

ADDENDUM NUMBER TWO

**HCPS WAREHOUSE BUILDING
HENDERSON COUNTY/HENDERSON COUNTY PUBLIC SCHOOLS**

MLA PROJECT NUMBER: 21010

Mark Lusk Architecture, PLLC
128 Woodburn Drive
Swannanoa, NC 28778
(828) 808-9757

DATE OF ISSUE: August 25, 2021

TO: ALL BIDDERS OF RECORD

This Addendum modifies the Contract Documents only in the manner and to the extent stated herein and shown on any accompanying drawings and will become a part of the Contract Documents. Except as specified or otherwise indicated by this Addendum, all work shall be in accordance with the basic requirements of the Contract Documents.

BIDDERS SHALL ACKNOWLEDGE RECEIPT OF ADDENDUM ON BID FORM.

This Addendum consists of one page(s) and any enclosures noted:

I. ENCLOSURES:

1. Pre Bid Conference Report
2. Bid Form
3. 012200 Unit Prices
4. 083613 Sectional Doors
5. 087100 Door Hardware
6. Bid Drawings set

II. GENERAL INFORMATION / CLARIFICATIONS:

1. Invitation For Bids, Pre Bid Conference Report: The bid opening is moved to September 2, 2021 at 2:00.
2. Pre bid conference Report
3. The sliding gate shall be cantilever type on carriage wheels
4. Provide snow guard system continuous along both eaves equal to: Dyna-Guard with standing seam clamps, continuous 4" rail and sno-dam 2

III. CHANGES TO PROJECT MANUAL:

1. The Bid Form is revised regarding:
 - substantial completion date
 - material delivery lead times
 - unit prices
2. 012200 Unit Prices: added for dirt fill
3. 083613 Sectional Doors: section is replaced
4. 087100 Door Hardware: products and schedule added

IV. CHANGES TO DRAWINGS:

1. C101:
 - HDPE pipe acceptable for underground drain lines
 - Dirt for fill is available on site. A unit price is added for fill dirt if off site fill dirt is required.

- Top soil removed for clearing is acceptable for outside fill
 - Exterior concrete clarifications and note
2. A101/ A201:
 - The soffit is deleted from the building
 - The ridge vent is deleted from the building
 - The passage door location is corrected on Alternate 1 plan
 - Concrete floor stone base thickness changed to 4"
 3. 4-5/A201: revise 6 mil VB to 10 mil VB
 4. E1/E2/ E3/ E4:
 - An exhaust fan is added to the south louvers and specified on Lighting Fixture Schedule
 - The passage door locations are corrected on Alternate 1 plan
 - The meter box and panel are re-located to the south corner wall
 - Panel A is revised to include EF's

END OF ADDENDUM

PRE-BID CONFERENCE

DATE: August 24, 2021
LOCATION: HCPS Maintenance Shop
PROJECT: HCPS Warehouse Building
PROJECT #: 21010

ATTENDING:

See attached Sign In Sheet

The following items shall be incorporated as part of the Contract Documents:

1. The Pre Bid is a mandatory pre bid.
2. Bid opening is August 31, 2021 at 2:00 per Addendum 1. Bidders are responsible deliver to deliver bids to HCPS Maintenance Shop in sealed envelopes. P & P Bonds and MBE Forms are require for contracts \$300,000 and over. Bid bonds are required on bids \$500,000 and over.
3. The substantial completion date is December 18, 2021 however lead times for materials will be considered regarding the substantial completion date. Bidders will be including the lead times on their bid form
4. Addendum #2 will include changes to the documents discussed during the meeting
5. The scope of the project was reviewed. The project consists of constructing a pre-engineered building at the Maintenance Facility.
 - Site information contains spot elevations provided by the Owner, and location of existing conditions from satellite imagery. Contractors shall verify existing conditions pertaining to the construction of the building
 - Grading on the west and south sides will be steeper than the north and east sides
 - Contractor shall provide engineer sealed drawings and documents by the manufacturer
 - All permit costs shall be included in the bid
 - The building consists of a pre engineered metal building on a concrete floor slab with 2 O/H doors, 2 passage doors, lighting and exhaust fan. Electrical scope terminates at the exterior meter box. Commercial power will be provided by the Owner to the meter box.
 - Alternate 1 consist of a 20 foot addition to the south end of the building

HCPS WAREHOUSE BUILDING
HENDERSON COUNTY/HENDERSON COUNTY PUBLIC SCHOOLS

PRE-BID MEETING
August 24, 2021
8:00 am

SIGN IN SHEET

Please Print

NAME	FIRM	EMAIL	TELEPHONE
Demetrius Dunlap	Dunlap Construction Co	dunlapconstructionco@hotmail.com	388-0859
JED DEAN	COOPER CONST. CO	JDEAN@COOPERCONST.COM	828-243 4333
Thud Ninneman	HC		577-1501
Martha Ballard	HCPS		388-0684
ELIJAH FERGUSON	CAROLINA SPECIALTIES	ELIJAH@CSCWNC.COM	435-0692
MARK LUKK	MCA		

**BID FORM
Addendum 2 ****

BID OF: _____
(Contractor)

BID TO: _____ HENDERSON COUNTY _____
(Owner)

PROJECT NAME: _____ HCPS WAREHOUSE BUILDING _____

PROJECT NUMBER: _____ 21010 _____ BID DATE: _____

BASE BID AGREEMENT

The undersigned, having examined all the Bidding Documents and acknowledging all Addendum(a) as follows:

Addendum(a)#

shall execute the entire Work in the Bidding Documents as described, for a LUMP SUM amount of:

_____ Dollars

(\$ _____) which sum is hereafter called the BASE BID.

ALTERNATE(S) TO THE BASE BID:

Alternate No. 1 – Provide 20 foot extension to the building:

_____ Dollars(\$)

****UNIT PRICES:**

****Unit Price #1 _____ per cubic yard.**

****Provide clean dirt fill.**

****MATERIAL DELIVERY LEADTIME:**

****The following is the anticipated delivery time of the pre engineered building materials to the site
following approved submittals:

DATE FOR COMMENCEMENT AND SUBSTANTIAL COMPLETION

The Date for Commencement shall be established in the Notice to Proceed. The Contractor shall not incur any expense until the contract has been awarded. An award requires that either the Contract be signed by both the awarding authority and the contractor or a Notice to Proceed is executed.

All work shall be substantially completed (as evidenced by the date on the CERTIFICATE OF SUBSTANTIAL COMPLETION) by ****December 18, 2021** subject to adjustments as provided in the Contract Documents and the following:

Testing days affected by roofing work, shall be considered adjustment to the calendar

The undersigned further agrees that from the compensation to be paid, the owner may retain liquidated damages the sum of One Hundred Fifty Dollars (\$150) for each calendar day the actual contract time for Substantial Completion exceeds the specified or adjusted contract time for Substantial Completion as provided in the Contract Documents.

BID SECURITY

Bid Bonds are required if bid is \$500,000 or greater. If required the undersigned enclosed bid security in the amount of not less than five (5) percent of the BASE BID. The Contractor shall have seven (7) days maximum from the date of the Notice of Intent to Award to deliver Performance and Payment Bond, Certificate of Insurance, and the Contract (signed by Contractor only). Failure to deliver these documents, as required, shall entitle the agency to consider the Contractor non-responsible and declare the bid security forfeited.

ADDENDA

The undersigned acknowledges the receipt of the addenda (as noted on page one of this Bid Form) and confirms that the BID as submitted reflects appropriate price responses.

BID HOLDING TIME AND ACCEPTANCE

The undersigned agrees that this Base Bid may not be revoked or withdrawn after the time set for the opening of bids, but shall remain open for acceptance for a period of sixty (60) days following the bid date.

CERTIFICATION REGARDING DRUG-FREE WORKPLACE

The undersigned certifies that the contractor listed below will provide a "drug-free workplace" as that term is defined in Article 5 of Chapter 90 of the NC General Statutes.

PROGRESS PAYMENTS

Contractor's Application for Payment shall be submitted to the Architect on AIA Document G702 and G703 - 1992 Edition. The period covered by each application for Payment shall be not less than one calendar month. The Owner shall make progress payments to the Contractor on undisputed amounts certified by the Architect within thirty (30) days from receipt of the Application for Payment by the Owner.

CONTRACTOR'S CLASSIFICATIONS AND SUBCLASSIFICATIONS WITH LIMITATIONS

(Classification)	(Subclassification)	(Limitations)

(NC Contractor's License Number)

AUTHORIZATION

(Type or Print Name of Contractor)

(Type or Print Address)

(Type or Print Phone Number)

(Type or Print Fax Number)

(Type or Print Name)

(Title)

(Signature)

(Date)

END OF BID DOCUMENT

****Addendum 2**

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.

Related Requirements:

1. Division 01 Section "Contract Modification Procedures" for procedures for submitting and handling Change Orders.

1.3 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.4 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.

Measurement and Payment: See individual Specification Sections for work that requires establishment of unit prices. Methods of measurement and payment for unit prices are specified in those Sections.

Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.

List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

****Addendum 2**

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

UNIT PRICE #1: Provide clean dirt fill

Unit Price per cubic
yard

END OF SECTION **012200**

****Addendum 2**

SECTION 083613 - SECTIONAL OVERHEAD DOORS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes manually operated sectional doors.
- B. Related Section:
 - 1. Division 5 Section "Metal Fabrications" for miscellaneous steel supports.

1.2 PERFORMANCE REQUIREMENTS

- A. General Performance: Sectional doors shall meet performance requirements specified without failure due to defective manufacture, fabrication, installation, or other defects in construction and without requiring temporary installation of reinforcing components.
- B. Delegated Design: Design sectional doors, including comprehensive engineering analysis by a qualified professional engineer, using performance requirements and design criteria indicated.
- C. Structural Performance: Exterior sectional doors shall withstand the effects of gravity loads, and the following loads and stresses within limits and under conditions indicated according to ASCE/SEI 7.
 - 1. Wind Loads: Uniform pressure (velocity pressure) of 20 lbf/sq. ft. (960 Pa), acting inward and outward
- D. Windborne-Debris-Impact-Resistance Performance: Provide sectional doors that pass large-missile-impact and cyclic-pressure tests when tested according to ASTM E 1886 and ASTM E 1996.

1.3 SUBMITTALS

- A. Product Data: For each type and size of sectional door and accessory.
- B. Shop Drawings: For each installation and for special components not dimensioned or detailed in manufacturer's product data. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each exposed product and for each color and texture specified.
- D. Delegated-Design Submittal: For sectional doors indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- E. Seismic Qualification Certificates: For sectional doors, accessories, and components, from manufacturer.
- F. Maintenance data.

****Addendum 2**

- G. Warranties: Sample of special warranties.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.
- B. Standard for Sectional Doors: Fabricate sectional doors to comply with DASMA 102.

1.5 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of sectional doors that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: Five years from date of Substantial Completion.
- B. Special Finish Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 STEEL DOOR SECTIONS

- A. Exterior Section Faces and Frames: Fabricate from manufacturer's standard zinc-coated (galvanized), cold-rolled, steel sheet.
 - 1. Roll horizontal meeting edges to a continuous, interlocking, keyed, rabbeted, shiplap, or tongue-in-groove weathertight seal, with a reinforcing flange return.
 - 2. For insulated doors, provide sections with continuous thermal-break construction, separating the exterior and interior faces of door.
- B. Section Ends and Intermediate Stiles: Enclose open ends of sections with channel end stiles formed from galvanized-steel sheet welded to door section. Provide intermediate stiles formed from galvanized-steel sheet, cut to door section profile, and welded in place. Space stiles not more than 48 inches (1219 mm) apart.
- C. Reinforce bottom section with a continuous channel or angle conforming to bottom-section profile and allowing installation of astragal.
- D. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading. Provide galvanized-steel bars, struts, trusses, or strip steel, formed to depth and bolted or welded in place
- E. Provide reinforcement for hardware attachment.

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2.2 ALUMINUM DOOR SECTIONS

- A. Sections: Construct door sections with stiles and rails formed from extruded-aluminum shapes. Fabricate sections with stile and rail dimensions and profiles shown on Drawings. Join stiles and rails by welding or with concealed aluminum or nonmagnetic stainless-steel through bolts, full height of door section. Form meeting rails to provide a weathertight-seal joint.
 - 1. Reinforce sections with continuous horizontal and diagonal reinforcement, as required to stiffen door and for wind loading
 - 2. Provide reinforcement for hardware attachment.
- B. Solid Panels: Fabricate of aluminum sheet set in continuous vinyl channel retained with rigid, snap-in, extruded-vinyl moldings or with rubber or neoprene glazing gasket with aluminum stop.

2.3 TRACKS, SUPPORTS, AND ACCESSORIES

- A. Tracks: Manufacturer's standard, galvanized-steel track system of configuration indicated, sized for door size and weight, designed for lift type indicated and clearances shown on Drawings. Provide complete track assembly including brackets, bracing, and reinforcement for rigid support of ball-bearing roller guides for required door type and size. Slot vertical sections of track spaced 2 inches (51 mm) apart for door-drop safety device. Slope tracks at proper angle from vertical or design tracks to ensure tight closure at jambs when door unit is closed.
- B. Track Reinforcement and Supports: Galvanized-steel track reinforcement and support members. Secure, reinforce, and support tracks as required for door size and weight to provide strength and rigidity without sag, sway, and vibration during opening and closing of doors.
- C. Weatherseals: Replaceable, adjustable, continuous, compressible weather-stripping gaskets of flexible vinyl, rubber, or neoprene fitted to bottom and top of sectional door unless otherwise indicated.

2.4 HARDWARE

- A. General: Provide heavy-duty, corrosion-resistant hardware, with hot-dip galvanized, stainless-steel, or other corrosion-resistant fasteners, to suit door type.
- B. Hinges: Heavy-duty, galvanized-steel hinges at each end stile and at each intermediate stile, according to manufacturer's written recommendations for door size. Attach hinges to door sections through stiles and rails.
- C. Rollers: Heavy-duty rollers with steel ball-bearings in case-hardened steel races, mounted with varying projections to suit slope of track. Provide 3-inch- (76-mm-) diameter roller tires for 3-inch- (76-mm-) wide track and 2-inch- (51-mm-) diameter roller tires for 2-inch- (51-mm-) wide track.
- D. Push/Pull Handles: For push-up or emergency-operated doors, provide galvanized-steel lifting handles on each side of door.

2.5 LOCKING DEVICES

- A. Slide Bolt: Fabricate with side-locking bolts to engage through slots in tracks for locking by padlock, located on single-jamb side, operable from inside only.

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2.6 COUNTERBALANCE MECHANISM

- A. Torsion Spring: Counterbalance mechanism consisting of adjustable-tension torsion springs mounted on torsion shaft made of steel tube or solid steel. Provide springs designed for number of operation cycles indicated.
- B. Cable Drums and Shaft for Doors: Cast-aluminum or gray-iron casting cable drums mounted on torsion shaft and grooved to receive door-lifting cables as door is raised. Mount counterbalance mechanism with manufacturer's standard ball-bearing brackets at each end of torsion shaft.
- C. Cables: Galvanized-steel lifting cables.
- D. Cable Safety Device: Include, on each side-edge of door, a device designed to automatically stop door if either lifting cable breaks.
- E. Bracket: Provide anchor support bracket as required to connect stationary end of spring to the wall and to level the shaft and prevent sag.
- F. Provide a spring bumper at each horizontal track to cushion door at end of opening operation.

2.7 MANUAL DOOR OPERATORS

- A. Equip door with manufacturer's recommended manual door operator unless another type of door operator is indicated.
- B. Chain-Hoist Operator: Consisting of endless steel hand chain, chain-pocket wheel and guard, and gear-reduction unit with a maximum 25-lbf (111-N) force for door operation. Provide alloy-steel hand chain with chain holder secured to operator guide.

2.8 DOOR ASSEMBLY

- A. Aluminum Sectional Door: Sectional door formed with hinged sections.
 - 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Amarr Garage Doors.
 - b. Arm-R-Lite.
 - c. C.H.I. Overhead Doors.
 - d. Clopay Building Products; a Griffon company.
 - e. Fimbel Architectural Door Specialties.
 - f. General American Door Company.
 - g. Haas Door; a Nofziger company.
 - h. Martin Door Manufacturing.
 - i. Overhead Door Corporation.
 - j. Raynor.
 - k. Rite-Hite Corporation.
 - l. Wayne-Dalton Corp.
 - m. Windsor Republic Doors.
- B. Operation Cycles: Not less than 100,000.

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- C. Aluminum Sections: Solid panels.
- D. Track Configuration: Standard-lift track.
- E. Weatherseals: Fitted to bottom and top and around entire perimeter
- F. Locking Devices: Equip door with slide bolt for padlock.
 - 1. Locking Device Assembly: Single-jamb side.
- G. Manual Door Operator: Chain-hoist operator.
- H. Door Finish:
 - 1. Baked-Enamel or Powder-Coated Finish: Color and gloss as selected by Architect from manufacturer's full range.
 - 2. Finish of Interior Facing Material: Match finish of exterior section face

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install sectional doors and operating equipment complete with necessary hardware, anchors, inserts, hangers, and equipment supports; according to manufacturer's written instructions and as specified.
- B. Tracks: Provide sway bracing, diagonal bracing, and reinforcement as required for rigid installation of track and door-operating equipment. Repair galvanized coating on tracks according to ASTM A 780.
- C. Adjust hardware and moving parts to function smoothly so that doors operate easily, free of warp, twist, or distortion. Adjust doors and seals to provide weathertight fit around entire perimeter.

3.2 DEMONSTRATION

- A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain sectional doors.

END OF SECTION 08361

ADDENDUM 2
SECTION 087100 – DOOR HARDWARE

PART 1 **GENERAL**

1.1 **RELATED DOCUMENTS:**

Drawings and the general provisions of the Contract, Instructions to Bidders, General and Supplementary Conditions apply to the Work in this Section the same as if incorporated herein.

1.2 **DESCRIPTION OF WORK:**

A. Door hardware is hereby defined to include all items known commercially as builder's hardware, as required for the proper operation of all doors.

B. The required types of door hardware include (but are not necessarily limited to) the following:

1. Butts and hinges
2. Lock cylinders and keys
3. Lock and latch sets
4. Bolts
5. Door trim units
6. Stripping and seals
7. Thresholds
8. Door stops

C. Hardware Installation: The General Contractor shall allow in his base bid an appropriate sum for the installing of builder's hardware for this project as indicated. The General Contractor and the Hardware Supplier shall review all existing openings and verify the application of the specified hardware. Notify the Architect of any exceptions.

1.3 **RELATED WORK:**

A. Section 081113 – Hollow Metal Doors and Frames

1.4 **SUBMITTALS:**

Complete hardware schedule shall be prepared by a DHI certified Architectural Hardware Consultants (AHC) and submitted to the Architect for approval.

1.5 **GENERAL:**

A. Hardware, Designation Numbers: Particular manufacturer's product numbers, as specified or otherwise noted, establishes a basis of design for quality and function.

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- B. Acceptable Manufacturers: The Hardware Sets, included in Part 3 of this section, indicates a basis of design for the required function of hardware. Furnish manufacturers' products, which comply with the indicated requirements, and meet the requirements of the existing door and frame conditions.
- C. Manufacturer: To the greatest extent possible, obtain each kind of hardware (latch and lock sets, hinges, closers, etc.) from only one manufacturer.
- D. Final Hardware Schedule: Based on the hardware requirements indicated on the contract documents (including drawings, schedules and specifications), the hardware supplier shall prepare a final hardware schedule in a vertical format, indicating complete designation of every item required for each door or opening. Furnish final schedule after samples, manufacturer's data sheets, coordination with shop drawings for other work, delivery schedules and similar information has been completed and accepted.
- E. Hand of Door: The drawings show the swing or hand of each door leaf (left, right, reverse bevel, etc.). Furnish each item of hardware for proper installation and operation of the door swing as shown.
- F. Templates: Furnish hardware templates to each fabricator of doors, frames, and other work to be factory-prepared, or job-site prepared for the installation of hardware. Upon request, check the shop drawings of such other work, to confirm that adequate provisions are made for the proper installation of hardware.
- G. Fire-Rated Openings: Provide only hardware, which has been tested and listed by UL for the types and sizes of doors required, and complies with the requirements of the door and doorframe labels.
- H. Where panic exit devices are required on fire-rated doors, (with supplementary marking on door UL label indicating "Fire Door to be Equipped with "Fire Exit Hardware") provide UL label on exit device indicating "Fire Exit Hardware".
- I. Coordination: Coordinate hardware with other work. Tag each item or package separately, with identification related to the final hardware schedule, and include basic installation instructions in doors and frames of the thickness, profile, swing, security, and similar requirements indicated, as necessary for proper installation and function. Deliver individually packaged hardware items at the proper times to the proper locations (shop or filled) for installation.

PART 2

PRODUCTS

****2.1 SCHEDULED DOOR HARDWARE**

- A. Provide door hardware for each door as scheduled on Drawings to comply with requirements in this Section.**

- 1. Door Hardware Sets: Provide quantity, item, size, finish or color indicated, and**

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products complying with BHMA designations referenced.

- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:**

- 1. References to BHMA Designations: Provide products complying with these designations and requirements for description, quality, and function.**

2.2 HINGES

- C. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.**

- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:**

**Baldwin Hardware Corporation.
Cal-Royal Products, Inc.
PBB, Inc.
Stanley Commercial Hardware; Div. of The Stanley Works.**

2.3 MECHANICAL LOCKS AND LATCHES

- D. Lock Throw: Comply with testing requirements for length of bolts required for labeled fire doors, and as follows:**

- 1. Bored Locks: Minimum 1/2-inch latchbolt throw.**
- 2. Deadbolts: Minimum 1-inch bolt throw**

- E. Lock Trim:**

- 1. Levers: Wrought Forged or Cast.**

- F. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.**

- 1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.**

Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.

Aluminum-Frame Strike Box: Manufacturer's special strike box fabricated for aluminum framing.

Rabbit Front and Strike: Provide on locksets for rabbeted meeting stiles.

- G. Bored Locks: BHMA A156.2; Grade 1; Series 4000.**

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- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:**

**Corbin Russwin Architectural Hardware; n ASSA ABLOY Group Company.
SARGENT Manufacturing Company; an ASSA ABLOY Group company.
Schlage Commercial Lock Division; an Ingersoll-Rand company.
Yale Security Inc.; an ASSA ABLOY Group company.**

2.4 AUXILIARY LOCKS

- H. Bored Auxiliary Locks: BHMA A156.5: Grade 1; with strike that suits frame.**

- 1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:**

**Corbin Russwin Architectural Hardware; n ASSA ABLOY Group Company
SARGENT Manufacturing Company; an ASSA ABLOY Group company.
Schlage Commercial Lock Division; an Ingersoll-Rand company.
Yale Security Inc.; an ASSA ABLOY Group company.**

2.5 LOCK CYLINDERS

- I. Lock Cylinders: Tumbler type, constructed from brass or bronze, stainless steel, or nickel silver.**

- 1. Manufacturer: Same manufacturer as for locking devices.**

- J. Standard Lock Cylinders: BHMA A156.5; Grade 1; permanent cores that are interchangeable; face finished to match lockset.**

High-Security Lock Cylinders: BHMA A156.30; Grade 1; Type M, mechanical; permanent cores that are removable; face finished to match lockset.

**Construction Cores: Provide construction cores that are replaceable by permanent cores.
Provide 10 construction master keys.**

2.6 KEYING –Provided by Owner

2.7 OPERATING TRIM

- K. Operating Trim: BHMA A156.6; stainless steel, unless otherwise indicated.**

2.8 SURFACE CLOSERS

- L. Surface Closers: BHMA A156.4; rack-and-pinion hydraulic type with adjustable sweep**

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and latch speeds controlled by key-operated valves and forged-steel main arm. Comply with manufacturer's written recommendations for size of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Provide factory-sized closers, adjustable to meet field conditions and requirements for opening force.

2.9 DOOR GASKETING

M. Door Gasketing: BHMA A156.22; air leakage not to exceed **0.50 cfm per foot** of crack length for gasketing other than for smoke control, as tested according to ASTM E 283; with resilient or flexible seal strips that are easily replaceable and readily available from stocks maintained by manufacturer.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Hager Companies.
National Guard Products.
Pemko Manufacturing Co.; an ASSA ABLOY Group company.
Reese Enterprises, Inc.

2.10 THRESHOLDS

N. Thresholds: BHMA A156.21; fabricated to full width of opening indicated.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Hager Companies.
National Guard Products.
Pemko Manufacturing Co.; an ASSA ABLOY Group company.
Reese Enterprises, Inc.

2.11 MECHANICAL STOPS AND HOLDERS

2. Floor-Mounted Stops: BHMA A156.16; polished cast brass, bronze, or aluminum base metal.

2.12 FABRICATION

O. Manufacturer's Nameplate: Do not provide products that have manufacturer's name or trade name displayed in a visible location except in conjunction with required fire-rated labels and as otherwise approved by Architect.

1. Manufacturer's identification is permitted on rim of lock cylinders only.

P. Base Metals: Produce door hardware units of base metal indicated, fabricated by

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forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness. Furnish metals of a quality equal to or greater than that of specified door hardware units and BHMA A156.18.

Fasteners: Provide door hardware manufactured to comply with published templates prepared for machine, wood, and sheet metal screws. Provide screws that comply with commercially recognized industry standards for application intended, except aluminum fasteners are not permitted. Provide Phillips flat-head screws with finished heads to match surface of door hardware, unless otherwise indicated.

1. **Concealed Fasteners:** For door hardware units that are exposed when door is closed, except for units already specified with concealed fasteners. Do not use through bolts for installation where bolt head or nut on opposite face is exposed unless it is the only means of securely attaching the door hardware. Where through bolts are used on hollow door and frame construction, provide sleeves for each through bolt.
2. **Spacers or Sex Bolts:** For through bolting of hollow-metal doors.
Gasketing Fasteners: Provide noncorrosive fasteners for exterior applications and elsewhere as indicated.

PART 3 EXECUTION

3.1 GENERAL:

- A. **Manufacturer's Data, Builder's Hardware:** For information only, hardware supplier shall submit 2 copies of manufacturer's data for each item of hardware. Include whatever information may be necessary to show compliance with requirements, and include instructions for installation and for maintenance of operating parts and exposed finishes. Wherever needed, furnish templates to fabricators of other work, which is to receive finish hardware. Indicate by transmittal that copy of applicable data has been distributed to the Installer.
- B. **Final Inspection for Adjustment to be made by Installer:** Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or areas, return to the work during the week prior to acceptance or occupancy, and make a final check and adjustment of all hardware items in such space or area. Clean and re-lubricate operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and compensate for final operation of heating and compensate for final operation of heating and ventilating equipment.
- C. **Install hardware in accordance with manufacturer's instructions and applicable codes. Mounting heights for hardware from finished floor to center line of hardware item:** As listed in Schedule, unless otherwise noted:
 1. For steel doors and frames: Comply with DHI "Recommended Locations for Architectural Hardware for Steel Doors and Frames."

3.2 FIELD QUALITY CONTROL

ADDENDUM 2

- A. Field inspection and testing will be performed under provisions of Section 01400.
- B. Provide an Architectural Hardware Consultant to inspect installation and certify that hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.3 ADJUSTING

- A. Adjust work under provisions of Division 1.
- B. Adjust hardware for smooth operation.

3.4 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of Division 1.
- B. Do not permit adjacent work to damage hardware or finish.

****HARDWARE SETS: (The hardware sets basis of design is noted from Russwin Corbin cylindrical lockset model numbers)**

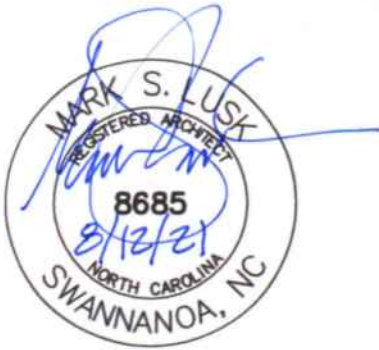
****HW SET:**

- 3 EA HINGE**
- 1 EA LOCKSET - ENTRANCE**
- 1 EA LEAVER HAND GRIP**
- 1 EA FLOOR STOP**
- 1 EA KICK PLATE**
- 1 EA WEATHERSTRIPPING**
- 1 EA THRESHOLD**
- 1 EA CLOSER**

END OF SECTION 087100

HCPS WAREHOUSE BUILDING

MARK LUSK ARCHITECTURE PLLC
 128 WOODBURN DR
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HENDERSON COUNTY PUBLIC SCHOOL DISTRICT

OWNER REPRESENTATIVES

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 HENDERSON COUNTY PUBLIC SCHOOLS

CHAD DILLON
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LIST OF DRAWINGS	
T101	COVER SHEET
STRUCTURAL	
C101	SITE PLAN
S001	GENERAL NOTES & TYPICAL DETAILS
S101	FOUNDATION PLAN
ARCHITECTURAL	
A101	FLOOR PLAN & ELEVATIONS
A201	WALL SECTIONS & ALT 1
ELECTRICAL	
E1	ELECTRICAL NOTES AND SCHEDULES
E2	ELECTRICAL PLANS
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E4	RISER DIAGRAM & PANEL SCHEDULE

**HCPS
 WAREHOUSE
 BUILDING**

Project Number: 21010
 Drawn: A. Rognas
 Date: 8/11/21
 Add2: 8/26/21

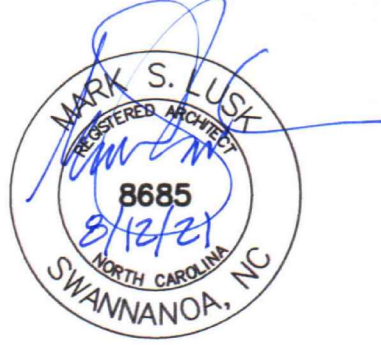
**COVER
 SHEET**

T101

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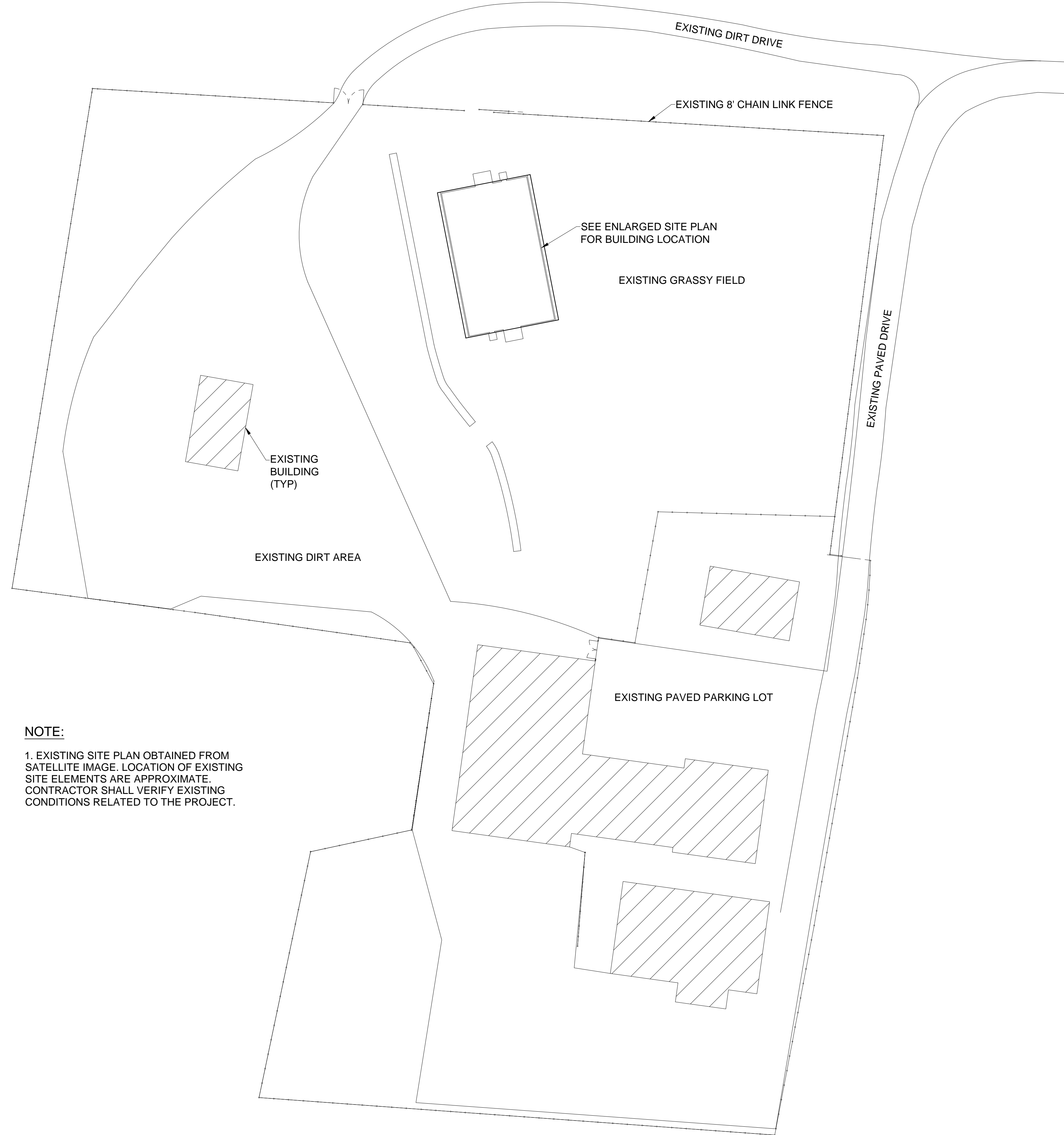
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NOTES:

1. EXISTING GRADE ELEVATIONS ARE APPROXIMATE
2. LOCATION OF EXISTING SITE FEATURES ARE APPROXIMATE. EXACT LOCATION OF BUILDING SHALL BE COORDINATED WITH OWNER/ARCHITECT
3. SITE FILL & GRADING SHALL BE COMPACTED FOR VEHICLE TRAFFIC
4. PROVIDE SEED/STRAW OVER DISTURBED SITE AREA
5. OUTSIDE CONCRETE SHALL BE 4000#PSI W/ 5% AIR ENTRAINED AND W2.9xW2.9 WWF
6. STONE DRIVES SHALL BE 8" COMPACTED STONE

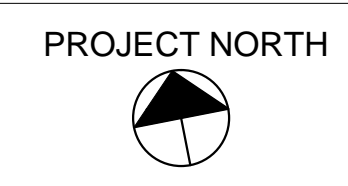
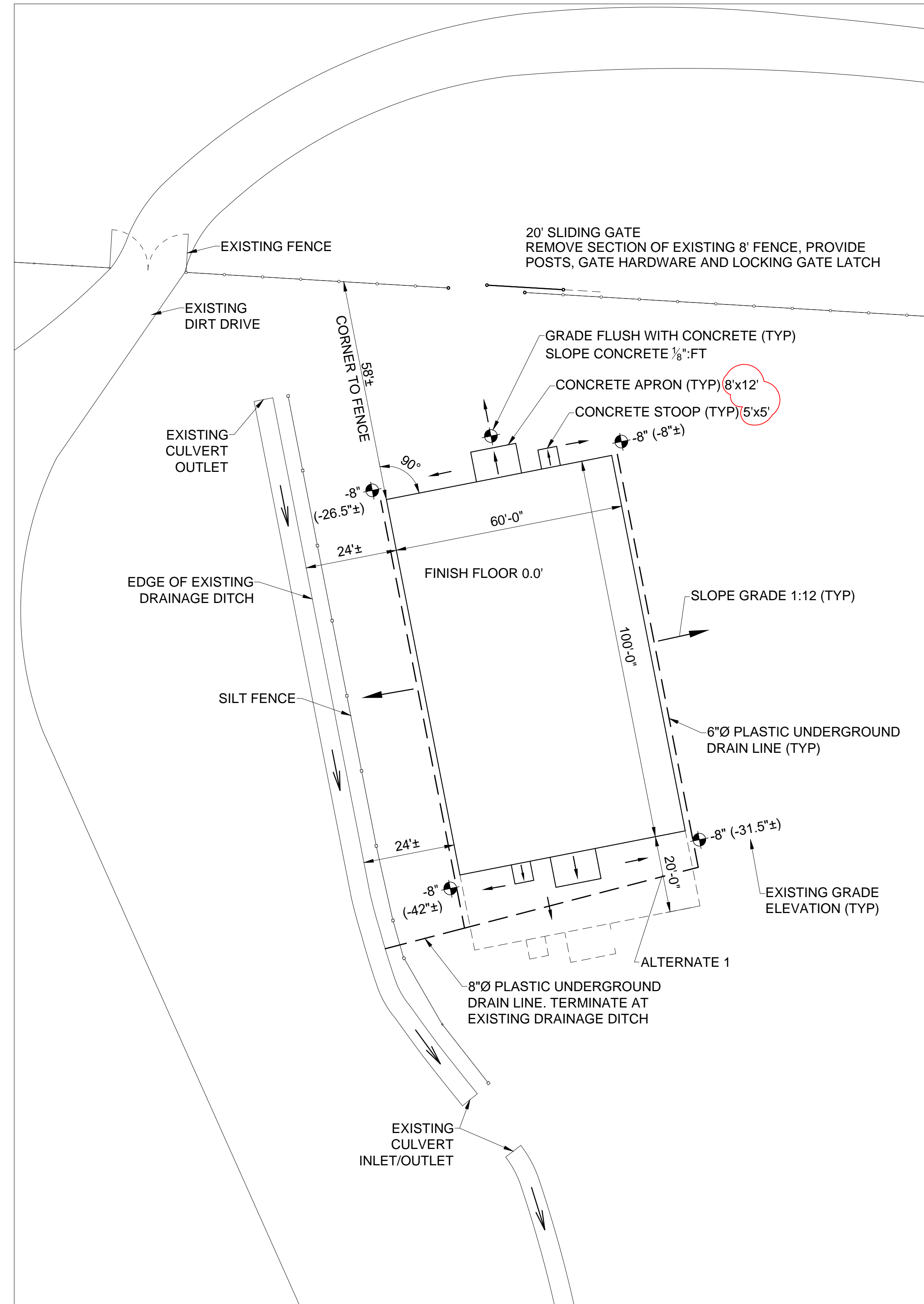


NOTE:

1. EXISTING SITE PLAN OBTAINED FROM SATELLITE IMAGE. LOCATION OF EXISTING SITE ELEMENTS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS RELATED TO THE PROJECT.



SITE PLAN
SCALE: 1" = 40'-0"



ENLARGED SITE PLAN
SCALE: 1" = 20'-0"

HCPS WAREHOUSE BUILDING

Project Number: 21010

Drawn: A. Rognas

Date: 8/11/21

Add2: 8/26/21

SITE PLAN

C101

GENERAL NOTES

STRUCTURAL DESIGN CRITERIA (APPENDIX B)

BUILDING CODE: NORTH CAROLINA BUILDING CODE, 2018 EDITION
BUILDING RISK CATEGORY: II

DESIGN LOADS: LIVE LOAD (PSF)
ROOF: 20

DRIFTING SNOW: $C_e = 1.0, I = 1.0, P_g = 15$ PSF

WIND LOAD CRITERIA (ASCE 7-10):

WIND VELOCITY: 115 MPH
EXPOSURE FACTOR: C
IMPORTANCE FACTOR: 1.0
WIND BASE SHEARS: PER PEMB DESIGNER

SEISMIC LOAD CRITERIA (NEHRP 2003):

SPECTRAL RESPONSE ACCELERATIONS: $S_s = 28.5\%g, S_1 = 10.6\%g$

DESIGN RESPONSE ACCELERATIONS: $S_{ds} = 29.9\%g, S_{d1} = 16.8\%g$

IMPORTANCE FACTOR: 1.0
SITE CLASSIFICATION: D
DESIGN SEISMIC CATEGORY: C
SEISMIC FORCE RESISTING SYSTEM: H - STEEL SYSTEM NOT SPECIFICALLY DESIGNED FOR SEISMIC RESISTANCE

SYSTEM OVER-STRENGTH FACTOR: 3.0
REDUNDANCY FACTOR: 1.0
RESPONSE MODIFICATION FACTOR (R): 3.0
DEFLECTION AMPLIFICATION FACTOR (Cd): 3.0
SEISMIC BASE SHEAR: PER PEMB DESIGNER
ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
ARCHITECTURAL MECHANICAL COMPONENTS ANCHORED?: YES
LATERAL DESIGN CONTROL: PER PEMB DESIGNER

FOUNDATIONS

PRESUMPTIVE DESIGN SOIL BEARING PRESSURE: 2000 PSF

FROST DEPTH: 24"; BOTTOM OF ALL EXTERIOR FOOTINGS AND TURNED-DOWN SLABS SHALL BEAR AT OR BELOW SPECIFIED FROST DEPTH.

TESTING AND INSPECTION:

- AN INDEPENDENT TESTING LABORATORY (ITL) SHALL BE RETAINED WITH A GEOTECHNICAL ENGINEER QUALIFIED TO INSPECT AND TEST SOILS IN ACCORDANCE WITH THE FOLLOWING PROGRAM:
 - PROOFROLLING OF ALL SUBGRADES SHALL BE OBSERVED AND APPROVED BY THE ITL.
 - ALL FOUNDATION BEARING STRATA SHALL BE INSPECTED AND APPROVED BY THE ITL.
 - FIELD ADJUSTMENTS TO SUBGRADES OR BEARING CONDITIONS SHALL ONLY BE MADE WITH THE APPROVAL OF THE ITL.
 - ITL SHALL PERFORM FIELD DENSITY TESTS OF ENGINEERED FILL FOR EVERY 2000 SQ. FT. FOR EACH LAYER UNDER PAVEMENT OR BUILDING SLAB, BUT IN NO CASE FEWER THAN THREE TESTS.

CAST-IN-PLACE CONCRETE

DESIGN STANDARD: ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"

DESIGN COMPRESSIVE STRENGTH AT 28 DAYS (f_c): 3000 PSI
DENSITY: 145 PCF (NORMAL WEIGHT)

MIX DESIGNS:

- CEMENT SHALL CONFORM TO ASTM C 150, TYPE 1 PORTLAND CEMENT, UNLESS OTHERWISE ACCEPTED BY THE STRUCTURAL ENGINEER.
- FLY ASH SHALL BE ASTM C 618, TYPE C OR F, BUT NOT EXCEEDING 4% LOSS ON IGNITION. FLY ASH SHALL NOT EXCEED 25% OF CEMENT CONTENT BY WEIGHT.
- NORMAL WEIGHT AGGREGATE SHALL CONFORM TO ASTM C 33. AGGREGATE SIZE SHALL BE #57 OR #67 FOR ALL CONCRETE.
- AIR ENTRAINING ADMIXTURE SHALL BE USED IN ACCORDANCE WITH ACI 301 IN ALL CONCRETE EXPOSED TO FREEZING AND THAWING.
- ALL CONCRETE SHALL HAVE A MAXIMUM SLUMP OF 4" EXCEPT CONCRETE UTILIZING HIGH OR MID-RANGE WATER REDUCERS SHALL HAVE A MAXIMUM SLUMP OF 6".

REINFORCING STEEL: ASTM A615, GRADE 60

REINFORCEMENT LAP SPLICES:

- ALL BARS MARKED CONTINUOUS ("CONT.") SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS.
- WELDING OR TACK WELDING OF REINFORCING BARS IS PROHIBITED.

CONCRETE COVER FOR REINFORCEMENT:

UNFORMED SURFACE CAST AGAINST EARTH: 3"
FORMED SURFACE EXPOSED TO EARTH OR WEATHER: 2"
FORMED SURFACE NOT EXPOSED TO EARTH OR WEATHER: SLABS, JOISTS: 3/4"

PLACEMENT:

- WHEN HOT WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN CONFORMANCE WITH ACI 305.
- WHEN COLD WEATHER CONDITIONS EXIST, PLACE AND CURE CONCRETE IN CONFORMANCE WITH ACI 306.
- PLACE AND FINISH CONCRETE TO TOLERANCES CONFORMING WITH ACI 117; WITH FLATNESS WITHIN 1/4" IN 10 FT., AS DETERMINED BY A 10 FOOT STRAIGHTEDGE PLACED ANYWHERE ON THE SLAB IN ANY DIRECTION.
- PLACE AND CONSOLIDATE CONCRETE IN CONFORMANCE WITH ACI 309.
- NO CONCRETE FOOTINGS OR GRADE BEAMS SHALL BE SLEEVED FOR PIPING OR DUCTS, UNLESS DETAILED ON THE STRUCTURAL DRAWINGS, OR OTHERWISE APPROVED BY THE STRUCTURAL ENGINEER.
- ALUMINUM EMBEDMENTS OF ANY KIND ARE PROHIBITED IN CONCRETE.

CURING:

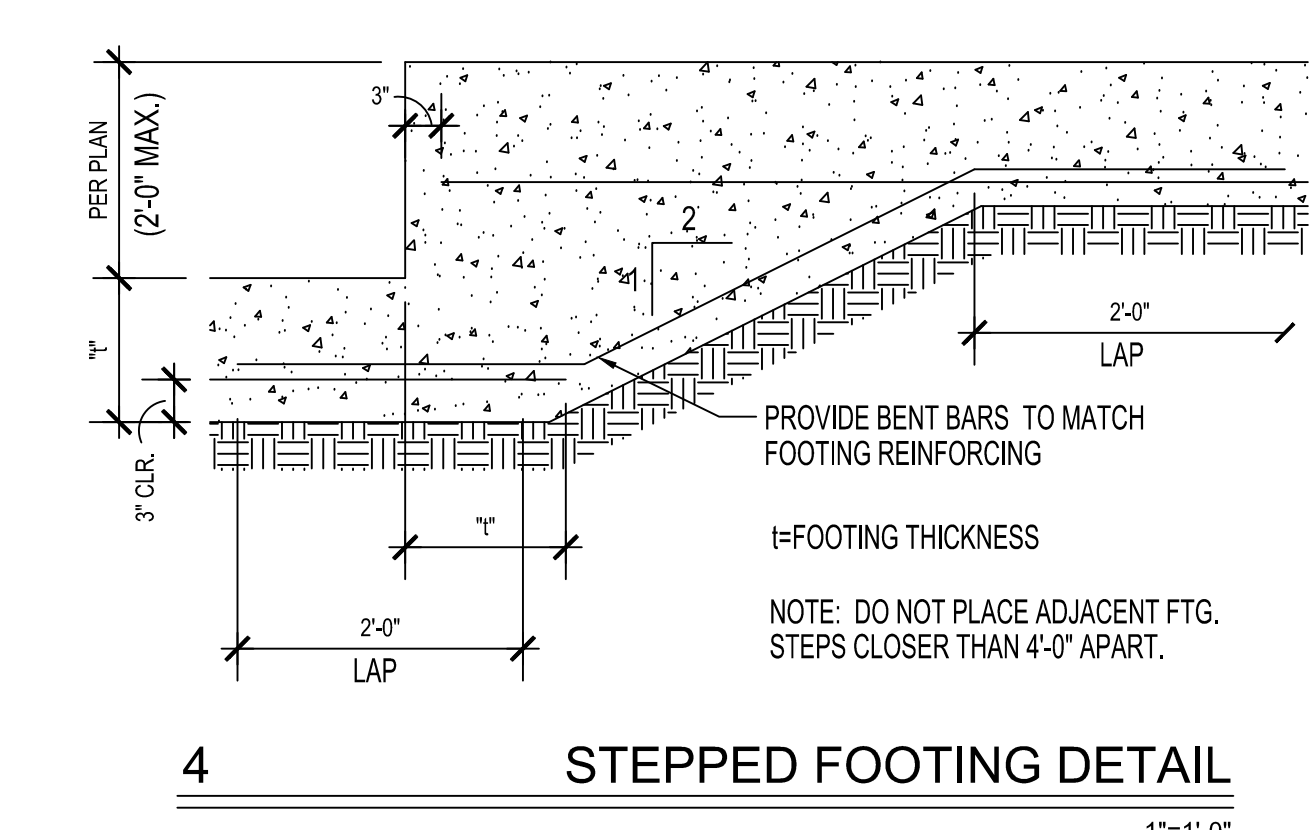
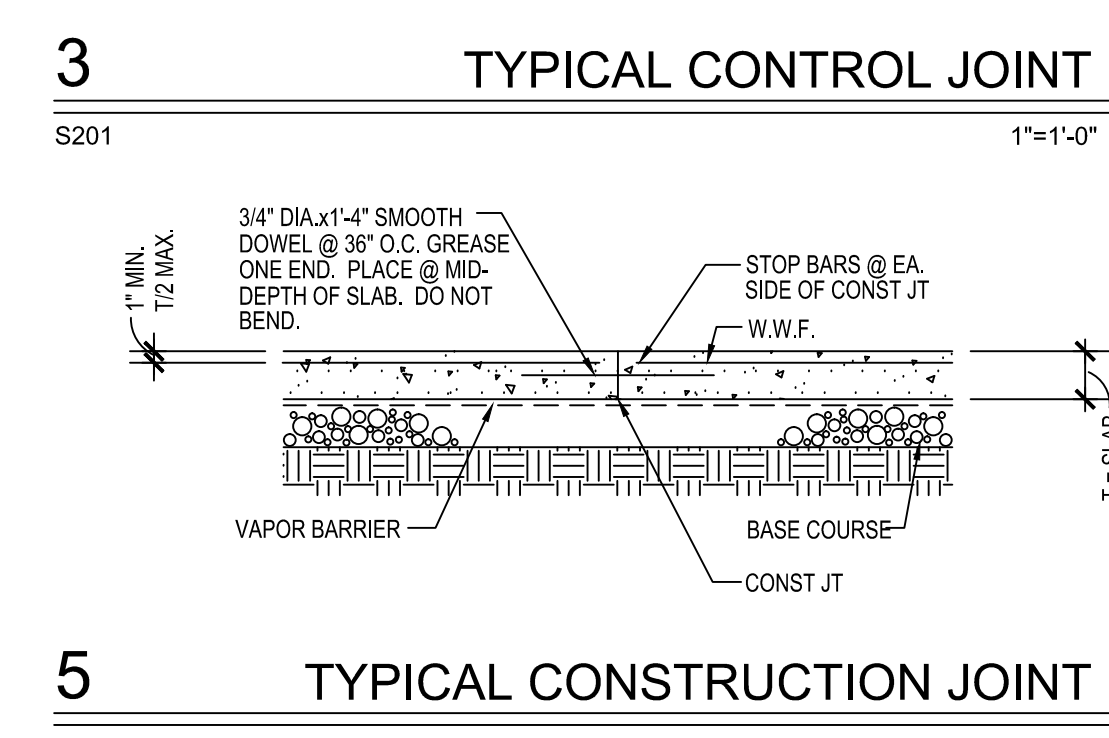
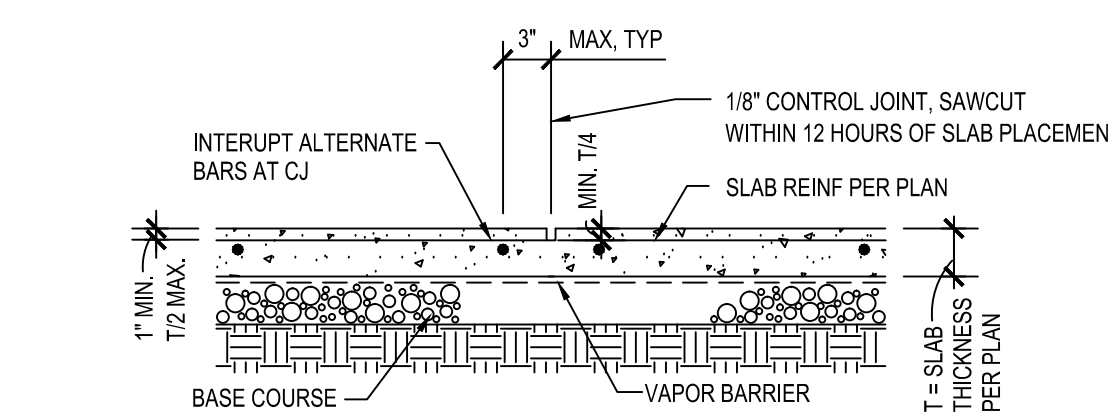
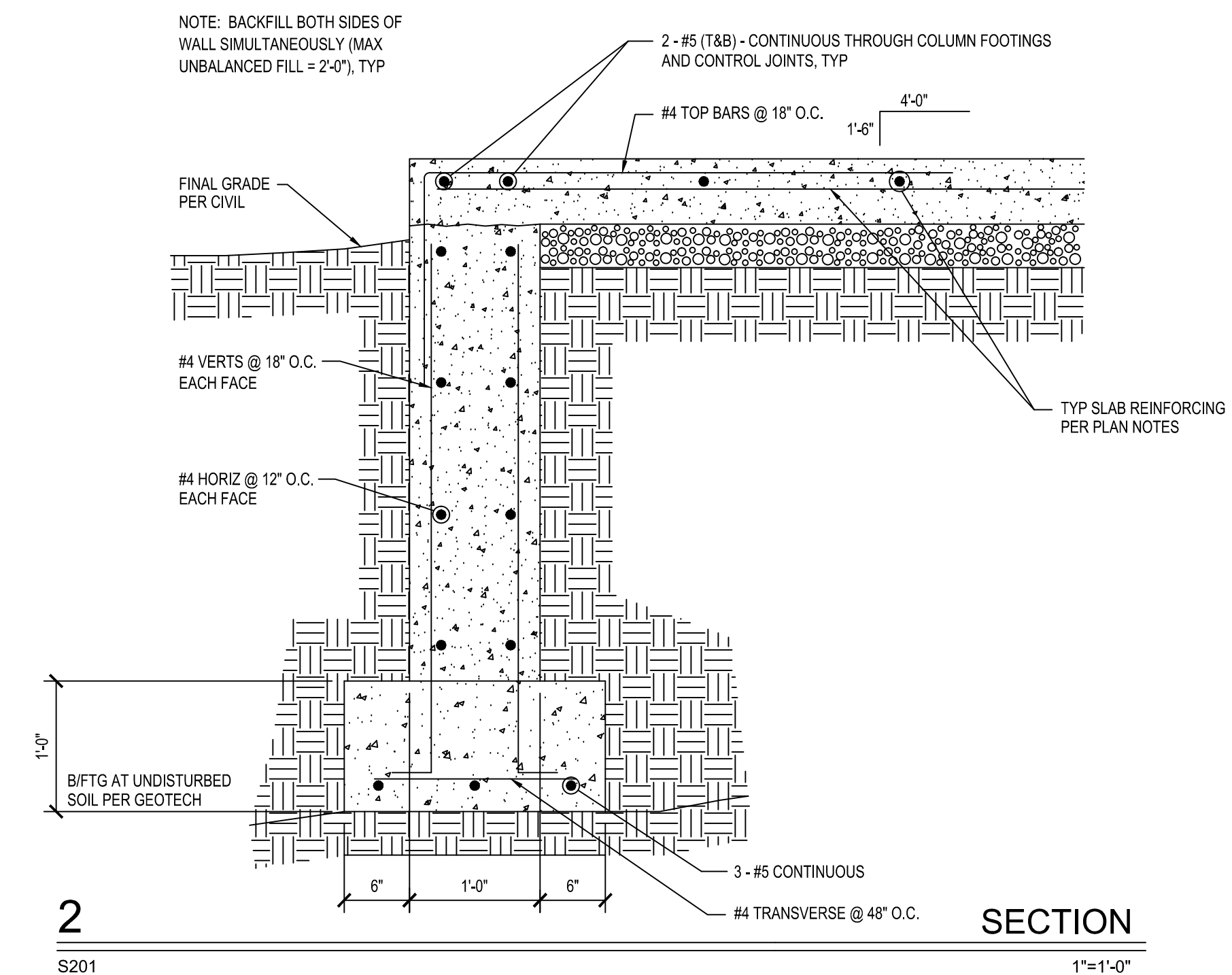
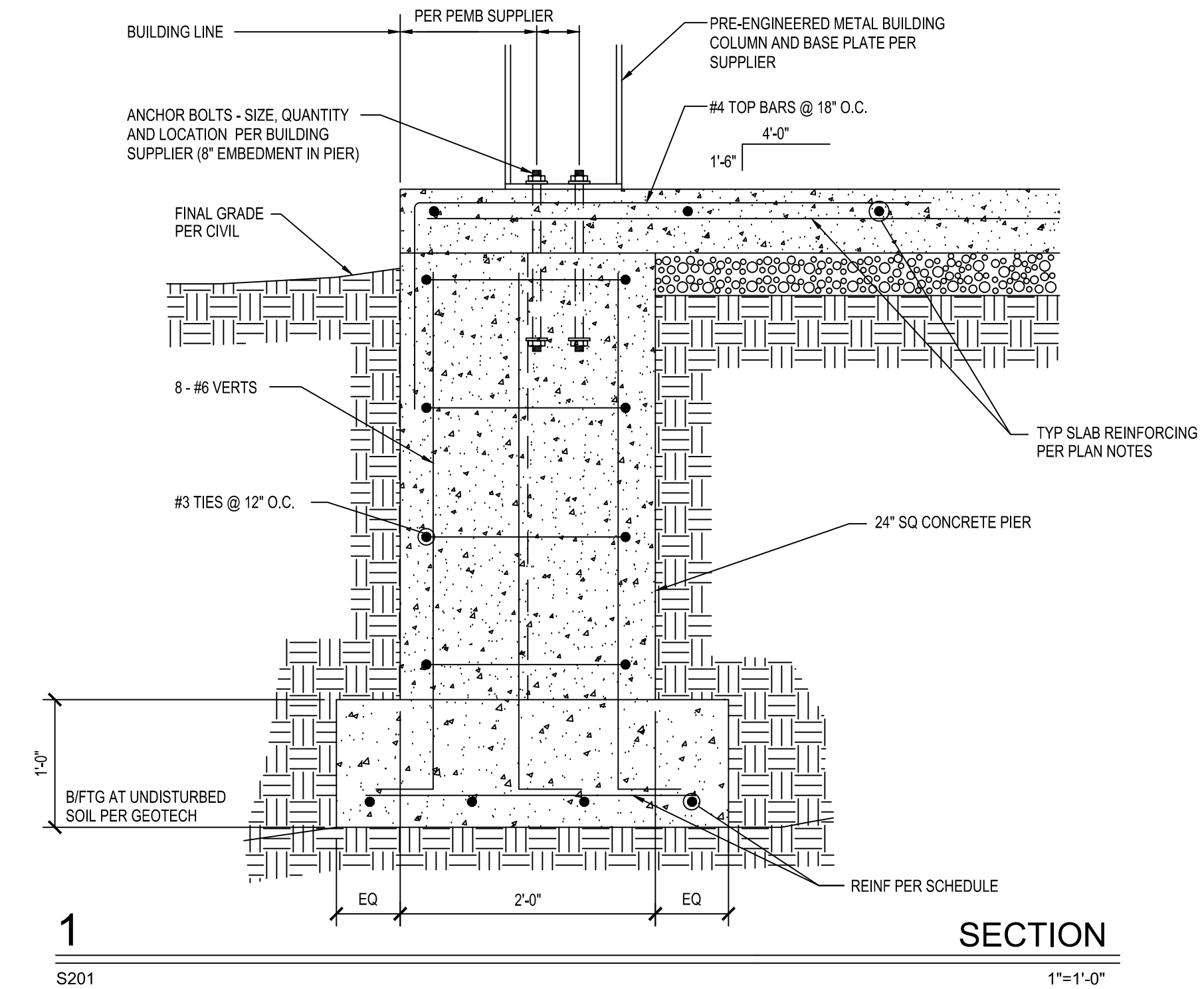
- CURE CONCRETE SLABS WITH MINIMUM 30% SOLIDS, LIQUID MEMBRANE CURING COMPOUND APPLIED WITHIN TWO HOURS AFTER COMPLETION OF FINISHING. ALTERNATIVELY, APPLY CONTINUOUS MOIST CURING FOR A MINIMUM OF SEVEN DAYS. DO NOT APPLY MEMBRANE CURING COMPOUND ON SURFACES TO RECEIVE FINISHES THAT ARE INCOMPATIBLE WITH THE CURING PRODUCT.

TESTING AND INSPECTION:

- AN INDEPENDENT TESTING LABORATORY (ITL) SHALL BE RETAINED THAT IS QUALIFIED TO INSPECT AND TEST CONCRETE IN ACCORDANCE WITH THE FOLLOWING PROGRAM:
 - SLUMP: ASTM C 143; ONE TEST FOR EACH CONCRETE LOAD AT POINT OF DISCHARGE.
 - AIR CONTENT: ASTM C 173; ONE TEST FOR EACH SET OF COMPRESSIVE STRENGTH CYLINDERS.
 - TEMPERATURE: FOR EACH LOAD, AT POINT OF DISCHARGE, TEST WHEN AIR TEMPERATURE IS BELOW 40 DEG. F AND ABOVE 80 DEGREES F, AND EACH TIME A SET OF COMPRESSIVE STRENGTH CYLINDERS IS MADE.
 - COMPRESSIVE STRENGTH: ASTM C 31; ONE SET OF 4 STANDARD CYLINDERS FOR EACH 100 C.Y. OR FRACTION THEREOF, OF EACH CONCRETE CLASS PLACES IN ANY ONE DAY OR FOR EACH 10,000 S.F. OF SURFACE AREA PLACED. TEST ONE CYLINDER AT 7 DAYS, TWO AT 28 DAYS, WITH ONE HELD IN RESERVE.
 - RECORD OF TEST RESULTS SHALL BE SUBMITTED BY THE ITL TO THE CONTRACTOR AND ARCHITECT.

REINFORCING STEEL SHOP DRAWINGS:

- SUBMIT DRAWINGS FOR FABRICATION, BENDING AND PLACEMENT OF CONCRETE REINFORCEMENT IN COMPLIANCE WITH ACI SP-66. CONTRACTOR SHALL REVIEW AND APPLY APPROVAL STAMP TO SHOP DRAWINGS PRIOR TO SUBMISSION.



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Dunn Structural Engineering, PLLC
125 S Lexington Ave, Suite 308
Asheville, NC 28601
Phone: (828) 775-5110
8/11/21

No.	Description	Date

HCPS WAREHOUSE BUILDING

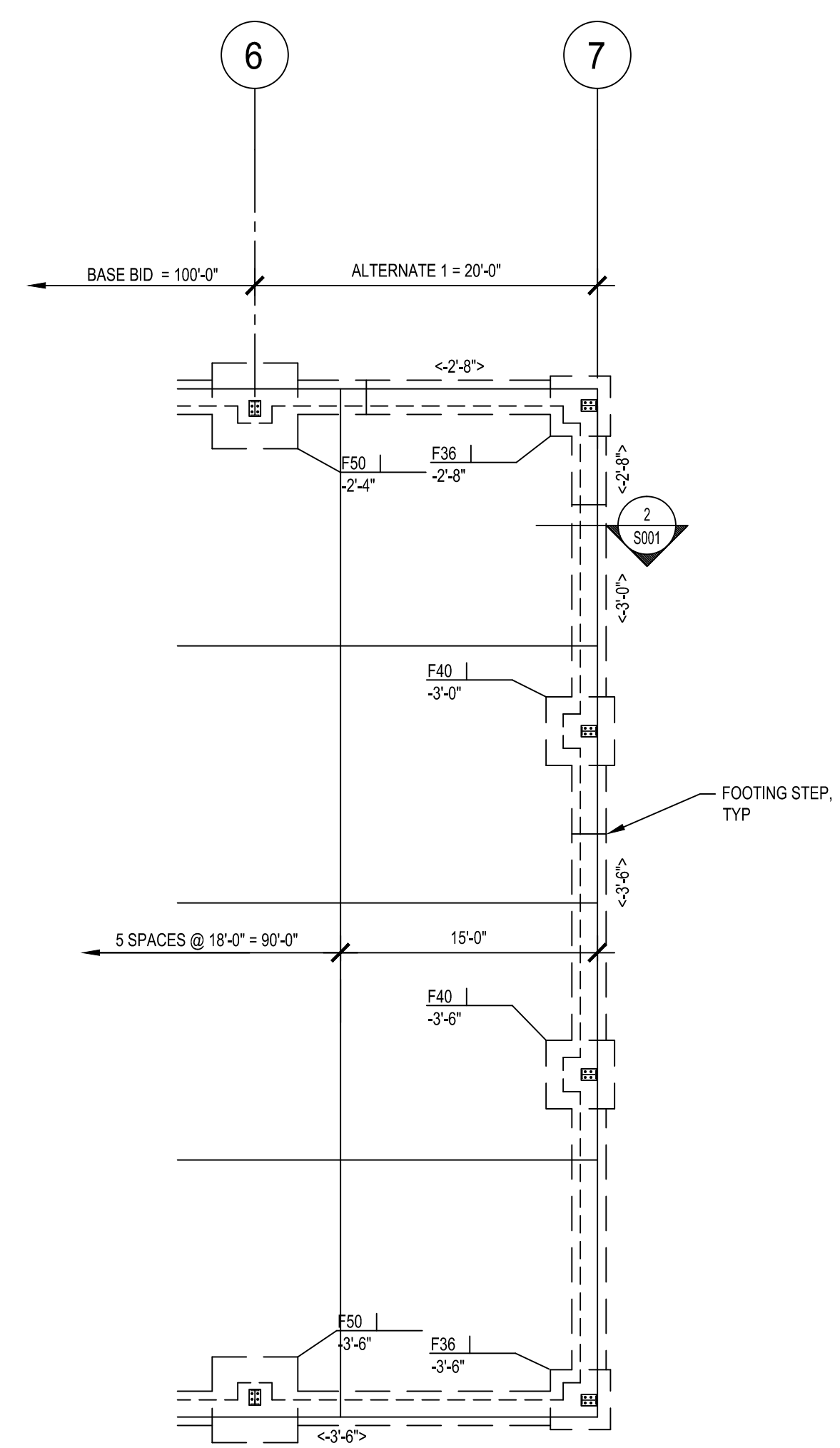
246 Education Dr
Flat Rock, NC 28731

General Notes & Typical Details

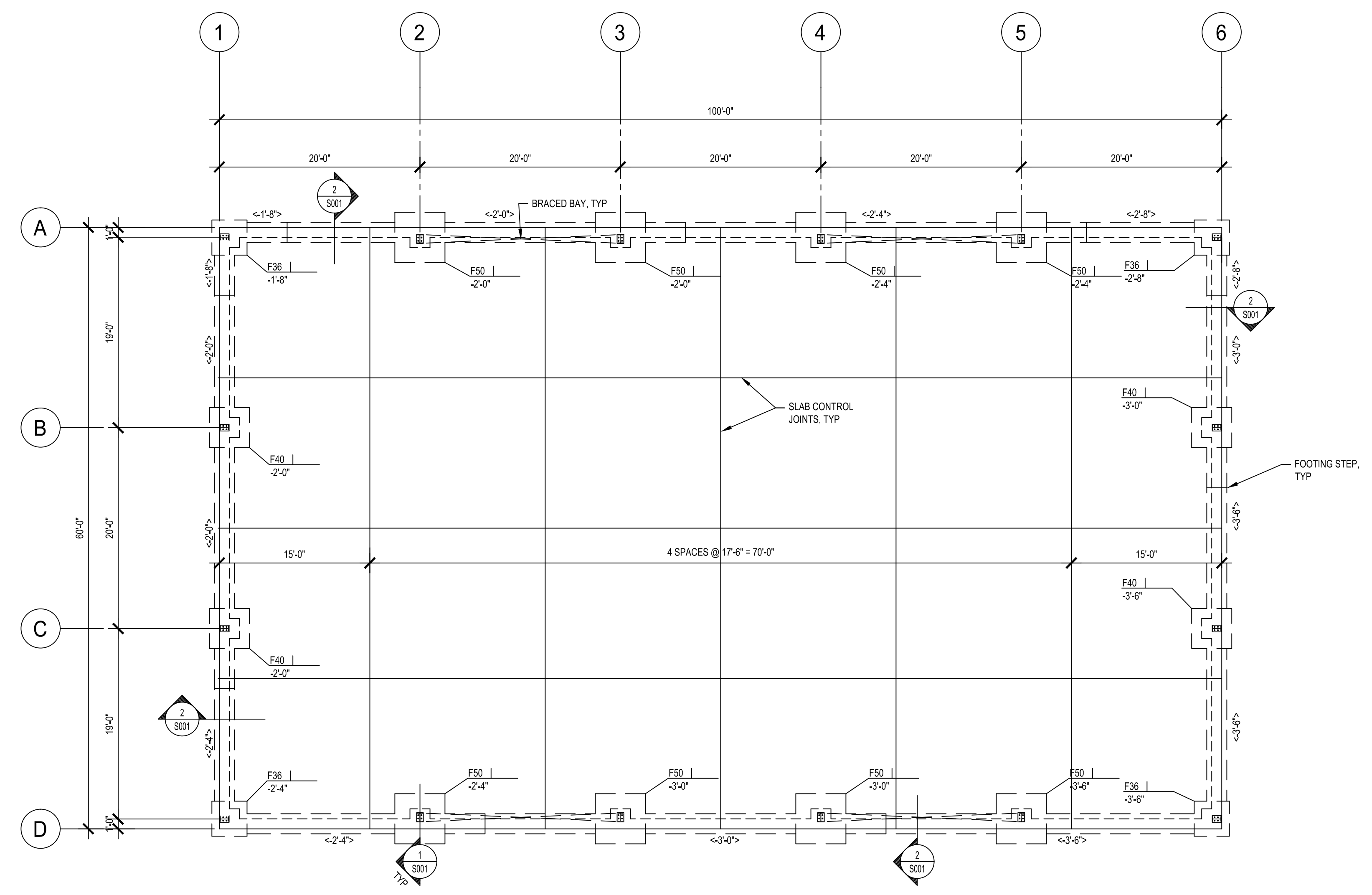
Project number: 21010
Date: 11 August, 2021
Drawn by: PTD
Checked by: PTD

S001

Scale



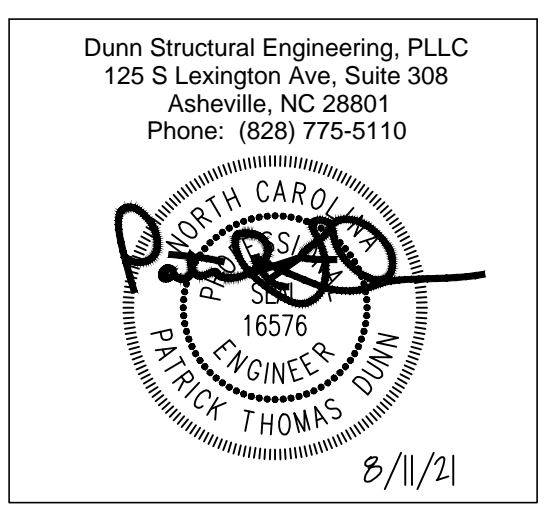
ALTERNATE 1 FOUNDATION PLAN
 1/8"=1'-0"



COLUMN FOOTING SCHEDULE			
MARK	DIM. (SQUARE) U.N.O.	THICKNESS	REINFORCEMENT EA. WAY (BOT)
F36	3'-6"	1'-0"	4#4
F40	4'-0"	1'-0"	5#4
F50	5'-0"	1'-0"	6#5

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

- PLAN NOTES:**
- TOP OF SLAB ELEVATION AT 0'-0" (DATUM ELEVATION). ALL OTHER ELEVATIONS ARE REFERENCED AS + OR - FROM DATUM.
 - TYPICAL SLAB ON GRADE IS 6" THICK, 3000 PSI NORMAL WEIGHT CONCRETE REINFORCED W/ #4 @ 18" O.C. EACH WAY AT SLAB MID-DEPTH ON MIN. 10 MIL VAPOR BARRIER OVER 4" OF #57 STONE DRAINAGE COURSE.
 - COORDINATE WITH OTHER DISCIPLINES AND TRADES FOR LOCATIONS AND DIMENSIONS OF OPENINGS, RECESSES, SLEEVES AND PIPING.
 - SEE SHEET S001 FOR GENERAL NOTES AND TYPICAL DETAILS PERTAINING TO THIS PLAN. NOTES AND DETAILS SHOWN THEREIN ARE NOT INDICATED ON PLAN, BUT DEFINE GENERAL DESIGN CRITERIA AND TYPICAL CONSTRUCTION CONDITIONS OCCURRING THROUGHOUT THE WORK.
 - LOCATION OF ANCHOR BOLTS AND BASE PLATES PER PEMB SUPPLIER.
 - PRIOR TO EXCAVATION AND FABRICATION OF REINFORCING, THE CONTRACTOR SHALL PROVIDE THE SUPPLIER'S COLUMN REACTIONS TO THE ENGINEER FOR VERIFICATION OF THE FOUNDATION SYSTEM.
 - LOCATE FOOTING STEPS TO MAINTAIN FROST DEPTH AND IN COORDINATION WITH FINAL GRADING PLANS.



No.	Description	Date

HCPS WAREHOUSE BUILDING

246 Education Dr
 Flat Rock, NC 28731

Foundation Plan

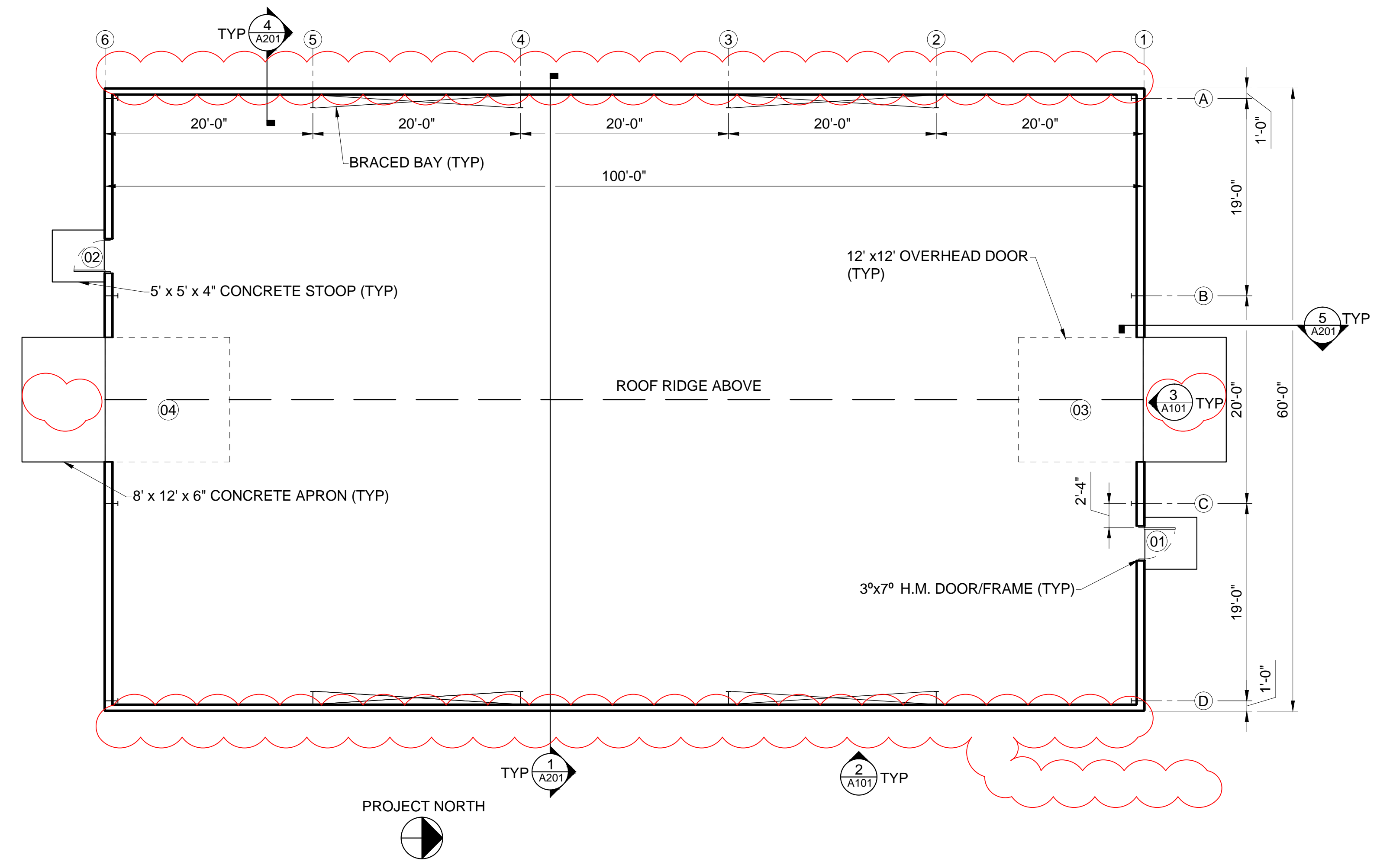
Project number 21010
 Date 11 August, 2021
 Drawn by PTD
 Checked by PTD

S101

Scale

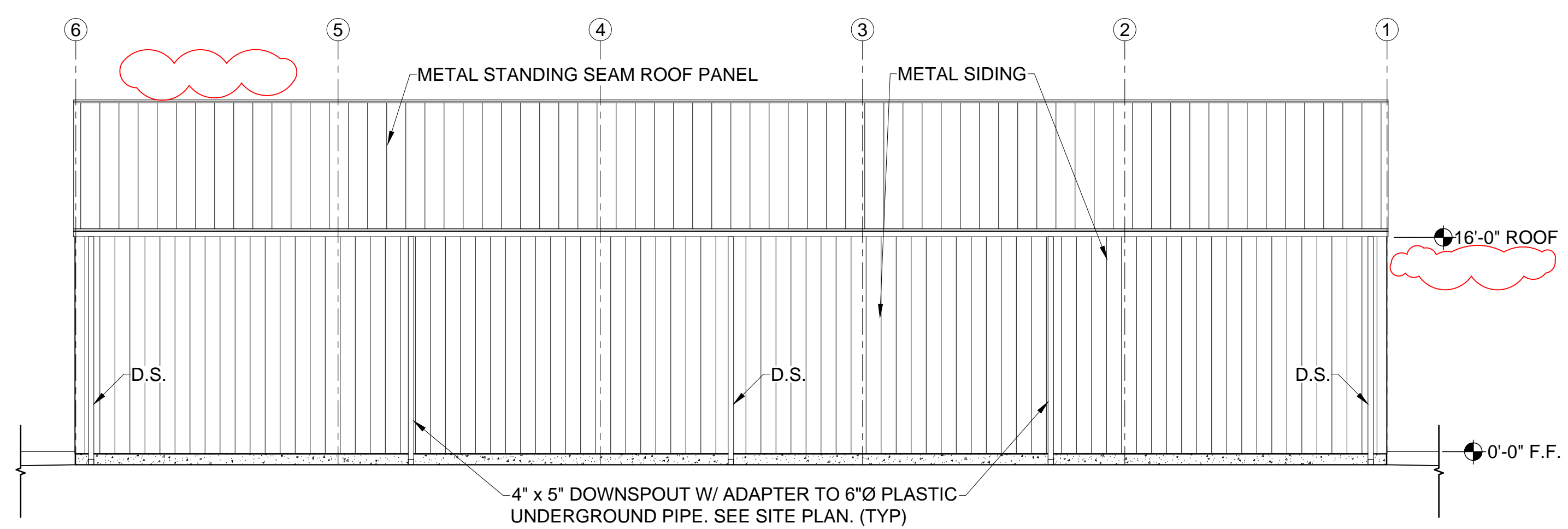


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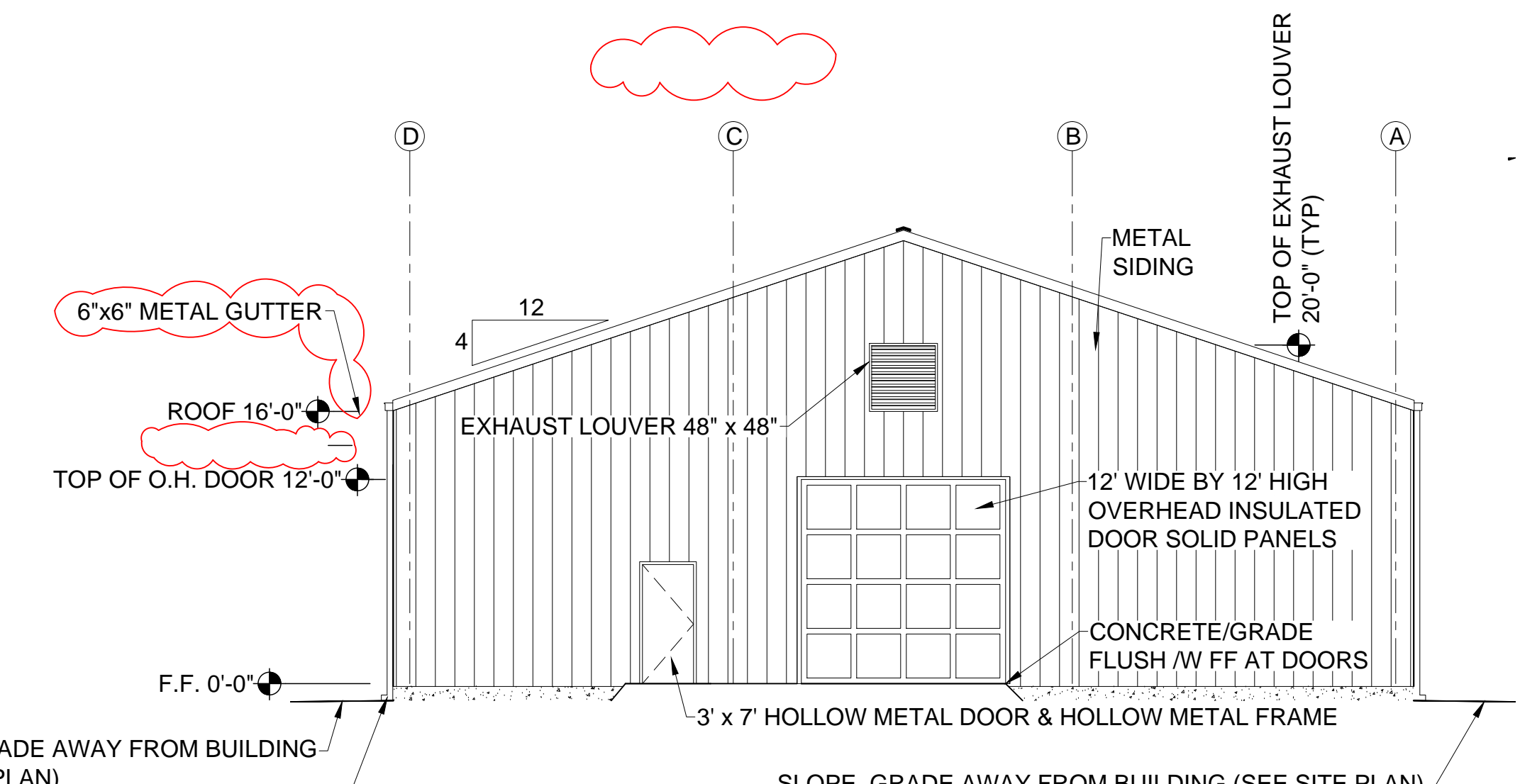


1 FLOOR PLAN
 SCALE: 1/8" = 1'-0"

- GENERAL NOTES:**
1. INSULATE EXTERIOR WALLS AND ROOF.
 2. PROVIDE NC SEAL ENGINEERED DOCUMENTS BY PRE-ENGINEERED BUILDING SUPPLIER.
- FINISH SCHEDULE NOTES:**
1. METAL PANELS & GUTTERS/D.S. SHALL BE PREFINISHED WITH PAINT COLOR SELECTED BY OWNER.
 2. HOLLOW METAL FRAMES & DOORS SHALL RECEIVE PAINT FINISH.
 3. PROVIDE A CLEAR PENETRATING SEALER FOR CONCRETE FLOORS.



2 EAST ELEVATION
 SCALE: 1/8" = 1'-0"

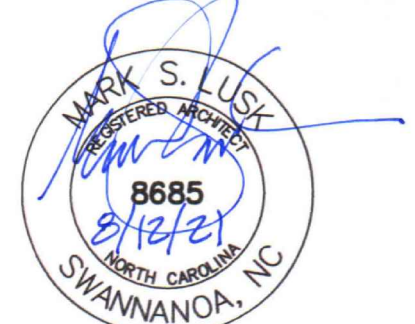
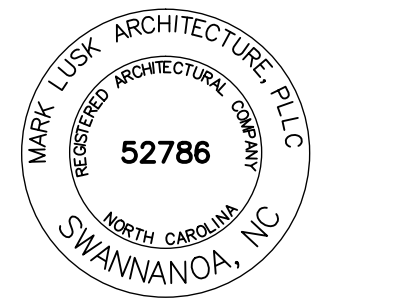


3 NORTH ELEVATION
 SCALE: 1/8" = 1'-0"

**HCPS
 WAREHOUSE
 BUILDING**

Project Number: 21010
 Drawn: A. Rognas
 Date: 8/11/21
 Add2: 8/26/21

**FLOOR PLAN &
 ELEVATIONS**



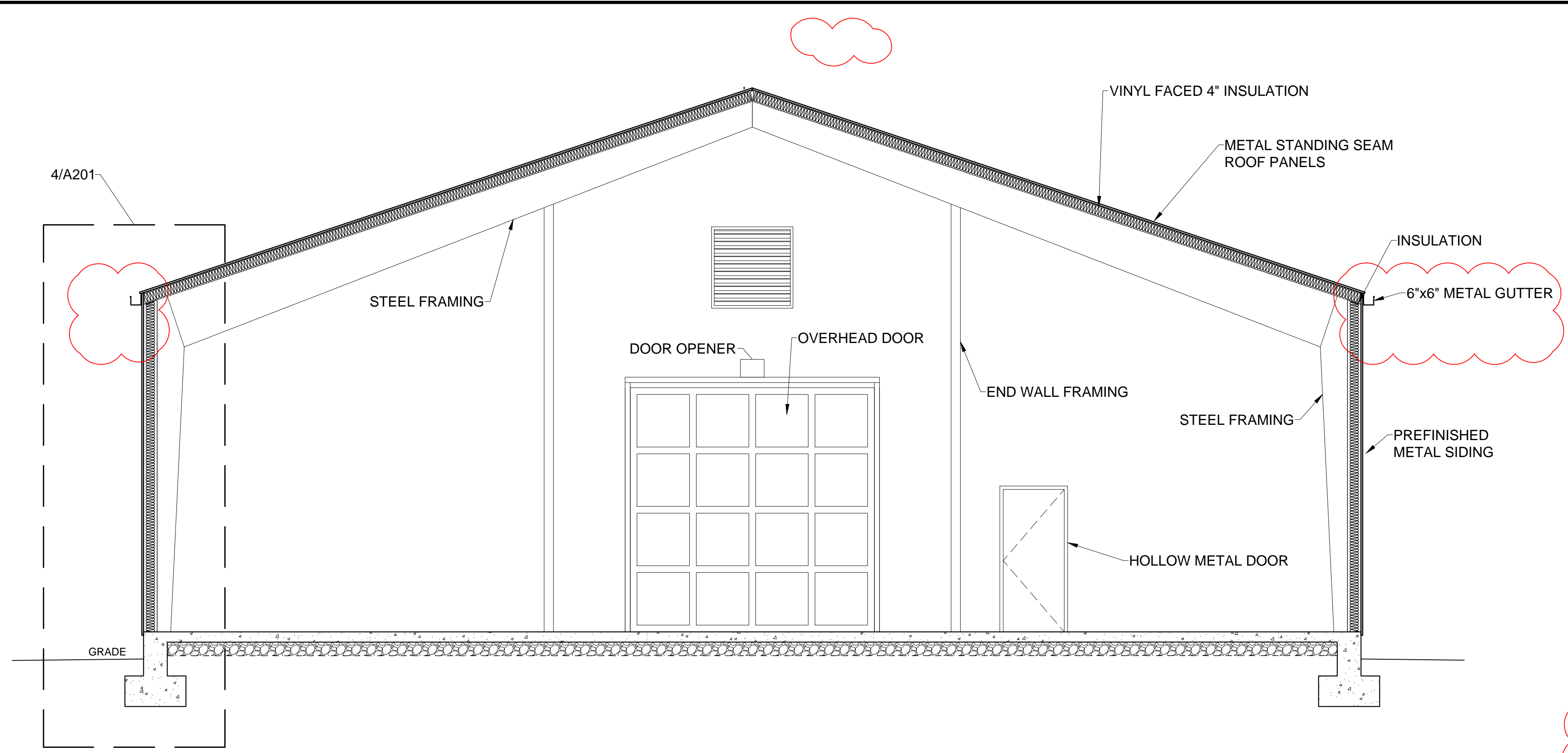
**HCPS
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 BUILDING**

Project Number: 21010

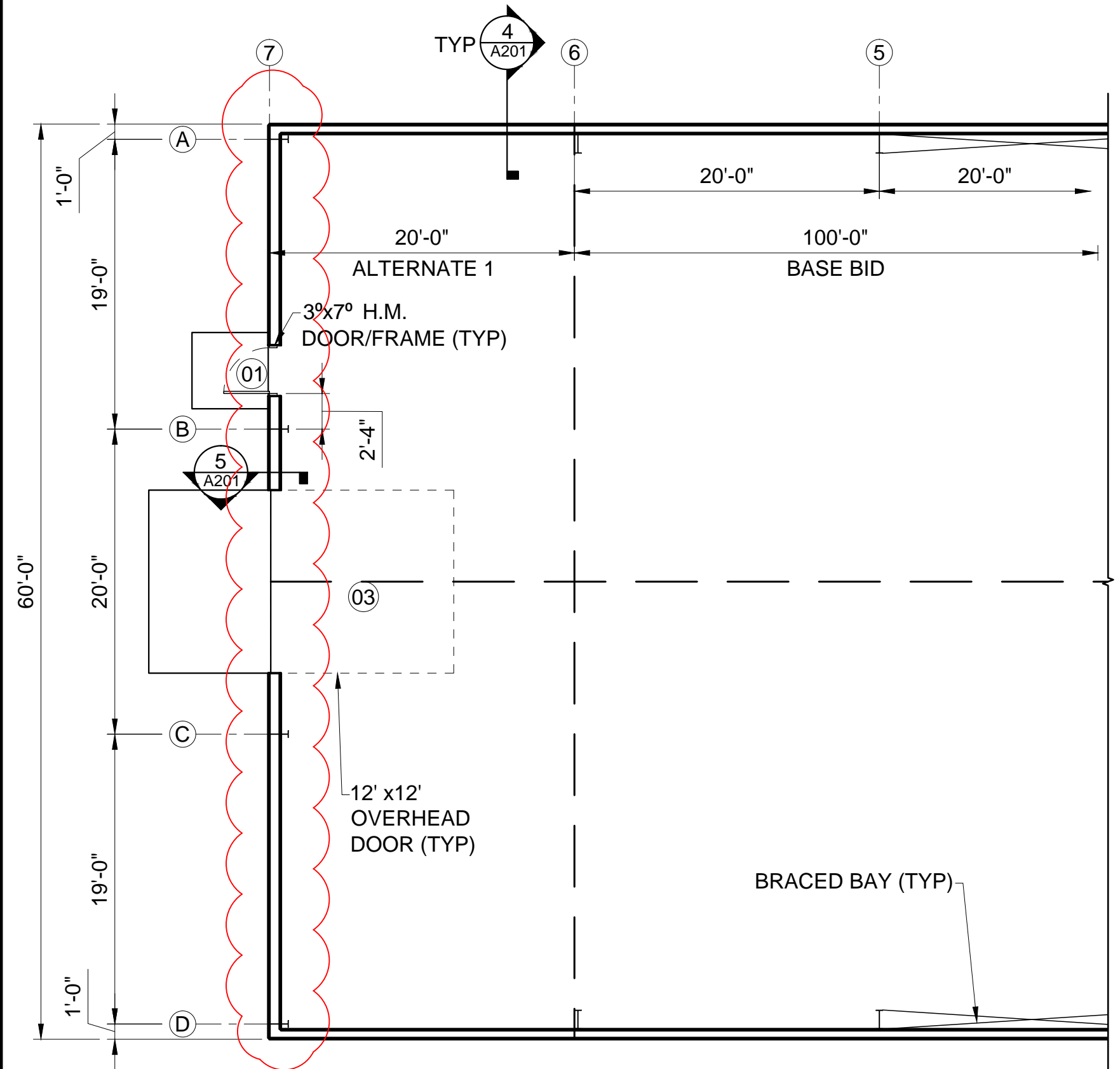
Drawn: A. Rognas
 Date: 8/11/21
 Add2: 8/26/21

**WALL
 SECTIONS
 & ALT 1**

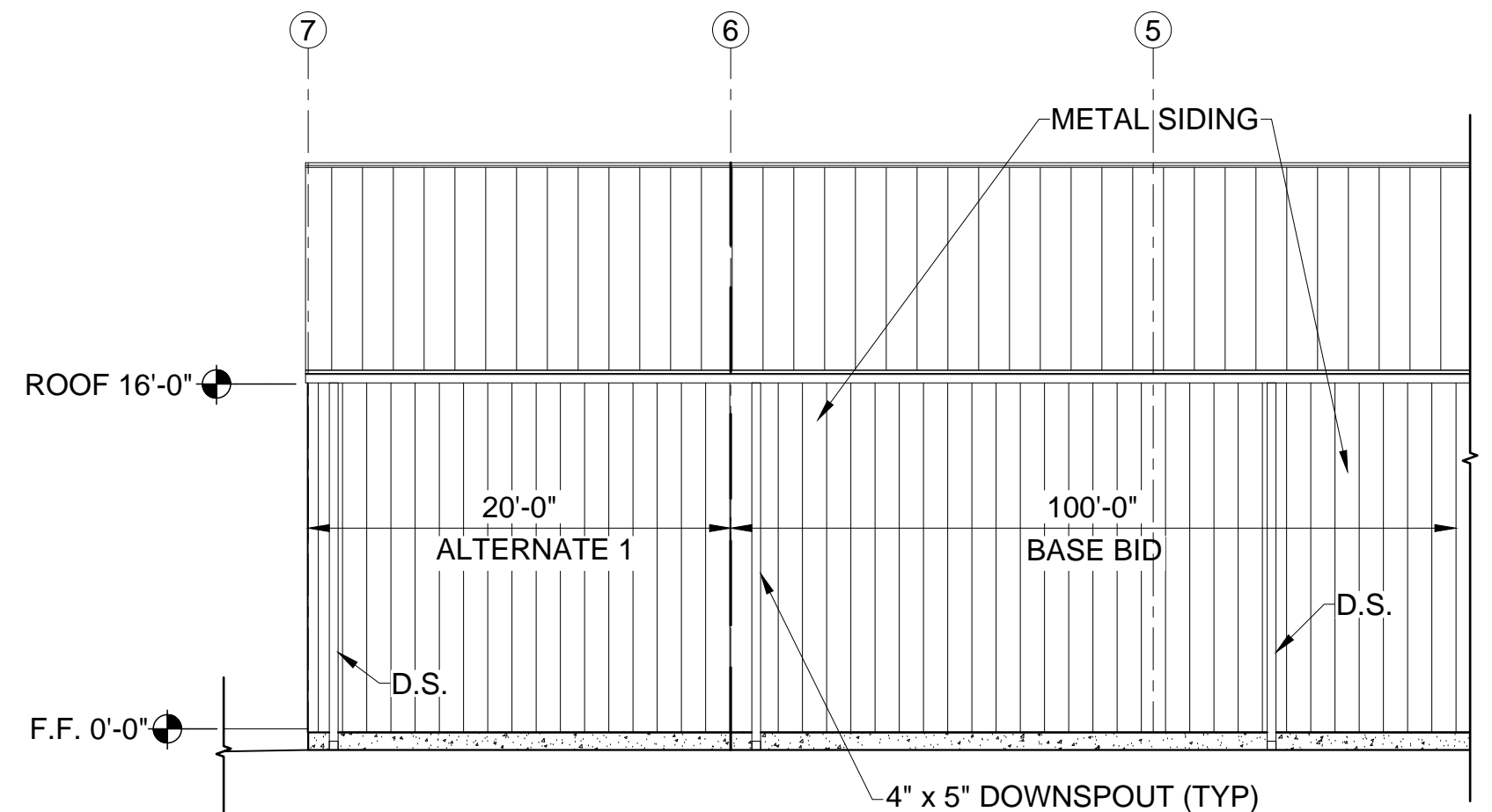
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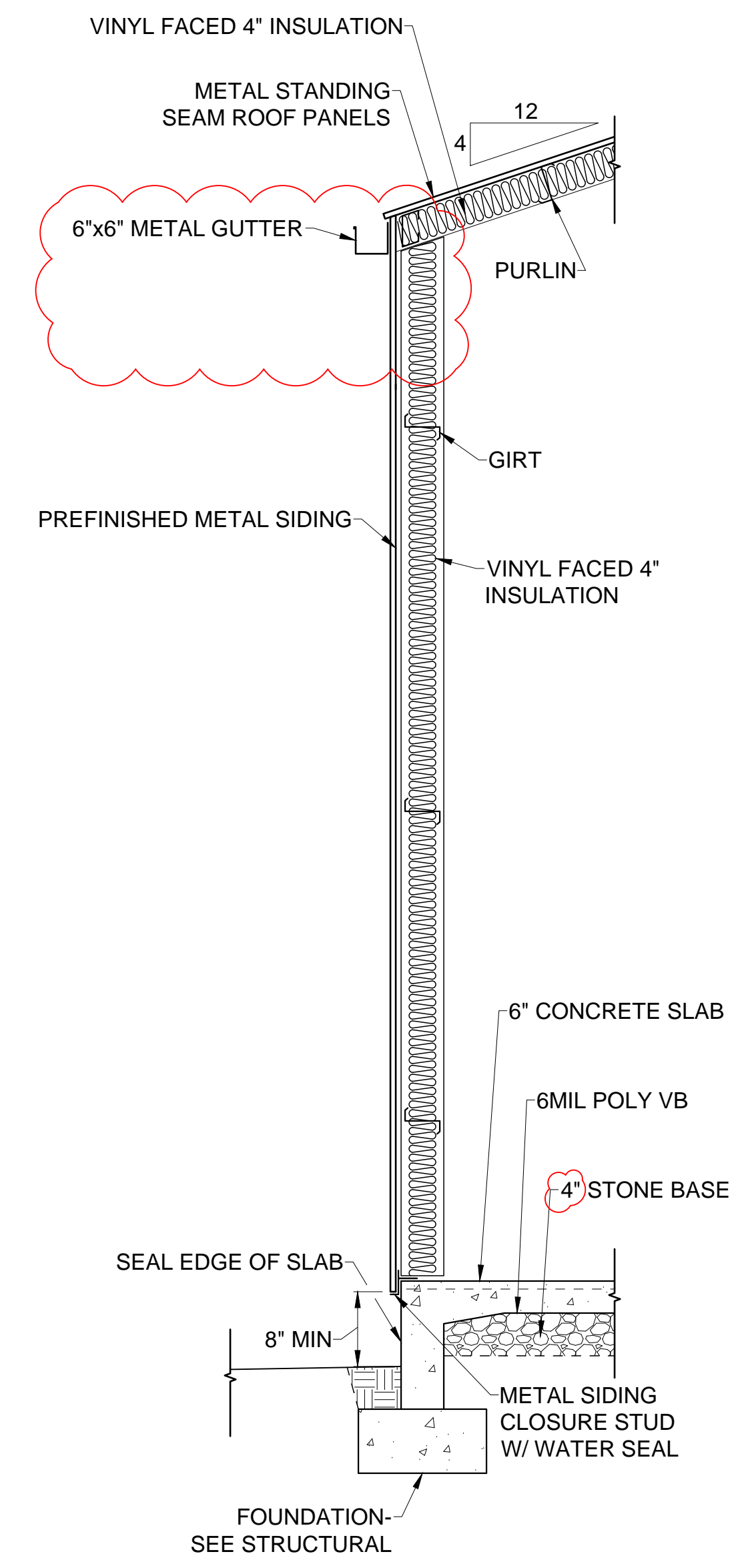
1 BUILDING SECTION
 SCALE: 1/2" = 1'-0"



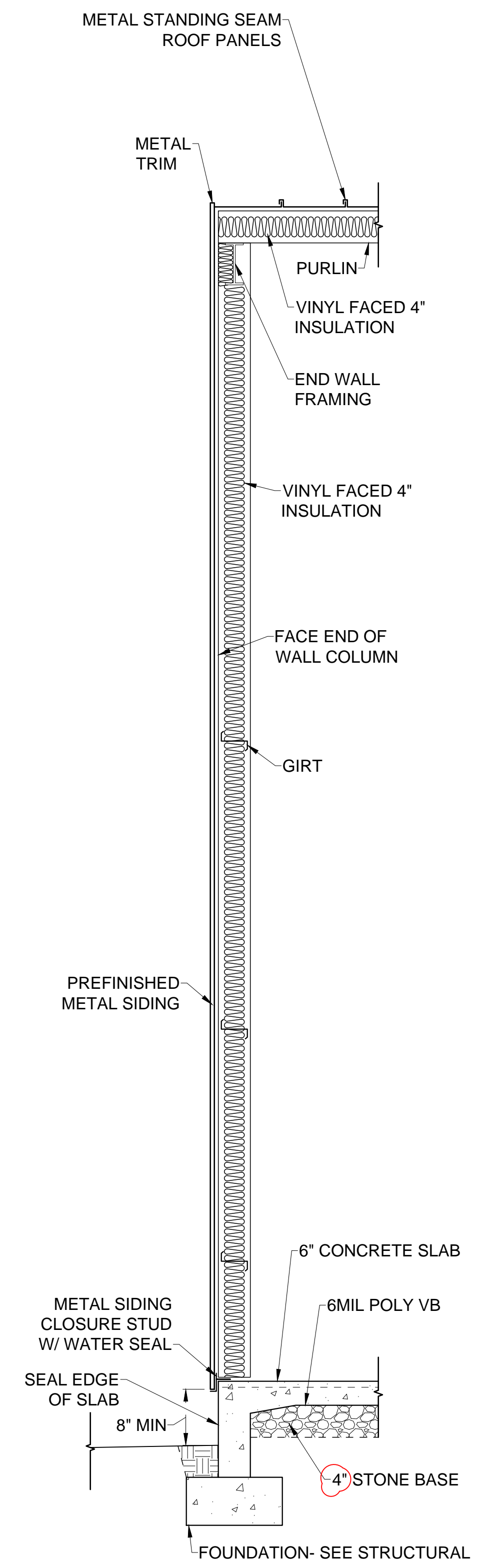
2 ALTERNATE 1 FLOOR PLAN
 SCALE: 1/8" = 1'-0"



3 ALTERNATE 1 EAST ELEVATION
 SCALE: 1/8" = 1'-0"



4 WALL SECTION
 SCALE: 1/2" = 1'-0"



5 WALL SECTION
 SCALE: 1/2" = 1'-0"

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PROGRESS DRAWING

DO NOT USE FOR
CONSTRUCTION

8-25-2021

**HCPS
WAREHOUSE
BUILDING**

Project Number: 21010

Drawn: MP
Date: 8-25-21

**ELECTRICAL
NOTES &
SCHEDULES**

E1

ELECTRICAL NOTES

- The intent of these drawings and specifications are to describe the installation of a complete, fully adjusted, and operational system.
- Provide five sets of electrical equipment submittals to the GC for the architect, engineer, GC and owner to review and approve prior to purchasing.
- The contractor shall provide all supervision, labor, material, equipment, machinery, and any and all other items necessary to complete the system. All work shall be performed in a neat and workmanlike manner in accordance with industry standards.
- All work under this section shall be accomplished in strict accordance with state building codes and the National Electric Code. Coordinate with local power company requirements.
- The contractor shall obtain all necessary approval, obtain all permits and pay all fees required for the installation of their work.
- The drawings are diagrammatic only. The contractor may need to make field adjustments to accommodate actual field conditions.
- Devices located in rated walls shall have sufficient separation from other devices to allow proper installation and firestopping.
- The contractor shall refer to the architectural and structural drawings for the general construction of the building, for floors and ceiling heights, for locations of wall, partitions, beams, etc.
- Manufacturer's listed are to establish a standard of quality and not intended to limit the selection to these manufacturers. Any substitutions must be approved by the architect and engineer.
- Contractor shall verify all listed model numbers with manufacturers to insure proper application of equipment.
- Equipment and materials shall be handled, stored and protected in accordance with the manufacturer's recommendations.
- The contractor shall perform any and all trenching, excavation and backfilling required for the installation of this work.
- The contractor shall furnish all necessary scaffolding, staging, rigging and hoisting required for the completion of this work.
- All work shall be coordinated with the general contractor and other trades involved in the construction project. All work shall be carefully laid out in advance to coordinate architectural, structural, mechanical, plumbing and electrical features of construction.
- The electrical contractor shall visit the site before submitting his bid so as to be thoroughly familiar with the job conditions and/or peculiarities. No extra payment will be allowed for anything which could have been anticipated from a visit to the site.
- Equipment shall be installed in accordance with manufacturer's written instructions.
- Provide grounding for all conduits, motor frames, metal casings, receptacles, system neutral, etc. and as required by NEC as minimum. Resistance to ground shall not exceed 25 OHMS.
- A green insulated copper ground wire, sized per NEC, shall be installed in all raceways, electric metallic tubing used for feeders, branch circuits, flexible conduit, and as otherwise noted on the drawings.
- All fixtures shown on the plans shall be furnished and installed, complete with all mounting accessories, lamps and tubes. Fixtures shall be independently supported from structure. Re-use existing fixtures that are in good condition. If additional fixtures need to be supplied, match existing fixtures.
- Coordinate with sprinkler contractor for all required sprinkler alarms (flow and tamper, etc.). All alarm wiring by provided by EC. Coordinate with sprinkler contractor for specific requirements.
- All wiring shall be run in conduit. The minimum indoor conduit size shall be 1/2". Indoor conduit shall be electrical metallic tubing or type MC cable may be used for branch circuits where allowed by NEC and not subject to physical damage, moisture or dampness. Connection to equipment shall be flexible metal conduit except in wet or damp locations use liquid tight flexible metal conduit. Indoor boxes and enclosures shall be NEMA type 1, except in damp or wet locations use NEMA type 4, stainless steel. Where nonmetallic conduit is used below the slab, provide a minimum of Schedule 80 PVC conduit to turn up into the building space or at any exterior walls, inside or outside framed walls, exterior landscape poles, or equipment. Use raceway fittings compatible with raceway and suitable for use and location. Run concealed raceways with a minimum of bends in the shortest practical distance considering the type of building construction and obstructions. Raceways shall run parallel to or at right angles to nearby surfaces or structural members, and follow the surface contours as much as practical. Provide grounding connections for raceway, boxes, and components as indicated and instructed by manufacturer. Tighten connections and terminals, including screws and bolts, according to equipment manufacturer's published torque-tightening values for equipment connectors. Where manufacturer's torquing requirements are not indicated, tighten connectors and terminals according to tightening torques specified in UL standard 486A.
- All underground raceways shall be identified by "underground line marking tape" located directly above the raceway at 6" below finished grade. Tape shall be permanent, bright-colored, continuous, magnetic strip, printed plastic tape compounded for direct burial not less than 6" wide and 4mils thick. Printed legend shall be indicative of the service it is marking. Conduits exposed to different temperatures shall be sealed as required by NEC Article 300.7A.
- Color for devices shall be coordinated with the general contractor.
- Receptacles shall comply with UL Standard 498, "electrical attachment plugs and receptacles," heavy-duty grade 20 AMP rated except as otherwise indicated.
- Ground-fault circuit interrupter (GFI) receptacles shall comply with UL Standard 943. "Ground fault circuit interrupters," with integral NEMA 5-20R duplex receptacle.
- Single pole and three/four-way toggle type snap switches shall be 20 AMP 120/277 V. AC., rated, quite-type A.C. switches. NRTL listed and labeled as complying with UL Standard 20 "general use snap switches," and with federal specification W-S-896.
- Wall plates: single and combination types shall be 302 stainless steel that mate and match with corresponding wiring devices.
- Conductors shall be color coded in accordance with NEC as follows:
Phase 208/120 Volts 480/277 Volts
A Black Brown
B Red Orange
C Blue Yellow
Neutral White Gray
Ground Green Green
- Electrical equipment shall be identified with labels of engraved plastic-laminate on each major unit of electrical equipment.
- Panelboards/loadcenters shall be type, rating, and features as indicated on the schedules. Enclosures shall be NEMA type 1, flush or surface mounted as indicated. Cabinet shall be code gauge, galvanized steel. Fronts shall be sheet steel with gray lacquer finish with hinged locking door. Ground and neutral bus shall be 100% rated. Bus shall be copper or aluminum. Main and neutral lugs shall be plug-on type. Equipment ground bus shall be adequate for feeder and branch-circuit equipment ground conductors bonded to box. Directory frame shall be metal, mounted inside each panel door. At the completion of this installation, type circuit designations on the directory card and leave in the card holder provided inside cabinet doors. Tandem circuit breakers shall not be used. Multi-pole breakers shall have common trip. The minimum interrupting rating for circuit breakers rated at 120/240 volts shall be 22,000 AMPS RMS symmetrical. For flush mounted panels provide a minimum of (4)-1" conduits stubbed to the ceiling space for future use.
- All wiring for equipment shall be copper with one of the following types of insulation: THW, THHW, THWN with a rating of at least 75 DEG. C. All wiring located above the ceiling shall be plenum-rated.
- Final locations of all exit and emergency lights shall be verified with the building inspector prior to installation.
- Branch circuits shall not exceed 80% of overcurrent protection. Devices shall be relocated to another circuit if found to be in excess of 80%.
- Electrical contractor shall be responsible to supply a coordinated study as described in the NEC or as required by permitting officials with all gear submitted involving generators, elevators, or any life safety equipment.

WIRING DEVICE NOTES

- Switches shall be Hubbell CS115 or equivalent and receptacles shall be Hubbell CR20 or equivalent. Devices shall be white or as directed by architect.
 - Switches shall be as follows:
single pole 20 amp CSB20AC1-1
3 way 20 amp CSB20AC3-1
4 way 20 amp CSB20AC4-1
motor starter switch Square D type "K" series
 - Duplex receptacle shall be as follows:
20 amp duplex PS5362I
20 amp duplex-GFCI 2095IL
20 amp duplex-Weather GFI 2095TRWRI
- Note: Duplex receptacles have nylon face and side wire type. Receptacles shall have brass contacts, brass terminal screws and green ground wire screw. GFCI receptacle shall be included with a trip indicator light.
- Coverplates shall be oversized stainless steel SSJX or as directed by architect.
 - Outlet boxes shall not be mounted back-to-back.
 - Receptacles shall be 20 amp unless 15 amp is required by equipment served.
 - Weatherproof in use covers shall be clear equal to Leviton. For horizontal mount covers use part no. "5997-CL". For vertical mount covers use part no. "5977-CL".
 - All outlets (including telephone and data) shall have cover plates.

**2018 APPENDIX B
BUILDING CODE SUMMARY:
ELECTRICAL SYSTEM AND EQUIPMENT**

Method of Compliance:
Energy Code: [X] Prescriptive [] Performance
ASHRAE 90.1: [X] Prescriptive [] Performance

Lighting schedule(each fixture type)
lamp type required in fixture (see fixture schedule)
number of lamps in fixture (see fixture schedule)
ballast type used in the fixture (see fixture schedule)
number of ballasts in fixture (see fixture schedule)
total wattage per fixture (see fixture schedule)
total interior wattage (whole space allowable) NOT TO EXCEED 15.5KW
total exterior wattage specified vs. allowed NOT TO EXCEED 3720WATTS

Additional Prescriptive Compliance:
C406.2 :More Efficient Mechanical Equipment [X] Prescriptive [] Performance
C406.3 :Reduced Lighting Power Density [] Prescriptive [] Performance
C406.4 :Energy Recovery Ventilation System [] Prescriptive [] Performance
C406.5 :Higher Efficiency Service Water Heating [] Prescriptive [] Performance
C406.6 :On-Site Supply of Renewable Energy [] Prescriptive [] Performance
C406.7 :Automatic Daylighting Control Systems [] Prescriptive [] Performance

**BRANCH CIRCUIT CONDUCTOR
SIZING TABLE**

For circuits with branch circuit protection rated 20 amps or less, copper conductors shall be sized according to the following:

voltage	distance (ft)	home run (AWG)	remainder (AWG)
120	0 - 50	12	12
	50 - 90	10	12
	90 - 140	8	10
	140 +	6	10
240	0 - 95	12	12
	95 - 160	10	12
	160 - 250	8	10
	250 +	6	10

ELECTRICAL SYMBOL LEGEND

SYMBOL	DESCRIPTION
	JUNCTION BOX PER N.E.C.
	HOMERUN - PANEL DESIGNATION AND CIRCUIT NUMBER
	SINGLE POLE SWITCH - 20A - 120/277V - MOUNT 46" A.F.F. TO BOTTOM
	DIMMER SWITCH
	THREE-WAY SWITCH - 20A - 120/277V - MOUNT 46" A.F.F. TO BOTTOM
	INDICATES SWITCHES ARE TO PROVIDE MULTIPLE LIGHT LEVELS (INBOARD, OUTBOARD SWITCHING OF LAMPS)
	115 OR 277 VOLT MOTOR AS NOTED ON PLANS
	FUSED OR NON-FUSIBLE HEAVY DUTY DISCONNECT SWITCH - BY DIVISION 16
	2-POLE OR 3-POLE MANUAL MOTOR STARTER. PROVIDE WITH OVERLOAD PROTECTION.
	WALL MOUNTED OCCUPANCY SENSOR, SOUND AND MOTION ACTIVATED - SENSOR SWITCH WSX-PDT-2P FOR TOILET ROOMS)
	CEILING MOUNTED OCCUPANCY SENSOR WITH DUAL STAGE ILLUMINATION - NLIGHT RCMS-PS150-PDT-10-AR-G2 - VERIFY EXACT WIRING REQUIREMENTS WITH MANUFACTURERS CUT SHEETS BEFORE BEGINNING ANY WORK.
	STANDARD 20A OUTLET - NEMA 5-20R DUPLEX. MOUNT 16" A.F.F. "GFI" DENOTES GROUND FAULT TYPE, NON-FEED THRU, "EWC" DENOTES OUTLET FOR ELECTRIC WATER COOLER - COORDINATE LOCATION WITH PLUMBING CONTRACTOR - NEMA 5-20R DUPLEX "WP" DENOTES WEATHERPROOF IN USE NEMA 5-20R DUPLEX, "ACT" DENOTES MOUNTED ABOVE COUNTER TOP OR BACKSPLASH, "BB" DENOTES MOUNTED ON THE BACKSIDE OF THE BAR JUST BENEATH THE BARTOP TYPICAL FOR RESTAURANTS AND BARS, "TR" DENOTES TAMPER RESISTANT. "USB" DENOTES LEGRAND TM826USB.
	TWO STANDARD 20A OUTLETS IN A 2-GANG BOX - NEMA 5-20R DUPLEX - COMMON COVER PLATE - MOUNT 16" A.F.F. TO BOTTOM OF DEVICE.
	STANDARD 20A OUTLET IN FLOOR BOX - NEMA 5-20R DUPLEX - LEGRAND WIREMOLD RFB2 FLOOR BOX.
	TELEPHONE/DATA OUTLET MTD. 16" AFF TO BOTTOM. PROVIDE 1" CONDUIT WITH PULL CORD FROM OUTLET TO COMMUNICATION BACKBOARD. STUB OUT 6" ABOVE BACKBOARD. PROVIDE NYLON BUSHING ON END OF CONDUIT. OUTLET BOX SHALL BE A 4" SQ. BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK COVERPLATE ON OUTLET BOX.
	CABLE TV OUTLET MTD. 16" AFF TO BOTTOM OR AS INDICATED. PROVIDE 1" CONDUIT WITH PULL CORD FROM OUTLET TO COMMUNICATION BACKBOARD. STUB OUT 6" ABOVE BACKBOARD. PROVIDE NYLON BUSHING ON END OF CONDUIT. OUTLET BOX SHALL BE A 4" SQ. BOX WITH SINGLE GANG PLASTER RING. PROVIDE BLANK COVERPLATE ON OUTLET BOX.
	GROUNDING FOR SERVICE OR SEPARATELY DERIVED SYSTEM, PER N.E.C.
	SPECIAL POWER OUTLET.

LIGHTING FIXTURE SCHEDULE

TAG	TYPE					VOLTAGE	FIXTURE WATTS	LAMPS NUMBER	WATTS / TYPE	MOUNTING				DESCRIPTION	MANUFACTURER & MODEL (OR EQUAL)	
	INCAND.	FLUOR.	LED	METAL HAL.	H.P.S.					OTHER	RECESSED	CEILING	PENDANT			WALL
A			X			120	83	-	LED				X		LED HIGHBAY	LITHONIA IBE-12LM-MVOLT-40K
A/E			X			120	83	-	LED				X		LED HIGHBAY WITH REMOTE EMERGENCY BALLAST	LITHONIA IBE-12LM-MVOLT-40K
B			X			120	9	-	LED				X		LED EXTERIOR SCONCE	LITHONIA OLLWD LED-P1-40K-120-DOB
C			X			120	35	-	LED				X		LED WALLPACK	LITHONIA DSKW1-20C-700-40K-T2M-MVOLT-BB W-PE
EF						120	1960		NA				X		48" 1 HP SIDE WALL EXHAUST FAN WITH LOUVERS	GREENHECK Model SB-2L48-10-16.200 CFM @ 0.15" STATIC PRESSURE
X1			X			120	5	-	LED				X		LED EXIT SIGN W/ EM HEADS	LITHONIA LHQM-LED
X2			X			120	21	-	LED				X		EXTERIOR EMERGENCY LIGHT	LITHONIA AFN-DB-EXT

1. CONTRACTOR SHALL COMPLY WITH INSULATION CONTACT (IC) RATING FOR RECESSED FIXTURES WHERE INSULATION IS INSTALLED DIRECTLY ABOVE. CEILING (SEE ARCHITECTURAL SHEETS).

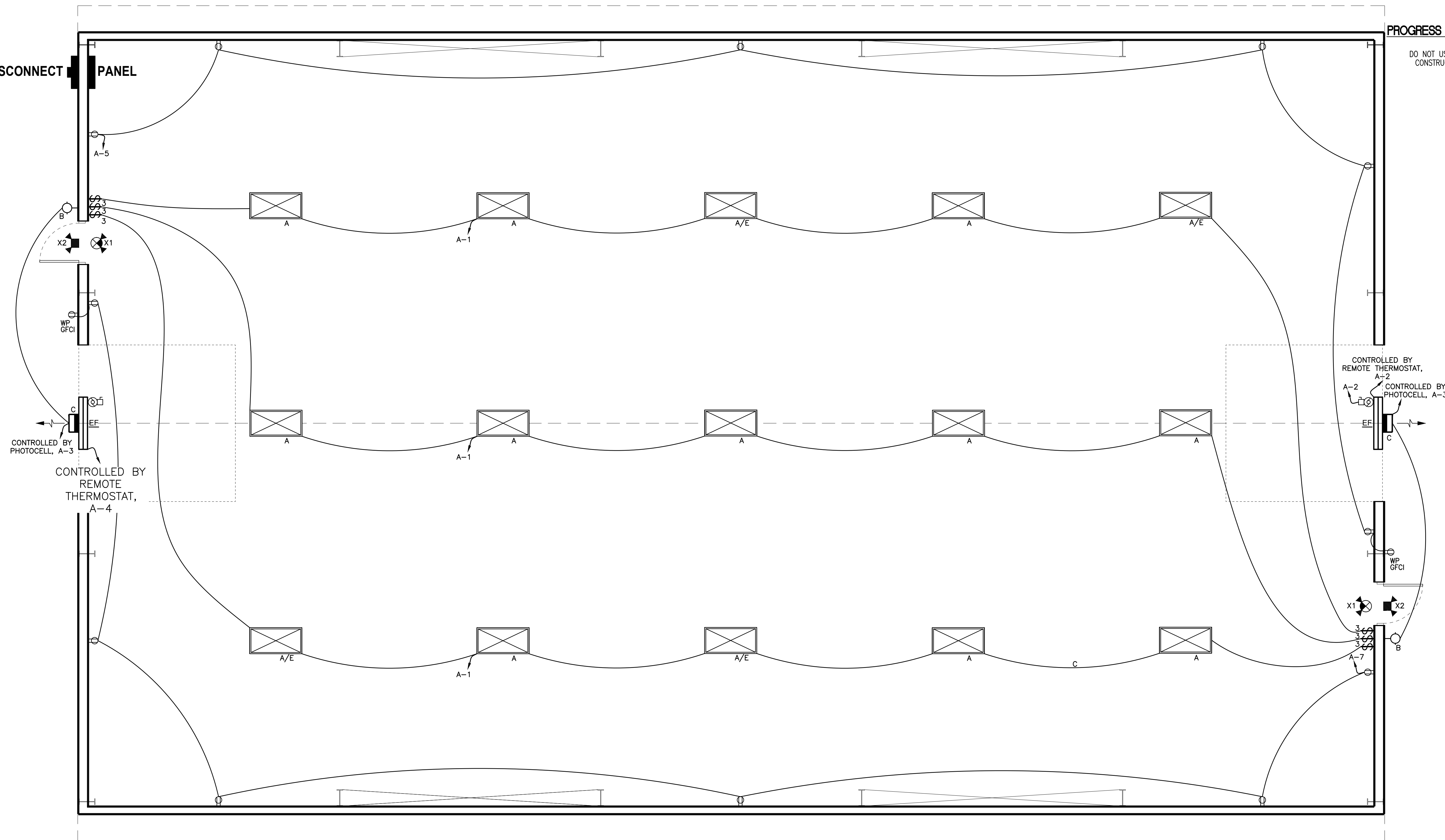
2. VERIFY MOUNTING HEIGHT WITH OWNER PRIOR TO INSTALLATION

PROGRESS DRAWING

DO NOT USE FOR CONSTRUCTION

8-25-2021

METER/DISCONNECT PANEL



CONTROLLED BY PHOTOCELL, A-3
CONTROLLED BY REMOTE THERMOSTAT, A-4

CONTROLLED BY REMOTE THERMOSTAT, A-2
CONTROLLED BY PHOTOCELL, A-3

HCPS WAREHOUSE BUILDING

Project Number: 21010
Drawn: MP
Date: 8-25-21

ELECTRICAL PLANS

1 ELECTRICAL PLANS
E2 SCALE: 1/4" = 1'-0"

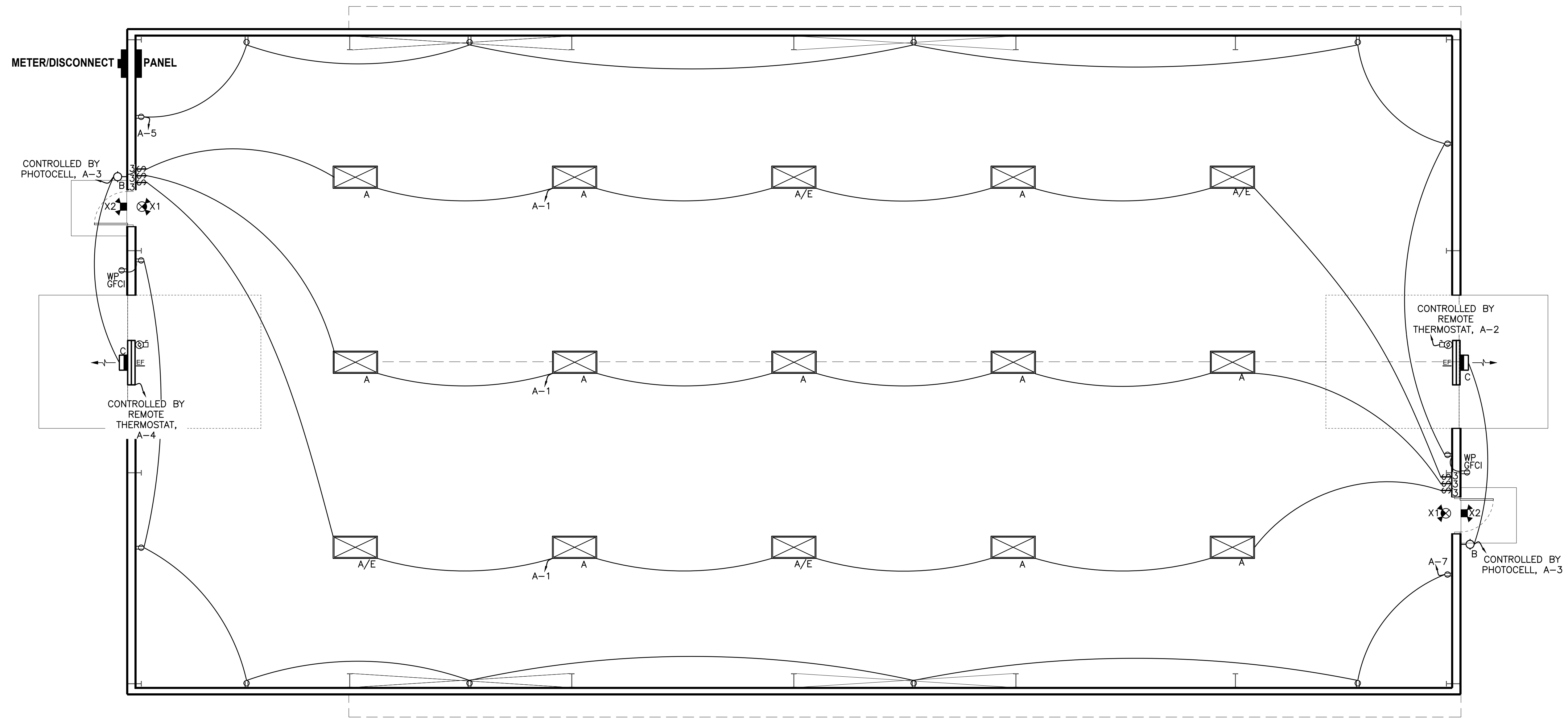
E2

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PROGRESS DRAWING

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**HCPS
WAREHOUSE
BUILDING**

Project Number: 21010

Drawn: MP
Date: 8-25-21

**ELECTRICAL
PLANS -
ALTERNATE 1**

1
E3 ELECTRICAL PLANS
 SCALE: 3/16" = 1'-0"

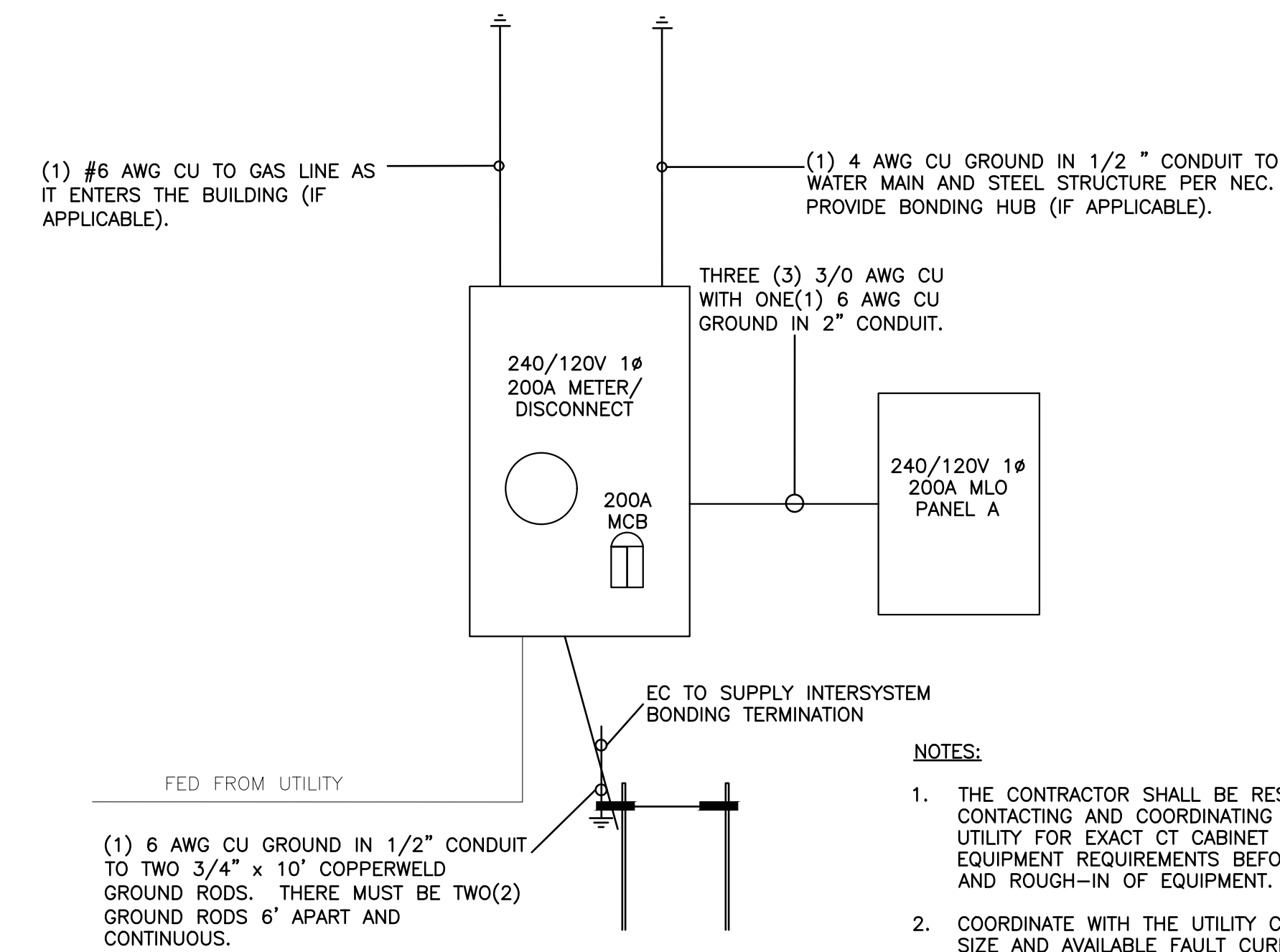
E3

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PROGRESS DRAWING

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1 RISER DIAGRAM
E3 SCALE: NOT TO SCALE

LOCATION: STORAGE AREA		PANEL: A	
MANUFACT.: EATON		FED FROM: UTILITY	
MODEL: LOADCENTER		FULLY RATED 22000 AIC	
MOUNTING: WALL/SURFACE		CONN	
		VOLTS	Ph
		240	120
		1	3
CONN	LOAD	Ph	N
VA	#	G	C
1245	1	LIGHTS	12 12 12 1/2 20
90	3	EXT LIGHTS	12 12 12 1/2 20
0	5	REC	12 12 12 1/2 20
1260	7	REC	12 12 12 1/2 20
1260	9		
0	11		
0	13		
0	15		
0	17		
0	19		
0	21		
0	23		
0	25		
0	27		
0	29		
0	31		
0	33		
0	35		
0	37		
0	39		
0	41		
21	SUBTOTAL AMPS Ph A		16
11	SUBTOTAL AMPS Ph B		16
MAIN BREAKER:		200 AMPS (MIN)	
MAIN LUGS:		200 AMPS (MIN)	
BUS AMPACITY:		200 AMPS (MIN)	
SUBTOTAL AMPS Ph A		4465	
SUBTOTAL AMPS Ph B		3310	
TOTAL		7.8 kVA	
LOAD	CONNECTED	DF	DEMAND
LIGHTING	1335	125	1669
A/C	0	100	0
HEATING	0	100	0
NON-VENT MOTORS	0	100	0
VENTILATION	3920	100	3920
KITCHEN	0	100	0
RECEPTACLES	2520	100	2520
MISCELLANEOUS	0	100	0
FUTURE	0	100	0
TOTAL	7775	8109 (VA)	34 (AMPS)

**HCPS
 WAREHOUSE
 BUILDING**

Project Number: 21010
 Drawn: MP
 Date: 8-25-21

**RISER
 DIAGRAM &
 PANEL
 SCHEDULE**

E4

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