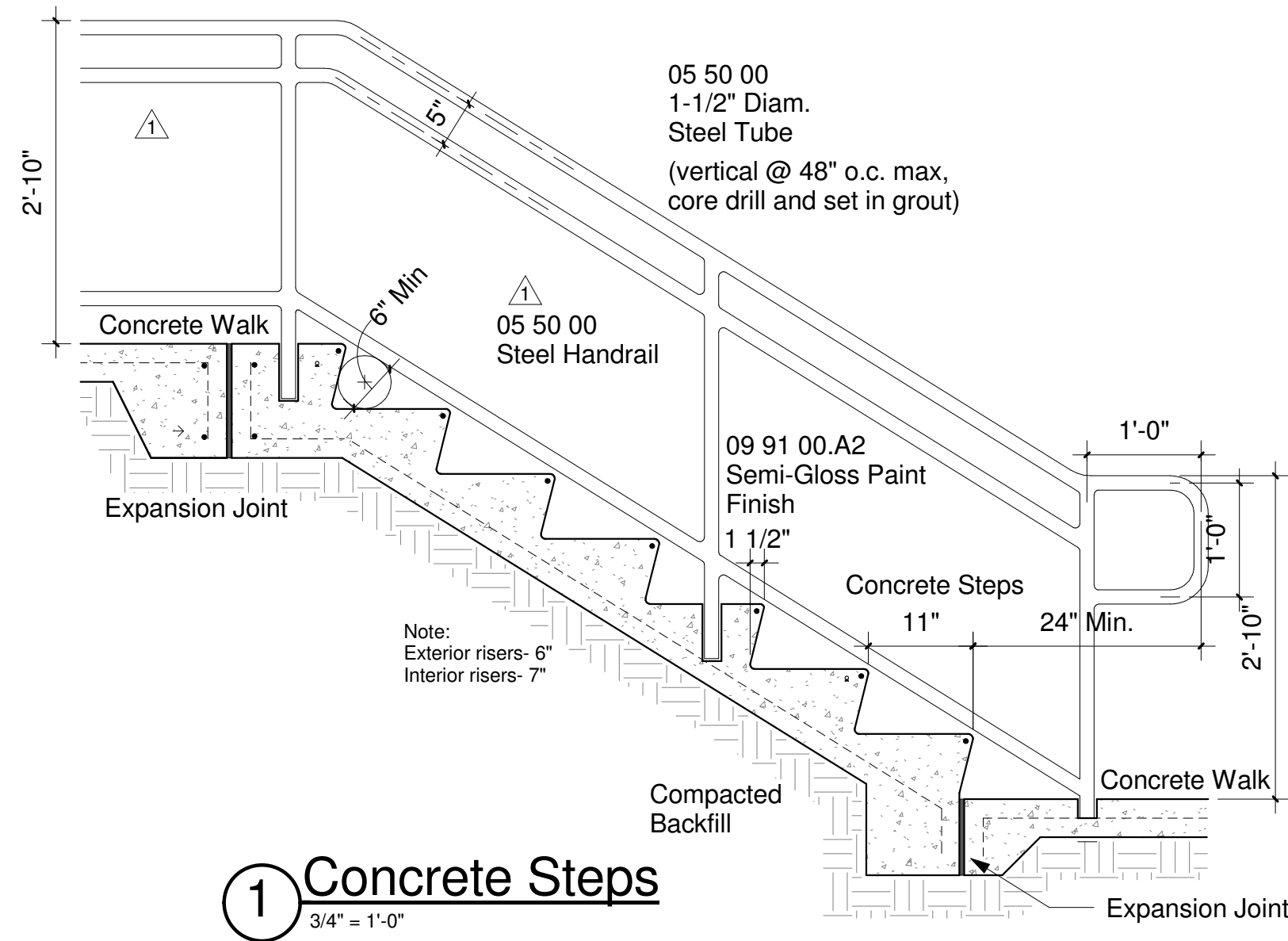
7 Exit Stair Section
1/4" = 1'-0"



JBHM
Architecture

10/25/17 DATE DESIGN TEAM C/J/NW/MP	REVISION REVISED TO EDIT RAILING	MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON Building Sections		WORKING NUMBER A400 SHEET NUMBER 33
		BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON	FILENAME: JBHM.P.N. 16051.00 CHECKED NW DATE 08/11/2017	

STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)



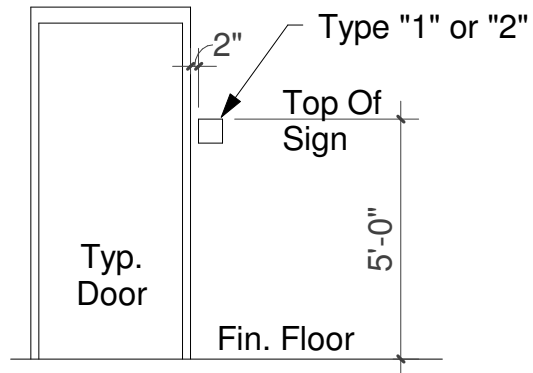
JBHM Architecture
Blair (a.k.a.)
Columbia
Jackson
Tennessee
800 954 2953
jbhm.com

MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON Section Details		
BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON		
WORKING NUMBER A401	FILENAME: JBHM P.N. 16051.00	
SHEET NUMBER 34	DESIGN TEAM REP/ NW/ MP CHECKED NW DATE 08/11/2017	

C:\Users\jones\Documents\16051.00 MDOT Newton Central R16_Chip Local.rvt

ADDENDUM

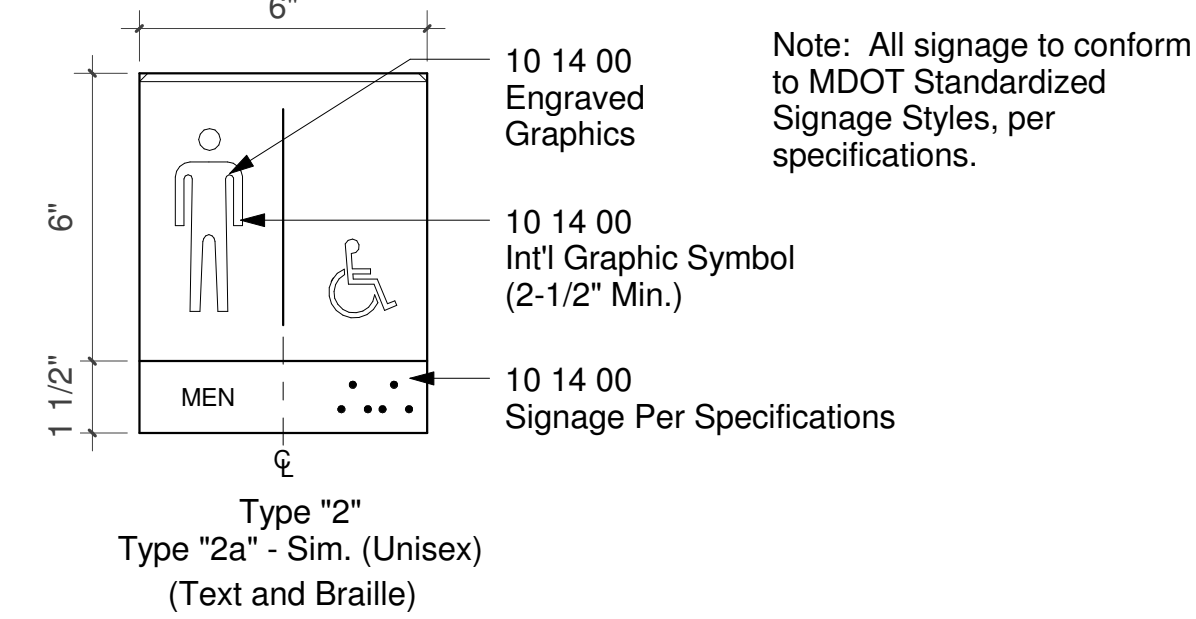
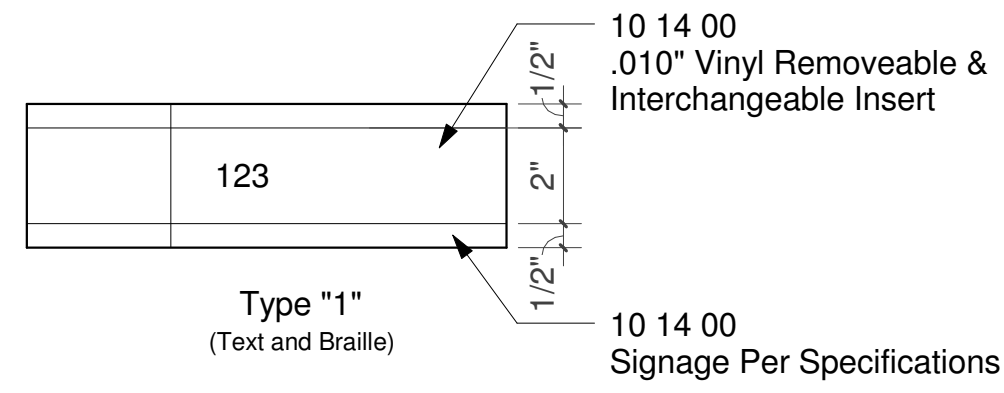
Note:
Signage to be mounted at room entrance on strike side of door frame, unless wall space is not sufficient. Reverse location w/ opp. door swing. Mount on right side of double doors.



Interior Signage Mounting

18 Signage Mounting Details

1/4" = 1'-0"



17 Signage Details

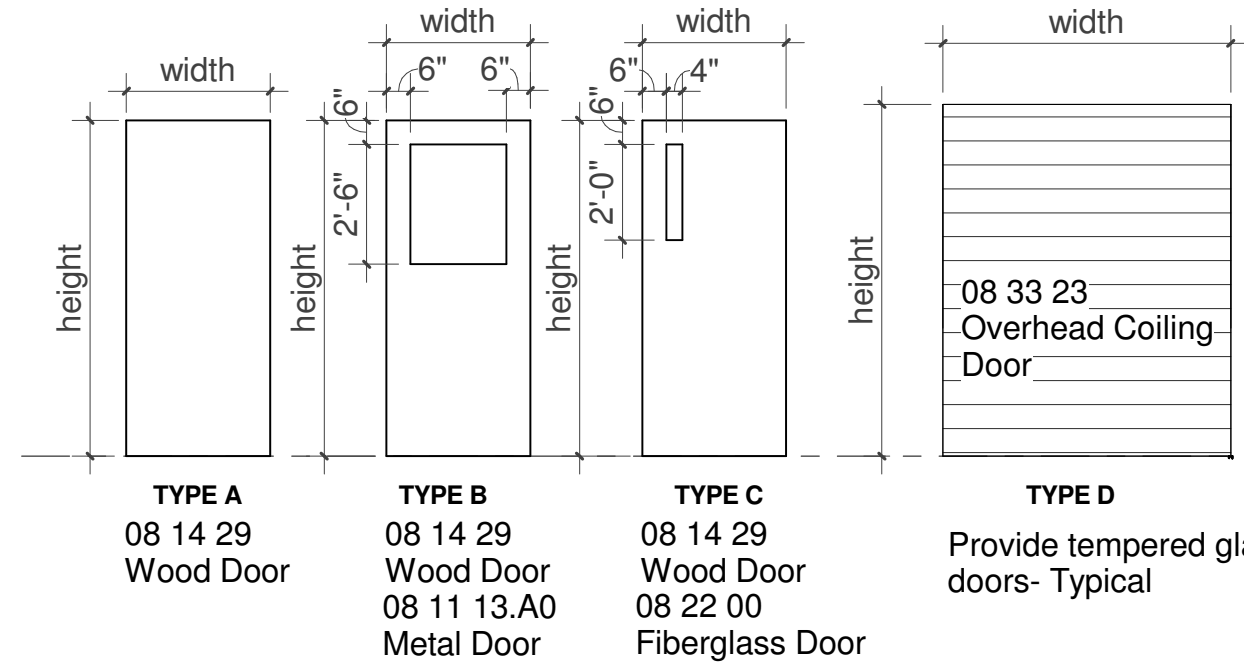
3" = 1'-0"

Signage Schedule		
Room No.	Sign Text	Sign Type
101		Type 1
102		Type 1
103		Type 1
104		Type 1
105		Type 1
106		Type 1
107		Type 1
108		Type 2
109		Type 2
110		Type 1
111		Type 1
112		Type 1

Signage Text to be Provided by Owner

Door No.	Door						Frame				Notes
	Size			Mtl.	Elev.	Mtl.	Elev.	Details - A600			
	W	H	Thk					Head	Jamb	Sill	
101	3'-0"	7'-0"	1 3/4"	SCWD	C	HM	1	3	4		HW SET 2
102	3'-0"	7'-0"	1 3/4"	SCWD	C	HM	1	3	4		HW SET 2
103	3'-0"	7'-0"	1 3/4"	SCWD	C	HM	1	3	4		HW SET 2
104	3'-0"	7'-0"	1 3/4"	SCWD	C	HM	1	3	4		HW SET 2
106A	3'-0"	7'-0"	1 3/4"	FIBERGLASS	C	HM	1	8	9	10	EXT. DOOR - HW SET 1
106B	3'-0"	7'-0"	1 3/4"	HM	B	HM	1	3	4		HW SET 5
107A	3'-0"	7'-0"	1 3/4"	FIBERGLASS	C	HM	1	8	9	10	EXT. DOOR - HW SET 1
107B	3'-0"	7'-0"	1 3/4"	HM	B	HM	1	3	4		HW SET 5
107C	3'-0"	7'-0"	1 3/4"	HM	B	HM	1	3	4		HW SET 5
108	3'-0"	7'-0"	1 3/4"	SCWD	A	HM	1	3	4		HW SET 3
109	3'-0"	7'-0"	1 3/4"	SCWD	A	HM	1	3	4		HW SET 3
110	3'-0"	7'-0"	1 3/4"	SCWD	B	HM	1	3	4		HW SET 4
111A	8'-0"	10'-0"	2"	METAL	D	METAL	-	14	15	16	OVERHEAD COILING
111B	12'-0"	12'-0"	2"	METAL	D	METAL	-	14	15	16	OVERHEAD COILING
111C	12'-0"	12'-0"	2"	METAL	D	METAL	-	14	15	16	OVERHEAD COILING
111D	3'-0"	7'-0"	1 3/4"	FIBERGLASS	C	HM	1	8	9	10	EXT. DOOR - HW SET 1
111E	3'-0"	7'-0"	1 3/4"	FIBERGLASS	C	HM	1	8	9	10	EXT. DOOR - HW SET 1

See door schedule for locations of glazing types

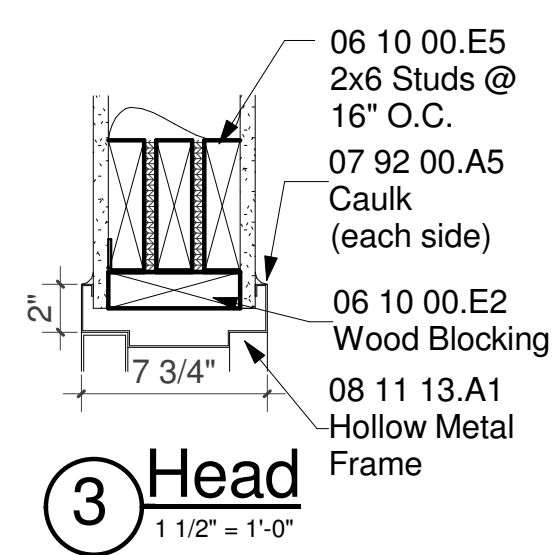
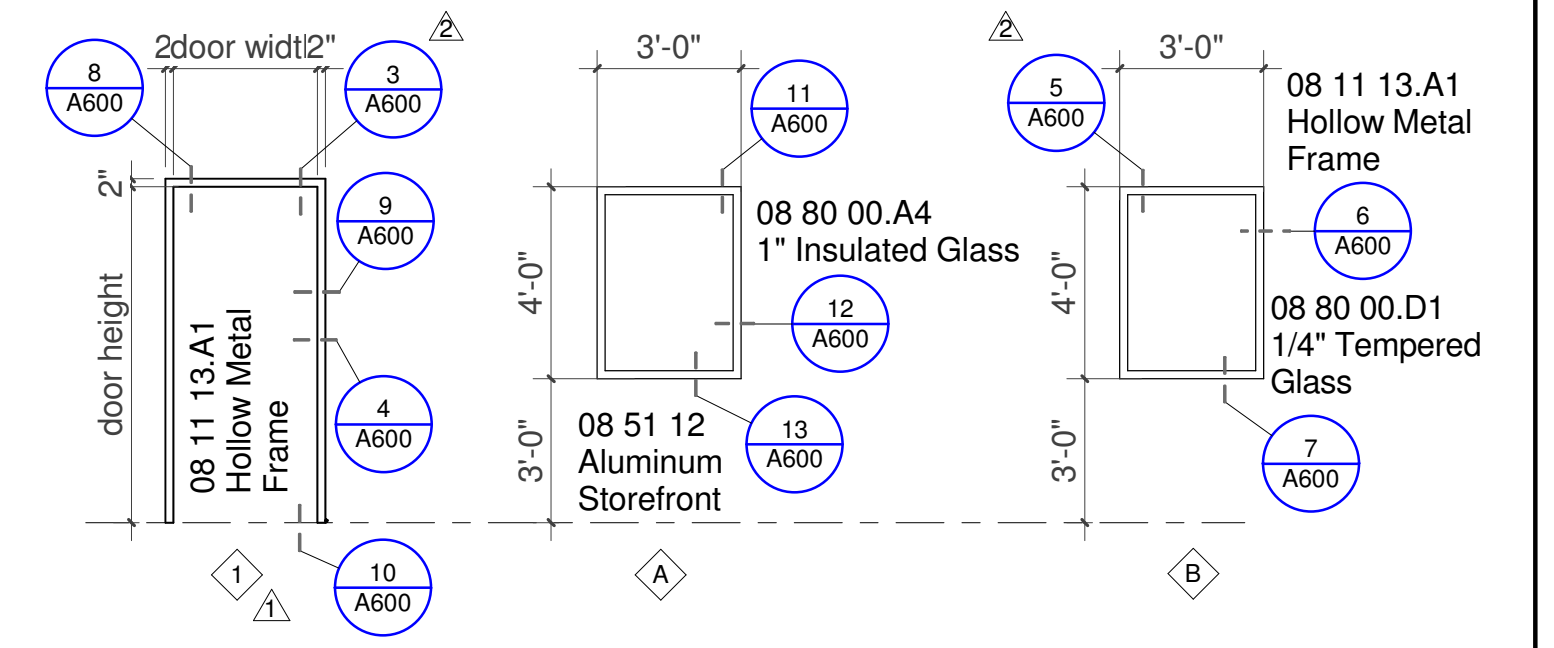


1 Door Types

1/4" = 1'-0"

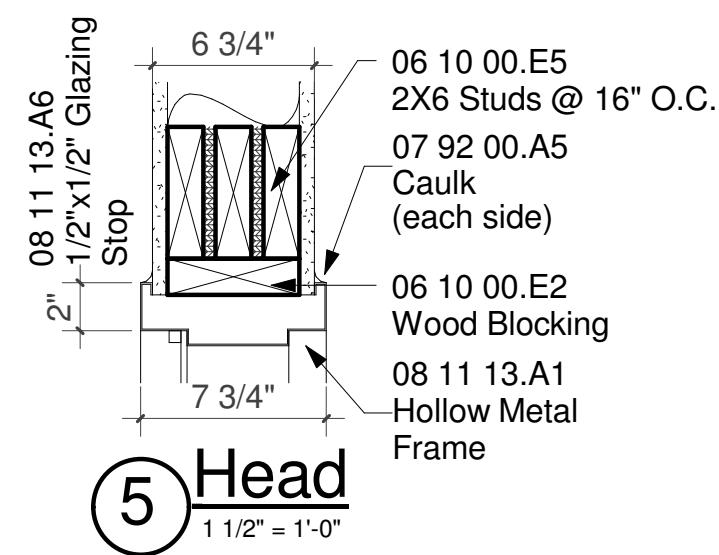
2 Frame Types

1/4" = 1'-0"



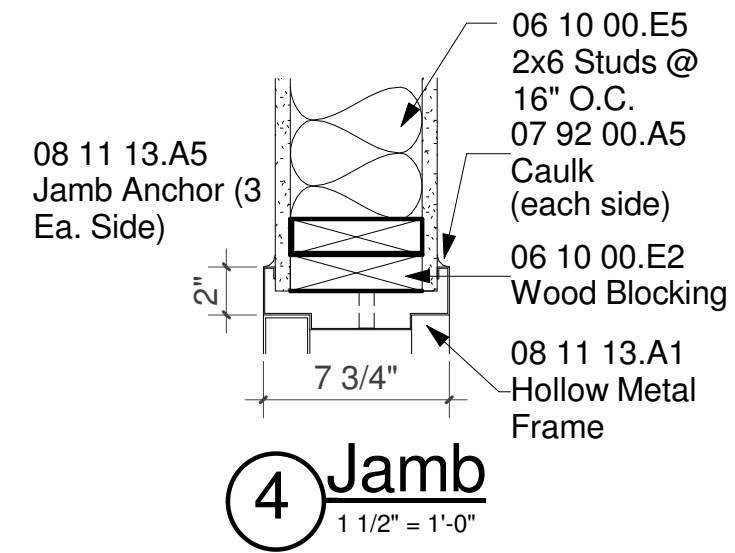
3 Head

1 1/2" = 1'-0"



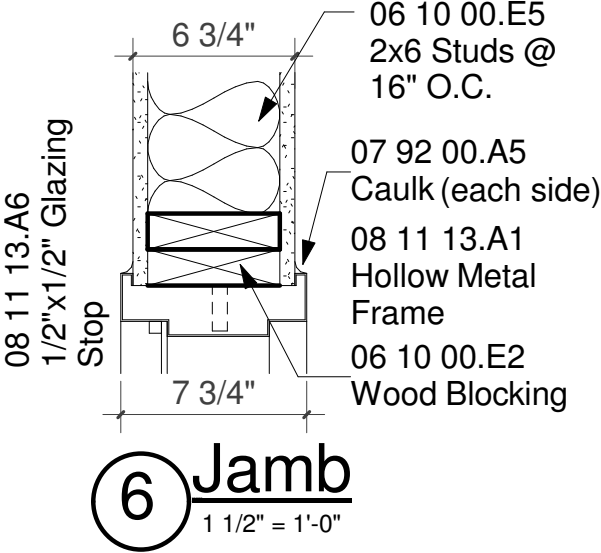
5 Head

1 1/2" = 1'-0"



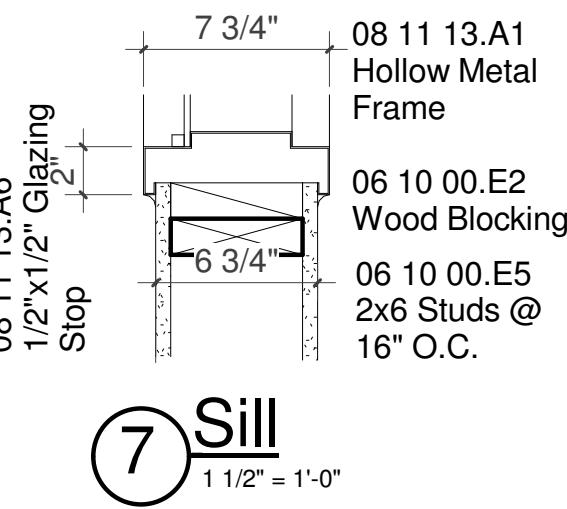
4 Jamb

1 1/2" = 1'-0"



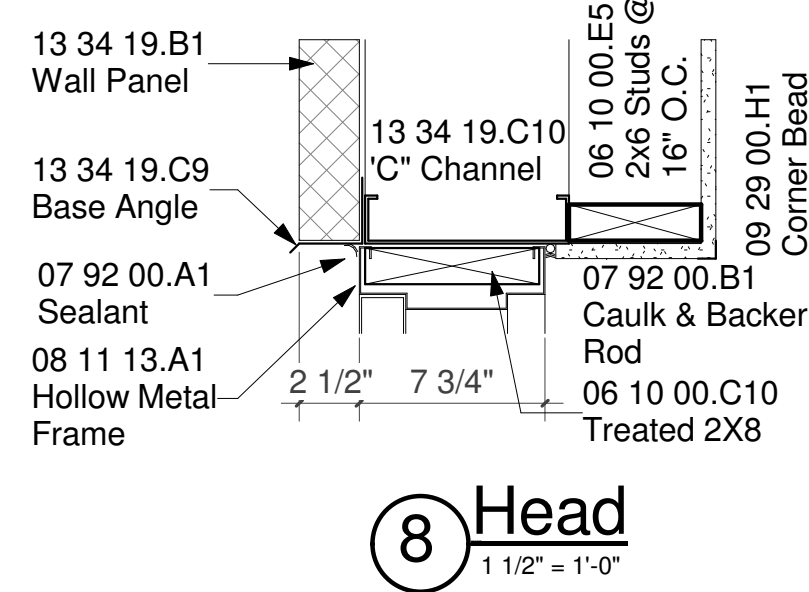
6 Jamb

1 1/2" = 1'-0"



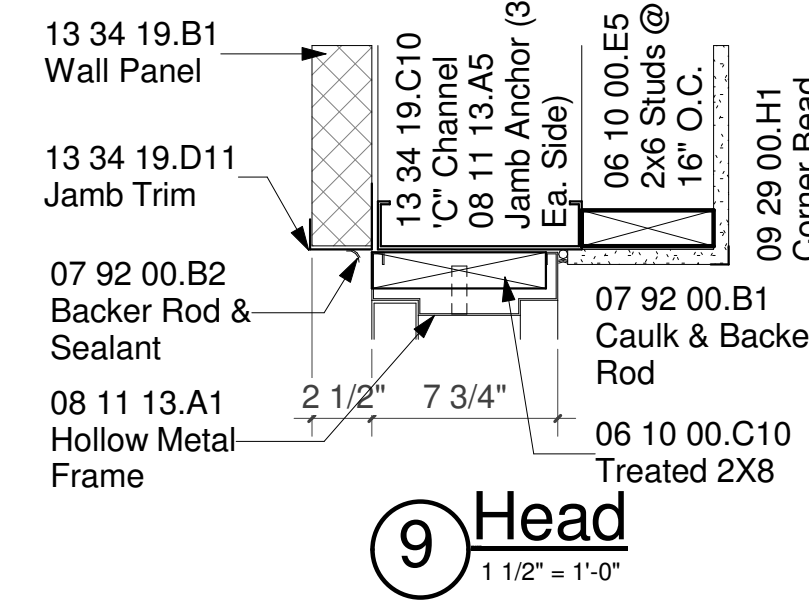
7 Sill

1 1/2" = 1'-0"



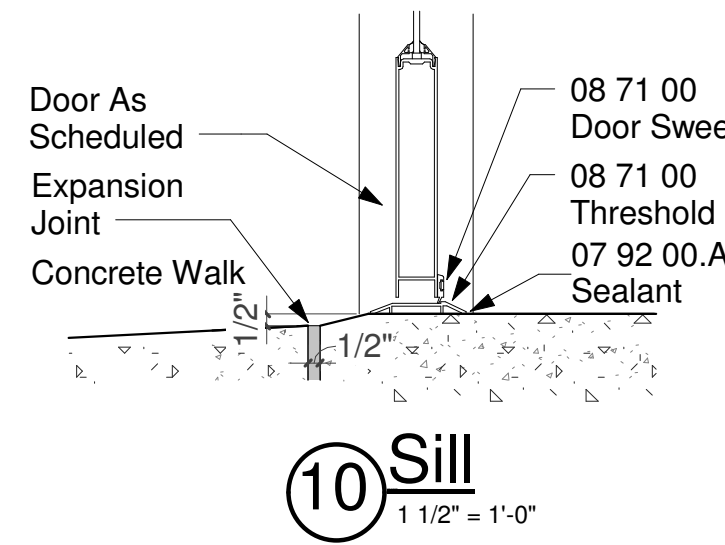
8 Head

1 1/2" = 1'-0"



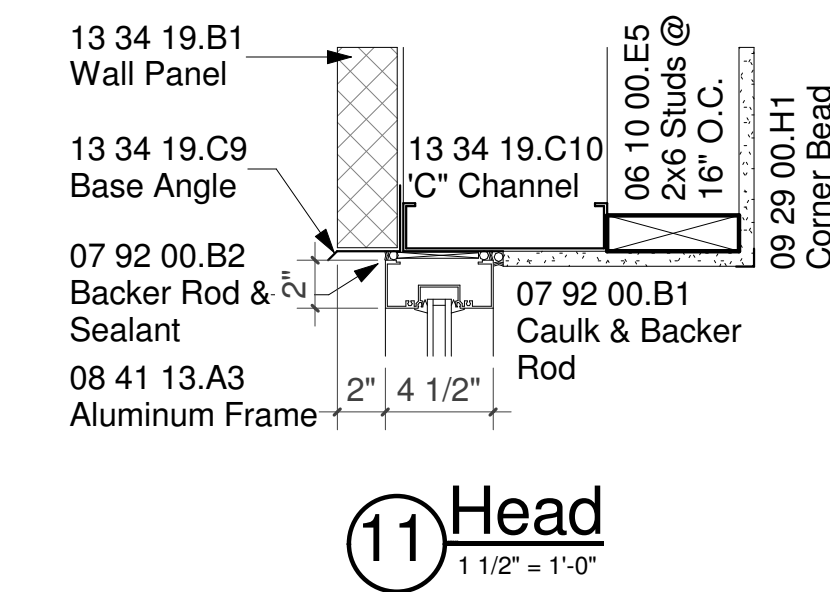
9 Head

1 1/2" = 1'-0"



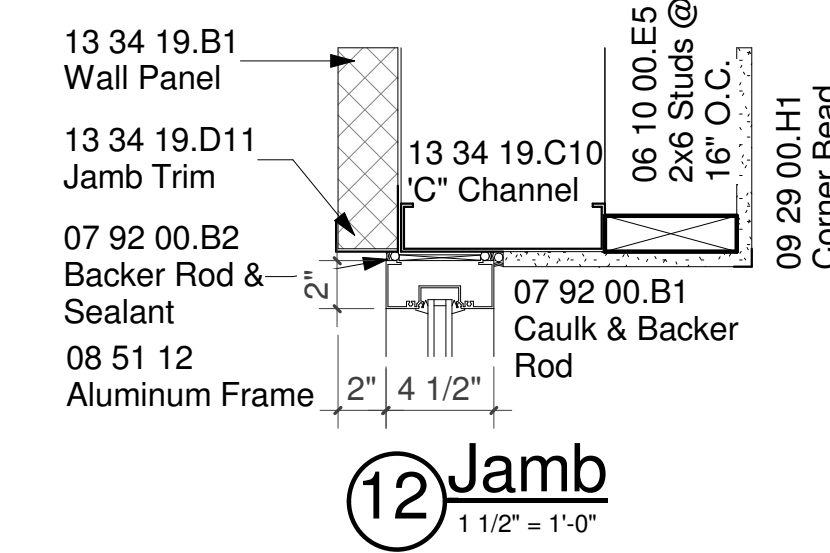
10 Sill

1 1/2" = 1'-0"



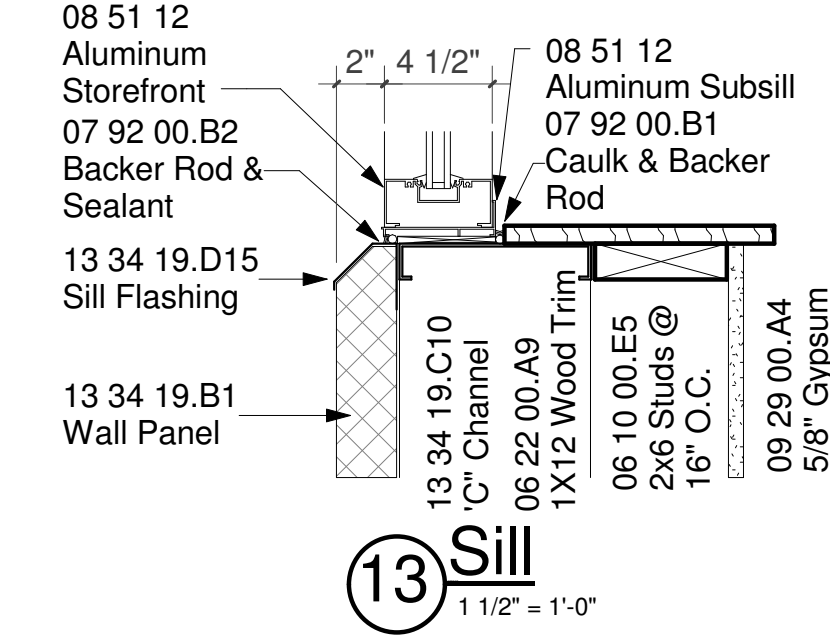
11 Head

1 1/2" = 1'-0"



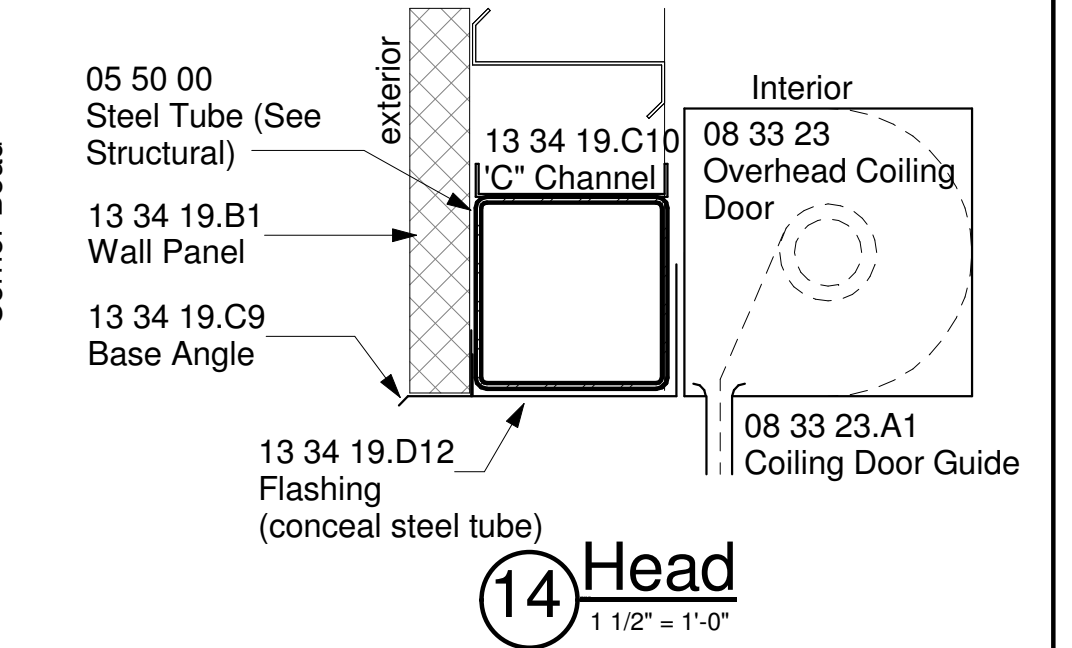
12 Jamb

1 1/2" = 1'-0"



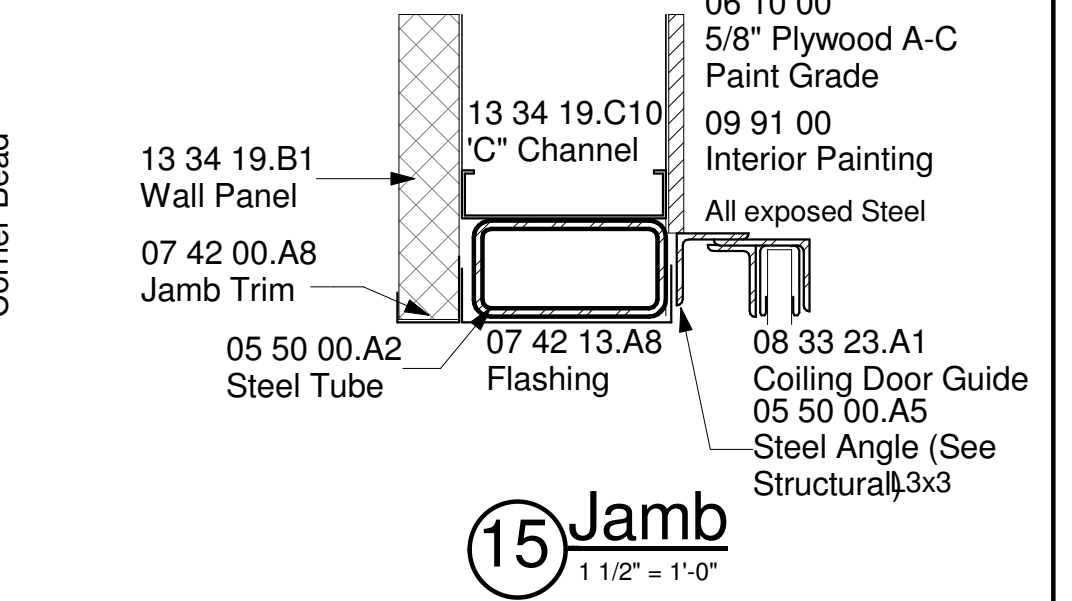
13 Sill

1 1/2" = 1'-0"



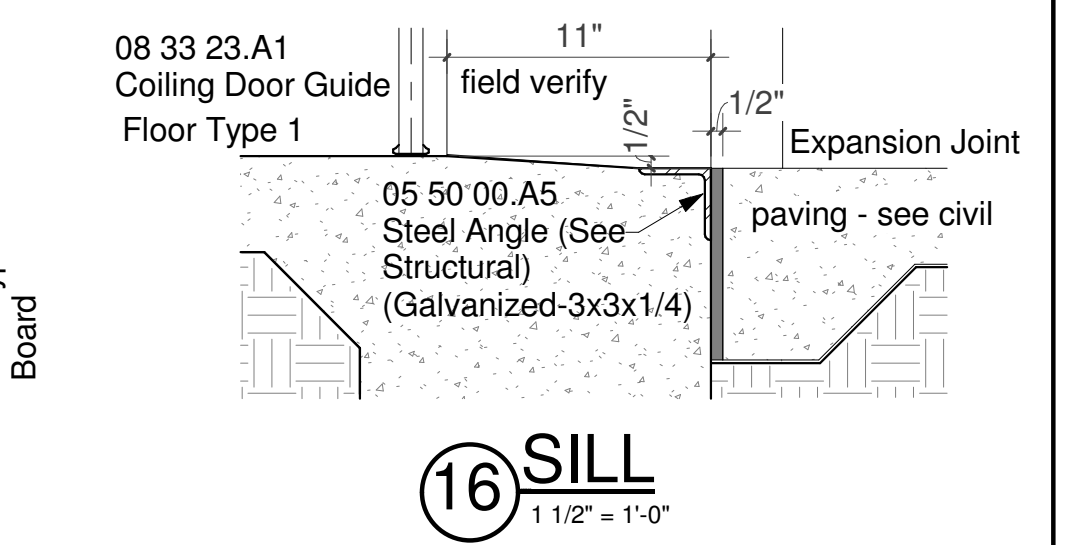
14 Head

1 1/2" = 1'-0"



15 Jamb

1 1/2" = 1'-0"



16 Sill

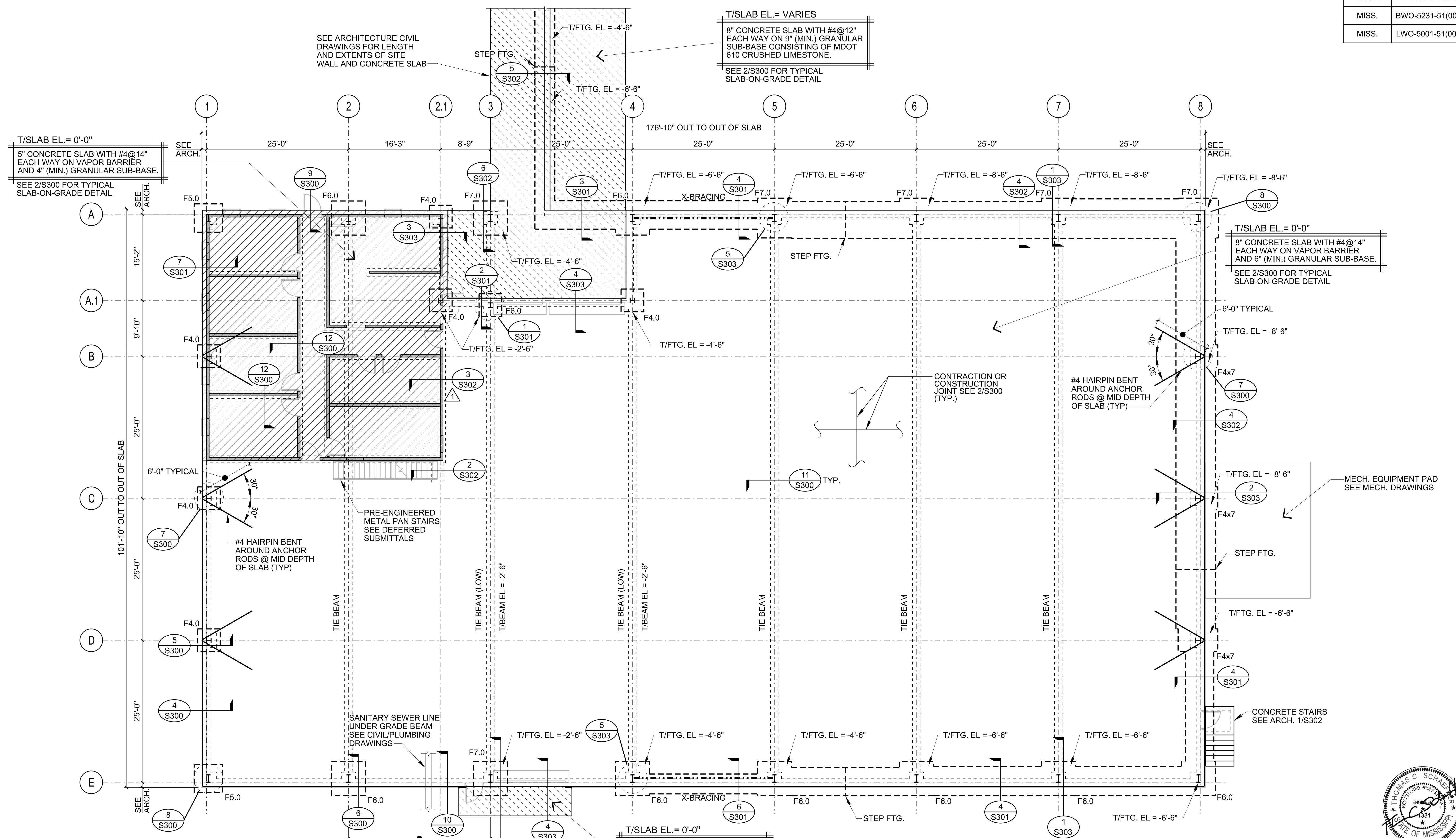
1 1/2" = 1'-0"



JBHM
Architecture

CDU	CDU	BY	MISSISSIPPI DEPARTMENT OF TRANSPORTATION	
REVISION	REVISION		DISTRICT 5 WAREHOUSE	
REVISION	REVISION		NEWTON	
REVISION	REVISION		Doors & Windows	
REVISION	REVISION		BWO-5231-51(001) & LWO-5001-51(008)	
REVISION	REVISION		COUNTY: NEWTON	
REVISION	REVISION		FILENAME:	JBHM P.N. 16051.00
REVISION	REVISION		DESIGN TEAM C/J/NW/MP	CHECKED NW DATE 08/11/2017
REVISION	REVISION		WORKING NUMBER	A600
REVISION	REVISION		SHEET NUMBER	35

STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)



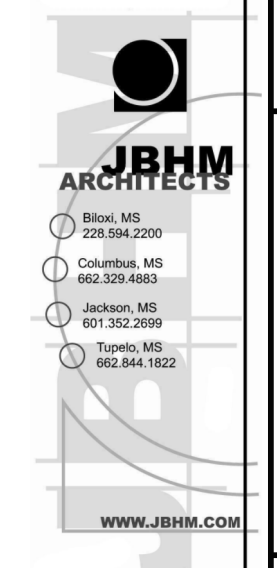
- FOUNDATION PLAN NOTES**
- SEE ARCHITECTURAL DRAWINGS FOR DIMENSIONS NOT SHOWN.
 - ALL DIMENSIONS ARE TO BE VERIFIED WITH ARCHITECTURAL DRAWINGS BEFORE DETAILING AND CONSTRUCTION ARE TO BEGIN.
 - DO NOT LOCATE PLUMBING LINES WITHIN CONCRETE FOOTINGS.
 - TOP OF FOOTING ELEVATION = -2'-6" UNO.
 - SEE DETAIL 6/S303 FOR DETAIL AT BOLLARDS - SEE ARCH/CIVIL DRAWINGS FOR BOLLARD LOCATIONS.

PRE-ENGINEERED METAL BUILDING SYSTEM. REFER TO STRUCTURAL NOTES AND SPECIFICATIONS FOR REQUIREMENTS. DESIGN STRUCTURE TO SUPPORT ALL ITEMS ATTACHED TO THE STRUCTURE SUCH AS CEILING, MECHANICAL EQUIPMENT, RIGGING, ETC. COORDINATE WITH THE STRUCTURAL, ARCHITECTURAL, AND MPE DOCUMENTS. COORDINATE DEPTH OF MEMBERS WITH ARCHITECTURAL DOCUMENTS.

T/SLAB EL. = 0'-0"
 8" CONCRETE SLAB WITH #4@12" EACH WAY ON 9" (MIN.) GRANULAR SUB-BASE CONSISTING OF MDOT 610 CRUSHED LIMESTONE.
 SEE 2/S300 FOR TYPICAL SLAB-ON-GRADE DETAIL

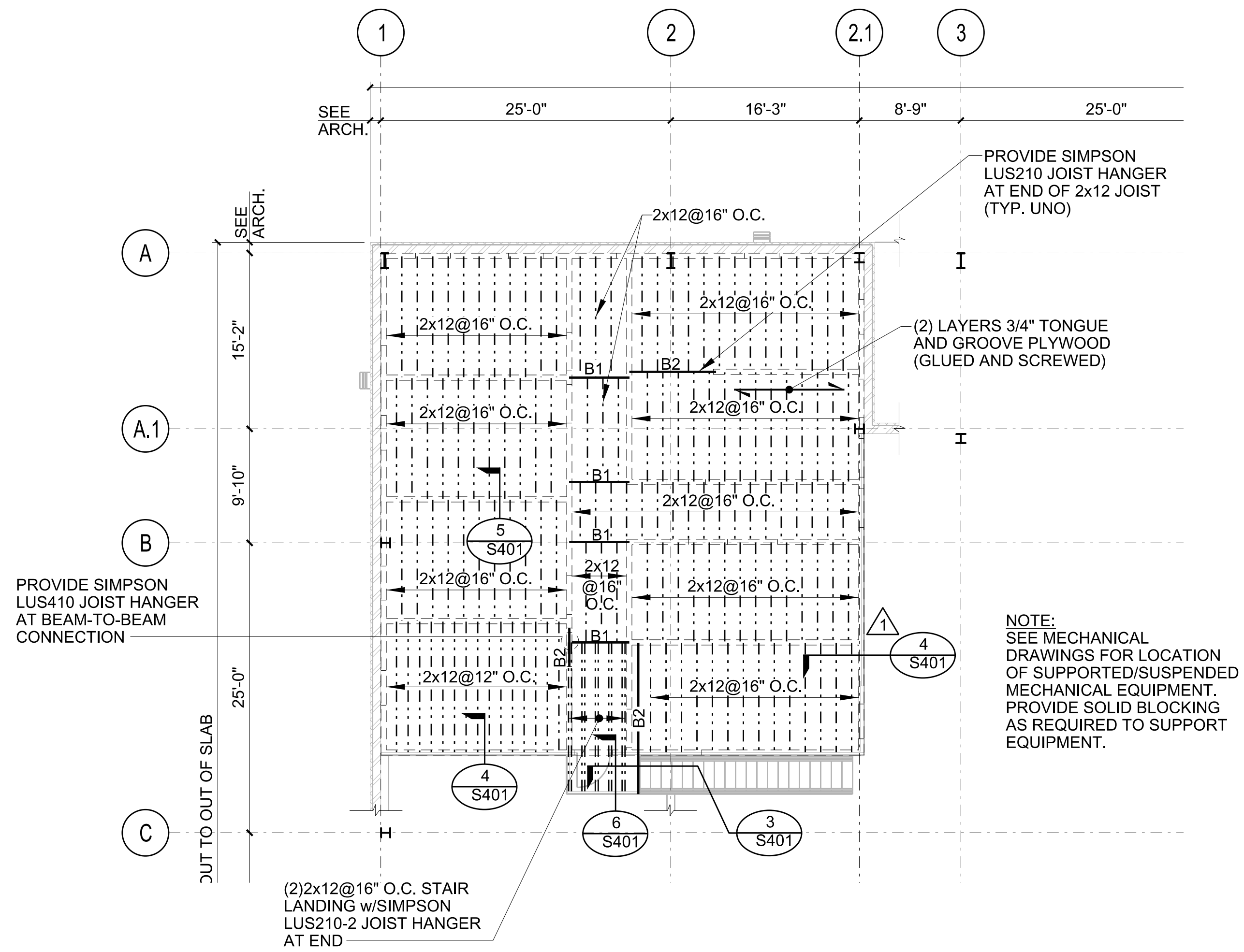
1 Foundation Plan
 1/8" = 1'-0"

Structural Design Group
 220 Great Circle Road, Suite 106
 Nashville, Tennessee 37228
 p. 615.255.5537
 f. 615.255.1486
 SDG Project No. 2016-291.00
 ©2016



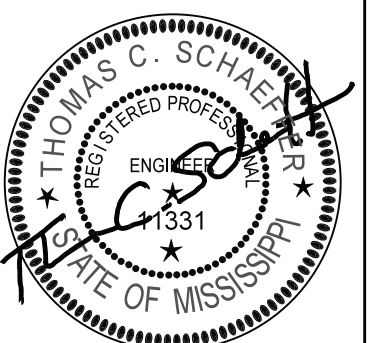
MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON FOUNDATION PLAN	
BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON	
FILENAME: JBMH P.N. 16051.00 DESIGN TEAM SDG	CHECKED J.V./T.S. DATE 08/11/2017
WORKING NUMBER S200	SHEET NUMBER 39

STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)



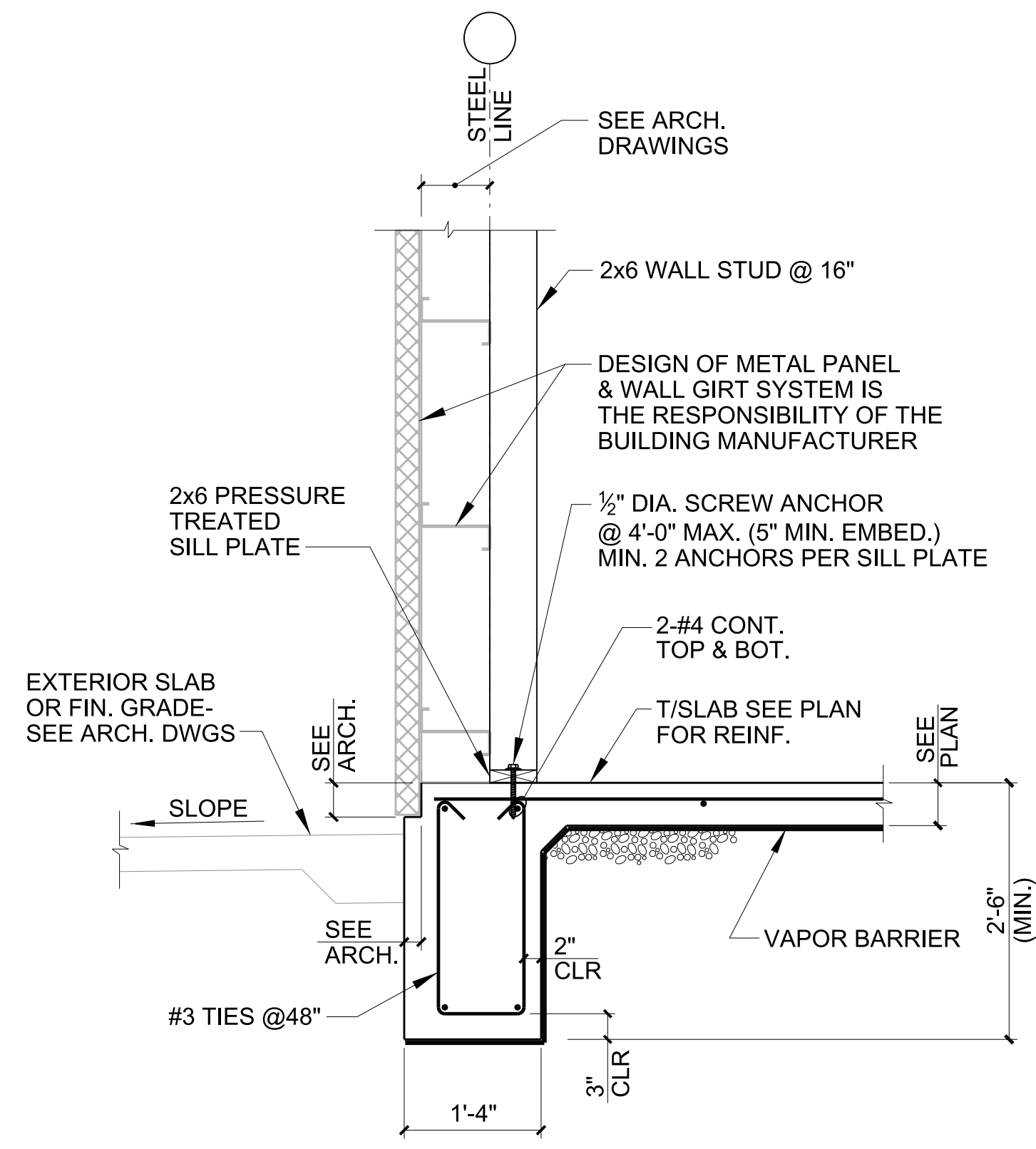
1 Mezzanine Framing Plan
1/8" = 1'-0"

Structural Design Group
220 Great Circle Road, Suite 106
Nashville, Tennessee 37228
p. 615.255.5537
f. 615.255.1486
SDG Project No. 2016-291.00
©2016

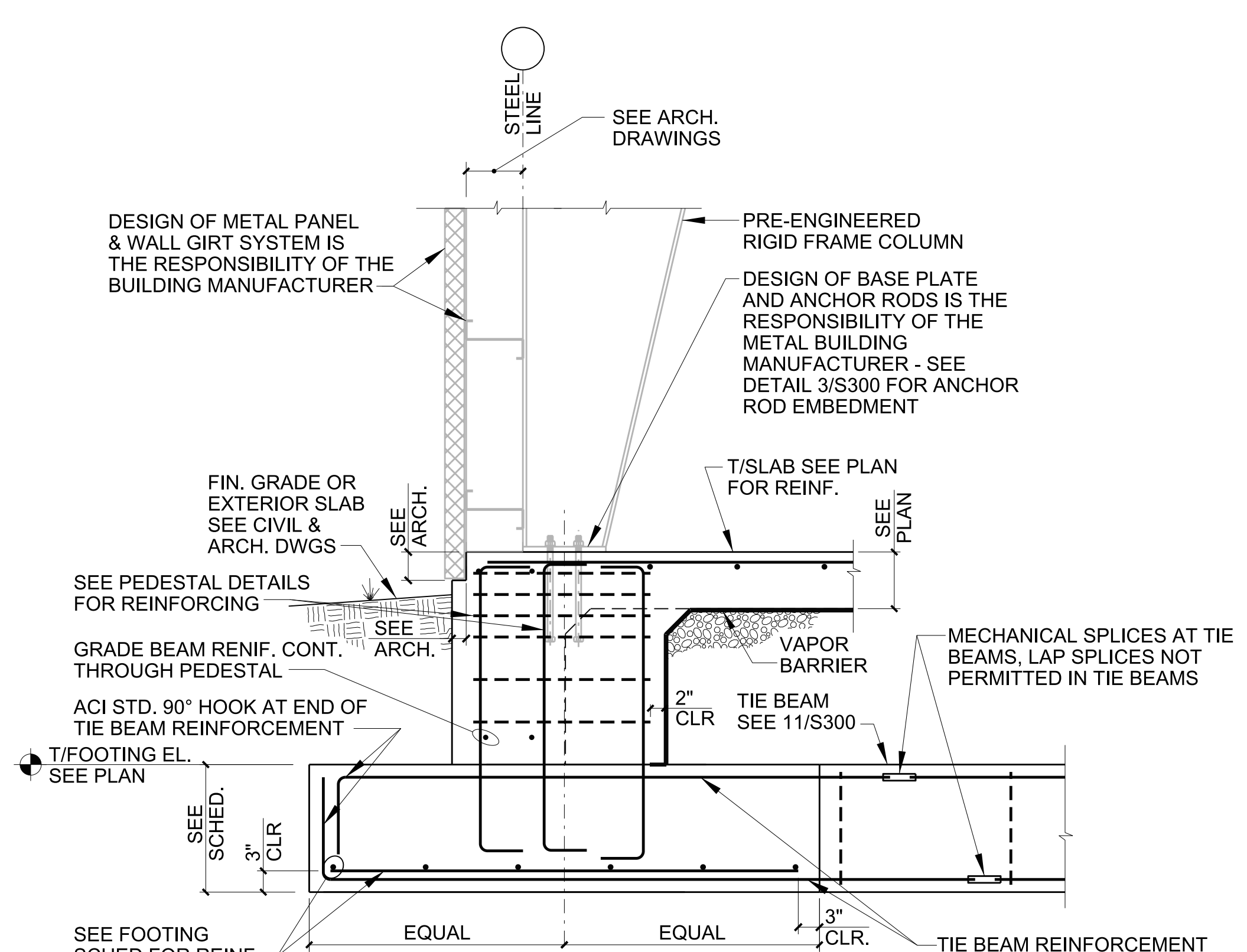


REVISION	TS	BY	MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON MEZZANINE FRAMING PLAN
	DATE	DESIGN TEAM	SDG
FILENAME: JBHM P.N. 16051.00			WORKING NUMBER S210
DESIGN TEAM SDG			CHECKED J.V./T.S. DATE 08/11/2017
SHEET NUMBER 40			

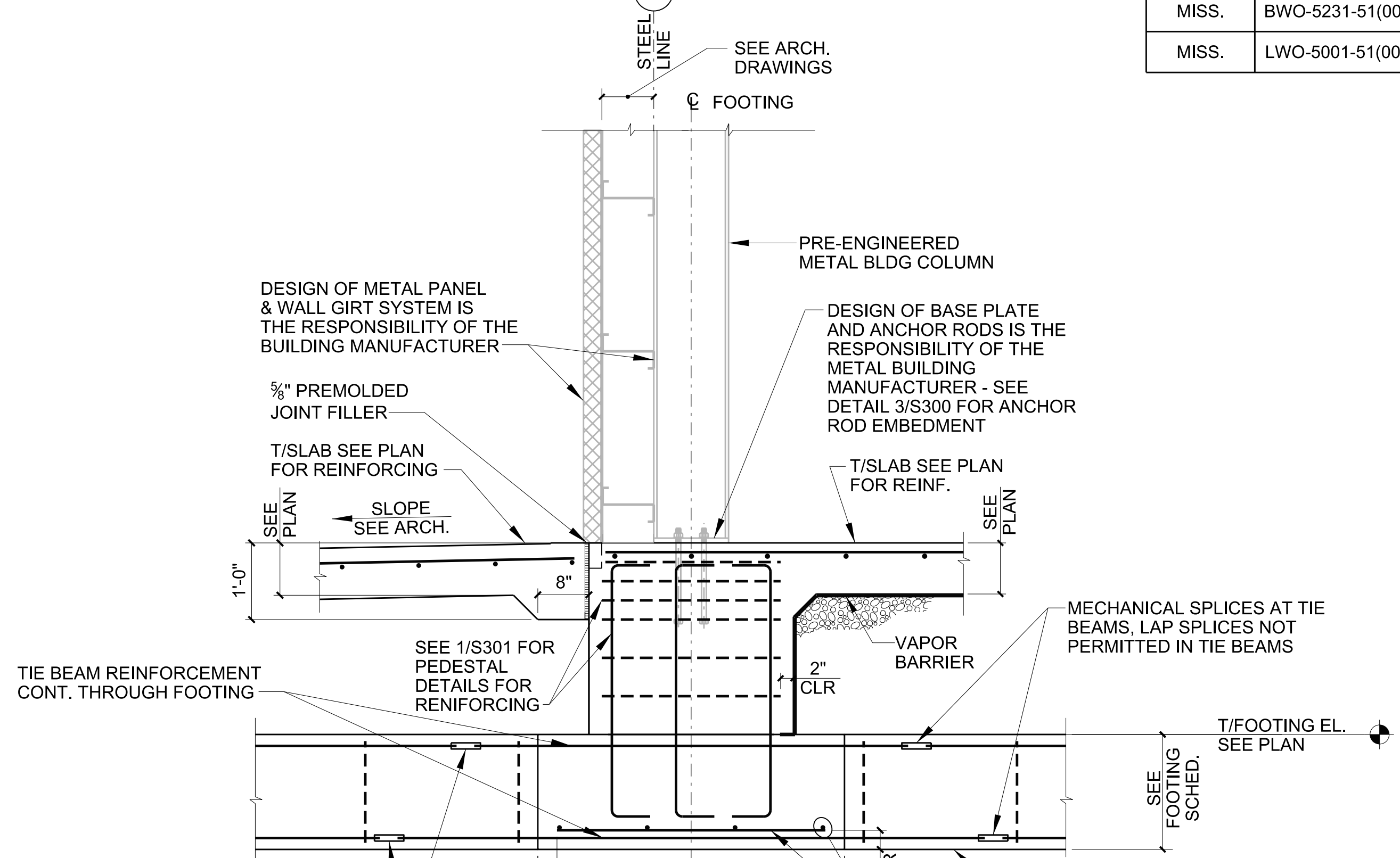
STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)



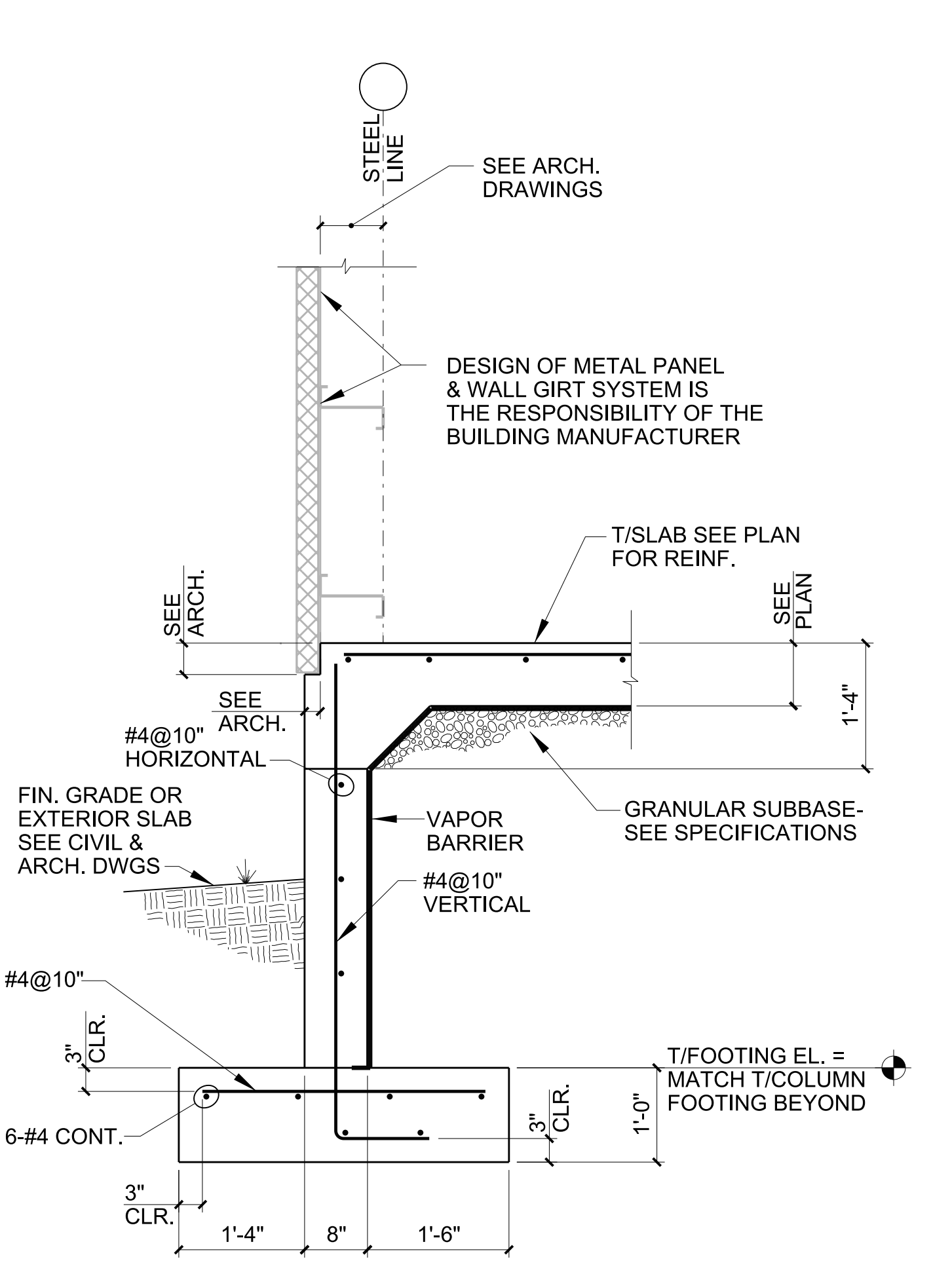
7 EXTERIOR SECTION



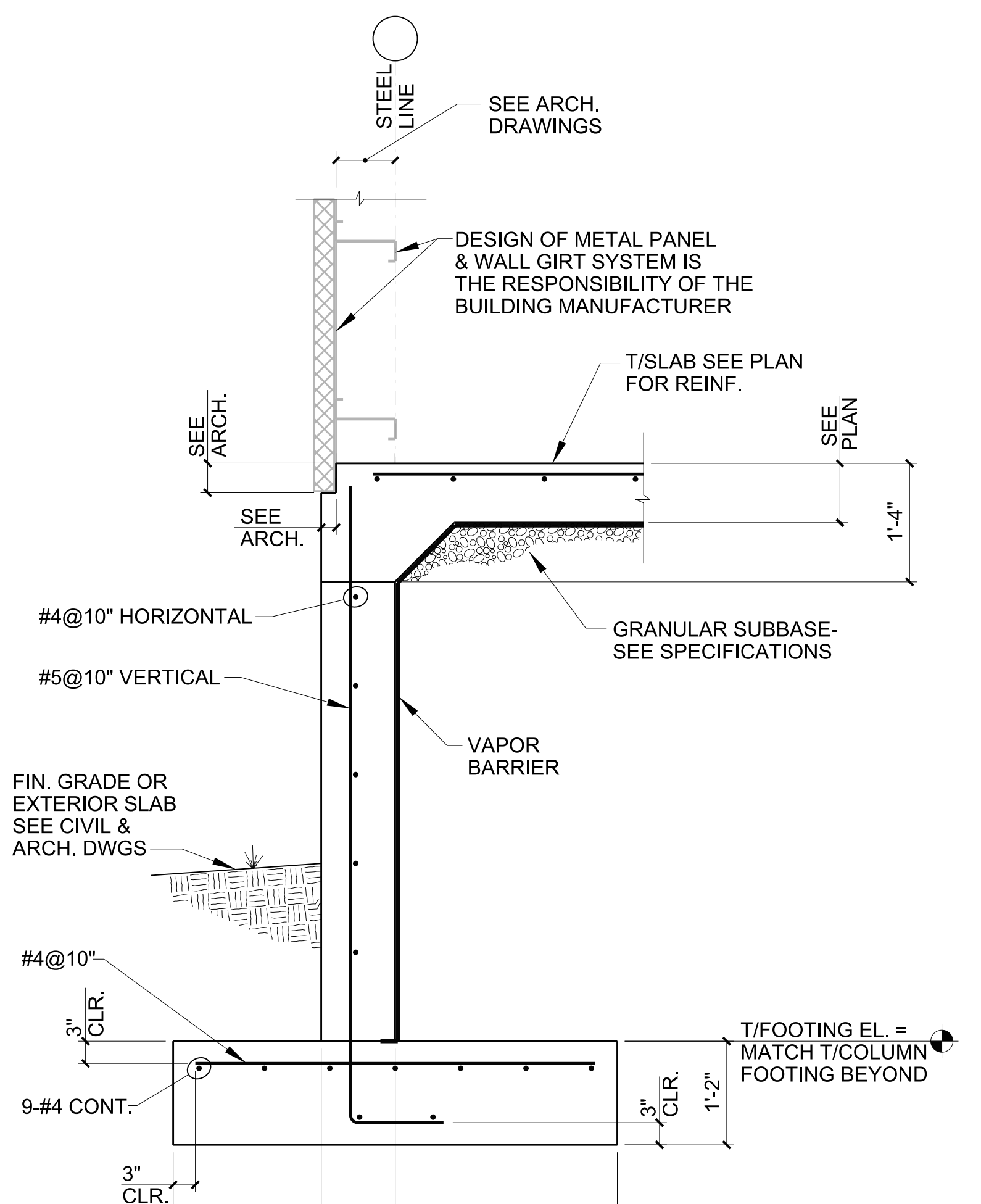
5 SECTION AT METAL BUILDING COLUMN



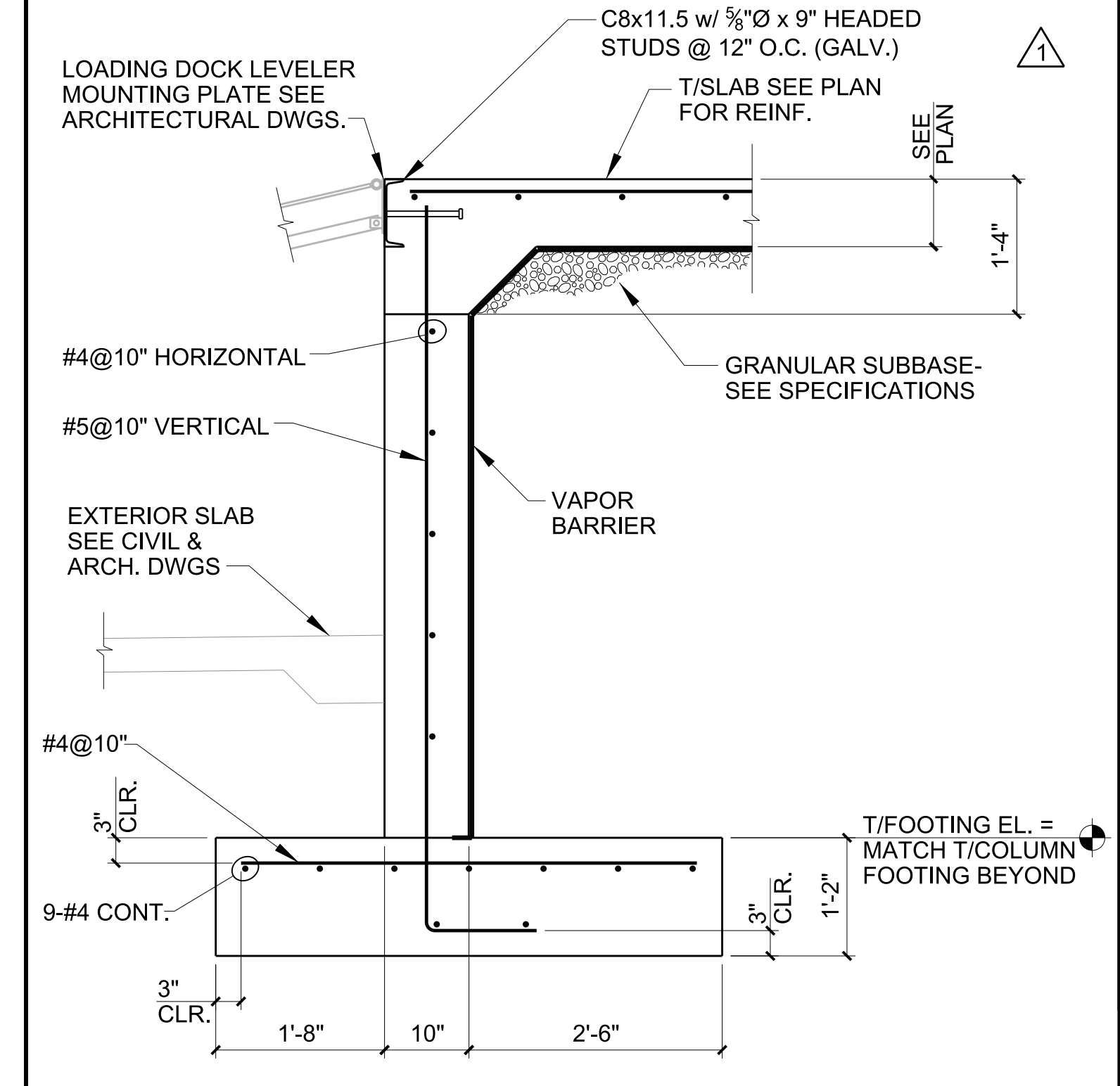
2 SECTION AT METAL BUILDING COLUMN



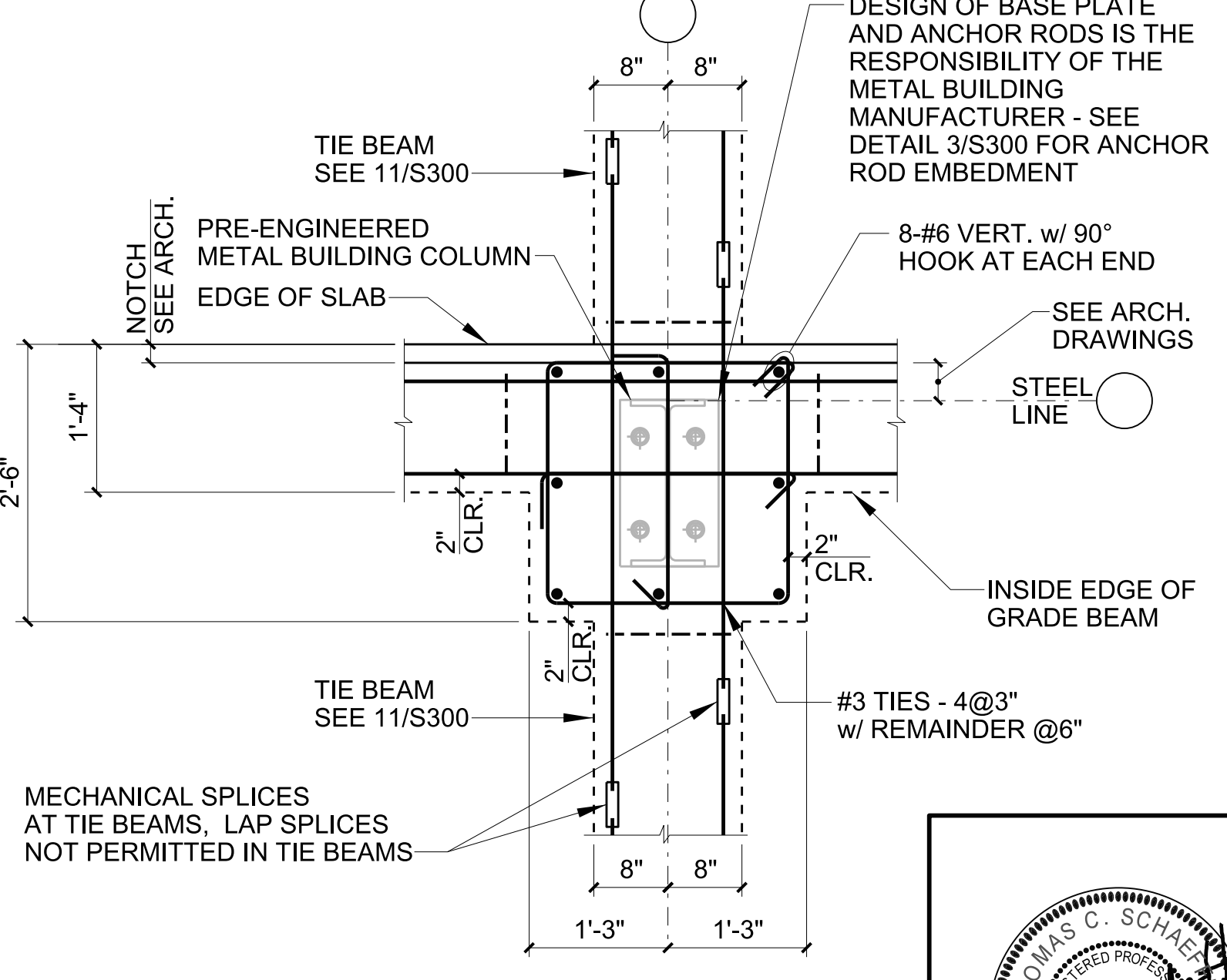
6 EXTERIOR SECTION



4 EXTERIOR SECTION

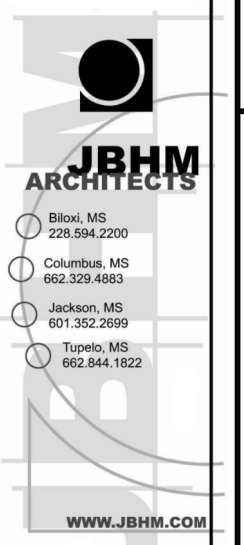


3 EXTERIOR SECTION AT LOADING DOCK

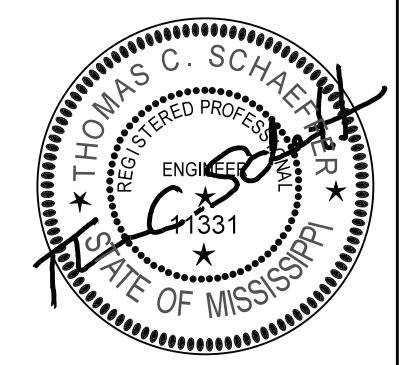


1 DETAIL AT PEDESTAL

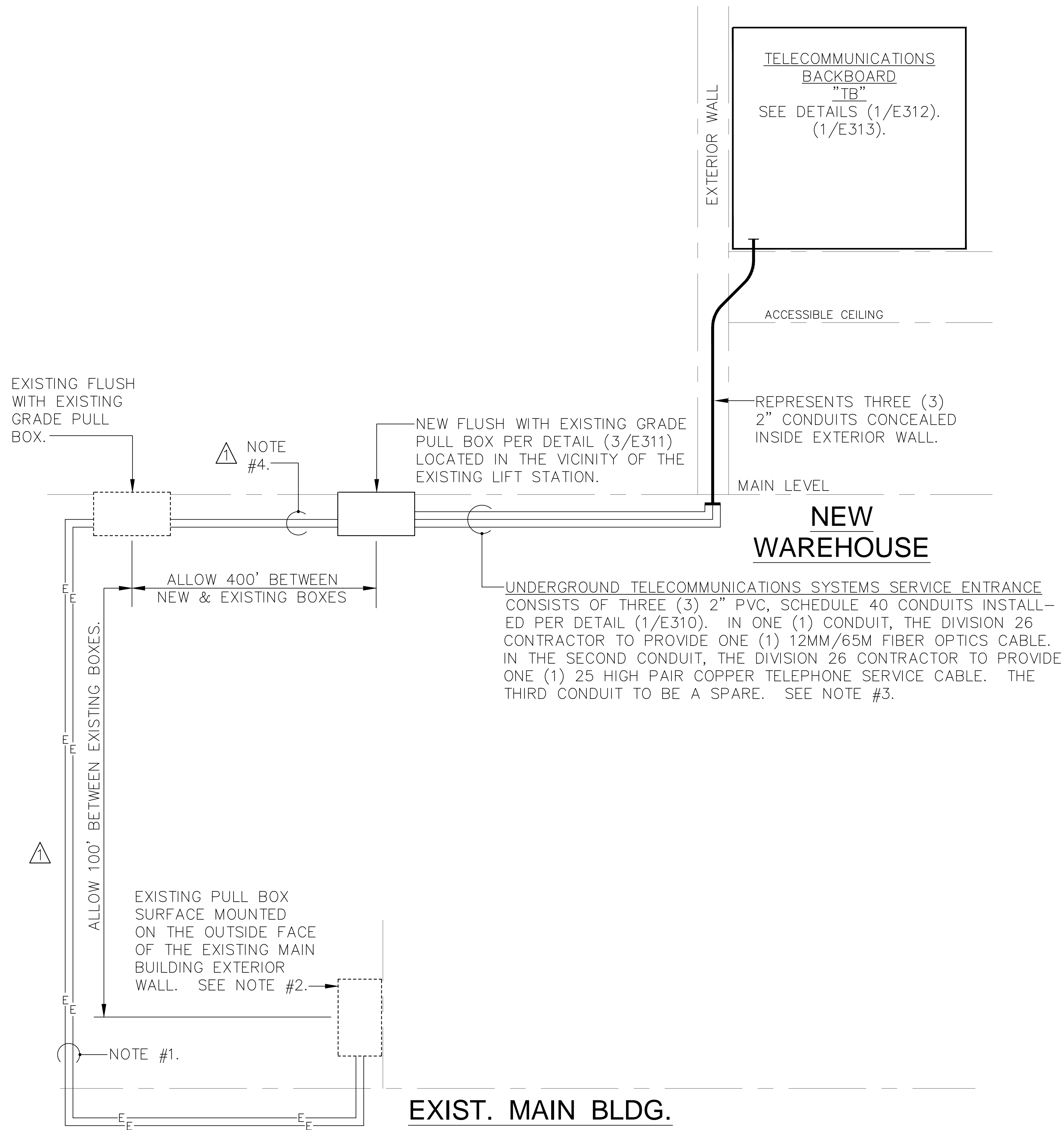
Structural Design Group
 220 Great Circle Road, Suite 106
 Nashville, Tennessee 37228
 p. 615.255.5537
 f. 615.255.1486
 SDG Project No. 2016-291.00
 ©2016



MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON FOUNDATION SECTIONS AND DETAILS BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON		
WORKING NUMBER S301	SHEET NUMBER 43	
FILENAME: JBHM P.N. 16051.00 DESIGN TEAM SDG	CHECKED J.V./T.S. DATE 08/11/2017	



STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)



NOTES:

1. TWO (2) EXISTING 4" TELECOMMUNICATIONS DISTRIBUTION CONDUITS. IN ONE (1) CONDUIT, THE DIVISION 26 CONTRACTOR TO PROVIDE ONE (1) 12MM/54 FIBER OPTICS CABLE. IN THE SECOND CONDUIT, THE DIVISION 26 CONTRACTOR TO PROVIDE ONE (1) 25 HIGH PAIR COPPER TELEPHONE SERVICE CABLE. NOTE #3.
2. WITHOUT CONDUITS, THE DIVISION 26 CONTRACTOR TO PROVIDE 200' OF 12MM/54M FIBER OPTICS CABLE AND 200' OF 25 HIGH PAIR COPPER TELEPHONE SERVICE CABLE. ROUTE THESE TWO (2) CABLES THROUGH THE BUILDING TO WHERE DIRECTED BY THE USER. CONCEAL CABLES ABOVE ACCESSIBLE CEILINGS WHERE AVAILABLE AND PRACTICAL. THE TWO (2) CABLES TO ENTER THE EXISTING BUILDING WHERE DIRECTED BY THE ARCHITECT AND BY THE METHOD RECOMMENDED BY THE ARCHITECT. PATCH THE EXTERIOR WALL AS REQUIRED. NOTE #3.
3. INSTALL THE FIBER OPTICS AND THE TELEPHONE SERVICE ENTRANCE CABLES WITHOUT ANY SPLICES BETWEEN THE TWO (2) BUILDING. THE DIVISION 26 CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY TERMINATING BOTH CABLES. ALL DISTANCES NOTED ON THIS DETAIL ARE FOR ESTIMATING PURPOSES ONLY.
4. TWO (2) NEW 4" TELECOMMUNICATIONS DISTRIBUTION CONDUITS. INSTALL PER THE APPROPRIATE PORTION OF DETAIL (1/E310). IN ONE (1) CONDUIT, THE DIVISION 26 CONTRACTOR TO PROVIDE ONE (1) 12MM/54 FIBER OPTICS CABLE. IN THE SECOND CONDUIT, THE DIVISION CONTRACTOR TO PROVIDE ONE (1) 25 HIGH PAIR COPPER TELEPHONE SERVICE CABLE. NOTE #3.

DETAIL (1/E101)--UNDERGROUND TELECOMMUNICATIONS SERVICE ENTRANCE RISER DIAGRAM
NO SCALE



JBHM Architecture



<table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>REVISIONS TO DETAIL (1/E101)</th> <th>BY</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table>	NO.	DATE	REVISIONS TO DETAIL (1/E101)	BY					MISSISSIPPI DEPARTMENT OF TRANSPORTATION DISTRICT 5 WAREHOUSE NEWTON DETAIL: UNDERGND. TELECOM. SERVICE ENTRANCE RISER DIA. BWO-5231-51(001) & LWO-5001-51(008) COUNTY: NEWTON	
NO.	DATE	REVISIONS TO DETAIL (1/E101)	BY							
FILENAME: 217011_E101.dwg DESIGN TEAM: _____ CHECKED: _____ DATE: _____	JBHM P.N. WORKING NUMBER E101 SHEET NUMBER 57									

ARCHITECTURAL SERVICES DIVISION MISSISSIPPI DEPARTMENT OF TRANSPORTATION

POWER CONNECTIONS SCHEDULE

STATE	PROJECT NO.
MISS.	BWO-5231-51(001)
MISS.	LWO-5001-51(008)

MARK #	EQUIPMENT	VOLTAGE/ PHASE	F.L.A.	KW.	HP.	PANEL- CKT. NO.	BRANCH CIRCUIT (1)	DISC. SW. FUSE (2)	REMARKS
1	SELF-CONTAIN PACK UNIT AC-01	208/3	90.0	32.4	--	MDP-1	3-#1, 1-#6 GND., 1 1/2" C	(5)	(3) (4) ⚠
2	HEAT PUMP/HE RECOVERY O/D CONDENSING UNIT ODU-01	208/1	20.5	4.3	--	LPX-1	2-#10, 1-#10 GND., 3/4" C.	60A2P/NEMA-3R	(3) ⚠
3	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-01 (6)	208/1	.18	.04	--	LPX-2	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
4	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-02 (6)	208/1	.18	.04	--	LPX-3	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
5	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-03 (6)	208/1	.18	.04	--	LPX-4	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
6	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-04 (6)	208/1	.18	.04	--	LPX-5	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
7	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-05 (6)	208/1	.18	.04	--	LPX-6	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
8	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-06 (6)	208/1	.20	.04	--	LPX-7	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
9	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-07 (6)	208/1	.18	.04	--	LPX-8	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
10	INDOOR HEAT PUMP BLOWER COIL UNIT IDU-08 (6)	208/1	.18	.04	--	LPX-9	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (8)
11	BRANCH CIR CONTROLLER BC-01	208/1	.16	.03	--	LPX-11	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (9)
12	BRANCH CIR CONTROLLER BC-02	208/1	.16	.03	--	LPX-12	2-#12, 1-#12 GND., 3/4" C.	30A2P (7)	(3) (9)
13	DEHUMIDIFIER UNIT DH-01	120	8.3	1.0	--	LLX-48	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
14	(GAS) WATER HTR W-01 (11)	120	8.3	1.0	--	LLX-47	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3)
15	EXHAUST FAN EF-01 (13)	120	1.0	.12	--	LLX-16 (14)	2-#12, 1-#12 GND., 3/4" C.	(15)	(3) (12)
16	EXHAUST FAN EF-02 (13)	120	1.0	.12	--	LLX-15 (14)	2-#12, 1-#12 GND., 3/4" C.	(15)	(3) (12)
17	MOTORIZED OVERHEAD DOOR	120	9.2	1.10	1/2	LLX-49	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3) (10)
18	MOTORIZED OVERHEAD DOOR	120	9.2	1.10	1/2	LLX-50	2-#12, 1-#12 GND., 3/4" C.	30A2P	(3) (10)
19	MOTORIZED OVERHEAD DOOR	120	9.2	1.10	1/2	LLX-51	2-#10, 1-#10 GND., 3/4" C.	30A2P	(3) (10)

REMARKS

- (1) CIRCUIT TO INCLUDE ONE (1) GREEN GROUNDING CONDUCTOR ("GND.") SIZED PER THE BRANCH CIRCUIT CONDUCTORS SIZE, UNLESS SHOWN TO BE SIZED DIFFERENTLY. MINIMUM BRANCH CIRCUITRY REQUIREMENTS: 2-#12, 1-#12 GND., 3/4" CONDUIT.
- (2) DUAL ELEMENT FUSE AND SWITCH UNIT OF PROPER VOLTAGE. IF FUSE SIZE IS NOT SHOWN, UNIT TO BE UNFUSED. SURFACE MOUNT ADJACENT TO THE UNIT SERVED. ABOVE ACCESSIBLE CEILINGS, INSTALL EITHER ON THE UNIT OR TO AN STRUCTURAL MEMBER ADJACENT TO THE UNIT.
- (3) FINAL CONNECTION USING LIQUIDTIGHT FLEXIBLE CONDUIT.
- (4) UNIT INCLUDES THE FOLLOWING FEATURES:
 --FACTORY MOUNTED AND POWERED WEATHERPROOF RECEPTACLE WITH GROUND FAULT INTERRUPTING TYPE DEVICE
 --SINGLE POINT ELECTRICAL CONNECTION.
- (5) UNIT EQUIPMENT WITH INTEGRAL DISCONNECT MEANS.
- (6) CEILING CASSETTE RECESSED IN ACCESSIBLE CEILING.
- (7) IF SUFFICIENT SPACE IS NOT AVAILABLE ABOVE THE ACCESSIBLE CEILING FOR A DISCONNECT SWITCH, PROVIDE A 20 AMP., 2 POLE MANUAL MOTOR SWITCH (WITHOUT THE HEATERS) IN A NEMA 1 ENCLOSURE SURFACE MOUNTED TO A STRUCTURAL MEMBER ABOVE THE ACCESSIBLE CEILING AND ADJACENT TO THE UNIT.
- (8) UNIT INCLUDES THE FOLLOWING FEATURES:
 --INTEGRAL CONDENSATE PUMP
 --SINGLE POINT ELECTRICAL CONNECTION.
- (9) MOUNTED ABOVE ACCESSIBLE CEILING.
- (10) THE DIVISION 26 CONTRACTOR SHALL INSTALL AND CONNECT PER THE MANUFACTURER'S RECOMMENDATION THE MOTORIZED OVERHEAD DOOR CONTROLLER FURNISHED WITH THE DOOR BY THE MANUFACTURER.
- (11) MOUNTED HIGH ABOVE SINK.
- (12) LOCAL CONTROL OF UNIT BY MOTION SENSOR PROVIDED UNDER ANOTHER DIVISION OF THIS CONTRACT, INCLUDING ALL CONDUIT AND CONDUCTORS.
- (13) CEILING CABINET TYPE.
- (14) SERVE WITH THE SAME 20 AMP., 120 VOLTS CIRCUIT THAT SERVES THE DUPLEX RECEPTACLE LOCATED IN THE ROOM SERVED BY THE UNIT.
- (15) UNIT EQUIPPED WITH FACTORY MOUNTED AND WIRED DISCONNECT MEANS.



JBHM
Architecture



DATE	10/20/17	REVISIONS TO POWER CONNECTIONS SCHEDULE	BY	HEANEY
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MISSISSIPPI DEPARTMENT OF TRANSPORTATION
 DISTRICT 5 WAREHOUSE
 NEWTON
POWER CONNECTIONS SCHEDULE
 BWO-5231-51(001) &
 LWO-5001-51(008)
 COUNTY: NEWTON

WORKING NUMBER
E401

FILENAME: 217011 E401.dwg JBHM P.N.
 DESIGN TEAM CHECKED DATE

SHEET NUMBER
77



ARCHITECTURAL SERVICES DIVISION MISSISSIPPI DEPARTMENT OF TRANSPORTATION