

ADDENDUM

Project Name: Town of Hillsborough, Utilities Department
Adron F. Thompson Addition and Renovation
Project No.: 2231.01

ADDENDUM No. 3

Issued January 21, 2026

GENERAL NOTE: The Contract Documents include all Drawings and Specifications, plus all Addenda. The Drawings and the Specifications are complementary and are to be taken together for a complete interpretation of the Work. Contractors shall review a complete set of Contract Documents prior to bidding the work.

Modifications to the original contract documents dated 12/19/2025 for this project shall be made as follows:

The attached documents are either clouded with a revisions date including ADDENDUM No.3, 01.21.2026 or if Specifications are edited, the section or text added is in red to clarify the revision. If full specification sections are added these are not in all red, but the header lists the Addendum number and date that the specification section was issued.

PROJECT MANUAL SPECIFICATIONS:

1. Project Manual shall not include **SECTION 000301 – AIA A701-2018 INSTRUCTIONS TO BIDDERS** as part of the Contract Documents. Requirements listed in this document codify the discussions we had in the pre-bid meeting into the contract.
2. Replace Specification Section **000400 TABLE OF CONTENTS** with the attached of the same number. *The Specification was edited to add the **SECTION 000301 – AIA A701-2018 INSTRUCTIONS TO BIDDERS** into the Table of Contents. This Section is labelled as DRAFT as we will need to amend the sheet list and Specification List for the actual Contract, but all other information in this document will remain as it indicates in the DRAFT version.*
3. Replace Specification **SECTION 133419 METAL BUILDING SYSTEMS** with the attached of the same number. Section was edited to;
 - a. Revise the number of coats specified for the Metal Roof and Wall Panels to 2 coats.
 - b. Revise the wall insulation above the wood studs to R-19 over the girts.
 - c. Remove the Special Weathertightness Warranty since we are not specifying standing seam roofing.

DRAWINGS:

4. Replace plan sheet number **C-2.0 SITE LAYOUT** with the attached sheet of the same number. Sheet was modified to remove the note that indicated "PROPOSED RETAINING WALL" at the Northwest corner of the Vehicle Storage Building. Clouded area indicates removed text location. Other minor revisions were made for this sheet to match the architectural plans for the sidewalk layout around the building and the curved retaining wall at the Lower Level Entrance of Original Building.
5. Replace plan sheet number **C-5.0 GRADING - UTILITY** with the attached sheet of the same number. Sheet was modified to show additional top of wall elevations. Changes are clouded. Other minor revisions were made for this sheet to match the architectural plans for the sidewalk layout around the building and the curved retaining wall at the Lower Level Entrance of Original Building.
6. Replace plan sheet number **A201 RENOVATION ADDITION PLAN - LOWER LEVEL** with the attached sheet of the same number. Sheet was modified to show additional scope to install plumbing drains through the existing steel plates between Lower Level and Main Level.
7. Replace sheet number **A202 RENOVATION ADDITION PLAN - MAIN LEVEL** with the attached sheet of the same number. Sheet was modified to;
 - d. Add a note to include additional scope to install aluminum trim at both sides of interior brick jambs of Door 100 at Entrance Lobby 100.
 - e. Add Note to direct the scope to repair brick at foundation with existing brick found onsite. See images below.
8. Replace sheet number **E001 ELECTRICAL LEGEND AND NOTES** with the attached sheet of the same number. Sheet was modified to add Flag Pole Lights to the fixture schedule.
9. Replace sheet number **E201 ELECTRICAL RENOVATION PLAN - LOWER LEVEL** with the attached sheet of the same number. Sheet revised to add step-up transformer & disconnect switch for pump station; and show exterior lighting contactor location in main electrical room.
10. Replace sheet number **E401 SITE ELECTRICAL PLAN** with the attached sheet of the same number. Sheet revised to Add circuit for pump station; Added flag pole lights and circuit.
11. Replace plan sheet number **E601 ELECTRICAL POWER RISER & PANEL SCHEDULES** with the attached sheet of the same number. Sheet was modified as follows;
 - a. Revised power riser to add step-up transformer & disconnect switch for pump station; Revised panel schedule.
 - b. 'B1' to add pump station circuit and expand panel to 54 circuits: Revised panel schedule 'E1' to add exterior lighting circuits.
12. Replace plan sheet numbered **E701 ELECTRICAL DETAILS** with the attached sheet of the same number. Sheet revised exterior lighting control schematic.

ADDITIONAL INFORMATION:

13. Addendum No. 2 Item #30 incorrectly answered a Bidder Question regarding the materials of the flag pole in the project scope. **The Flag Pole in this scope of work is revised to be aluminum per Item # 3 in Addendum #2 that reissued the Flag Pole Specification to change the material to Aluminum.** We inadvertently answered Bidder Question Item #30 in Addendum #2 indicating provide Stainless Steel for the Flag Pole Material, this is wrong. Flag Pole material shall be Aluminum.
14. All new PC-1 Precast Sills installed in the brick masonry veneer walls of the lower level North (A302) East (A304) and South Elevations (A305) shall either be two piece sills to match the existing sill of the original building with a joint in the middle, or be one piece with a groove or reveal at the mid line to mimic the original sills which are two piece and pictured below.



Figure 1- Existing 2-Piece Window Sill

15. The existing Northeast corner of the building below the water table has the existing brick spalled off the concrete foundation wall. The original removed brick appears to be onsite at this location. General Contractor shall include in their bid repair of approximately 6 s.f. of exterior brick facing using the brick that is found onsite. If brick onsite does not fill the gap, new brick that matches the original shall be sourced and installed. Existing bricks will need to have existing mortar removed and new mortar placed to course this brick into the area where the brick spalled off. See Figures 1 & 2 of the images detailing this area below. Note added to Sheet A202 RENOVATION ADDITION MAIN LEVEL to locate this scope.

ADDENDUM



Figure 2 - Existing Brick onsite to repair NE foundation – Foundation corner visible where repair is needed.



Figure 3 – Sample of Existing Brick located On-Site to repair NE Foundation

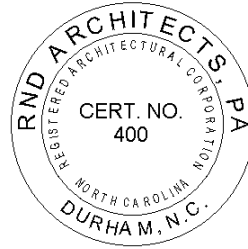
DESIGN TEAM RESPONSES TO CONTRACTOR QUESTIONS:

16. Question: How should the new guard railing at the two existing light wells shall be attached?
Response: New Railing shall be bolted to the existing brick veneer utilizing the same fastener locations as the existing railing and bolted to the top of the existing concrete light well retaining walls as the existing railing is installed. Reuse existing attachment points where possible or fill holes remaining from abandoned fastener locations and drill new locations for new fasteners.
17. Question: The horizontal wind channel that provides lateral stability to the top of the stud and brick walls below. What should we limit the deflection of this channel to L/240 or L/360?
Response: L360 where the prefabricated metal building channel framing also withstands the lateral wind loading of the brick veneer wall.
18. Question: Reviewing the Addendum and Specifications on Addendum - 1 - Architect is specifying a 3-coat finish on the Panels (Roof & Walls) – will 2 coat finish be acceptable?
Response: Specifications have been revised to allow a Two Coat System.

19. Question: Our vendor quoting the spiral ductwork asked us to confirm what ducts will need to be double-walled and what ducts will need to be single-walled.

Response: Specifications indicate what locations ductwork shall be used, however it also indicates that exposed ductwork shall have fabric wrap to conceal the insulation, This is accurate for exposed areas in the Lower Level Storage Rooms, however the ductwork that is installed in the original building Rooms LOBBY 100, OFFICE 1 - 101, CONF. RM. - 102, OFFICE 3 - 103, OFFICE 2 - 104, OFFICE 4 - 105, CORRIDOR 106, STAIR 018 is also exposed and shall be double walled spiral duct as we want to see the metal ductwork instead of the fabric wrap in the Main Level of the rooms listed above.

END OF ADDENDUM No. 3



DRAFT AIA® Document A701® – 2018

Instructions to Bidders

for the following Project:
(Name, location, and detailed description)

«Town of Hillsborough
Adron F. Thompson Utilities Dept. »
«Addition and Renovation
715 Dimmocks Mill Rd
Hillsborough, NC 27278 »

THE OWNER:
(Name, legal status, address, and other information)

«Town of Hillsborough, North Carolina »« »
«PO Box 429
Hillsborough, NC 27278
(919) 732-1270 »

THE ARCHITECT:
(Name, legal status, address, and other information)

«RND Architects, PA »« »
«3608 University Drive, Suite 204
Durham, North Carolina, 27707 »

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ADDITIONS AND DELETIONS: The author of this document has added information needed for its completion. The author may also have revised the text of the original AIA standard form. An *Additions and Deletions Report* that notes added information as well as revisions to the standard form text is available from the author and should be reviewed.

This document has important legal consequences. Consultation with an attorney is encouraged with respect to its completion or modification.

FEDERAL, STATE, AND LOCAL LAWS MAY IMPOSE REQUIREMENTS ON PUBLIC PROCUREMENT CONTRACTS. CONSULT LOCAL AUTHORITIES OR AN ATTORNEY TO VERIFY REQUIREMENTS APPLICABLE TO THIS PROCUREMENT BEFORE COMPLETING THIS FORM.

It is intended that AIA Document G612™-2017, Owner's Instructions to the Architect, Parts A and B will be completed prior to using this document.

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ARTICLE 1 DEFINITIONS

§ 1.1 Bidding Documents include the Bidding Requirements and the Proposed Contract Documents. The Bidding Requirements consist of the advertisement or invitation to bid, Instructions to Bidders, supplementary instructions to bidders, the bid form, and any other bidding forms. The Proposed Contract Documents consist of the unexecuted form of Agreement between the Owner and Contractor and that Agreement's Exhibits, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, all Addenda, and all other documents enumerated in Article 8 of these Instructions.

§ 1.2 Definitions set forth in the General Conditions of the Contract for Construction, or in other Proposed Contract Documents apply to the Bidding Documents.

§ 1.3 Addenda are written or graphic instruments issued by the Architect, which, by additions, deletions, clarifications, or corrections, modify or interpret the Bidding Documents.

§ 1.4 A Bid is a complete and properly executed proposal to do the Work for the sums stipulated therein, submitted in accordance with the Bidding Documents.

§ 1.5 The Base Bid is the sum stated in the Bid for which the Bidder offers to perform the Work described in the Bidding Documents, to which Work may be added or deleted by sums stated in Alternate Bids.

§ 1.6 An Alternate Bid (or Alternate) is an amount stated in the Bid to be added to or deducted from, or that does not change, the Base Bid if the corresponding change in the Work, as described in the Bidding Documents, is accepted.

§ 1.7 A Unit Price is an amount stated in the Bid as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, as described in the Bidding Documents.

§ 1.8 A Bidder is a person or entity who submits a Bid and who meets the requirements set forth in the Bidding Documents.

§ 1.9 A Sub-bidder is a person or entity who submits a bid to a Bidder for materials, equipment, or labor for a portion of the Work.

ARTICLE 2 BIDDER'S REPRESENTATIONS

§ 2.1 By submitting a Bid, the Bidder represents that:

- .1 the Bidder has read and understands the Bidding Documents;
- .2 the Bidder understands how the Bidding Documents relate to other portions of the Project, if any, being bid concurrently or presently under construction;
- .3 the Bid complies with the Bidding Documents;
- .4 the Bidder has visited the site, become familiar with local conditions under which the Work is to be performed, and has correlated the Bidder's observations with the requirements of the Proposed Contract Documents;
- .5 the Bid is based upon the materials, equipment, and systems required by the Bidding Documents without exception; and
- .6 the Bidder has read and understands the provisions for liquidated damages, if any, set forth in the form of Agreement between the Owner and Contractor.

ARTICLE 3 BIDDING DOCUMENTS

§ 3.1 Distribution

§ 3.1.1 Bidders shall obtain complete Bidding Documents, as indicated below, from the issuing office designated in the advertisement or invitation to bid, for the deposit sum, if any, stated therein.

(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall obtain Bidding Documents.)

« See Notice to Bidders, electronic documents obtained free of charge by download and / or e-mail from Architect »

§ 3.1.2 Any required deposit shall be refunded to Bidders who submit a bona fide Bid and return the paper Bidding Documents in good condition within ten days after receipt of Bids. The cost to replace missing or damaged paper

documents will be deducted from the deposit. A Bidder receiving a Contract award may retain the paper Bidding Documents, and the Bidder's deposit will be refunded.

§ 3.1.3 Bidding Documents will not be issued directly to Sub-bidders unless specifically offered in the advertisement or invitation to bid, or in supplementary instructions to bidders.

§ 3.1.4 Bidders shall use complete Bidding Documents in preparing Bids. Neither the Owner nor Architect assumes responsibility for errors or misinterpretations resulting from the use of incomplete Bidding Documents.

§ 3.1.5 The Bidding Documents will be available for the sole purpose of obtaining Bids on the Work. No license or grant of use is conferred by distribution of the Bidding Documents.

§ 3.2 Modification or Interpretation of Bidding Documents

§ 3.2.1 The Bidder shall carefully study the Bidding Documents, shall examine the site and local conditions, and shall notify the Architect of errors, inconsistencies, or ambiguities discovered and request clarification or interpretation pursuant to Section 3.2.2.

§ 3.2.2 Requests for clarification or interpretation of the Bidding Documents shall be submitted by the Bidder in writing and shall be received by the Architect at least seven days prior to the date for receipt of Bids.
(Indicate how, such as by email, website, host site/platform, paper copy, or other method Bidders shall submit requests for clarification and interpretation.)

«Bidders shall e-mail Architect using the e-mail addresses provided in the Pre-Bid Meeting Notes and Notice to Bidders »

§ 3.2.3 Modifications and interpretations of the Bidding Documents shall be made by Addendum. Modifications and interpretations of the Bidding Documents made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3 Substitutions

§ 3.3.1 The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution.

§ 3.3.2 Substitution Process

§ 3.3.2.1 Written requests for substitutions shall be received by the Architect at least ten days prior to the date for receipt of Bids. Requests shall be submitted in the same manner as that established for submitting clarifications and interpretations in Section 3.2.2.

§ 3.3.2.2 Bidders shall submit substitution requests on a Substitution Request Form if one is provided in the Bidding Documents.

§ 3.3.2.3 If a Substitution Request Form is not provided, requests shall include (1) the name of the material or equipment specified in the Bidding Documents; (2) the reason for the requested substitution; (3) a complete description of the proposed substitution including the name of the material or equipment proposed as the substitute, performance and test data, and relevant drawings; and (4) any other information necessary for an evaluation. The request shall include a statement setting forth changes in other materials, equipment, or other portions of the Work, including changes in the work of other contracts or the impact on any Project Certifications (such as LEED), that will result from incorporation of the proposed substitution.

§ 3.3.3 The burden of proof of the merit of the proposed substitution is upon the proposer. The Architect's decision of approval or disapproval of a proposed substitution shall be final.

§ 3.3.4 If the Architect approves a proposed substitution prior to receipt of Bids, such approval shall be set forth in an Addendum. Approvals made in any other manner shall not be binding, and Bidders shall not rely upon them.

§ 3.3.5 No substitutions will be considered after the Contract award unless specifically provided for in the Contract Documents.

§ 3.4 Addenda

§ 3.4.1 Addenda will be transmitted to Bidders known by the issuing office to have received complete Bidding Documents. *(Indicate how, such as by email, website, host site/platform, paper copy, or other method Addenda will be transmitted.)*

« Addenda will be issued via e-mail or download link to all planholders that have requested documents from the Architect.
»

§ 3.4.2 Addenda will be available where Bidding Documents are on file.

§ 3.4.3 Addenda will be issued no later than four days prior to the date for receipt of Bids, except an Addendum withdrawing the request for Bids or one which includes postponement of the date for receipt of Bids.

§ 3.4.4 Prior to submitting a Bid, each Bidder shall ascertain that the Bidder has received all Addenda issued, and the Bidder shall acknowledge their receipt in the Bid.

ARTICLE 4 BIDDING PROCEDURES

§ 4.1 Preparation of Bids

§ 4.1.1 Bids shall be submitted on the forms included with or identified in the Bidding Documents.

§ 4.1.2 All blanks on the bid form shall be legibly executed. Paper bid forms shall be executed in a non-erasable medium.

§ 4.1.3 Sums shall be expressed in both words and numbers, unless noted otherwise on the bid form. In case of discrepancy, the amount entered in words shall govern.

§ 4.1.4 Edits to entries made on paper bid forms must be initialed by the signer of the Bid.

§ 4.1.5 All requested Alternates shall be bid. If no change in the Base Bid is required, enter "No Change" or as required by the bid form.

§ 4.1.6 Where two or more Bids for designated portions of the Work have been requested, the Bidder may, without forfeiture of the bid security, state the Bidder's refusal to accept award of less than the combination of Bids stipulated by the Bidder. The Bidder shall neither make additional stipulations on the bid form nor qualify the Bid in any other manner.

§ 4.1.7 Each copy of the Bid shall state the legal name and legal status of the Bidder. As part of the documentation submitted with the Bid, the Bidder shall provide evidence of its legal authority to perform the Work in the jurisdiction where the Project is located. Each copy of the Bid shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A Bid by a corporation shall further name the state of incorporation and have the corporate seal affixed. A Bid submitted by an agent shall have a current power of attorney attached, certifying the agent's authority to bind the Bidder.

§ 4.1.8 A Bidder shall incur all costs associated with the preparation of its Bid.

§ 4.2 Bid Security

§ 4.2.1 Each Bid shall be accompanied by the following bid security:
(Insert the form and amount of bid security.)

« See Section 00300 NOTICE TO BIDDERS for requirements for Bid Bond »

§ 4.2.2 The Bidder pledges to enter into a Contract with the Owner on the terms stated in the Bid and shall, if required, furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds if required, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as a penalty. In the event the Owner fails to comply with Section 6.2, the amount of the bid security shall not be forfeited to the Owner.

§ 4.2.3 If a surety bond is required as bid security, it shall be written on AIA Document A310™, Bid Bond, unless otherwise provided in the Bidding Documents. The attorney-in-fact who executes the bond on behalf of the surety shall

affix to the bond a certified and current copy of an acceptable power of attorney. The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 4.2.4 The Owner will have the right to retain the bid security of Bidders to whom an award is being considered until (a) the Contract has been executed and bonds, if required, have been furnished; (b) the specified time has elapsed so that Bids may be withdrawn; or (c) all Bids have been rejected. However, if no Contract has been awarded or a Bidder has not been notified of the acceptance of its Bid, a Bidder may, beginning « 10 » days after the opening of Bids, withdraw its Bid and request the return of its bid security.

§ 4.3 Submission of Bids

§ 4.3.1 A Bidder shall submit its Bid as indicated below:

(Indicate how, such as by website, host site/platform, paper copy, or other method Bidders shall submit their Bid.)

«Bids shall be delivered in person to the location indicated in the Notice to Bidders or mailed, sent by courier, or overnight parcel service (UPS, FED-EX, etc.) to Bryant Green, PE Town of Hillsborough Utilities Engineering Services Manager (Owner) at 105 E. Corbin Street, Hillsborough, NC 27278. Bid Bonds shall be in a separate envelope to allow Architect to determine if there are three responsive bids without opening the bids to divulge the amounts.»

§ 4.3.2 Paper copies of the Bid, the bid security, and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be addressed to the party receiving the Bids and shall be identified with the Project name, the Bidder's name and address, and, if applicable, the designated portion of the Work for which the Bid is submitted. If the Bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "SEALED BID ENCLOSED" on the face thereof.

§ 4.3.3 Bids shall be submitted by the date and time and at the place indicated in the invitation to bid. Bids submitted after the date and time for receipt of Bids, or at an incorrect place, will not be accepted.

§ 4.3.4 The Bidder shall assume full responsibility for timely delivery at the location designated for receipt of Bids.

§ 4.3.5 A Bid submitted by any method other than as provided in this Section 4.3 will not be accepted.

§ 4.4 Modification or Withdrawal of Bid

§ 4.4.1 Prior to the date and time designated for receipt of Bids, a Bidder may submit a new Bid to replace a Bid previously submitted, or withdraw its Bid entirely, by notice to the party designated to receive the Bids. Such notice shall be received and duly recorded by the receiving party on or before the date and time set for receipt of Bids. The receiving party shall verify that replaced or withdrawn Bids are removed from the other submitted Bids and not considered. Notice of submission of a replacement Bid or withdrawal of a Bid shall be worded so as not to reveal the amount of the original Bid.

§ 4.4.2 Withdrawn Bids may be resubmitted up to the date and time designated for the receipt of Bids in the same format as that established in Section 4.3, provided they fully conform with these Instructions to Bidders. Bid security shall be in an amount sufficient for the Bid as resubmitted.

§ 4.4.3 After the date and time designated for receipt of Bids, a Bidder who discovers that it made a clerical error in its Bid shall notify the Architect of such error within two days, or pursuant to a timeframe specified by the law of the jurisdiction where the Project is located, requesting withdrawal of its Bid. Upon providing evidence of such error to the reasonable satisfaction of the Architect, the Bid shall be withdrawn and not resubmitted. If a Bid is withdrawn pursuant to this Section 4.4.3, the bid security will be attended to as follows:

(State the terms and conditions, such as Bid rank, for returning or retaining the bid security.)

« No Bid shall be withdrawn after the scheduled closing time for the receipt of bids for a period of 30 days. »

ARTICLE 5 CONSIDERATION OF BIDS

§ 5.1 Opening of Bids

If stipulated in an advertisement or invitation to bid, or when otherwise required by law, Bids properly identified and received within the specified time limits will be publicly opened and read aloud. A summary of the Bids may be made available to Bidders.

§ 5.2 Rejection of Bids

Unless otherwise prohibited by law, the Owner shall have the right to reject any or all Bids.

§ 5.3 Acceptance of Bid (Award)

§ 5.3.1 It is the intent of the Owner to award a Contract to the lowest responsive and responsible Bidder, provided the Bid has been submitted in accordance with the requirements of the Bidding Documents. Unless otherwise prohibited by law, the Owner shall have the right to waive informalities and irregularities in a Bid received and to accept the Bid which, in the Owner's judgment, is in the Owner's best interests.

§ 5.3.2 Unless otherwise prohibited by law, the Owner shall have the right to accept Alternates in any order or combination, unless otherwise specifically provided in the Bidding Documents, and to determine the lowest responsive and responsible Bidder on the basis of the sum of the Base Bid and Alternates accepted.

ARTICLE 6 POST-BID INFORMATION

§ 6.1 Contractor's Qualification Statement

Bidders to whom award of a Contract is under consideration shall submit to the Architect, upon request and within the timeframe specified by the Architect, a properly executed AIA Document A305™, Contractor's Qualification Statement, unless such a Statement has been previously required and submitted for this Bid.

§ 6.2 Owner's Financial Capability

A Bidder to whom award of a Contract is under consideration may request in writing, fourteen days prior to the expiration of the time for withdrawal of Bids, that the Owner furnish to the Bidder reasonable evidence that financial arrangements have been made to fulfill the Owner's obligations under the Contract. The Owner shall then furnish such reasonable evidence to the Bidder no later than seven days prior to the expiration of the time for withdrawal of Bids. Unless such reasonable evidence is furnished within the allotted time, the Bidder will not be required to execute the Agreement between the Owner and Contractor.

§ 6.3 Submittals

§ 6.3.1 After notification of selection for the award of the Contract, the Bidder shall, as soon as practicable or as stipulated in the Bidding Documents, submit in writing to the Owner through the Architect:

- .1 a designation of the Work to be performed with the Bidder's own forces;
- .2 names of the principal products and systems proposed for the Work and the manufacturers and suppliers of each; and
- .3 names of persons or entities (including those who are to furnish materials or equipment fabricated to a special design) proposed for the principal portions of the Work.

§ 6.3.2 The Bidder will be required to establish to the satisfaction of the Architect and Owner the reliability and responsibility of the persons or entities proposed to furnish and perform the Work described in the Bidding Documents.

§ 6.3.3 Prior to the execution of the Contract, the Architect will notify the Bidder if either the Owner or Architect, after due investigation, has reasonable objection to a person or entity proposed by the Bidder. If the Owner or Architect has reasonable objection to a proposed person or entity, the Bidder may, at the Bidder's option, withdraw the Bid or submit an acceptable substitute person or entity. The Bidder may also submit any required adjustment in the Base Bid or Alternate Bid to account for the difference in cost occasioned by such substitution. The Owner may accept the adjusted bid price or disqualify the Bidder. In the event of either withdrawal or disqualification, bid security will not be forfeited.

§ 6.3.4 Persons and entities proposed by the Bidder and to whom the Owner and Architect have made no reasonable objection must be used on the Work for which they were proposed and shall not be changed except with the written consent of the Owner and Architect.

ARTICLE 7 PERFORMANCE BOND AND PAYMENT BOND

§ 7.1 Bond Requirements

§ 7.1.1 If stipulated in the Bidding Documents, the Bidder shall furnish bonds covering the faithful performance of the Contract and payment of all obligations arising thereunder.

§ 7.1.2 If the furnishing of such bonds is stipulated in the Bidding Documents, the cost shall be included in the Bid. If the furnishing of such bonds is required after receipt of bids and before execution of the Contract, the cost of such bonds shall be added to the Bid in determining the Contract Sum.

§ 7.1.3 The Bidder shall provide surety bonds from a company or companies lawfully authorized to issue surety bonds in the jurisdiction where the Project is located.

§ 7.1.4 Unless otherwise indicated below, the Penal Sum of the Payment and Performance Bonds shall be the amount of the Contract Sum.

(If Payment or Performance Bonds are to be in an amount other than 100% of the Contract Sum, indicate the dollar amount or percentage of the Contract Sum.)

« Performance and Payment Bonds are to be the amount of the Contract Sum. »

§ 7.2 Time of Delivery and Form of Bonds

§ 7.2.1 The Bidder shall deliver the required bonds to the Owner not later than three days following the date of execution of the Contract. If the Work is to commence sooner in response to a letter of intent, the Bidder shall, prior to commencement of the Work, submit evidence satisfactory to the Owner that such bonds will be furnished and delivered in accordance with this Section 7.2.1.

§ 7.2.2 Unless otherwise provided, the bonds shall be written on AIA Document A312, Performance Bond and Payment Bond.

§ 7.2.3 The bonds shall be dated on or after the date of the Contract.

§ 7.2.4 The Bidder shall require the attorney-in-fact who executes the required bonds on behalf of the surety to affix to the bond a certified and current copy of the power of attorney.

ARTICLE 8 ENUMERATION OF THE PROPOSED CONTRACT DOCUMENTS

§ 8.1 Copies of the proposed Contract Documents have been made available to the Bidder and consist of the following documents:

- .1 AIA Document A101™–2017, Standard Form of Agreement Between Owner and Contractor, unless otherwise stated below.

(Insert the complete AIA Document number, including year, and Document title.)

«The form of Construction Contract was included with the Project Manual, this version will be executed with the contractor »

- .2 AIA Document A101™–2017, Exhibit A, Insurance and Bonds, unless otherwise stated below.

(Insert the complete AIA Document number, including year, and Document title.)

« SECTION 000600 Supplementary General Conditions EXHIBIT A Insurance Requirements issued in Addendum 1 dated 01.09.2026»

- .3 AIA Document A201™–2017, General Conditions of the Contract for Construction, unless otherwise stated below.

(Insert the complete AIA Document number, including year, and Document title.)

« »

- .4 Building Information Modeling Exhibit, if completed:

« Drawings were complete in Revit and AutoCad, these files can be obtained by the contractor for submittals by executing a liability release provided by the Architect. »

- .5 Drawings

Number	Title	Date
	<u>GENERAL AND CODE SHEETS</u>	
A001	COVER SHEET	12.19.2025
A002	PROJECT SCOPE SUMMARY PLAN	12.19.2025
A003	BUILDING CODE SUMMARY - ADDITION & RENOVATION	12.19.2025
A004	BUILDING CODE SUMMARY - VEHICLE STORAGE BUILDING	12.19.2025
A005	LIFE SAFETY PLANS - LOWER LEVEL - EXISTING	12.19.2025
A006	LIFE SAFETY PLAN - MAIN LEVEL - EXISTING	12.19.2025
A007	LIFE SAFETY PLAN LOWER LEVEL - RENOVATION	12.19.2025
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.7 Addenda:

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Addendum No. 2	01.16.2026	134 pages
Addendum No. 3	01.21.2026	
All Subsequent Addenda acknowledged on executed Form of Proposal		

.8 Other Exhibits:

(Check all boxes that apply and include appropriate information identifying the exhibit where required.)

[☐ »] AIA Document E204™–2017, Sustainable Projects Exhibit, dated as indicated below:
(Insert the date of the E204-2017.)

« N/A »

[☐ »] The Sustainability Plan:

Title	Date	Pages
NOT APPLICABLE TO PROJECT		

[☒ »] Supplementary and other Conditions of the Contract:

Document	Title	Date	Pages
Supplementary General Conditions	SECTION 000600 - SUPPLEMENTARY GENERAL CONDITIONS	01.09.2026	2

- .9 Other documents listed below:
(List here any additional documents that are intended to form part of the Proposed Contract Documents.)

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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NOT APPLICABLE

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SECTION 133419 - METAL BUILDING SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes items below that are to be erected to create the Vehicle Storage Building as identified on the drawings:

1. Structural-steel framing.
2. Metal roof panels.
3. Metal wall panels.
4. Metal Soffit panels
5. Thermal insulation.
6. Personnel doors and frames.
7. Windows.
8. Translucent panels.
9. Accessories.

- B. Related Requirements:

1. Section 042113 – “Brick Masonry” for exterior building materials for the pre-engineered metal building
2. Section 083600 "Sectional Overhead Doors" for sectional vehicular doors in metal building systems.
3. Section 084113 – “Aluminum-Framed Entrances and Storefronts” for windows in Vehicle Storage Building

1.3 DEFINITIONS

- A. Terminology Standard: See MBMA's "Metal Building Systems Manual" for definitions of terms for metal building system construction not otherwise defined in this Section or in standards referenced by this Section.

1.4 COORDINATION

- A. Coordinate sizes and locations of concrete foundations and casting of anchor-rod inserts into foundation walls and footings. Anchor rod installation, concrete, reinforcement, and formwork requirements are specified in Section 033000 "Cast-in-Place Concrete."
- B. Coordinate metal panel assemblies with rain drainage work, flashing, trim, and construction of supports and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at **Project site**.
 - 1. Review methods and procedures related to metal building systems including, but not limited to, the following:
 - a. Condition of foundations and other preparatory work performed by other trades.
 - b. Structural load limitations.
 - c. Construction schedule. Verify availability of materials and erector's personnel, equipment, and facilities needed to make progress and avoid delays.
 - d. Required tests, inspections, and certifications.
 - e. Unfavorable weather and forecasted weather conditions and impact on construction schedule.
 - 2. Review methods and procedures related to metal roof panel assemblies including, but not limited to, the following:
 - a. Compliance with requirements for purlin and rafter conditions, including flatness and attachment to structural members.
 - b. Structural limitations of purlins and rafters during and after roofing.
 - c. Flashings, special roof details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect metal roof panels.
 - d. Temporary protection requirements for metal roof panel assembly during and after installation.
 - e. Roof observation and repair after metal roof panel installation.
 - 3. Review methods and procedures related to metal wall panel assemblies including, but not limited to, the following:
 - a. Compliance with requirements for support conditions, including alignment between and attachment to structural members.
 - b. Structural limitations of girts and columns during and after wall panel installation.

- c. Flashings, special siding details, wall penetrations, openings, and condition of other construction that will affect metal wall panels.
- d. Temporary protection requirements for metal wall panel assembly during and after installation.
- e. Wall observation and repair after metal wall panel installation.

1.6 ACTION SUBMITTALS

A. Product Data: For each type of metal building system component.

- 1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for the following:
 - a. Metal roof panels.
 - b. Metal wall panels.
 - c. Thermal insulation and vapor-retarder facings.
 - d. Personnel doors and frames.
 - e. Windows.
 - f. Translucent roof panels.
 - g. Louvers.

B. Shop Drawings: Indicate components by others. Include full building plan, elevations, sections, details and the following:

- 1. Anchor-Rod Plans: Submit anchor-rod plans and templates before foundation work begins. Include location, diameter, and minimum required projection of anchor rods required to attach metal building to foundation. Indicate column reactions at each location.
- 2. Structural-Framing Drawings: Show complete fabrication of primary and secondary framing; include provisions for openings. Indicate welds and bolted connections, distinguishing between shop and field applications. Include transverse cross-sections.
- 3. Metal Roof and Wall Panel Layout Drawings: Show layouts of panels including methods of support. Include details of edge conditions, joints, panel profiles, corners, anchorages, clip spacing, trim, flashings, closures, and special details. Distinguish between factory- and field-assembled work; show locations of exposed fasteners.
 - a. Show roof-mounted items including roof hatches, equipment supports, pipe supports and penetrations, lighting fixtures, and items mounted on roof curbs.
 - b. Show wall-mounted items including personnel doors, vehicular doors, windows, louvers, and lighting fixtures.
 - c. Show translucent panels.

4. Accessory Drawings: Include details of the following items, at a scale of not less than 1-1/2 inches per 12 inches (1:8)
 - a. Flashing and trim.
 - b. Gutters.
 - c. Downspouts.
- C. Samples for Initial Selection: For units with factory-applied finishes.
- D. Samples for Verification: For the following products:
 1. Panels: Nominal 12 inches (300 mm) long by actual panel width. Include fasteners, closures, and other exposed panel accessories.
 2. Flashing and Trim: Nominal 12 inches (300 mm) long. Include fasteners and other exposed accessories.
 3. Vapor-Retarder Facings: Nominal 6-inch- (150-mm-) square Samples.
 4. Windows: Storefront windows specified elsewhere,
 5. Accessories: Nominal 12-inch- (300-mm-) long Samples for each type of accessory.
- E. Door Schedule: For doors and frames. Use same designations indicated on Drawings. Include details of reinforcement.
 1. Door Hardware Schedule: See Door hardware Section
 2. Keying Schedule: See Door Hardware Section.
- F. Delegated-Design Submittal: For metal building systems.
 1. Include analysis data indicating compliance with performance requirements and design data signed and sealed by the qualified professional engineer responsible for their preparation.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For erector and manufacturer.
- B. Welding certificates.
- C. Letter of Design Certification: Signed and sealed by a qualified professional engineer. Include the following:
 1. Name and location of Project.
 2. Order number.
 3. Name of manufacturer.
 4. Name of Contractor.
 5. Building dimensions including width, length, height, and roof slope.
 6. Indicate compliance with AISC standards for hot-rolled steel and AISI standards for cold-rolled steel, including edition dates of each standard.

7. Governing building code and year of edition.
8. Design Loads: Include dead load, roof live load, collateral loads, roof snow load, deflection, wind loads/speeds and exposure, seismic design category or effective peak velocity-related acceleration/peak acceleration, and auxiliary loads (cranes).
9. Load Combinations: Indicate that loads were applied acting simultaneously with concentrated loads, according to governing building code.
10. Building-Use Category: Indicate category of building use and its effect on load importance factors.

D. Erector Certificates: For qualified erector, from manufacturer.

E. Material Test Reports: For each of the following products:

1. Structural steel including chemical and physical properties.
2. Bolts, nuts, and washers including mechanical properties and chemical analysis.
3. Tension-control, high-strength, bolt-nut-washer assemblies.
4. Shop primers.
5. Nonshrink grout.

F. Source quality-control reports.

G. Field quality-control reports.

H. Surveys: Show final elevations and locations of major members. Indicate discrepancies between actual installation and the Contract Documents. Have surveyor who performed surveys certify their accuracy.

I. Sample Warranties: For special warranties.

1.8 CLOSEOUT SUBMITTALS

A. Maintenance Data: For metal panel finishes to include in maintenance manuals.

1.9 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer.

1. Accreditation: Manufacturer's facility accredited according to the International Accreditation Service's AC472, "Accreditation Criteria for Inspection Programs for Manufacturers of Metal Building Systems."
2. Engineering Responsibility: Preparation of comprehensive engineering analysis and Shop Drawings by a professional engineer who is legally qualified to practice in jurisdiction where Project is located.

- B. Erector Qualifications: An experienced erector who specializes in erecting and installing work similar in material, design, and extent to that indicated for this Project and who is acceptable to manufacturer.
- C. 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."

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, sheets, panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Protect foam-plastic insulation as follows:
 - 1. Do not expose to sunlight, except to extent necessary for period of installation and concealment.
 - 2. Protect against ignition at all times. Do not deliver foam-plastic insulation materials to Project site before installation time.
 - 3. Complete installation and concealment of foam-plastic materials as rapidly as possible in each area of construction.

1.11 FIELD CONDITIONS

- A. Weather Limitations: Proceed with panel installation only when weather conditions permit metal panels to be installed according to manufacturers' written instructions and warranty requirements.

1.12 WARRANTY

- A. Special Warranty on Metal Panel Finishes: Manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
 - 1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:

- a. Color fading more than 5 Hunter units when tested according to ASTM D 2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D 4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Subject to the performance and other requirements listed in this specification and the contract documents, provide the pre-engineered metal building as shown on the drawings as the Vehicle Storage Building from one of the manufacturers listed below;
 1. American Metal Buildings
 2. Butler Manufacturing, a division of BlueScope Buildings North America, Inc.
 3. Ceko Building Systems
 4. Cornerstone Building Brands
 5. Kirby Building Systems
 6. Metallic Building Systems
 7. Nucor Building Systems
 8. Star Building Systems
 9. Varco Pruden Buildings
- B. Source Limitations: Obtain metal building system components, including primary and secondary framing and metal panel assemblies, from single source from single manufacturer.

2.2 SYSTEM DESCRIPTION

- A. Provide a complete, integrated set of mutually dependent components and assemblies that form a metal building system capable of withstanding structural and other loads, thermally induced movement, and exposure to weather without failure or infiltration of water into building interior.

- B. Primary-Frame Type:
 - 1. Rigid Clear Span: Solid-member, structural-framing system without interior columns.
- C. End-Wall Framing: Manufacturer's standard, for buildings not required to be expandable, consisting of load-bearing end-wall and corner columns and rafters.
- D. Secondary-Frame Type: Manufacturer's standard purlins and joists and exterior-framed (bypass) girts.
- E. Eave Height: As indicated by nominal height on Drawings.
- F. Bay Spacing: As indicated on Drawings.
- G. Roof Slope: 3 inch per 12 inches (1:4) as shown on drawings.
- H. Roof System: Manufacturer's standard lap-seam, tapered-rib metal roof panels.
- I. Exterior Wall System: Manufacturer's standard exposed-fastener, tapered-rib, metal wall panels.

2.3 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design metal building system.
- B. Structural Performance: Metal building systems shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated according to procedures in MBMA's "Metal Building Systems Manual."
 - 1. Design Loads: As indicated on Drawings.
 - 2. Deflection and Drift Limits: Design metal building system assemblies to withstand serviceability design loads without exceeding deflections and drift limits recommended in AISC Steel Design Guide No. 3 "Serviceability Design Considerations for Steel Buildings."
 - 3. Deflection and Drift Limits: No greater than the following:
 - a. Purlins and Rafters: Vertical deflection of 1/240 of the span.
 - b. Girts: Horizontal deflection of 1/240 of the span.
 - c. Metal Roof Panels: Vertical deflection of 1/240 of the span.
 - d. Metal Wall Panels: Horizontal deflection of 1/240 of the span.
 - e. Design secondary-framing system to accommodate deflection of primary framing and construction tolerances, and to maintain clearances at openings.
 - f. Lateral Drift: Maximum of 1/400 of the building height.

- C. Seismic Performance: Metal building system shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change: 120 deg F (67 deg C), ambient; 180 deg F (100 deg C), material surfaces.
- E. Fire-Resistance Ratings: Where assemblies are indicated to have a fire-resistance rating, provide metal panel assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 or ASTM E 108 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 1. Indicate design designations from UL's "Fire Resistance Directory," FM Global's "Approval Guide," or from the listings of another qualified testing agency.
- F. Structural Performance for Metal Roof and Wall Panels: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E 1592:
 - 1. Wind Loads: As indicated on Drawings.
- G. Air Infiltration for Metal Roof Panels: Air leakage of not more than 0.06 cfm/sq. ft. (0.3 L/s per sq. m) when tested according to ASTM E 1680 or ASTM E 283 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 1.57 lbf/sq. ft. (75 Pa).
- H. Air Infiltration for Metal Wall Panels: Air leakage of not more than 0.06 cfm/sq. ft. (0.3 L/s per sq. m) when tested according to ASTM E 283 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 1.57 lbf/sq. ft. (75 Pa).
- I. Water Penetration for Metal Roof Panels: No water penetration when tested according to ASTM E 1646 or ASTM E 331 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 6.24 lbf/sq. ft. (300 Pa).
- J. Water Penetration for Metal Wall Panels: No water penetration when tested according to ASTM E 331 at the following test-pressure difference:
 - 1. Test-Pressure Difference: 6.24 lbf/sq. ft. (300 Pa).

- K. Wind-Uplift Resistance: Provide metal roof panel assemblies that comply with UL 580 for wind-uplift-resistance class indicated.
 - 1. Uplift Rating: UL 30.
- L. Thermal Performance for Opaque Elements: Provide the following maximum U-factors and minimum R-values when tested according to ASTM C 1363 or ASTM C 518:
 - 1. Roof:
 - a. U-Factor: 0.053
 - b. R-Value: 19
 - 2. Walls:
 - a. U-Factor: 0.053
 - b. R-Value: 19

2.4 STRUCTURAL-STEEL FRAMING

- A. Structural Steel: Comply with AISC 360, "Specification for Structural Steel Buildings."
- B. Bolted Connections: Comply with RCSC's "Specification for Structural Joints Using High-Strength Bolts."
- C. Cold-Formed Steel: Comply with AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members" for design requirements and allowable stresses.
- D. Primary Framing: Manufacturer's standard primary-framing system, designed to withstand required loads and specified requirements. Primary framing includes transverse and lean-to frames; rafters, rake, and canopy beams; sidewall, intermediate, end-wall, and corner columns; and wind bracing.
 - 1. General: Provide frames with attachment plates, bearing plates, and splice members. Factory drill for field-bolted assembly. Provide frame span and spacing indicated.
 - a. Slight variations in span and spacing may be acceptable if necessary to comply with manufacturer's standard, as approved by Architect.
 - 2. Rigid Clear-Span Frames: I-shaped frame sections fabricated from shop-welded, built-up steel plates or structural-steel shapes. Interior columns are not permitted.
 - 3. Frame Configuration: Single gable.
 - 4. Exterior Column: Tapered.
 - 5. Rafter: Tapered.

- E. End-Wall Framing: Manufacturer's standard primary end-wall framing fabricated for field-bolted assembly to comply with the following:
1. End-Wall and Corner Columns: I-shaped sections fabricated from structural-steel shapes; shop-welded, built-up steel plates; or C-shaped, cold-formed, structural-steel sheet.
 2. End-Wall Rafters: C-shaped, cold-formed, structural-steel sheet; or I-shaped sections fabricated from shop-welded, built-up steel plates or structural-steel shapes.
- F. Secondary Framing: Manufacturer's standard secondary framing, including purlins, girts, eave struts, flange bracing, base members, gable angles, clips, headers, jambs, and other miscellaneous structural members. Unless otherwise indicated, fabricate framing from either cold-formed, structural-steel sheet or roll-formed, metallic-coated steel sheet, prepainted with coil coating, to comply with the following:
1. Purlins: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; minimum 2-1/2-inch- (64-mm-) wide flanges.
 - a. Depth: 8" As indicated on Drawings.
 2. Purlins: Steel joists of depths indicated on Drawings.
 3. Girts: C- or Z-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes. Form ends of Z-sections with stiffening lips angled 40 to 50 degrees from flange, with minimum 2-1/2-inch- (64-mm-) wide flanges.
 - a. Depth: 8" As indicated on drawings, and required to comply with system performance requirements.
 4. Eave Struts: Unequal-flange, C-shaped sections; fabricated from built-up steel plates, steel sheet, or structural-steel shapes; to provide adequate backup for metal panels.
 5. Flange Bracing: Minimum 2-by-2-by-1/8-inch (51-by-51-by-3-mm) structural-steel angles or 1-inch- (25-mm-) diameter, cold-formed structural tubing to stiffen primary-frame flanges.
 6. Sag Bracing: Minimum 1-by-1-by-1/8-inch (25-by-25-by-3-mm) structural-steel angles.
 7. Base or Sill Angles: Manufacturer's standard base angle, minimum 3-by-2-inch (76-by-51-mm), fabricated from zinc-coated (galvanized) steel sheet.
 8. Purlin and Girt Clips: Manufacturer's standard clips fabricated from steel sheet. Provide galvanized clips where clips are connected to galvanized framing members.
 9. Framing for Openings: Channel shapes; fabricated from cold-formed, structural-steel sheet or structural-steel shapes. Frame head and jamb of door openings and head, jamb, and sill of other openings.
 10. Miscellaneous Structural Members: Manufacturer's standard sections fabricated from cold-formed, structural-steel sheet; built-up steel plates; or zinc-coated (galvanized) steel sheet; designed to withstand required loads.

- G. Bracing: Provide adjustable wind bracing using any method as follows except where portal frames are shown indicated in drawings to accommodate lateral resistance for facades with large door openings:
1. Rods: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 (345); or ASTM A 529/A 529M, Grade 50 (345); minimum 1/2-inch- (13-mm-) diameter steel; threaded full length or threaded a minimum of 6 inches (152 mm) at each end.
 2. Cable: ASTM A 475, minimum 1/4-inch- (6-mm-) diameter, extra-high-strength grade, Class B, zinc-coated, seven-strand steel; with threaded end anchors.
 3. Angles: Fabricated from structural-steel shapes to match primary framing, of size required to withstand design loads.
 4. Rigid Portal Frames: Fabricated from shop-welded, built-up steel plates or structural-steel shapes to match primary framing; of size required to withstand design loads.
 5. Fixed-Base Columns: Fabricated from shop-welded, built-up steel plates or structural-steel shapes to match primary framing; of size required to withstand design loads.
 6. Diaphragm Action of Metal Panels: Design metal building to resist wind forces through diaphragm action of metal panels.
- H. Anchor Rods: Headed anchor rods as indicated in Anchor Rod Plan for attachment of metal building to foundation.
- I. Materials:
1. W-Shapes: ASTM A 992/A 992M; ASTM A 572/A 572M, Grade 50 or 55 (345 or 380); or ASTM A 529/A 529M, Grade 50 or 55 (345 or 380).
 2. Channels, Angles, M-Shapes, and S-Shapes: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 or 55 (345 or 380); or ASTM A 529/A 529M, Grade 50 or 55 (345 or 380).
 3. Plate and Bar: ASTM A 36/A 36M; ASTM A 572/A 572M, Grade 50 or 55 (345 or 380); or ASTM A 529/A 529M, Grade 50 or 55 (345 or 380).
 4. Steel Pipe: ASTM A 53/A 53M, Type E or S, Grade B.
 5. Cold-Formed Hollow Structural Sections: ASTM A 500, Grade B or C, structural tubing.
 6. Structural-Steel Sheet: Hot-rolled, ASTM A 1011/A 1011M, Structural Steel (SS), Grades 30 through 55 (205 through 380), or High-Strength Low-Alloy Steel (HSLAS) or High-Strength Low-Alloy Steel with Improved Formability (HSLAS-F), Grades 45 through 70 (310 through 480); or cold-rolled, ASTM A 1008/A 1008M, Structural Steel (SS), Grades 25 through 80 (170 through 550), or HSLAS, Grades 45 through 70 (310 through 480).
 7. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, SS, Grades 33 through 80 (230 through 550), or HSLAS or HSLAS-F, Grades 50 through 80 (340 through 550); with G60 (Z180) coating designation; mill phosphatized.
 8. Metallic-Coated Steel Sheet Prepainted with Coil Coating: Steel sheet, metallic coated by the hot-dip process and prepainted by the coil-coating process to comply with ASTM A 755/A 755M.

- a. Zinc-Coated (Galvanized) Steel Sheet: ASTM A 653/A 653M, SS, Grades 33 through 80 (230 through 550), or HSLAS or HSLAS-F, Grades 50 through 80 (340 through 550); with G90 (Z275) coating designation.
 - b. Aluminum-Zinc Alloy-Coated Steel Sheet: ASTM A 792/A 792M, SS, Grade 50 or 80 (340 or 550); with Class AZ50 (AZM150) coating.
9. Joist Girders: Manufactured according to "Standard Specifications for Joist Girders," in SJI's "Standard Specifications and Load Tables for Steel Joists and Joist Girders"; with steel-angle, top- and bottom-chord members, and end- and top-chord arrangements as indicated on Drawings and required for primary framing.
10. Steel Joists: Manufactured according to "Standard Specifications for Open Web Steel Joists, K-Series," in SJI's "Standard Specifications and Load Tables for Steel Joists and Joist Girders"; with steel-angle, top- and bottom-chord members, and end- and top-chord arrangements as indicated on Drawings and required for secondary framing.
11. Non-High-Strength Bolts, Nuts, and Washers: ASTM A 307, Grade A, carbon-steel, hex-head bolts; ASTM A 563 (ASTM A 563M) carbon-steel hex nuts; and ASTM F 844 plain (flat) steel washers.
 - a. Finish: Hot-dip zinc coating, ASTM F 2329, Class C.
12. Structural Bolts, Nuts, and Washers: ASTM A 325 (ASTM A 325M), Type 1, heavy-hex steel structural bolts; ASTM A 563 (ASTM A 563M) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M) hardened carbon-steel washers.
 - a. Finish: Plain.
13. High-Strength Bolts, Nuts, and Washers: ASTM A 490 (ASTM A 490M), Type 1, heavy-hex steel structural bolts or tension-control, bolt-nut-washer assemblies with spline ends; ASTM A 563 (ASTM A 563M) heavy-hex carbon-steel nuts; and ASTM F 436 (ASTM F 436M) hardened carbon-steel washers, plain.
14. Tension-Control, High-Strength Bolt-Nut-Washer Assemblies: ASTM F 1852, Type 1, heavy-hex-head steel structural bolts with spline ends.
 - a. Finish: Plain.
15. Anchor Rods: ASTM A 307, Grade A.
 - a. Configuration: Straight.
 - b. Nuts: ASTM A 563 (ASTM A 563M) heavy-hex carbon steel.
 - c. Plate Washers: ASTM A 36/A 36M carbon steel.
 - d. Washers: ASTM F 436 (ASTM F 436M) hardened carbon steel.
 - e. Finish: Hot-dip zinc coating, ASTM F 2329, Class C.
16. Threaded Rods: ASTM A 307, Grade A.

- a. Nuts: ASTM A 563 (ASTM A 563M) heavy-hex carbon steel.
 - b. Washers: ASTM F 436 (ASTM F 436M) hardened.
 - c. Finish: Plain.
- J. Finish: Factory primed. Apply specified primer immediately after cleaning and pretreating.
 - 1. Clean and prepare in accordance with SSPC-SP2.
 - 2. Coat with manufacturer's standard primer. Apply primer to primary and secondary framing to a minimum dry film thickness of 1 mil (0.025 mm).
 - a. Prime secondary framing formed from uncoated steel sheet to a minimum dry film thickness of 0.5 mil (0.013 mm) on each side.

2.5 METAL ROOF PANELS

- A. Exposed Fastener, Tapered-Rib, Metal Roof Panels MRP as indicated on drawings Formed with raised, trapezoidal major ribs and pan between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps.
 - 1. Material: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.0239-inch (0.61-mm) equating to 24 gauge nominal uncoated steel thickness. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Exterior Finish: **Two-coat fluoropolymer.**
 - b. Color: As selected by Architect from manufacturer's full range.
 - 2. Major-Rib Spacing: 12 inches (305 mm) o.c.
 - 3. Panel Coverage: 36 inches (914 mm).
 - 4. Panel Height: 1.5 inches (38 mm).
- B. Finishes:
 - 1. Exposed Coil-Coated Finish:
 - a. **Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.**
 - 2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

2.6 METAL WALL PANELS

- A. Exposed-Fastener, Tapered-Rib, Metal Wall Panels MWP as indicated on Drawings: Formed with raised, trapezoidal major ribs and flat pan between major ribs; designed to be installed by lapping side edges of adjacent panels and mechanically attaching panels to supports using exposed fasteners in side laps.
 - 1. Material: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, [0.0239-inch (0.61-mm) equating to 24 gauge nominal uncoated steel thickness. Prepainted by the coil-coating process to comply with ASTM A 755/A 755M.
 - a. Exterior Finish: **Two-coat fluoropolymer.**
 - b. Color: As selected by Architect from manufacturer's full range.
 - 2. Major-Rib Spacing: 12 inches (305 mm) o.c.
 - 3. Panel Coverage: 36 inches (914 mm).
 - 4. Panel Height: 1.5 inches (38 mm).
- B. Finishes:
 - 1. Exposed Coil-Coated Finish:
 - a. **Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent PVDF resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.**
 - 2. Concealed Finish: Apply pretreatment and manufacturer's standard white or light-colored acrylic or polyester backer finish, consisting of prime coat and wash coat with a minimum total dry film thickness of 0.5 mil (0.013 mm).

2.7 THERMAL INSULATION

- A. Faced Metal Building Insulation: ASTM C 991, Type II, glass-fiber-blanket insulation; 0.5-lb/cu. ft. (8-kg/cu. m) density; 2-inch- (51-mm-) wide, continuous, vapor-tight edge tabs; with a flame-spread index of 25 or less.
- B. Retainer Strips: For securing insulation between supports, 0.025-inch (0.64-mm) nominal-thickness, formed, metallic-coated steel or PVC retainer clips colored to match insulation facing.
- C. Vapor-Retarder Facing: ASTM C 1136, with permeance not greater than 0.02 perm (1.15 ng/Pa x s x sq. m) when tested according to ASTM E 96/E 96M, Desiccant Method.
 - 1. Composition: White polypropylene film facing and fiberglass-polyester-blend fabric backing.

- D. Vapor-Retarder Tape: Pressure-sensitive tape of type recommended by vapor-retarder manufacturer for sealing joints and penetrations in vapor retarder.

2.8 PERSONNEL DOORS AND FRAMES

- A. Swinging Personnel Doors and Frames: Metal building system manufacturer's standard doors and frames; prepared and reinforced at strike and at hinges to receive factory- and field-applied hardware according to BHMA A156 Series.
 - 1. Steel Doors: 1-3/4 inches (44.5 mm) thick; fabricated from metallic-coated steel face sheets, 0.036-inch (0.91-mm) nominal uncoated steel thickness, of seamless, hollow-metal construction; with 0.060-inch (1.52-mm) nominal uncoated steel thickness, inverted metallic-coated steel channels welded to face sheets at top and bottom of door.
 - a. Design: Flush As indicated on Drawings.
 - b. Core: Polystyrene foam with U-factor rating of at least 0.16 Btu/sq. ft. x h x deg F (0.91 W/sq. m x K).
 - c. Glazing Frames: Aluminum frames specified elsewhere.
 - d. Glazing: As specified in Section 088000 "Glazing."
 - 2. Steel Frames: Fabricate 2-inch- (51-mm-) wide face frames from zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.060-inch (1.52-mm) nominal uncoated steel thickness.
 - a. Type: Factory welded.
 - 3. Fabricate concealed stiffeners, reinforcement, edge channels, and moldings from either cold- or hot-rolled steel sheet.
 - 4. Hardware:
 - a. Provide hardware for each door leaf, as follows:
 - 1) Hinges: BHMA A156.1. Three antifriction-bearing, standard-weight, full-mortise, stainless-steel or bronze, template-type hinges; 4-1/2 by 4-1/2 inches (114 by 114 mm), with nonremovable pin.
 - 2) Lockset: BHMA A156.2. Key-in-lever cylindrical type – coordinate with Door Hardware Schedule as exterior doors are access controlled requiring electrified hardware.
 - 3) Threshold: BHMA A156.21. Extruded aluminum.
 - 4) Silencers: Pneumatic rubber; three silencers on strike jambs of single door frames and two silencers on heads of double door frames.
 - 5) Closer: BHMA A156.4. Surface-applied, standard-duty hydraulic type.
 - 6) Weather Stripping: Vinyl applied to head and jambs, with vinyl sweep at sill.

5. Anchors and Accessories: Manufacturer's standard units, galvanized according to ASTM A 123/A 123M.
6. Fabrication: Fabricate doors and frames to be rigid; neat in appearance; and free from defects, warp, or buckle. Provide continuous welds on exposed joints; grind, dress, and make welds smooth, flush, and invisible.

B. Materials:

1. Cold-Rolled Steel Sheet: ASTM A 1008/A 1008M, Commercial Steel (CS), Type B, suitable for exposed applications.
2. Hot-Rolled Steel Sheet: ASTM A 1011/A 1011M, CS, Type B; free of scale, pitting, or surface defects; pickled and oiled.
3. Metallic-Coated Steel Sheet: ASTM A 653/A 653M, CS, Type B; with G60 (Z180) zinc (galvanized) or A60 (ZF180) zinc-iron-alloy (galvannealed) coating designation.

C. Finishes for Personnel Doors and Frames:

1. Prime Finish: Factory-apply manufacturer's standard primer immediately after cleaning and pretreating.
 - a. Shop Primer: Manufacturer's standard, fast-curing, lead- and chromate-free primer complying with SDI A250.10 acceptance criteria; recommended by primer manufacturer for substrate; compatible with substrate and field-applied coatings despite prolonged exposure.
2. Factory-Applied Paint Finish: Manufacturer's standard, complying with SDI A250.3 for performance and acceptance criteria.
 - a. Color and Gloss: As selected by Architect from manufacturer's full range

2.9 WINDOWS

A. Aluminum Windows: As specified in Section 084113 "Aluminum-Framed Entrances and Storefronts Windows."

1. Fasteners, Anchors, and Clips: Nonmagnetic stainless steel, aluminum, or other noncorrosive material, compatible with aluminum window members, trim, hardware, anchors, and other components of window units. Fasteners shall not be exposed, except for attaching hardware.
 - a. Reinforcement: Where fasteners screw-anchor into aluminum less than 0.128 inch (3.26 mm) thick, reinforce interior with aluminum or nonmagnetic stainless steel to receive screw threads, or provide standard, noncorrosive, pressed-in, spline grommet nuts.

2. Sliding-Type Weather Stripping: Woven-pile weather stripping of wool, polypropylene, or nylon pile and resin-impregnated backing fabric; complying with AAMA 701/702.

- B. Glazing: Comply with requirements specified in Section 088000 "Glazing."

2.10 TRANSLUCENT PANELS

- A. Insulated Translucent Panels TRP as indicated on drawings: Fabricate insulating units of two sheets of glass-fiber-reinforced polyester, translucent plastic separated by an air space; complying with ASTM D 3841, Type CC1 (limited flammability), Grade 1 (weather resistant); smooth finish on both sides. Match profile of adjacent metal panels.
 1. Exterior Panel Weight: Not less than 6 oz./sq. ft. (1831 g/sq. m).
 2. Interior Panel Weight: Not less than 6 oz./sq. ft. (1831 g/sq. m).
 3. Light Transmittance: Not less than 42 percent according to ASTM D 1494.
 4. Metal Edge: Fabricate full length of each side of panel with metal edge for seaming into standing-seam roof panel joint.
 5. Color: White.
- B. Mastic for Translucent Panels: Nonstaining, saturated vinyl polymer as recommended by translucent panel manufacturer for sealing laps.
- C. Performance:
 1. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.
 - b. Smoke-Developed Index: 450 or less.

2.11 ACCESSORIES

- A. General: Provide accessories as standard with metal building system manufacturer and as specified. Fabricate and finish accessories at the factory to greatest extent possible, by manufacturer's standard procedures and processes. Comply with indicated profiles and with dimensional and structural requirements.
 1. Form exposed sheet metal accessories that are without excessive oil-canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
- B. Roof Panel Accessories: Provide components required for a complete metal roof panel assembly including copings, fasciae, corner units, ridge closures, clips, sealants,

gaskets, fillers, closure strips, and similar items. Match material and finish of metal roof panels unless otherwise indicated.

1. Closures: Provide closures at eaves and ridges, fabricated of same material as metal roof panels.
 2. Clips: Manufacturer's standard, formed from steel sheet, designed to withstand negative-load requirements.
 3. Cleats: Manufacturer's standard, mechanically seamed cleats formed from steel sheet.
 4. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 5. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal roof panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
 6. Thermal Spacer Blocks: Where metal panels attach directly to purlins, provide thermal spacer blocks of thickness required to provide 1-inch (25-mm) standoff; fabricated from extruded polystyrene.
- C. Wall Panel Accessories: Provide components required for a complete metal wall panel assembly including copings, fasciae, mullions, sills, corner units, clips, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal wall panels unless otherwise indicated.
1. Closures: Provide closures at eaves and rakes, fabricated of same material as metal wall panels.
 2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
 3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal wall panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- D. Flashing and Trim: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.018-inch (0.46-mm) nominal uncoated steel thickness, prepainted with coil coating; finished to match adjacent metal panels.
1. Provide flashing and trim as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, eaves, rakes, corners, bases, framed openings, ridges, fasciae, and fillers.
 2. Opening Trim: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.030-inch (0.76-mm) nominal uncoated steel thickness, prepainted with coil coating. Trim head and jamb of door openings, and head, jamb, and sill of other openings.
- E. Gutters: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.018-inch (0.46-mm) nominal uncoated steel thickness, prepainted with coil coating; finished to match roof fascia and rake trim. Match profile of gable trim, complete with end

pieces, outlet tubes, and other special pieces as required. Fabricate in minimum 96-inch- (2438-mm-) long sections, sized according to SMACNA's "Architectural Sheet Metal Manual."

1. Gutter Supports: Fabricated from same material and finish as gutters.
 2. Strainers: Bronze, copper, or aluminum wire ball type at outlets.
- F. Downspouts: Zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.018-inch (0.46-mm) nominal uncoated steel thickness, prepainted with coil coating; finished to match metal wall panels. Fabricate in minimum 10-foot- (3-m-) long sections, complete with formed elbows and offsets.
1. Mounting Straps: Fabricated from same material and finish as gutters.
- G. Louvers: Size and design indicated on Mechanical Drawings; self-framing and self-flashing. Fabricate welded frames from zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.048-inch (1.21-mm) nominal uncoated steel thickness; finished to match metal wall panels. Form blades from zinc-coated (galvanized) or aluminum-zinc alloy-coated steel sheet, 0.036-inch (0.91-mm) nominal uncoated steel thickness; folded or beaded at edges, set at an angle that excludes driving rains, and secured to frames by riveting or welding. Fabricate louvers with equal blade spacing to produce uniform appearance.
1. Blades: Fixed and Adjustable type, with weather-stripped edges.
 2. Free Area: As required on Mechanical Drawings.
 3. Bird Screening: Galvanized steel, 1/2-inch- (13-mm-) square mesh, 0.041-inch (1.04-mm) wire; with rewirable frames, removable and secured with clips; fabricated of same kind and form of metal and with same finish as louvers.
 - a. Mounting: Interior face of louvers.
 4. Vertical Mullions: Provide mullions at spacings recommended by manufacturer, or 72 inches (1830 mm) o.c., whichever is less.
- H. Materials:
1. Fasteners: Self-tapping screws, bolts, nuts, self-locking rivets and bolts, end-welded studs, and other suitable fasteners designed to withstand design loads. Provide fasteners with heads matching color of materials being fastened by means of plastic caps or factory-applied coating.
 - a. Fasteners for Metal Roof Panels: Self-drilling or self-tapping, zinc-plated, hex-head carbon-steel screws, with a stainless-steel cap or zinc-aluminum-alloy head and EPDM sealing washer.
 - b. Fasteners for Metal Wall Panels: Self-drilling or self-tapping, zinc-plated, hex-head carbon-steel screws, with EPDM sealing washers bearing on weather side of metal panels.

- c. Fasteners for Flashing and Trim: Blind fasteners or self-drilling screws with hex washer head.
 - d. Blind Fasteners: High-strength aluminum or stainless-steel rivets.
- 2. Corrosion-Resistant Coating: Cold-applied asphalt mastic, compounded for 15-mil (0.4-mm) dry film thickness per coat. Provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.
- 3. Nonmetallic, Shrinkage-Resistant Grout: ASTM C 1107/C 1107M, factory-packaged, nonmetallic aggregate grout, noncorrosive, nonstaining, mixed with water to consistency suitable for application and a 30-minute working time.
- 4. Metal Panel Sealants:
 - a. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene-compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape of manufacturer's standard size.
 - b. Joint Sealant: ASTM C 920; one part elastomeric polyurethane or polysulfide; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended by metal building system manufacturer.

2.12 FABRICATION

- A. General: Design components and field connections required for erection to permit easy assembly.
 - 1. Mark each piece and part of the assembly to correspond with previously prepared erection drawings, diagrams, and instruction manuals.
 - 2. Fabricate structural framing to produce clean, smooth cuts and bends. Punch holes of proper size, shape, and location. Members shall be free of cracks, tears, and ruptures.
- B. Tolerances: Comply with MBMA's "Metal Building Systems Manual" for fabrication and erection tolerances.
- C. Primary Framing: Shop fabricate framing components to indicated size and section, with baseplates, bearing plates, stiffeners, and other items required for erection welded into place. Cut, form, punch, drill, and weld framing for bolted field assembly.
 - 1. Make shop connections by welding or by using high-strength bolts.
 - 2. Join flanges to webs of built-up members by a continuous, submerged arc-welding process.
 - 3. Brace compression flange of primary framing with steel angles or cold-formed structural tubing between frame web and purlin web or girt web, so flange compressive strength is within allowable limits for any combination of loadings.

4. Weld clips to frames for attaching secondary framing if applicable, or punch for bolts.
 5. Shop Priming: Prepare surfaces for shop priming according to SSPC-SP 2. Shop prime primary framing with specified primer after fabrication.
- D. Secondary Framing: Shop fabricate framing components to indicated size and section by roll forming or break forming, with baseplates, bearing plates, stiffeners, and other plates required for erection welded into place. Cut, form, punch, drill, and weld secondary framing for bolted field connections to primary framing.
1. Make shop connections by welding or by using non-high-strength bolts.
 2. Shop Priming: Prepare uncoated surfaces for shop priming according to SSPC-SP 2. Shop prime uncoated secondary framing with specified primer after fabrication.
- E. Metal Panels: Fabricate and finish metal panels at the factory to greatest extent possible, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements. Comply with indicated profiles and with dimensional and structural requirements.
1. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of metal panel.

2.13 SOURCE QUALITY CONTROL

- A. Special Inspection: Owner will engage a qualified special inspector to perform source quality control inspections and to submit reports.
1. Accredited Manufacturers: Special inspections will not be required if fabrication is performed by an IAS AC472-accredited manufacturer approved by authorities having jurisdiction to perform such Work without special inspection.
 - a. After fabrication, submit copy of certificate of compliance to authorities having jurisdiction, certifying that Work was performed according to Contract requirements.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with erector present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
- B. Before erection proceeds, survey elevations and locations of concrete- and masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedments

to receive structural framing, with erector present, for compliance with requirements and metal building system manufacturer's tolerances.

1. Engage land surveyor to perform surveying.
- C. Proceed with erection only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition.
- B. Provide temporary shores, guys, braces, and other supports during erection to keep structural framing secure, plumb, and in alignment against temporary construction loads and loads equal in intensity to design loads. Remove temporary supports when permanent structural framing, connections, and bracing are in place unless otherwise indicated.

3.3 ERECTION OF STRUCTURAL FRAMING

- A. Erect metal building system according to manufacturer's written instructions and drawings.
- B. Do not field cut, drill, or alter structural members without written approval from metal building system manufacturer's professional engineer.
- C. Set structural framing accurately in locations and to elevations indicated, according to AISC specifications referenced in this Section. Maintain structural stability of frame during erection.
- D. Base and Bearing Plates: Clean concrete- and masonry-bearing surfaces of bond-reducing materials, and roughen surfaces prior to setting plates. Clean bottom surface of plates.
1. Set plates for structural members on wedges, shims, or setting nuts as required.
 2. Tighten anchor rods after supported members have been positioned and plumbed. Do not remove wedges or shims but, if protruding, cut off flush with edge of plate before packing with grout.
 3. Promptly pack grout solidly between bearing surfaces and plates so no voids remain. Neatly finish exposed surfaces; protect grout and allow to cure. Comply with manufacturer's written installation instructions for shrinkage-resistant grouts.
- E. Align and adjust structural framing before permanently fastening. Before assembly, clean bearing surfaces and other surfaces that will be in permanent contact with framing. Perform necessary adjustments to compensate for discrepancies in elevations and alignment.

1. Level and plumb individual members of structure.
 2. Make allowances for difference between temperature at time of erection and mean temperature when structure will be completed and in service.
- F. Primary Framing and End Walls: Erect framing level, plumb, rigid, secure, and true to line. Level baseplates to a true even plane with full bearing to supporting structures, set with double-nutted anchor bolts. Use grout to obtain uniform bearing and to maintain a level base-line elevation. Moist-cure grout for not less than seven days after placement.
1. Make field connections using high-strength bolts installed according to RCSC's "Specification for Structural Joints Using High-Strength Bolts" for bolt type and joint type specified.
 - a. Joint Type: Snug tightened or pretensioned as required by manufacturer.
- G. Secondary Framing: Erect framing level, plumb, rigid, secure, and true to line. Field bolt secondary framing to clips attached to primary framing.
1. Provide rake or gable purlins with tight-fitting closure channels and fasciae.
 2. Locate and space wall girts to suit openings such as doors and windows.
 3. Provide supplemental framing at entire perimeter of openings, including doors, windows, louvers, ventilators, and other penetrations of roof and walls.
- H. Bracing: Install bracing in roof and sidewalls where indicated on erection drawings.
1. Tighten rod and cable bracing to avoid sag.
 2. Locate interior end-bay bracing only where indicated.
- I. Framing for Openings: Provide shapes of proper design and size to reinforce openings and to carry loads and vibrations imposed, including equipment furnished under mechanical and electrical work. Securely attach to structural framing.
- J. Erection Tolerances: Maintain erection tolerances of structural framing within AISC 303.
- 3.4 METAL PANEL INSTALLATION, GENERAL
- A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate according to equipment manufacturer's written instructions and to comply with details shown.

- C. Examination: Examine primary and secondary framing to verify that structural-panel support members and anchorages have been installed within alignment tolerances required by manufacturer.
 - 1. Examine roughing-in for components and systems penetrating metal panels, to verify actual locations of penetrations relative to seams before metal panel installation.
- D. General: Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 1. Field cut metal panels as required for doors, windows, and other openings. Cut openings as small as possible, neatly to size required, and without damage to adjacent metal panel finishes.
 - a. Field cutting of metal panels by torch is not permitted unless approved in writing by manufacturer.
 - 2. Install metal panels perpendicular to structural supports unless otherwise indicated.
 - 3. Flash and seal metal panels with weather closures at perimeter of openings and similar elements. Fasten with self-tapping screws.
 - 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 - 5. Locate metal panel splices over structural supports with end laps in alignment.
 - 6. Lap metal flashing over metal panels to allow moisture to run over and off the material.
- E. Lap-Seam Metal Panels: Install screw fasteners using power tools with controlled torque adjusted to compress EPDM washers tightly without damage to washers, screw threads, or metal panels. Install screws in predrilled holes.
 - 1. Arrange and nest side-lap joints so prevailing winds blow over, not into, lapped joints. Lap ribbed or fluted sheets one full rib corrugation. Apply metal panels and associated items for neat and weathertight enclosure. Avoid "panel creep" or application not true to line.
- F. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by metal roof panel manufacturer.
- G. Joint Sealers: Install gaskets, joint fillers, and sealants where indicated and where required for weatherproof performance of metal panel assemblies. Provide types of gaskets, fillers, and sealants indicated; or, if not indicated, provide types recommended by metal panel manufacturer.
 - 1. Seal metal panel end laps with double beads of tape or sealant the full width of panel. Seal side joints where recommended by metal panel manufacturer.

2. Prepare joints and apply sealants to comply with requirements in Section 079200 "Joint Sealants."

3.5 METAL ROOF PANEL INSTALLATION

- A. General: Provide metal roof panels of full length from eave to ridge unless otherwise indicated or restricted by shipping limitations.
 1. Install ridge caps as metal roof panel work proceeds.
 2. Flash and seal metal roof panels with weather closures at eaves and rakes. Fasten with self-tapping screws.
- B. Lap-Seam Metal Roof Panels: Fasten metal roof panels to supports with exposed fasteners at each lapped joint, at location and spacing recommended by manufacturer.
 1. Provide metal-backed sealing washers under heads of exposed fasteners bearing on weather side of metal roof panels.
 2. Provide sealant tape at lapped joints of metal roof panels and between panels and protruding equipment, vents, and accessories.
 3. Apply a continuous ribbon of sealant tape to weather-side surface of fastenings on end laps and on side laps of nesting-type metal panels, on side laps of ribbed or fluted metal panels, and elsewhere as needed to make metal panels weatherproof to driving rains.
 4. At metal panel splices, nest panels with minimum 6-inch (152-mm) end lap, sealed with butyl-rubber sealant and fastened together by interlocking clamping plates.
- C. Metal Fascia Panels: Align bottom of metal panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws. Flash and seal metal panels with weather closures where fasciae meet soffits, along lower panel edges, and at perimeter of all openings.
- D. Metal Roof Panel Installation Tolerances: Shim and align metal roof panels within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m) on slope and location lines and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.6 METAL WALL PANEL INSTALLATION

- A. General: Install metal wall panels in orientation, sizes, and locations indicated on Drawings. Install panels perpendicular to girts, extending full height of building, unless otherwise indicated. Anchor metal wall panels and other components of the Work securely in place, with provisions for thermal and structural movement.
 1. Unless otherwise indicated, begin metal panel installation at corners with center of rib lined up with line of framing.
 2. Shim or otherwise plumb substrates receiving metal wall panels.

3. When two rows of metal panels are required, lap panels 4 inches (102 mm) minimum.
 4. When building height requires two rows of metal panels at gable ends, align lap of gable panels over metal wall panels at eave height.
 5. Rigidly fasten base end of metal wall panels and allow eave end free movement for thermal expansion and contraction. Predrill panels.
 6. Flash and seal metal wall panels with weather closures at eaves and rakes, and at perimeter of all openings. Fasten with self-tapping screws.
 7. Install screw fasteners in predrilled holes.
 8. Install flashing and trim as metal wall panel work proceeds.
 9. Apply elastomeric sealant continuously between metal base channel (sill angle) and concrete, and elsewhere as indicated on Drawings; if not indicated, as necessary for waterproofing.
 10. Align bottom of metal wall panels and fasten with blind rivets, bolts, or self-drilling or self-tapping screws.
 11. Provide weatherproof escutcheons for pipe and conduit penetrating exterior walls.
- B. Metal Wall Panels: Install metal wall panels on exterior side of girts. Attach metal wall panels to supports with fasteners as recommended by manufacturer.
- C. Installation Tolerances: Shim and align metal wall panels within installed tolerance of 1/4 inch in 20 feet (6 mm in 6 m), noncumulative; level, plumb, and on location lines; and within 1/8-inch (3-mm) offset of adjoining faces and of alignment of matching profiles.

3.7 TRANSLUCENT PANEL INSTALLATION

- A. Translucent Panels: Attach translucent panels to structural framing with fasteners according to manufacturer's written instructions. Install panels perpendicular to supports unless otherwise indicated. Anchor translucent panels securely in place, with provisions for thermal and structural movement.
1. Provide end laps of not less than 6 inches (152 mm) and side laps of not less than 1-1/2-inch (38-mm) corrugations for metal roof panels.
 2. Align horizontal laps with adjacent metal panels.
 3. Seal intermediate end laps and side laps of translucent panels with translucent mastic.

3.8 METAL SOFFIT PANEL INSTALLATION

- A. Provide metal soffit panels the full width of soffits. Install panels perpendicular to support framing.
- B. Flash and seal metal soffit panels with weather closures where panels meet walls and at perimeter of all openings.

3.9 THERMAL INSULATION INSTALLATION

- A. General: Install insulation concurrently with metal panel installation, in thickness indicated to cover entire surface, according to manufacturer's written instructions.
 - 1. Set vapor-retarder-faced units with vapor retarder toward warm side of construction unless otherwise indicated. Do not obstruct ventilation spaces except for firestopping.
 - 2. Tape joints and ruptures in vapor retarder, and seal each continuous area of insulation to the surrounding construction to ensure airtight installation.
 - 3. Install factory-laminated, vapor-retarder-faced blankets straight and true in one-piece lengths, with both sets of facing tabs sealed, to provide a complete vapor retarder.
 - 4. Install blankets straight and true in one-piece lengths. Install vapor retarder over insulation, with both sets of facing tabs sealed, to provide a complete vapor retarder.
- B. Blanket Roof Insulation: Comply with the following installation method:
 - 1. Over-Framing Installation: Extend insulation and vapor retarder over and perpendicular to top flange of secondary framing. Hold in place by metal roof panels fastened to secondary framing.
 - 2. Between-Purlin Installation: Extend insulation and vapor retarder between purlins. Carry vapor-retarder-facing tabs up and over purlin, overlapping adjoining facing of next insulation course and maintaining continuity of retarder. Hold in place with bands and crossbands below insulation.
 - 3. Over-Purlin-with-Spacer-Block Installation: Extend insulation and vapor retarder over and perpendicular to top flange of secondary framing. Install layer of filler insulation over first layer to fill space formed by metal roof panel standoffs. Hold in place by panels fastened to standoffs.
 - a. Thermal Spacer Blocks: Where metal roof panels attach directly to purlins, install thermal spacer blocks.
 - 4. Two-Layers-between-Purlin-with-Spacer-Block Installation: Extend insulation and vapor retarder between purlins. Carry vapor-retarder-facing tabs up and over purlin, overlapping adjoining facing of next insulation course and maintaining continuity of retarder. Install layer of filler insulation over first layer to fill space between purlins formed by thermal spacer blocks. Hold in place with bands and crossbands below insulation.
 - a. Thermal Spacer Blocks: Where metal roof panels attach directly to purlins, install thermal spacer blocks.
 - 5. Retainer Strips: Install retainer strips at each longitudinal insulation joint, straight and taut, nesting with secondary framing to hold insulation in place.

- C. Blanket Wall Insulation: Extend insulation and vapor retarder over and perpendicular to top flange of secondary framing. Hold in place by metal wall panels fastened to secondary framing.
 - 1. Retainer Strips: Install retainer strips at each longitudinal insulation joint, straight and taut, nesting with secondary framing to hold insulation in place.
- D. Board Wall Insulation: Extend board insulation in thickness indicated to cover entire wall. Hold in place by metal wall panels fastened to secondary framing. Comply with manufacturers' written instructions.
 - 1. Retainer Strips: Install retainer strips at each longitudinal insulation joint, straight and taut, nesting with secondary framing to hold insulation in place.

3.10 DOOR AND FRAME INSTALLATION

- A. General: Install doors and frames plumb, rigid, properly aligned, and securely fastened in place according to manufacturers' written instructions. Coordinate installation with wall flashings and other components. Seal perimeter of each door frame with elastomeric sealant used for metal wall panels.
- B. Personnel Doors and Frames: Install doors and frames according to NAAMM-HMMA 840. Fit non-fire-rated doors accurately in their respective frames, with the following clearances:
 - 1. Between Doors and Frames at Jambs and Head: 1/8 inch (3 mm).
 - 2. Between Edges of Pairs of Doors: 1/8 inch (3 mm).
 - 3. At Door Sills with Threshold: 3/8 inch (9.5 mm).
 - 4. At Door Sills without Threshold: 3/4 inch (19.1 mm).
 - 5. At fire-rated openings, install frames according to, and doors with clearances specified in, NFPA 80.
- C. Field Glazing: Comply with installation requirements in Section 088000 "Glazing."
- D. Door Hardware:
 - 1. Install surface-mounted items after finishes have been completed at heights indicated in DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 - 3. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.
 - 4. Set thresholds for exterior doors in full bed of sealant complying with requirements for concealed mastics specified in Section 079200 "Joint Sealants."

3.11 WINDOW INSTALLATION

- A. General: Install windows plumb, rigid, properly aligned, without warp or rack of frames or sash, and securely fasten in place according to manufacturer's written instructions. Coordinate installation with wall flashings and other components. Seal perimeter of each window frame with elastomeric sealant used for metal wall panels.
 - 1. Separate dissimilar materials from sources of corrosion or electrolytic action at points of contact with other materials by complying with requirements specified in AAMA/WDMA/CSA 101/I.S.2/A440.
- B. Set sill members in bed of sealant or with gaskets, for weathertight construction.
- C. Install windows and components to drain condensation, water penetrating joints, and moisture migrating within windows to the exterior.
- D. Mount screens directly to frames with tapped screw clips.

3.12 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
 - 1. Install components required for a complete metal roof panel assembly, including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
 - 2. Install components for a complete metal wall panel assembly, including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
 - 3. Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action by painting contact surfaces with corrosion-resistant coating, by applying rubberized-asphalt underlayment to each contact surface, or by other permanent separation as recommended by manufacturer.
- B. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
 - 1. Install exposed flashing and trim that is without excessive oil-canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
 - 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (600 mm) of corner or intersection. Where lapped or bayonet-

type expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

- C. Gutters: Join sections with riveted-and-soldered or lapped-and-sealed joints. Attach gutters to eave with gutter hangers spaced as required for gutter size, but not more than 36 inches (914 mm) o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.
- D. Downspouts: Join sections with 1-1/2-inch (38-mm) telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch (25 mm) away from walls; locate fasteners at top and bottom and at approximately 60 inches (1524 mm) o.c. in between.
 - 1. Provide elbows at base of downspouts to direct water away from building.
 - 2. Tie downspouts to underground drainage system indicated.
- E. Louvers: Locate and place louver units level, plumb, and at indicated alignment with adjacent work.
 - 1. Use concealed anchorages where possible. Provide brass or lead washers fitted to screws where required to protect metal surfaces and to make a weathertight connection.
 - 2. Provide perimeter reveals and openings of uniform width for sealants and joint fillers.
 - 3. Protect galvanized- and nonferrous-metal surfaces from corrosion or galvanic action by applying a heavy coating of corrosion-resistant paint on surfaces that will be in contact with concrete, masonry, or dissimilar metals.
 - 4. Install concealed gaskets, flashings, joint fillers, and insulation as louver installation progresses, where weathertight louver joints are required. Comply with Section 079200 "Joint Sealants" for sealants applied during louver installation.

3.13 FIELD QUALITY CONTROL

- A. Special Inspections: Owner will engage a qualified special inspector to perform field quality control special inspections and to submit reports.
- B. Product will be considered defective if it does not pass tests and inspections.
- C. Prepare test and inspection reports.

3.14 ADJUSTING

- A. Doors: After completing installation, test and adjust doors to operate easily, free of warp, twist, or distortion.

- B. Door Hardware: Adjust and check each operating item of door hardware and each door to ensure proper operation and function of every unit. Replace units that cannot be adjusted to operate as intended.
- C. Windows: Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and at weather stripping to ensure smooth operation and weathertight closure. Lubricate hardware and moving parts.
- D. Adjustable Louvers: After completing installation, including work by other trades, lubricate, test, and adjust units to operate easily, free of warp, twist, or distortion as needed to provide fully functioning units.
 - 1. Adjust louver blades to be weathertight when in closed position.

3.15 CLEANING AND PROTECTION

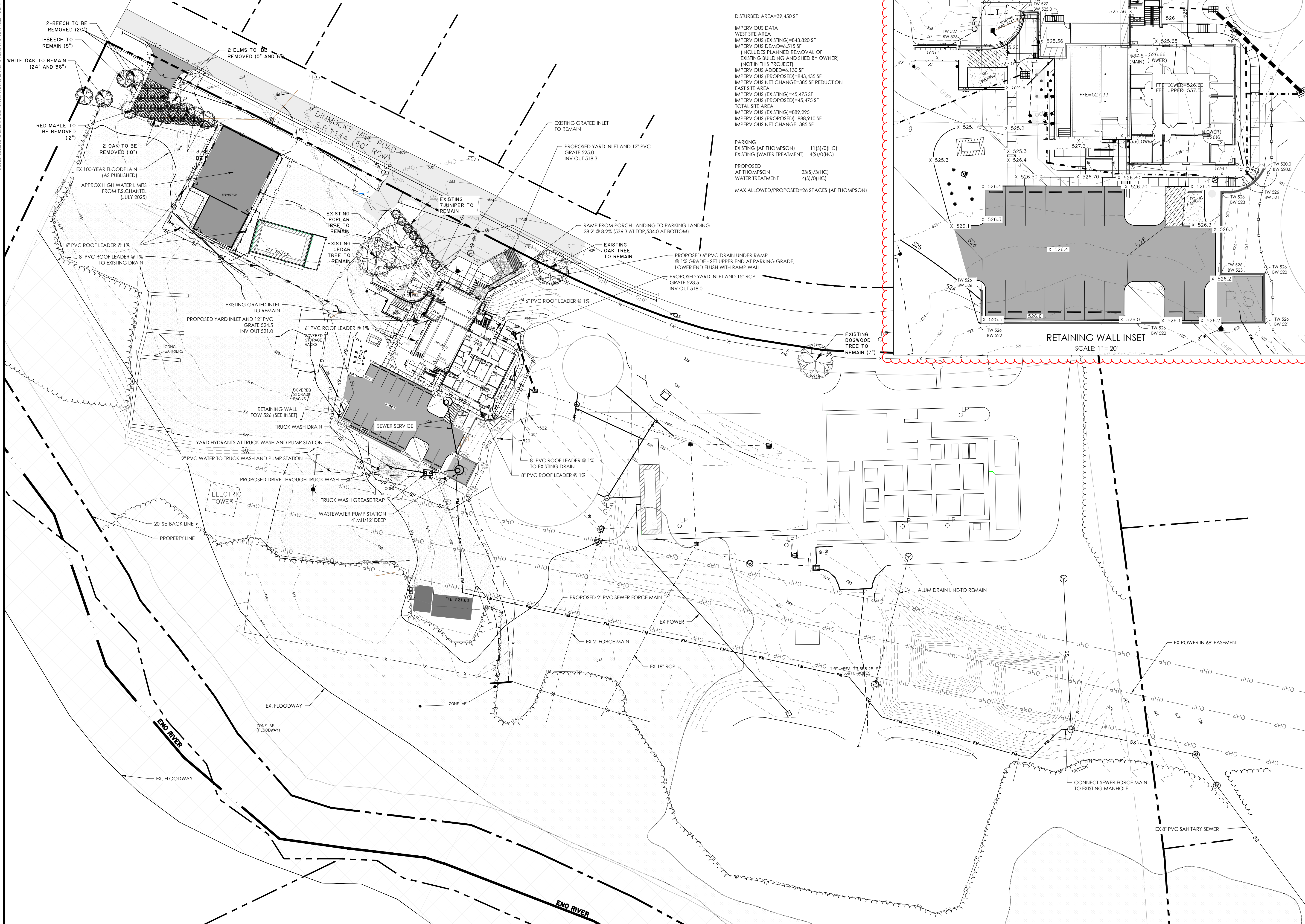
- A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A 780/A 780M and manufacturer's written instructions.
- B. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- C. Touchup Painting: After erection, promptly clean, prepare, and prime or reprime field connections, rust spots, and abraded surfaces of prime-painted structural framing, bearing plates, and accessories.
 - 1. Clean and prepare surfaces by SSPC-SP 2, "Hand Tool Cleaning," or by SSPC-SP 3, "Power Tool Cleaning."
 - 2. Apply a compatible primer of same type as shop primer used on adjacent surfaces.
- D. Touchup Painting: Cleaning and touchup painting are specified in Section 099113 "Exterior Painting" and Section 099123 "Interior Painting."
- E. Metal Panels: Remove temporary protective coverings and strippable films, if any, as metal panels are installed. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
 - 1. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.
- F. Doors and Frames: Immediately after installation, sand rusted or damaged areas of prime coat until smooth and apply touchup of compatible air-drying primer.
 - 1. Immediately before final inspection, remove protective wrappings from doors and frames.

- G. Windows: Clean metal surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances. Clean factory-glazed glass immediately after installing windows.
- H. Louvers: Clean exposed surfaces that are not protected by temporary covering, to remove fingerprints and soil during construction period. Do not let soil accumulate until final cleaning.
 - 1. Restore louvers damaged during installation and construction period so no evidence remains of corrective work. If results of restoration are unsuccessful, as determined by Architect, remove damaged units and replace with new units.
 - a. Touch up minor abrasions in finishes with air-dried coating that matches color and gloss of, and is compatible with, factory-applied finish coating.

END OF SECTION 133419

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22/08/2024 10:00 AM HILLSBOROUGH COUNTY PLANNING DEPARTMENT 10/21/2024

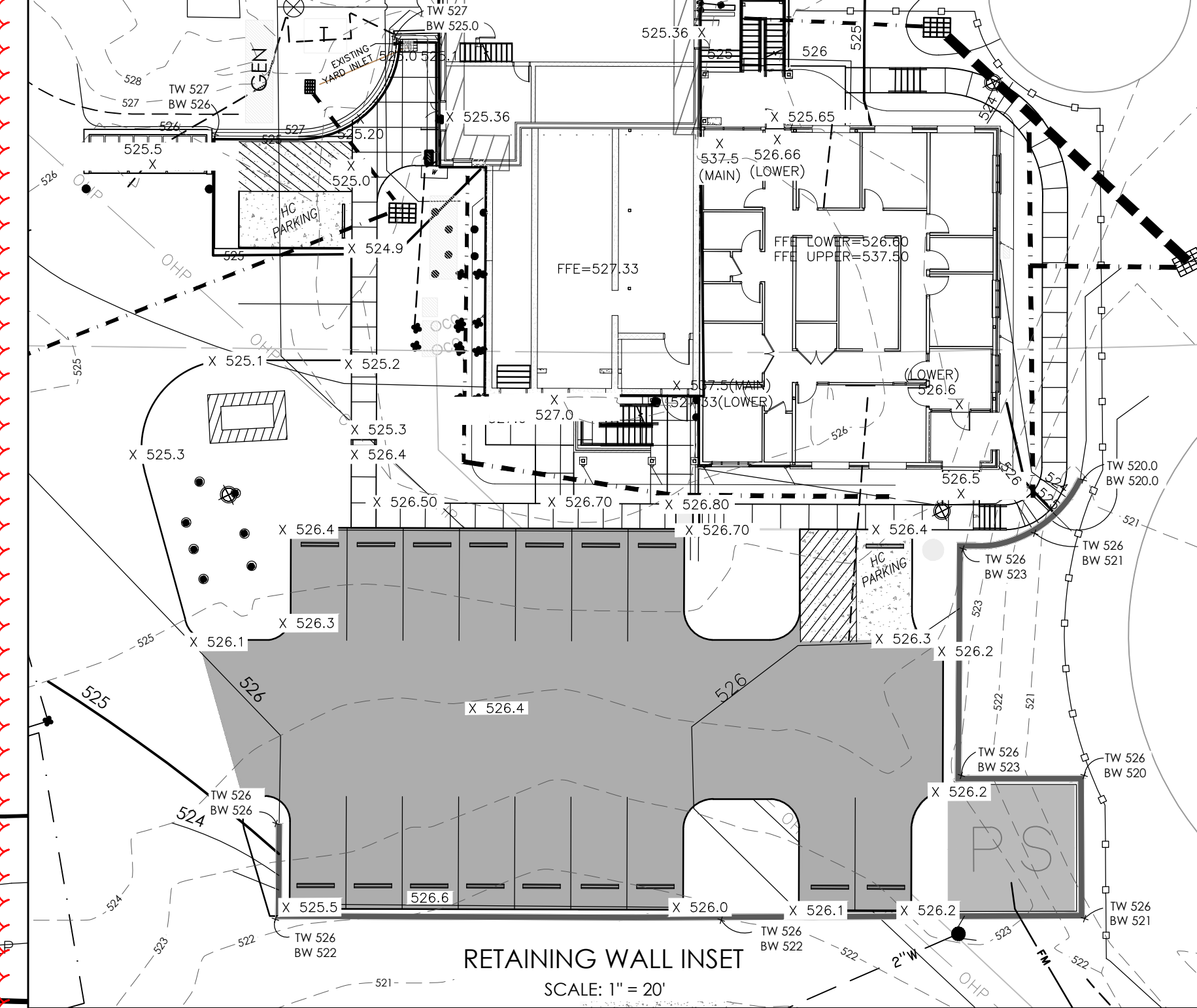


DISTURBED AREA=39,450 SF
IMPERVIOUS DATA
WEST SITE AREA
IMPERVIOUS (EXISTING)=843,820 SF
IMPERVIOUS DEMO=6,515 SF
(INCLUDES PLANNED REMOVAL OF EXISTING BUILDING AND SHED BY OWNER) (NOT IN THIS PROJECT)
IMPERVIOUS ADDED=6,130 SF
IMPERVIOUS (PROPOSED)=843,435 SF
IMPERVIOUS NET CHANGE=385 SF REDUCTION
EAST SITE AREA
IMPERVIOUS (EXISTING)=45,475 SF
IMPERVIOUS (PROPOSED)=45,475 SF
TOTAL SITE AREA
IMPERVIOUS (EXISTING)=889,295 SF
IMPERVIOUS (PROPOSED)=888,910 SF
IMPERVIOUS NET CHANGE=385 SF

PARKING
EXISTING (AF THOMPSON) 11(S)/0(HC)
EXISTING (WATER TREATMENT) 4(S)/0(HC)

PROPOSED
AF THOMPSON 23(S)/3(HC)
WATER TREATMENT 4(S)/0(HC)

MAX ALLOWED/PROPOSED=26 SPACES (AF THOMPSON)



NO.	REVISIONS	BY	DATE
8	ADDENDUM #3	PR	01.21.2026
5	BID SET	CH	12.19.2025
4	FLOOD PROTECTION REVISIONS	CH	11/21/2025
3	ADD ROOF LEADERS	T&H	7/24/2025
2	RESPONSE TO COMMENTS	T&H	5/15/2025
1	RESPONSE TO COMMENTS	T&H	4/16/2025

NORTH CAROLINA
PROFESSIONAL
SEAL
023461
ENGINEER
CHARLES N. HILL, JR.

NORTH CAROLINA
THOMAS & HUTTON
ENGINEERING
CO.
No. F-0871
CERTIFICATE OF AUTHORITY

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Durham, NC 27713 • 919.682.0368
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GRADING-UTILITY

2025
ADRON THOMPSON SITE
IMPROVEMENTS

PROJECT LOCATION:
HILLSBOROUGH, NORTH CAROLINA

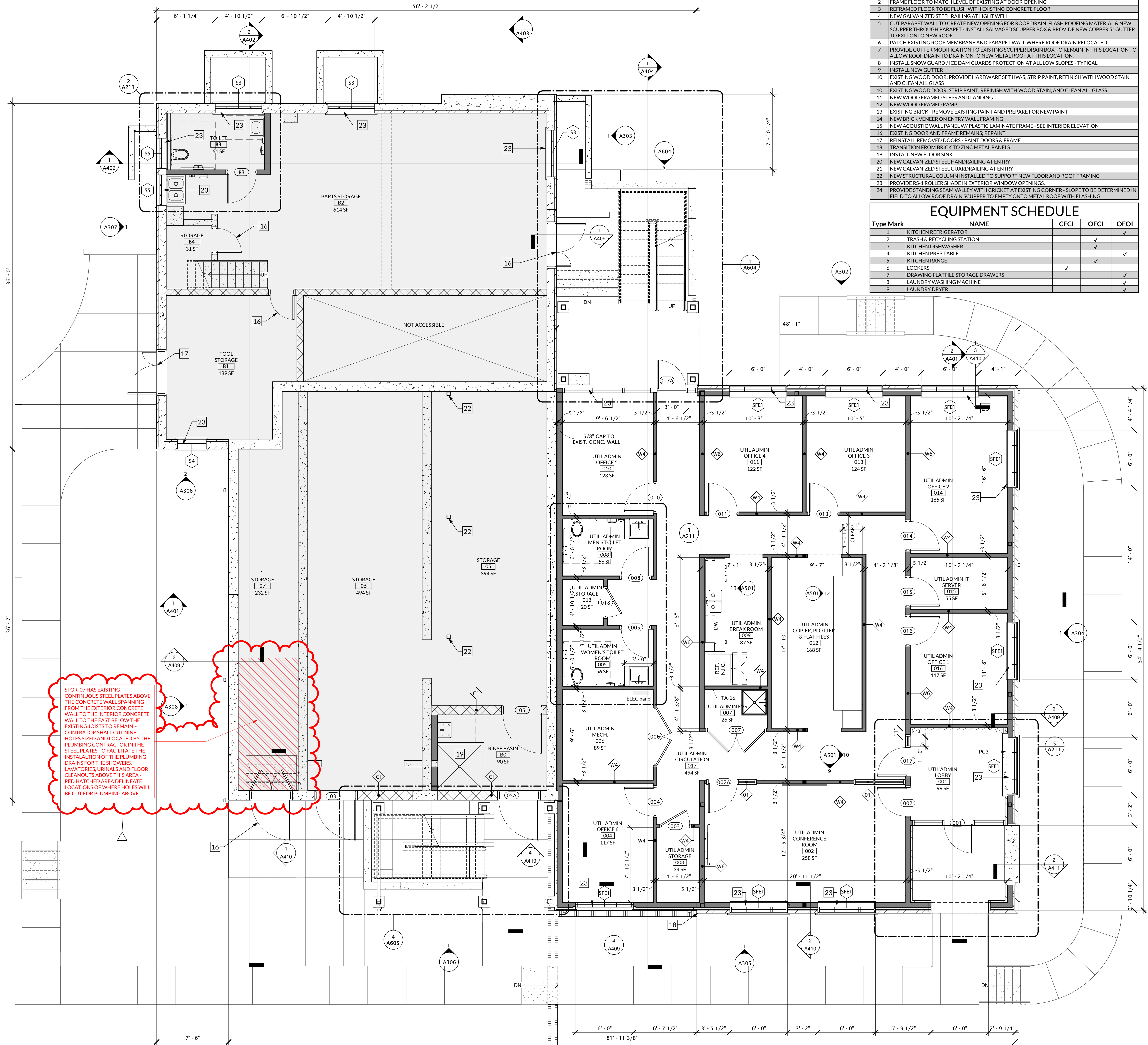
CLIENT/OWNER:
TOWN OF HILLSBOROUGH
NORTH CAROLINA

40 0 20 40
GRAPHIC SCALE:
1 INCH = 40 FEET

DATUM: HORIZ: NAD83 VERT: NAVD88

JOB NO:	30833
DATE:	02/26/2025
DRAWN:	
DESIGNED:	
REVIEWED:	
APPROVED:	
SCALE:	1" = 40'

C-5.0



KEYED RENOVATION NOTES				
No.	Note			
1	GC TO OVERFRAME THIS PORTION OF EXISTING ROOF			
2	FRAME FLOOR TO MATCH LEVEL OF EXISTING AT DOOR OPENING			
3	REFRAMED FLOOR TO BE FLUSH WITH EXISTING CONCRETE FLOOR			
4	NEW GALVANIZED STEEL RAILING AT LIGHT WELL			
5	CUT PARAPET WALL TO CREATE NEW OPENING FOR ROOF DRAIN, FLASH ROOFING MATERIAL & NEW SCUPPER THROUGH PARAPET - INSTALL SALVAGED SCUPPER BOX & PROVIDE NEW COPPER 5" GUTTER TO EXIT ONTO NEW ROOF			
6	PATCH EXISTING ROOF MEMBRANE AND PARAPET WALL WHERE ROOF DRAIN RELOCATED			
7	PROVIDE GUTTER MODIFICATION TO EXISTING SCUPPER DRAIN BOX TO REMAIN IN THIS LOCATION TO ALLOW ROOF DRAIN TO DRAIN ONTO NEW METAL ROOF AT THIS LOCATION			
8	INSTALL SNOW GUARD / ICE DAM GUARDS PROTECTION AT ALL LOW SLOPES - TYPICAL			
9	INSTALL NEW GUTTER			
10	EXISTING WOOD DOOR; PROVIDE HARDWARE SET HW-5, STRIP PAINT, REFINISH WITH WOOD STAIN, AND CLEAN ALL GLASS			
11	EXISTING WOOD DOOR; STRIP PAINT, REFINISH WITH WOOD STAIN, AND CLEAN ALL GLASS			
12	NEW WOOD FRAMED STEPS AND LANDING			
13	EXISTING BRICK - REMOVE EXISTING PAINT AND PREPARE FOR NEW PAINT			
14	NEW BRICK VENEER ON ENTRY WALL FRAMING			
15	NEW ACOUSTIC WALL PANEL W/ PLASTIC LAMINATE FRAME - SEE INTERIOR ELEVATION			
16	EXISTING DOOR AND FRAME REMAINS; REPAINT			
17	REINSTALL REMOVED DOORS - PAINT DOORS & FRAME			
18	TRANSITION FROM BRICK TO ZINC METAL PANELS			
19	INSTALL NEW FLOOR SINK			
20	NEW GALVANIZED STEEL HANDRAILING AT ENTRY			
21	NEW GALVANIZED STEEL GUARDRAILING AT ENTRY			
22	NEW STRUCTURAL COLUMN INSTALLED TO SUPPORT NEW FLOOR AND ROOF FRAMING			
23	PROVIDE RS-1 ROLLER SHADE IN EXTERIOR WINDOW OPENINGS			
24	PROVIDE STANDING SEAM VALLEY WITH CRICKET AT EXISTING CORNER - SLOPE TO BE DETERMINED IN FIELD TO ALLOW ROOF DRAIN SCUPPER TO EMPTY ONTO METAL ROOF WITH FLASHING			

EQUIPMENT SCHEDULE				
Type Mark	NAME	CFCI	OFCI	OFOI
1	KITCHEN REFRIGERATOR			✓
2	TRASH & RECYCLING STATION		✓	
3	KITCHEN DISHWASHER		✓	
4	KITCHEN PREP TABLE		✓	
5	KITCHEN RANGE		✓	
6	LOCKERS	✓		
7	DRAWING FLATFILE STORAGE DRAWERS			✓
8	LAUNDRY WASHING MACHINE			✓
9	LAUNDRY DRYER			✓

STOR. 07 HAS EXISTING CONTINUOUS STEEL PLATES ABOVE THE CONCRETE WALL SPANNING FROM THE EXTERIOR CONCRETE WALL TO THE INTERIOR CONCRETE WALL TO THE EAST BELOW THE EXISTING JOISTS TO REMAIN - CONTRACTOR SHALL CUT NINE HOLES SIZED AND LOCATED BY THE PLUMBING CONTRACTOR IN THE STEEL PLATES TO FACILITATE THE INSTALLATION OF THE PLUMBING DRAINS FOR THE SHOWERS, LAVATORIES, URINALS AND FLOOR CLEANOUTS ABOVE THIS AREA. RED HATCHED AREA DELINEATE LOCATIONS OF WHERE HOLES WILL BE CUT FOR PLUMBING ABOVE.

RNDarchitects

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Suite 204
Durham, NC 27707
(919) 490-1266
www.RNDarchitects.com

IN ASSOCIATION WITH:

PROFESSIONAL SEALS:

RND ARCHITECTS, P.A.
REGISTERED ARCHITECT
NORTH CAROLINA
DURHAM, N.C.
CERT. NO. 400

DAVID BLAKE DANKS
REGISTERED ARCHITECT
NORTH CAROLINA
DURHAM, N.C.
11381

01.21.2026

PROJECT INFORMATION:

Town of Hillsborough
Adron F. Thompson
Addition & Renovation
715 Dimmocks Mill Road, Hillsborough, NC

KEY PLAN:

Plan North

Not to Scale

REVISIONS

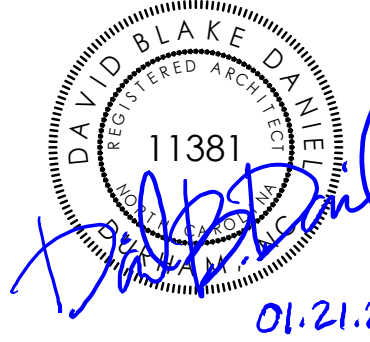
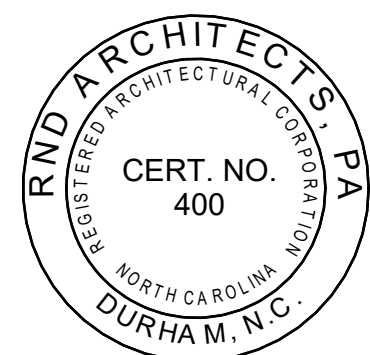
No.	Date	Description
1	01.21.2026	ADDENDUM No. 3

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Original drawing is 30"x42". Do not scale contents.

PROJECT:	DRAWN:	CHECKED:	DATE:
2231.01	EMC, JSM	DBD	12.19.2025

SHEET NAME:

RENOVATION ADDITION PLAN
- LOWER LEVEL
A201



Town of Hillsborough
Adron F. Thompson
Addition & Renovation

715 Dimmocks Mill Road, Hillsborough, NC

KEY PLAN:



Not to Scale

REVISIONS

No.	Date	Description
1	01.21.2026	ADDENDUM No. 3

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Original drawing is 30"x42". Do not scale contents.

PROJECT:	DRAWN:	CHECKED:	DATE:
2231.01	EMC	DBD	12.19.2025

SHEET NAME:

RENOVATION ADDITION PLAN
- MAIN LEVEL

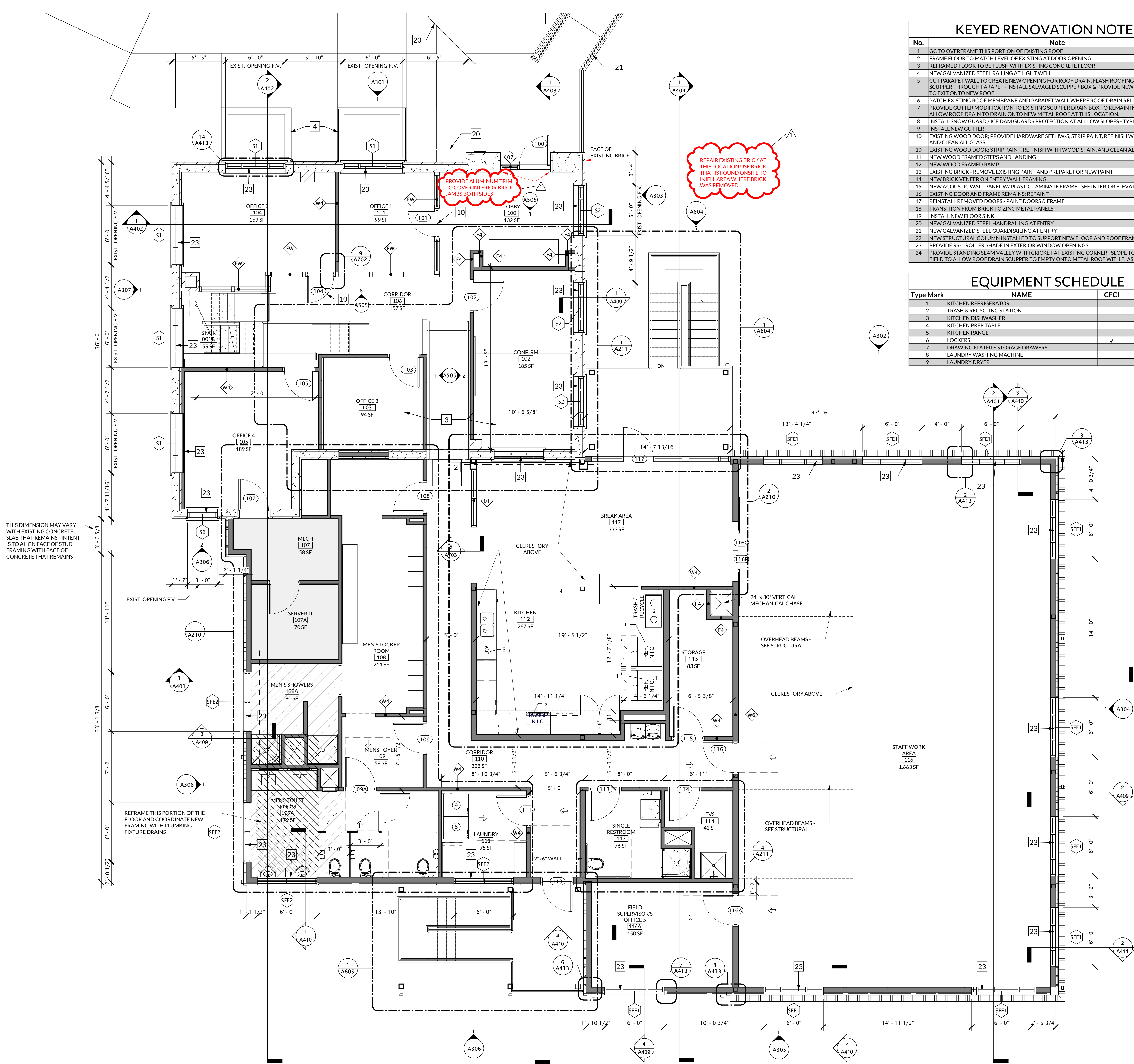
A202

KEYED RENOVATION NOTES

No.	Note
1	GC TO OVERFRAME THIS PORTION OF EXISTING ROOF
2	FRAME FLOOR TO MATCH LEVEL OF EXISTING AT DOOR OPENING
3	REFRAMED FLOOR TO BE FLUSH WITH EXISTING CONCRETE FLOOR
4	NEW GALVANIZED STEEL RAILING AT LIGHT WELL
5	CUT PARAPET WALL TO CREATE NEW OPENING FOR ROOF DRAIN, FLASH ROOFING MATERIAL & NEW SCUPPER THROUGH PARAPET - INSTALL SALVAGED SCUPPER BOX & PROVIDE NEW COPPER 5" GUTTER TO EXIT ONTO NEW ROOF
6	PATCH EXISTING ROOF MEMBRANE AND PARAPET WALL WHERE ROOF DRAIN RELOCATED
7	PROVIDE GUTTER MODIFICATION TO EXISTING SCUPPER DRAIN BOX TO REMAIN IN THIS LOCATION TO ALLOW ROOF DRAIN TO DRAIN ONTO NEW METAL ROOF AT THIS LOCATION
8	INSTALL SNOW GUARD / ICE DAM GUARDS PROTECTION AT ALL LOW SLOPES - TYPICAL
9	INSTALL NEW GUTTER
10	EXISTING WOOD DOOR: STRIP PAINT, REFINISH WITH WOOD STAIN, AND CLEAN ALL GLASS
11	NEW WOOD FRAMED STEPS AND LANDING
12	NEW WOOD FRAMED RAMP
13	EXISTING BRICK - REMOVE EXISTING PAINT AND PREPARE FOR NEW PAINT
14	NEW BRICK VENEER ON ENTRY WALL FRAMING
15	NEW ACOUSTIC WALL PANEL W/ PLASTIC LAMINATE FRAME - SEE INTERIOR ELEVATION
16	EXISTING DOOR AND FRAME REMAINS; REPAINT
17	REINSTALL REMOVED DOORS - PAINT DOORS & FRAME
18	TRANSITION FROM BRICK TO ZINC METAL PANELS
19	INSTALL NEW FLOOR SINK
20	NEW GALVANIZED STEEL HANDRAILING AT ENTRY
21	NEW GALVANIZED STEEL GUARDRAILING AT ENTRY
22	NEW STRUCTURAL COLUMN INSTALLED TO SUPPORT NEW FLOOR AND ROOF FRAMING
23	PROVIDE RS-1 ROLLER SHADE IN EXTERIOR WINDOW OPENINGS
24	PROVIDE STANDING SEAM VALLEY WITH CRICKET AT EXISTING CORNER - SLOPE TO BE DETERMINED IN FIELD TO ALLOW ROOF DRAIN SCUPPER TO EMPTY ONTO METAL ROOF WITH FLASHING

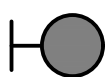
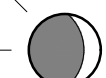
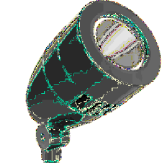
EQUIPMENT SCHEDULE

Type Mark	NAME	CFCI	OFCI	OFOI
1	KITCHEN REFRIGERATOR			✓
2	TRASH & RECYCLING STATION		✓	✓
3	KITCHEN DISHWASHER		✓	
4	KITCHEN PREP TABLE		✓	✓
5	KITCHEN RANGE		✓	
6	LOCKERS	✓		
7	DRAWING FLATFILE STORAGE DRAWERS			✓
8	LAUNDRY WASHING MACHINE			✓
9	LAUNDRY DRYER			✓



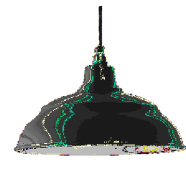
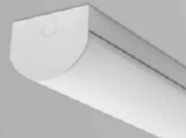
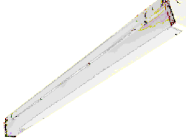
1 ADDITION & RENOVATION PLAN - MAIN LEVEL
A202 1/4" = 1'-0"

ALL DIMENSIONS & WALL TYPE TAGS FOR WALLS SHOWN IN ENLARGED PLAN REGIONS ARE DIMENSIONED AND TAGGED IN THE ENLARGED PLANS - TYPICAL

EXTERIOR LIGHT FIXTURE SCHEDULE							
SYMBOL/LABEL	PRODUCT IMAGE	MANUFACTURER	MODEL DESIGNATION	LAMPING	VOLTAGE	VA	FIXTURE DESCRIPTION
EA 		LSI INDUSTRIES	MRM-LED-36L-SIL-FT-UNV-DM-IL-MSBT2L	LED 38,000 LMS CRI=70	120-277V	288W	POWDER-COATED ALUMINUM HOUSING MOUNTS TO ROUND OR SQUARE POLES, WEATHER PROOF SILICON LENS, UNIVERSAL VOLTAGE, 0-10V DIMMING LED, >100K EXPECTED HOURS. OPTION MSBT2L = INTEGRAL BLUETOOTH MOTION AND PHOTOCCELL SENSOR OPTION IL = INTEGRAL LOUVER (SHARP SPILL LIGHT CUTOFF)
EA2 	SAME AS 'EA' EXCEPT AS NOTED	LSI INDUSTRIES	MRM-LED-36L-FT-UNV-DM-MSBT2L	LED 38,000 LMS CRI=70	120-277V	288W	POWDER-COATED ALUMINUM HOUSING MOUNTS TO ROUND OR SQUARE POLES, WEATHER PROOF SILICON LENS, UNIVERSAL VOLTAGE, 0-10V DIMMING LED, >100K EXPECTED HOURS. OPTION MSBT2L = INTEGRAL BLUETOOTH MOTION AND PHOTOCCELL SENSOR
EA3 	SAME AS 'EA' EXCEPT AS NOTED	LSI INDUSTRIES	MRM-LED-18L-SIL-3-UNV-DM-MSBT2L	LED 19,400 LMS CRI=70	120-277V	135W	SAME AS 'EA' WITH LOWER WATTAGE AND TYPE 3 DISTRIBUTION.
EB 		LSI INDUSTRIES	WPSLL-6L-UNV-40-BLK	LED 6500 LMS 4000K CRI>70	120-277V	60W	LARGE SLIM WALL PACK, POWDER-COATED ALUMINUM HOUSING SURFACE MOUNTS TO J-BOX OR WALL, WEATHER PROOF TEMPERED CLEAR-GLASS LENS, UNIVERSAL VOLTAGE, >100K EXPECTED HOURS.
EC 		LSI INDUSTRIES	WPSLS-1L-UNV-40-BLK	LED 1200 LMS 4000K CRI>70	120-277V	12W	SMALL SLIM WALL PACK, POWDER-COATED ALUMINUM HOUSING SURFACE MOUNTS TO J-BOX OR WALL, WEATHER PROOF TEMPERED CLEAR-GLASS LENS, UNIVERSAL VOLTAGE, >100K EXPECTED HOURS.
ED 		GENERATION LIGHTING	88940EN3-12	LED 800 LMS 3000K	120V	9W	OUTDOOR WALL MOUNTED LANTERN IN BLACK FINISH WITH SATIN ETCHED GLASS, SUPPLY FIXTURE WITH 9W LED BULB, LISTED FOR WET LOCATION.
EF 		SATCO	65-661	LED 3300 LUMENS 4000K CRI=80	120-277V	30W	OUTDOOR WALL MOUNTED GOOSENECK FIXTURE WITH ADJUSTABLE HOOT, WET LOCATION LISTED, BLACK FINISH.
Z 		RAB LIGHTING OR EQUIVALENT	HSLED28NA	LED, 4000K 3080 LUMENS	120-277V	26W	FLAG LIGHT GROUND MOUNTED, FLAG NARROW SPOT LIGHT, LED, SET LISTED, INSTALL PER MANUFACTURERS INSTALLATION INSTRUCTIONS, AIM FIXTURES TO PROVIDE BEST FLAG COVERAGE, FIELD COORDINATE LOCATIONS WITH ARCHITECT AND CIVIL ENGINEER.
NOTES: 1. FIXTURES SHALL BE APPROVED WITH ALL NECESSARY MOUNTING HARDWARE, OPTIONS, LAMPS AND COMPONENTS AS REQUIRED FOR THE INSTALLATION AND AS DESCRIBED IN THE SCHEDULE. 2. ALL EXT SIGNS AND EMERGENCY LIGHTS SHALL BE CIRCUITED TO THE LINE SIDE OF THE LOCAL AREA LIGHTING SWITCH. 3. EQUAL FIXTURES IN APPEARANCE, QUALITY AND PERFORMANCE MAY BE SUBMITTED UNLESS OTHERWISE.							

OCCUPANCY SENSOR SCHEDULE				
SYMBOL / LABEL	DESCRIPTION	MANUFACTURER	MODEL NUMBER	NOTES
OS	DUAL TECHNOLOGY, LOW VOLTAGE, SMALL MOTION 360° OCCUPANCY SENSOR.	ACUTY OR APPROVED EQUAL.		REFER TO SPEC SECTION 26 0923 FOR SPECIFICATIONS.
OSD	DUAL TECHNOLOGY, LOW VOLTAGE, LARGE MOTION 360° OCCUPANCY SENSOR.	ACUTY OR APPROVED EQUAL.	NOM-POT-10-R-B-ADCC	PROVIDE A DIMMING POWER PACK FOR EACH SWITCH ZONE. PROVIDE PLENUM RATED LOW VOLTAGE CONTROL CABLE BETWEEN DEVICES AND PLENUM RATED 0-10V DIMMING CONTROL CABLE BETWEEN POWER PACK AND FIXTURE DRIVERS, WHERE LOW VOLTAGE CABLES ARE EXPOSED INSTALL IN CONDUIT.
	0-10V DIMMING POWER PACK	ACUTY OR APPROVED EQUAL.	NPP16D	PROVIDE A POWER PACK PER SWITCH ZONE.
	SWITCHING POWER PACK	ACUTY OR APPROVED EQUAL.	NPP16	PROVIDE A POWER PACK PER SWITCH ZONE. THIS POWER PACK ONLY USED WHERE SPACES HAVE NO DIMMER INSTALLED.

FLOORBOX SCHEDULE				
SUBSYMBOL / LABEL	SIZE	SERVICES	CONNECTIVITY	GENERAL DESCRIPTION
FB2	6"	POWER	(1) 3/4"	CONCRETE FLOOR BOX WITH DIVIDER FOR SEPARATE POWER AND LOW VOLTAGE SERVICES. BOX SHALL HAVE (1) 3/4" TRADE SIZE KNOCK-OUT OPENING AND (1) 1-1/4" TRADE SIZE KNOCK-OUT OPENING. COVER PLATE TO BE SELECTED BY THE ARCHITECT, COORDINATE LOCATIONS WITH THE OWNER, EQUAL BY HUBBELL ACCEPTABLE.
		AV / DATA	(1) 1-1/4"	
FB	6"	POWER	(1) 3/4"	2-HR FIRE RATED POKE-THRU WITH DUPLEX RECEPTACLES AND CENTER MOUNTING PLATE FOR COMMUNICATIONS. UTILIZE LEGRAND EVOLUTION SERIES CATALOG 6ATSPX WHERE "XX" REPRESENTS THE FINISH. FLOOR BOX FURNISHED WITH DUPLEX RECEPTACLE WITH MOUNTING PLATE, CENTER COMPARTMENT WITH MOUNTING PLATES FOR COMMUNICATIONS, AND BOTTOM FEED COMPARTMENT FOR CONDUIT CONNECTION. SUITABLE FOR MOUNTING IN POLISHED CONCRETE FLOOR. PROVIDE 3/4" CONDUIT FOR POWER AND 1-1/4" CONDUIT FOR DATA. PROVIDE SUBMITTALS TO ENGINEER AND ARCHITECT FOR APPROVAL, EQUAL BY HUBBELL ACCEPTABLE.
		AV / DATA	(1) 1-1/4"	
NOTES:				

LIGHT FIXTURE SCHEDULE							
SYMBOL/LABEL	PRODUCT IMAGE	MANUFACTURER	MODEL DESIGNATION	LAMPING	VOLTAGE	VA	FIXTURE DESCRIPTION
A		LSI LIGHTING	LPEC22-20L-UNV-DM1-40-90	LED 2000 LUMEN 4000K CRI=90	120-277V	17W	2X2 SHALLOW DIRECT-INDIRECT CENTER BASKET LED TROFFER, 0-10V DIMMING.
A2		LSI LIGHTING	LPEC24-LED-40L-UNV-DM1-40-90	LED 4000 LUMEN 4000K CRI=90	120-277V	32W	2X4 SHALLOW DIRECT-INDIRECT CENTER BASKET LED TROFFER, 0-10V DIMMING.
B		LSI LIGHTING	SFP22-LED-30-UE-DIM-40	LED 3000 LUMEN 4000K CRI=80	120-277V	30W	2X2 FLAT PANEL LED, 0-10V DIMMING.
B2		LSI LIGHTING	SFP24-LED-50-UE-DIM-40	LED 5000 LUMEN 4000K CRI=80	120-277V	50W	2X4 FLAT PANEL LED, 0-10V DIMMING.
C		LSI LIGHTING OR APPROVED EQUAL	LDL3-48-LED-WW-24	LED 400 LUMENS/FT 3500K CRI=80	24V	5W/FT	LED ACCENT STRIP, AMIABLE, DIMMABLE, USED AS COVE FIXTURE ABOVE DROP CLOUD CEILINGS IN EXISTING BUILDING. ORDER POWER SUPPLY FOR EACH ROOM WHERE FIXTURES ARE SPECIFIED.
D		DMF LIGHTING	DC4-T2-S-D-10-GA-00-3500K-BK	LED 1000 LUMENS 3500K	120V	9W	4" CEILING PENDANT CYLINDER, 24" STEM MOUNT, GENERAL AMBIENT BEAM SPREAD.
E		EXISTING RELOCATED	-	-	-	-	EXISTING RLM TYPE FIXTURES TO BE RELOCATED. PAINT AND RELAMP WITH LED REPLACEMENT FIXTURES.
F		LITHONIA	WF6-LED-304050-90-MW	LED 920 LUMEN 4000K CRI=90	120V	13W	6" RECESSED CAN LIGHT, SHALLOW, INSTALLED IN HARD CEILING.
F2	SAME AS "F"	SAME AS "F"	SAME AS "F"	SAME AS "F"	-	-	SAME AS "F" INSTALLED IN LAY-IN CEILING GRID.
G		LSI LIGHTING	SDL4-LED-30L-FL-UNV-35-80CRI	LED 3000 LUMENS 3500K CRI=80	120-277V	23W	INDOOR INDUSTRIAL LED STRIP LIGHT, LISTED FOR DAMP LOCATIONS.
H(X) (XX=LENGTH)		METALUMEN	RM40-LED-40K-C-MEMB-SA-L1-1-W-1	LED 1290 LUMEN/FT 4000K CRI=80	120V	12W/FT	4" WIDE, WALL MOUNT, LINEAR LED FIXTURE, 100% DIRECT, VARYING LENGTHS
J		JUNO LIGHTING	JSBC-5IN-30K-90CRI-MI-M6	LED 350 LUMENS 3000K CRI=90	120V	11W	SHALLOW 5" SURFACE MOUNTED LED FIXTURE, DAMP LOCATION.
N(X) (X=LENGTH)		MARK ARCHITECTURAL LIGHTING	SZPD-LIP-MSLB-90CRI-40K-650LMF-SCT-MINI-MVOLT-WITT-TT-T1-36A-ROCY-WHTCY	LED 600 LUMENS/FT 4000K CRI=90	120-277V	5W/FT	SUSPENDED LED LINEAR LIGHT FIXTURE OVER CONFERENCE TABLE, 6'10"/12" ACCORDING TO RENOVATION PLANS. 0-10V DIMMING, WHITE SATIN FINISH, T-BAR CEILING BRACKET WITH 36" ADJUSTABLE SUSPENSION.
R		LSI LIGHTING	EG3-4-LED-6L-DA-S-UNV-35-80	LED 6000 LUMENS 3500K CRI=80	120-277V	48W	4" VAPOR TIGHT, WET LOCATION, GASKETED LED FIXTURE
T & T2		METALUX LIGHTING	"T": 8-LBED-LD4-12-SYMW-UNV-L840 "T2": 8-LBED-LD4-9-ASYMW-UNV-L840	LED T1: 12000 LUMENS T2: 9000 LUMENS	120-277V	85W 62W	8' LOW BAY LINEAR SERIES WITH IMPACT RATED LENS AND HOUSING, DAMP LOCATION LISTED.
X		BEGHELLI	EPX-SA	LED	120-277V	5W	AC ONLY LED EXT SIG, RED LETTERS ON WHITE BACK GROUND, UNIVERSAL MOUNT.
NOTES: 1. FIXTURES SHALL BE APPROVED WITH ALL NECESSARY MOUNTING HARDWARE, OPTIONS, LAMPS AND COMPONENTS AS REQUIRED FOR THE INSTALLATION AND AS DESCRIBED IN THE SCHEDULE. 2. ARCHITECT TO SELECT ALL FINISH COLORS. 3. PROVIDE SEPARATE POWER SUPPLIES, MOUNTING BRACKETS, END CAPS, ACCESSORIES AND ALL COMPONENTS TO ENSURE A COMPLETE AND CLEAN INSTALLATION. 4. COORDINATE EXACT MOUNTING DETAILS, COLORS AND LENGTHS WITH ARCHITECTURAL DETAILS PRIOR TO ORDERING. 5. EQUAL FIXTURES IN APPEARANCE, QUALITY AND PERFORMANCE MAY BE SUBMITTED UNLESS OTHERWISE NOTED BY THE ENGINEER, ARCHITECT OR OWNER.							

ELECTRICAL SYMBOLS		FIRE ALARM SYMBOLS	
	DIMMER (0-10V OR AS REQUIRED FOR FIXTURE)		FIRE ALARM CONTROL PANEL
	LIGHT SWITCH (3-WAY - 4-WAY) AS INDICATED		FIRE ALARM ANNUNCIATOR PANEL
	SWITCH OCCUPANCY SENSOR		FIRE ALARM NOTIFICATION APPLIANCE BOOSTER PANEL
	TIMER SWITCH		FIRE ALARM TERMINAL CABINET
	DIMMER 0-10V OCCUPANCY SENSOR		SMOKE DETECTOR
	NEW HOMERUN TO PANEL 'A', CIRCUIT 15		HEAT DETECTOR
	NEW UNSWITCHED LIGHTING CIRCUITRY		SMOKE DAMPER
	NEW POWER OR LIGHTING CIRCUITRY		DOUBLE-ACTION PULL STATION
	DUPLEX RECEPTACLE		HORN & STROBE (# INDICATES CANDELA)
	QUAD RECEPTACLE		STROBE (# INDICATES CANDELA)
	FLOOR BOX (POWER & DATA) - SEE SCHEDULE		DUCT DETECTOR
	TELEPHONE/DATA OUTLET (2 CABLES PER LOCATION UNLESS OTHERWISE NOTED ON PLANS)		REMOTE ALARM INDICATOR WITH KEYED TEST SWITCH
	DISCONNECT SWITCH FUSE AS SPECIFIED WITH TOOL DEFEATABLE DOOR INTERLOCK.		ADDRESSABLE CONTROL MODULE
	DISTRIBUTION PANEL AS SPECIFIED		ISOLATION MODULE
	JUNCTION BOX		RELAY
	BACK BOX WITH BLANK COVER PLATE		WP DENOTES WEATHERPROOF DEVICE
	HATCHING INDICATES DEVICE TO BE DEMOLISHED (TYPE.)		
	RELOCATE EXISTING DEVICE		
	EXISTING DEVICE RELOCATED		
	PANIC BUTTON OUTLET		
	DOOR CONTACT		
	CARD READER OUTLET		
	DOOR RELEASE OUTLET		
	GFI BLANK TRIP UNIT		
	SECURITY MOTION DETECTOR OUTLET		
	CEILING MOUNTED OCCUPANCY SENSOR		
	GROUND FAULT CIRCUIT INTERRUPTOR		
	WEATHER PROOF		
	WIRELESS ACCESS POINT		
	EXTERIOR POE CAMERA (BY OWNER, ROUGH-IN BY EC)		
	INTERIOR POE CAMERA (BY OWNER, ROUGH-IN BY EC)		
	CARD READER AT ACCESS CONTROLLED DOOR		
	ELECTRIC LOCK (STRIKE OR LOCK PER DOOR SCHEDULE)		
	DOOR POSITION SWITCH AT ACCESS CONTROLLED DOOR		
	ELECTRICAL CONTRACTOR		
	CEILING MOUNTED		

- NOTE:
- ITEMS IN BOLD INDICATE NEW WORK. THIN LINE WEIGHT ITEMS INDICATE EXISTING CONDITIONS.
 - NOT ALL DEVICES ARE IDENTIFIED IN THE LIST ABOVE. REFER TO DRAWINGS FOR ADDITIONAL INFORMATION.
- GENERAL ELECTRICAL DEMOLITION NOTES:**
- THE ELECTRICAL CONTRACTOR SHALL REMOVE ALL EXISTING LIGHT FIXTURES, SWITCHES, RECEPTACLES, POWER JUNCTION AND OUTLET BOXES, VOICE AND DATA TELECOMMUNICATION OUTLETS, TELEVISION OUTLETS, FIRE ALARM SYSTEM DEVICES AND OUTLETS, AND ASSOCIATED ELECTRICAL AND SIGNALING SYSTEM PANELS, CABINETS AND EQUIPMENTS AS INDICATED ON DEMOLITION DRAWINGS.
 - THE ELECTRICAL CONTRACTOR SHALL DISCONNECT ELECTRICAL SERVICES TO ALL EQUIPMENT FOR REMOVAL BY THE GENERAL CONTRACTOR. COORDINATE THE DISCONNECTION AND DEMOLITION OF EQUIPMENT CLOSELY WITH THE GENERAL CONTRACTOR.
 - REMOVE POWER AND SIGNALING SYSTEMS WIRING AND RACEWAY CIRCUITRY WHICH SERVES FIXTURES, DEVICES, OUTLETS AND/OR EQUIPMENT BEING REMOVED. REMOVE THIS CIRCUITRY BACK TO ITS SOURCE.
 - COORDINATE REMOVAL OF POWER TO ALL TELECOM AND AV ELECTRONIC EQUIPMENT WITH OWNER.
 - COORDINATE ANY AND ALL WORK WITH ALL OTHER TRADES PRIOR TO DEMOLITION SO AS TO AVOID CONFLICT DURING CONSTRUCTION.
 - THE CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS IN ORDER TO OBTAIN A FULL UNDERSTANDING OF WORK TO BE DONE. THE CONTRACTOR SHALL INSPECT AND OBSERVE THE EXISTING SITE, BUILDING, STRUCTURAL, PLUMBING, MECHANICAL AND ELECTRICAL CONDITIONS PRIOR TO BEGINNING DEMOLITION AND SHALL PERFORM HIS WORK IN A MANNER TO ACCOMMODATE THESE EXISTING CONDITIONS.
 - SINCE THIS RENOVATION INCLUDES A GUT OF THE EXISTING BUILDING, NOT ALL DEVICES ARE SHOWN WITHIN THIS AREA. CONTRACTOR SHALL VISIT SITE TO UNDERSTAND FULL SCOPE OF DEMOLITION.
 - ALL EXISTING POWER PANELS SHALL REMAIN IN SERVICE DURING PHASE 1 AND SHALL BE REMOVED COMPLETE DURING PHASE 2.
 - WHERE DEVICES ARE REMOVED IN AN EXISTING MASONRY WALL TO REMAIN, PROVIDE BLANK COVER PLATES OR PATCH HOLE TO MATCH EXISTING SURFACE.

- GENERAL ELECTRICAL NOTES:**
- THE CONTRACTOR SHALL VERIFY EQUIPMENT NAMEPLATE INFORMATION BEFORE INSTALLING CONDUIT, WIRING, CIRCUIT BREAKERS, DISCONNECT SWITCHES OR FUSES.
 - CONTRACTOR SHALL NOT CHOOSE PRODUCTS OTHER THAN THE BASIS OF DESIGN, WITH OUT COORDINATION WITH THE ENGINEER. CONTRACTOR ASSUMES FULL RESPONSIBILITY FOR ALL COSTS RELATED TO REPLACING ANY UNAPPROVED SUBSTITUTIONS.
 - ARCHITECTURAL AND STRUCTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE ELECTRICAL DRAWINGS REGARDING BUILDING CONSTRUCTION, DIMENSION AND ARRANGEMENT. LINES THAT REQUIRE SLOPE, SUCH AS PLUMBING WASTE LINES SHALL TAKE PRECEDENCE OVER ELECTRICAL LINES. CONTRACTOR SHALL COORDINATE CLOSELY WITH ALL TRADES TO AVOID CONFLICTS AND SHALL PROVIDE ALL OFFSETS AND EQUIPMENT AS REQUIRED TO FIT THE ELECTRICAL WORK INTO THE AVAILABLE SPACE.
 - ALL DISCONNECTS SHALL HAVE A GROUND BAR, A NEUTRAL BAR AND TOOL DEFEATABLE DOOR INTERLOCKS.
 - COORDINATE ANY AND ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION SO AS TO AVOID CONFLICT DURING CONSTRUCTION.
 - ALL PANELS SHALL HAVE TYPED, COMPLETED DIRECTORIES INDICATING EQUIPMENT SERVED AND ROOM NUMBER (AS INDICATED ON FINAL BUILDING ROOM SIGNAGE) OF EQUIPMENT LOCATION, OR SPARE, OR SPACE.
 - COORDINATE ALL DEVICES AND OUTLETS ABOVE, BELOW AND ABOUT CASEWORK CLOSELY WITH CASEWORK CONTRACTOR IN ORDER TO LOCATE AT THE PROPER LOCATION AND HEIGHT.
 - THE CONTRACTOR SHOULD READ AND UNDERSTAND THE ENTIRE SET OF CONSTRUCTION DOCUMENTS WHICH INCLUDES BUT IS NOT LIMITED TO THE SPECIFICATIONS, ARCHITECTURAL, CIVIL, STRUCTURAL AND ALL ENGINEERING DRAWINGS, SO THAT HE MAY UNDERSTAND THE FULL SCOPE OF WORK AND CONVEY THE PROPER REQUIRED MATERIALS AND METHODS OF INSTALLATION TO THE ESTIMATORS, SUPPLIERS AND INSTALLERS.
 - THE CONTRACTOR SHALL INSPECT AND OBSERVE THE EXISTING SITE, BUILDING, STRUCTURAL, PLUMBING, MECHANICAL AND ELECTRICAL CONDITIONS PRIOR TO BEGINNING WORK AND SHALL PROVIDE AND INSTALL FIXTURES, DEVICES AND EQUIPMENT IN A MANNER TO ACCOMMODATE THESE EXISTING CONDITIONS.
 - CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS IN ORDER TO OBTAIN A FULL UNDERSTANDING OF WORK TO BE DONE.
 - NO EXISTING POWER (CIRCUIT BREAKER, DISCONNECT SWITCHES, ETC.) IS TO BE TURNED OFF UNTIL VERIFIED THAT IT IS NOT IN CURRENT USE AND UNTIL APPROVED BY THE OWNER.
 - ALL ELECTRICAL EQUIPMENT TERMINALS SHALL BE RATED FOR 75°C CONDUCTORS.
 - FINAL LOCATIONS OF ALL POWER DEVICES SHALL BE COORDINATED WITH FINAL EQUIPMENT PLAN PRIOR TO ROUGH-IN OF ANY LOCATIONS.
 - IN FINISHED SPACES, ALL CONDUIT SHALL BE CONCEALED AND ALL OUTLET BOXES SHALL BE FLUSH MOUNTED.

**Town of Hillsborough
Adron F. Thompson
Addition & Renovation
and Vehicle Storage
Building**

715 Dimmocks Mill Road, Hillsborough, NC

KEY PLAN:

Plan
North

Not to Scale

REVISIONS

No.	Date	Description
1	1/21/26	ADDENDUM #3

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Original drawing is 30"x42" - Do not scale contents.

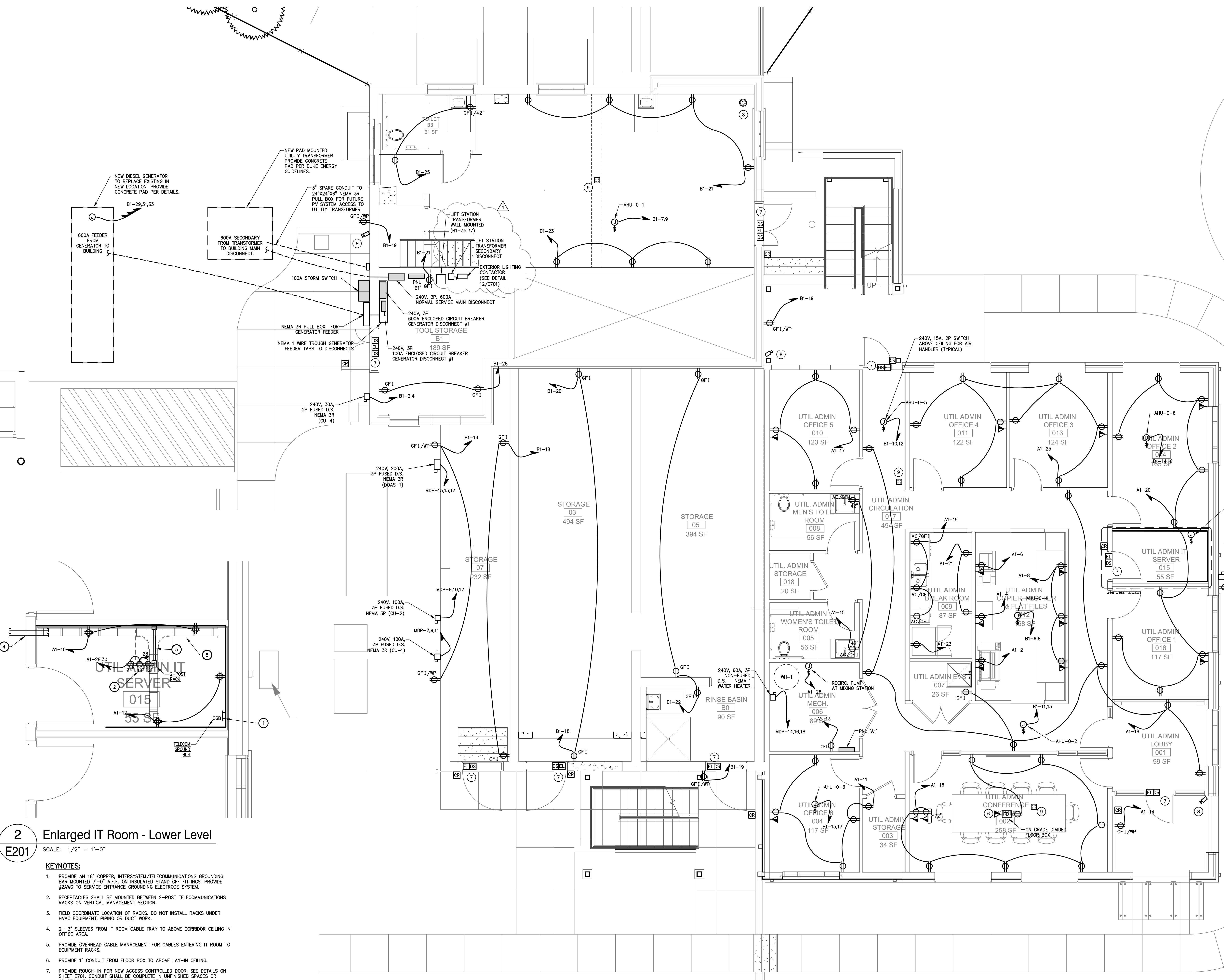
PROJECTS: DRAWN: CHECKED: DATE:

2231.01 JLH JDH 2025.12.19

SHEET NAME:

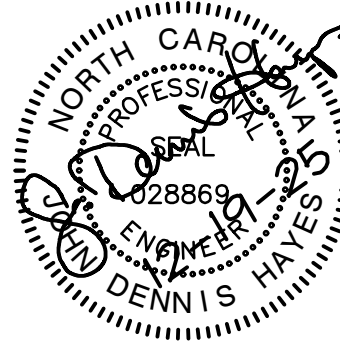
Electrical Renovation Plan - Lower Level

E201



1 Electrical Renovation Plan - Lower Level
SCALE: 1/4" = 1'-0"

E201

Town of Hillsborough
Adron F. Thompson
Addition & Renovation
and Vehicle Storage
Building

715 Dimmocks Mill Road, Hillsborough, NC

Plan North
Not to Scale

REVISIONS

No.	Date	Description
1	1/21/26	ADDENDUM #3

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2231.01 JDH JDH 2025.12.19

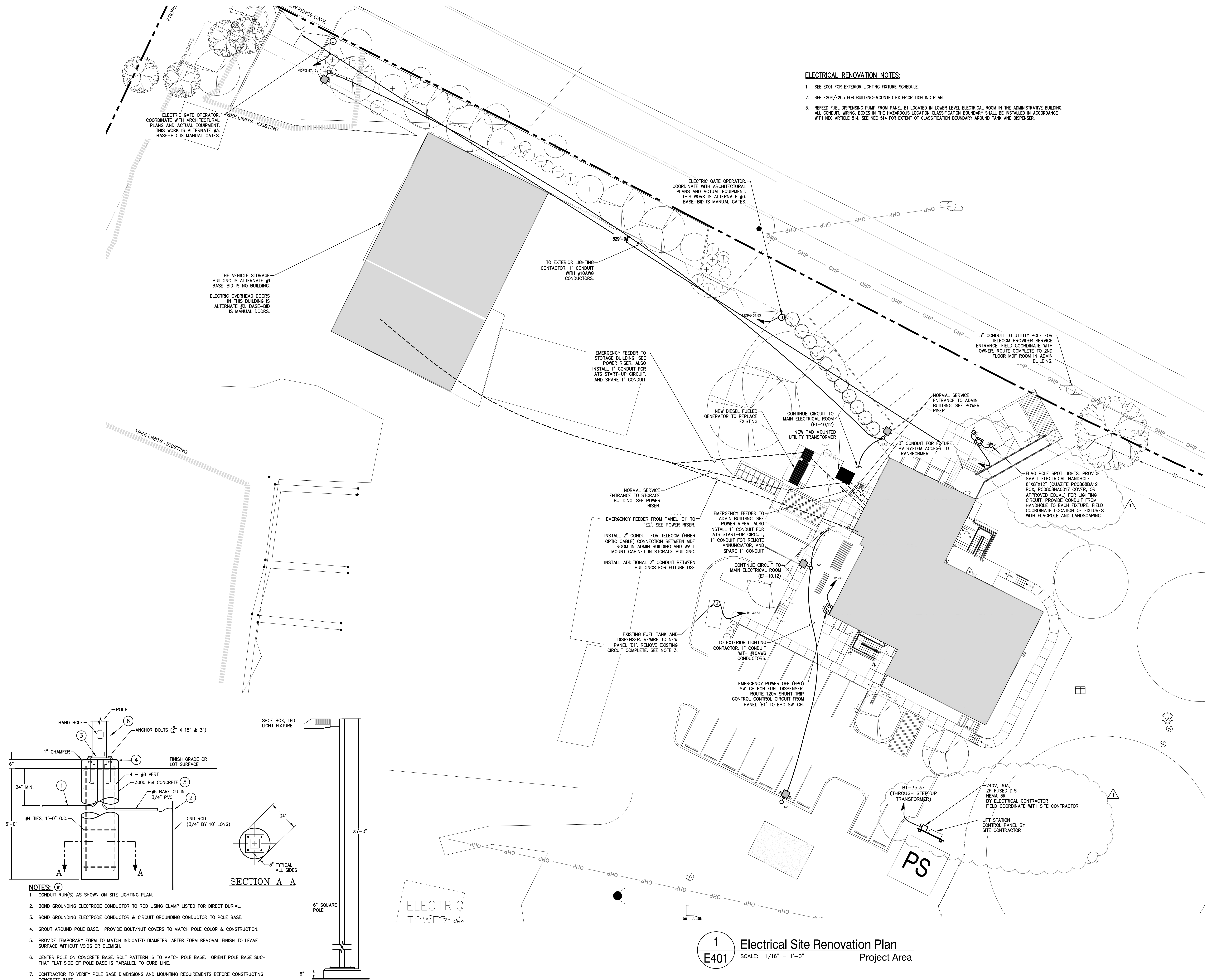
SHEET NAME:

Site Electrical Plan

E401

ELECTRICAL RENOVATION NOTES:

- SEE E001 FOR EXTERIOR LIGHTING FIXTURE SCHEDULE.
- SEE E204/E205 FOR BUILDING-MOUNTED EXTERIOR LIGHTING PLAN.
- REFEED FUEL DISPENSING PUMP FROM PANEL B1 LOCATED IN LOWER LEVEL ELECTRICAL ROOM IN THE ADMINISTRATIVE BUILDING. ALL CONDUIT, WIRING, BOXES IN THE HAZARDOUS LOCATION CLASSIFICATION BOUNDARY SHALL BE INSTALLED IN ACCORDANCE WITH NEC ARTICLE 514. SEE NEC 514 FOR EXTENT OF CLASSIFICATION BOUNDARY AROUND TANK AND DISPENSER.



NOTES:

- CONDUIT RUN(S) AS SHOWN ON SITE LIGHTING PLAN.
- BOND GROUNDING ELECTRODE CONDUCTOR TO ROD USING CLAMP LISTED FOR DIRECT BURIAL.
- BOND GROUNDING ELECTRODE CONDUCTOR & CIRCUIT GROUNDING CONDUCTOR TO POLE BASE.
- GROUT AROUND POLE BASE. PROVIDE BOLT/NUT COVERS TO MATCH POLE COLOR & CONSTRUCTION.
- PROVIDE TEMPORARY FORM TO MATCH INDICATED DIAMETER. AFTER FORM REMOVAL FINISH TO LEAVE SURFACE WITHOUT VOIDS OR BLEMISH.
- CENTER POLE ON CONCRETE BASE. BOLT PATTERN IS TO MATCH POLE BASE. ORIENT POLE BASE SUCH THAT FLAT SIDE OF POLE BASE IS PARALLEL TO CURB LINE.
- CONTRACTOR TO VERIFY POLE BASE DIMENSIONS AND MOUNTING REQUIREMENTS BEFORE CONSTRUCTING CONCRETE BASE.

2
E401

25' Light Pole Detail

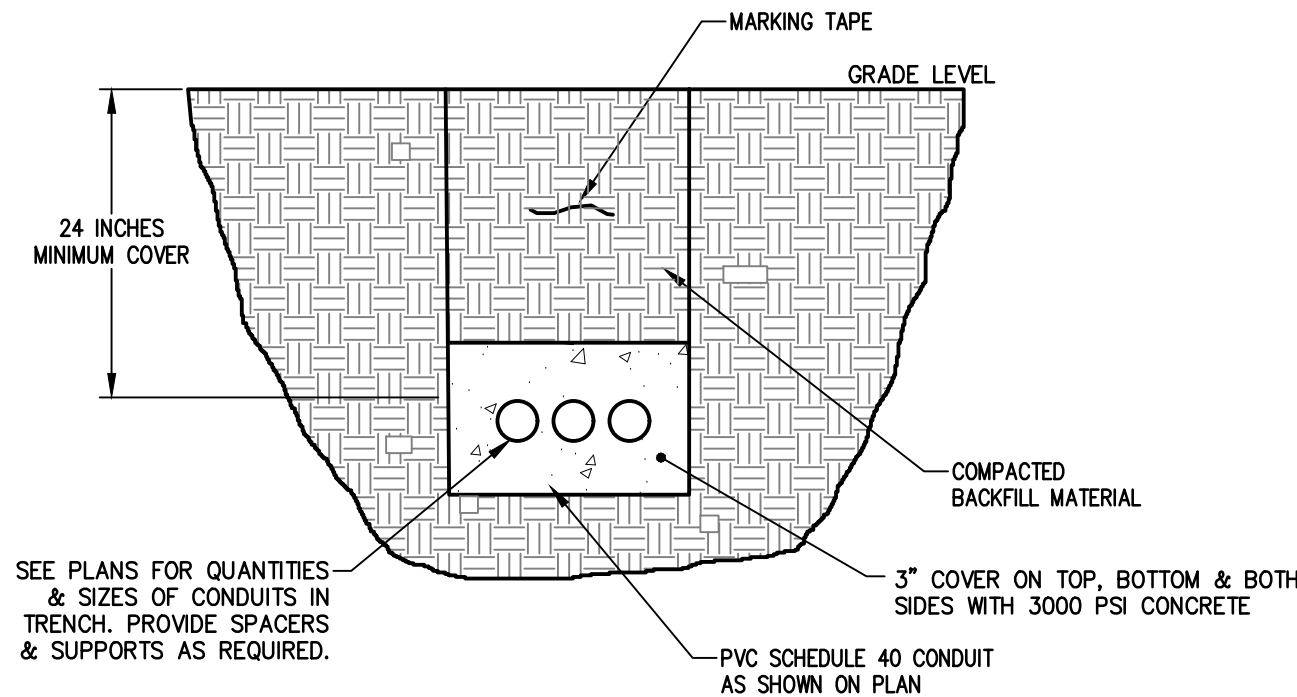
SCALE: NONE

1
E401

Electrical Site Renovation Plan

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

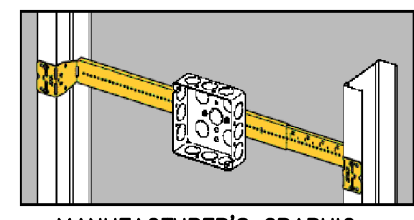
Project Area



1 Trench Detail
E701 SCALE: NONE

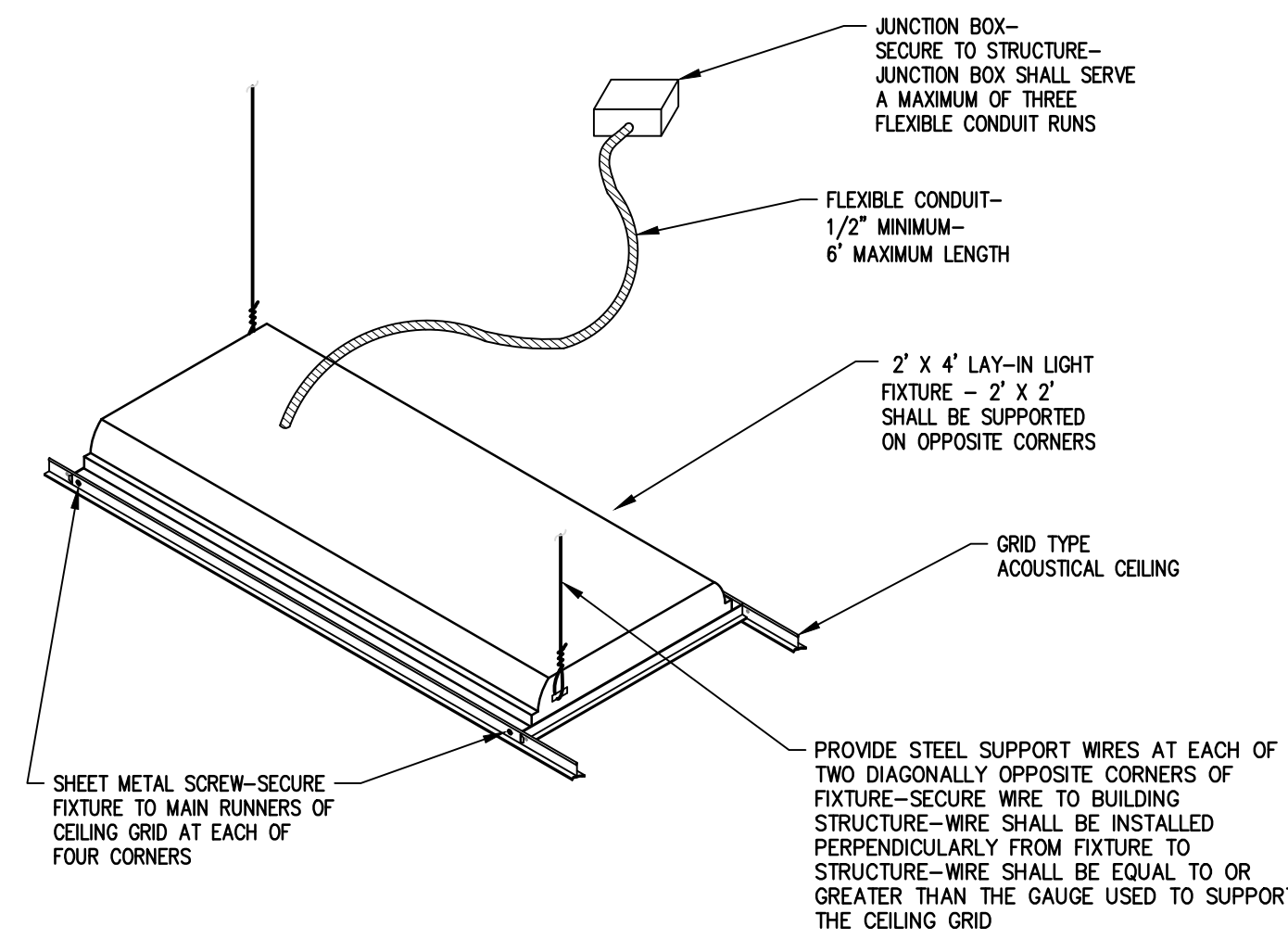
NOTES:

1. PROVIDE A NEW TRENCH FOR CONDUITS AS SHOWN IN PLAN. PROVIDE MINIMUM COVER AS NOTED. SPARE CONDUITS SHALL BE SEALED AND PROVIDED WITH FULL STRINGS. CONDUIT SEALS SHALL HAVE A FULL CORD ATTACHMENT.
2. BACKFILL AND COMPACT THE TRENCH WITH THE REMOVED MATERIAL.
3. PROVIDE 4MM DETECTABLE MARKING TAPE BELOW GRADE LEVEL AS SHOWN. MARKING TAPE SHALL BE MARKED "ELECTRICAL".

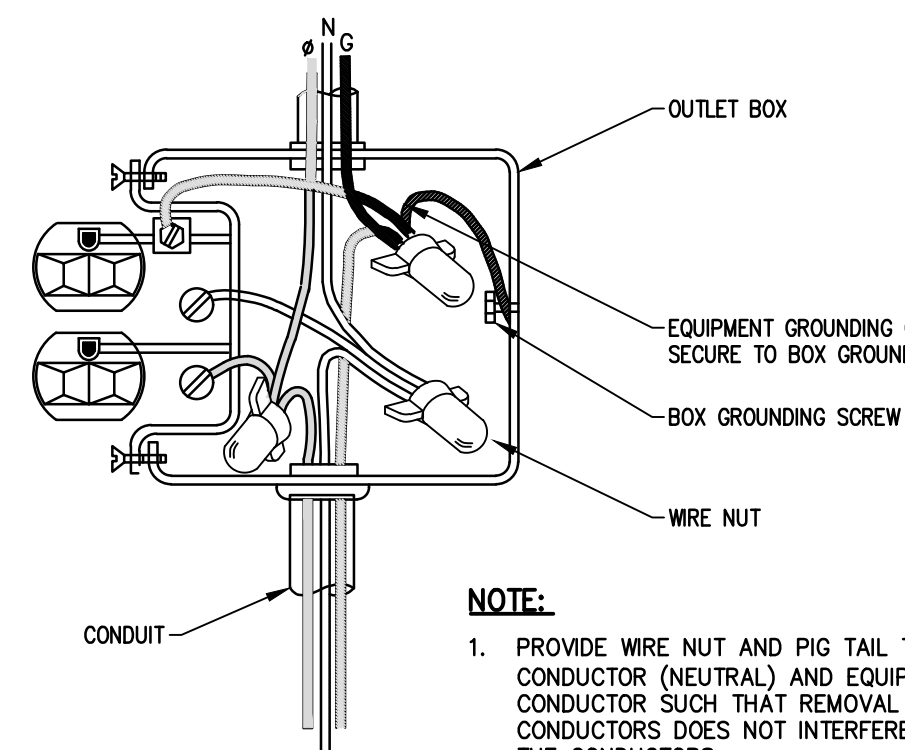


BOX MOUNTING BRACKET-USE APPROPRIATE BRACKET FOR STUD SPACING (16", 24", OR TELESCOPING BRACKET FOR 11" TO 18" AND 15" TO 28")-USE APPROPRIATE BRACKET FOR DEPTH OF BOX (1 1/2" OR 2 1/8")-SECURE TO STUD AT FOUR PLACES

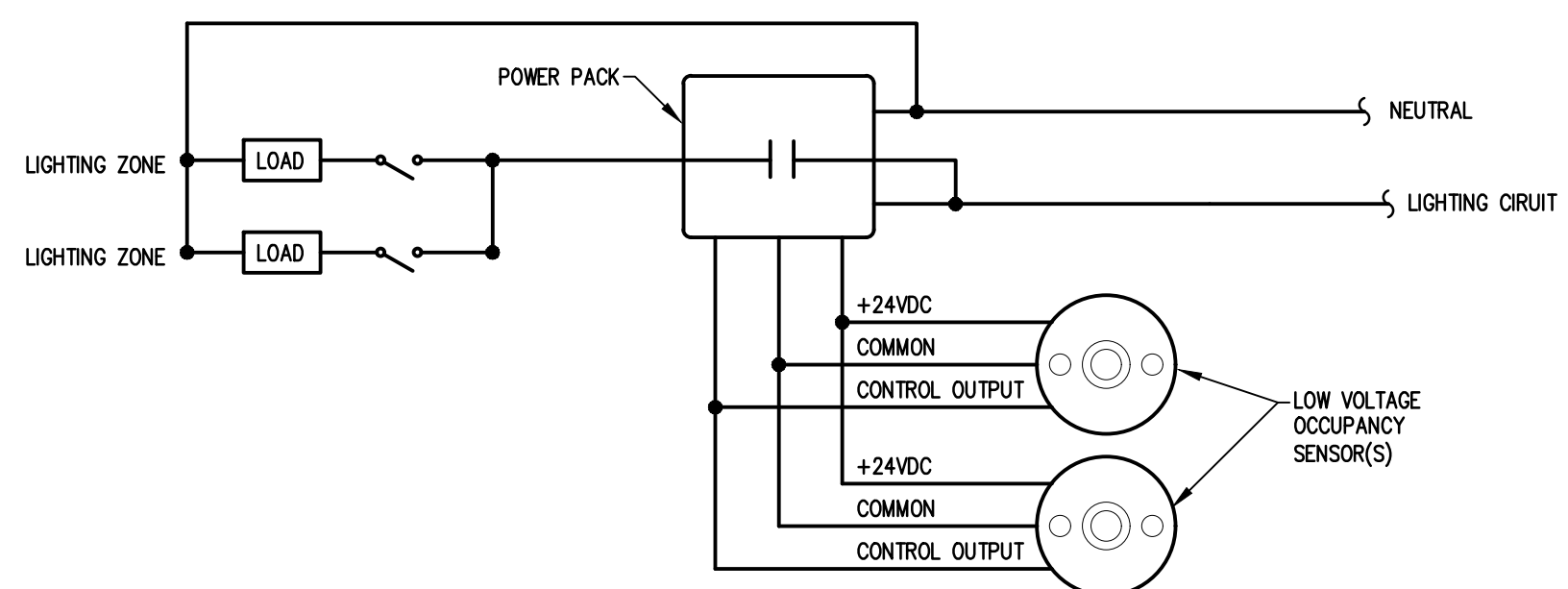
2 Outlet Box Mounting
E701 SCALE: NONE



3 Lay-In Light Fixture Installation
E701 SCALE: NONE



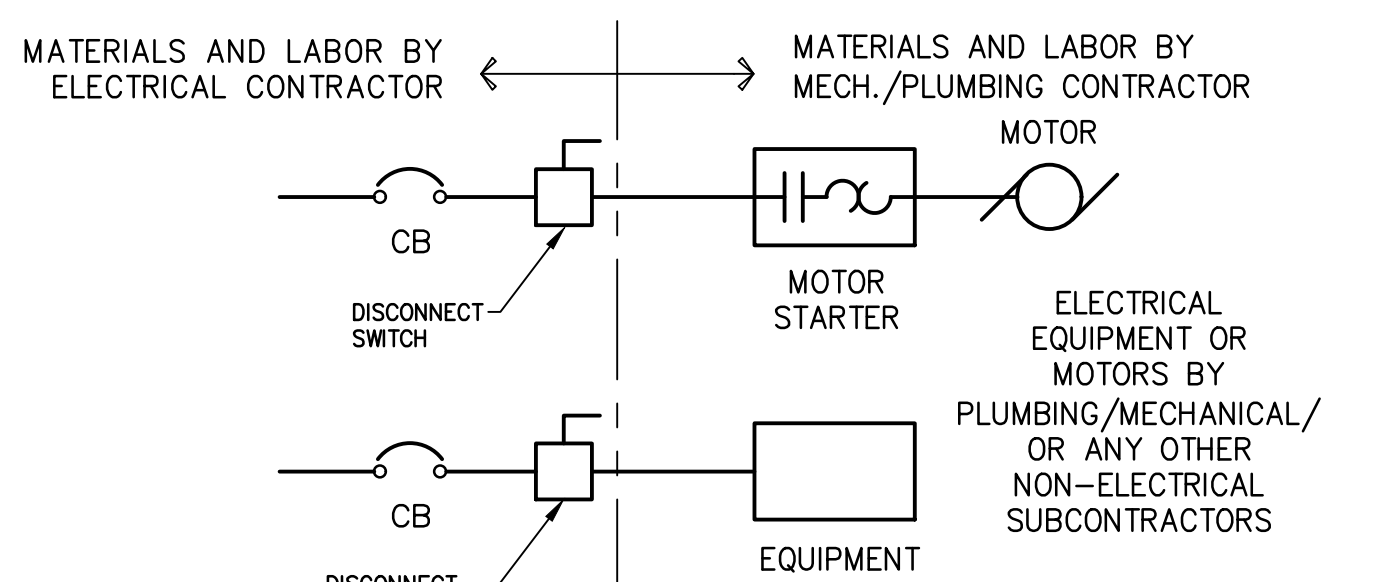
4 Receptacle Wiring Detail
E701 SCALE: NONE



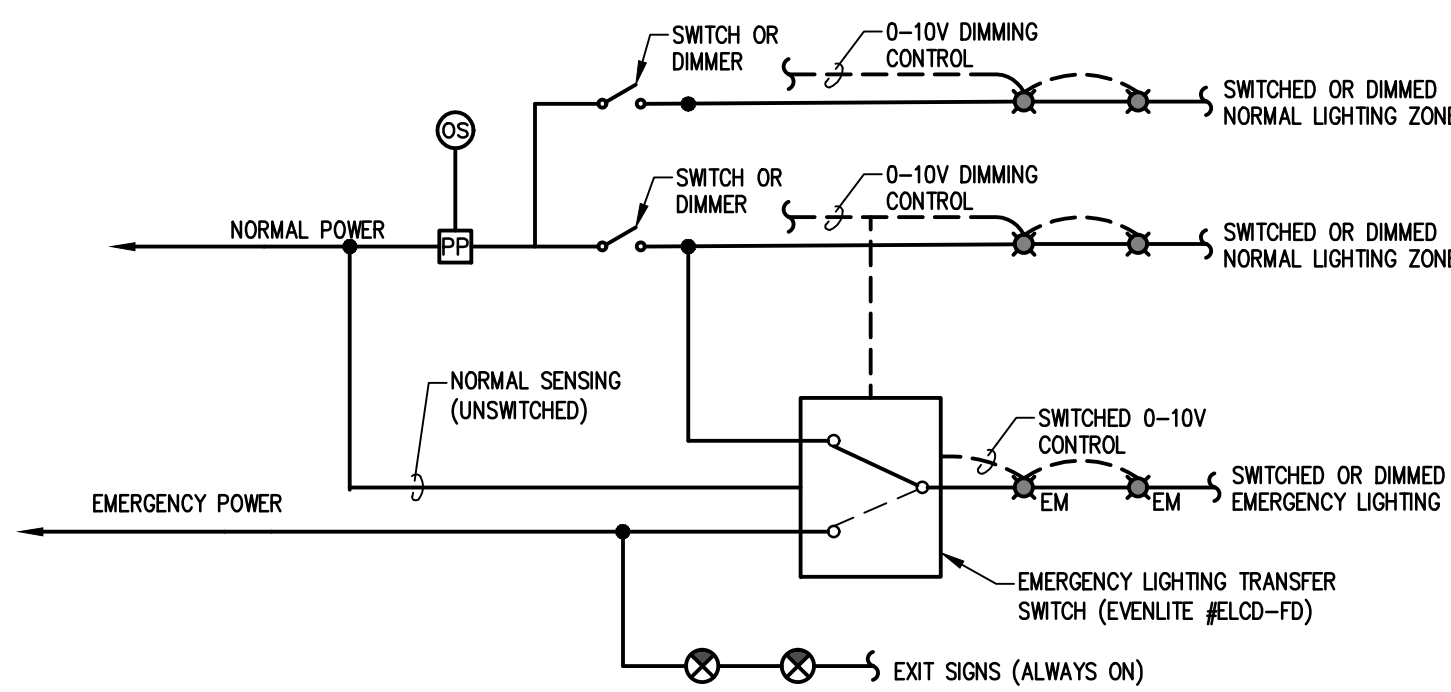
5 Occupancy Sensor Wiring
E701 SCALE: NONE LOW VOLTAGE

OCCUPANCY SENSOR SCHEDULE:

1. LOW VOLTAGE CEILING MOUNTED EXTENDED RANGE, DUAL TECHNOLOGY OCCUPANCY SENSOR TO BE INSTALLED IN CORRIDORS AND LARGE COMMON AREAS AS SHOWN ON DRAWINGS. PROVIDE 120V, 20A POWER PACKS FOR EACH AREA. THIS IS A TYPICAL DIAGRAM. SEE ADDITIONAL LIGHTING CONTROL DETAILS ON SHEET E501 FOR MORE INFORMATION.



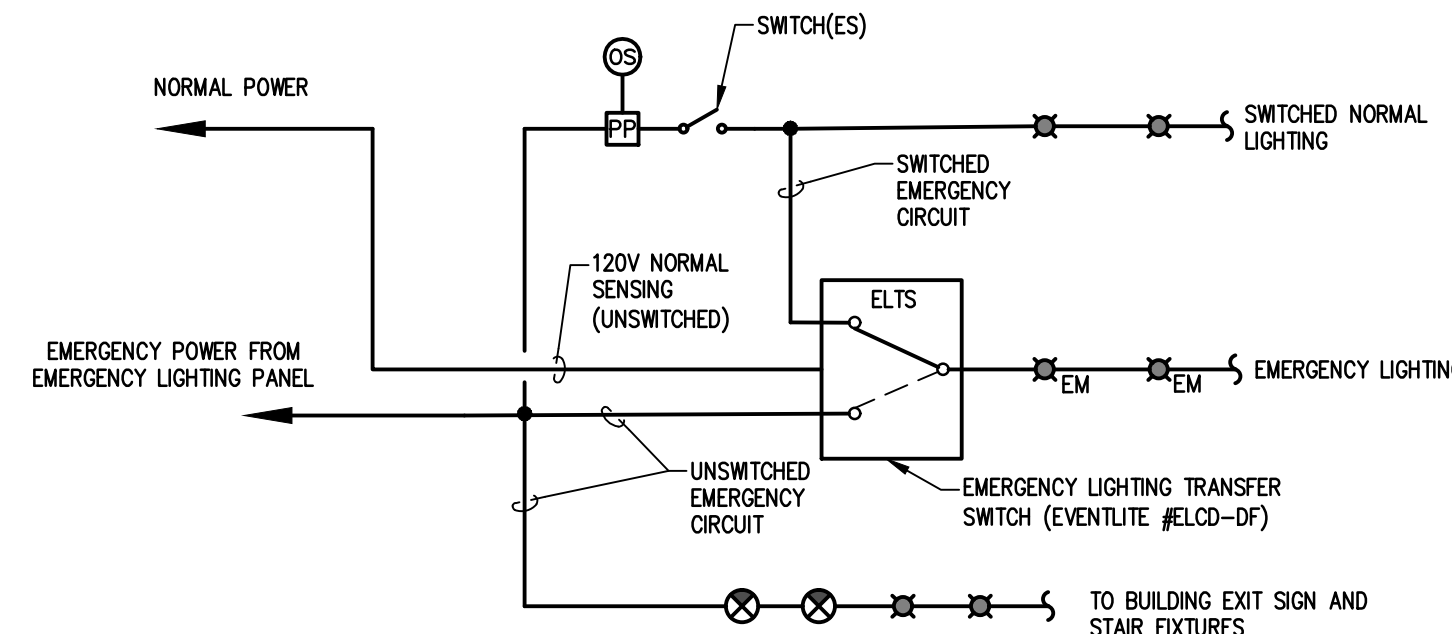
6 Division of Work Detail
E701 SCALE: Not To Scale



7 Typical Meeting Room Lighting Control
E701 SCALE: Not To Scale

NOTES:

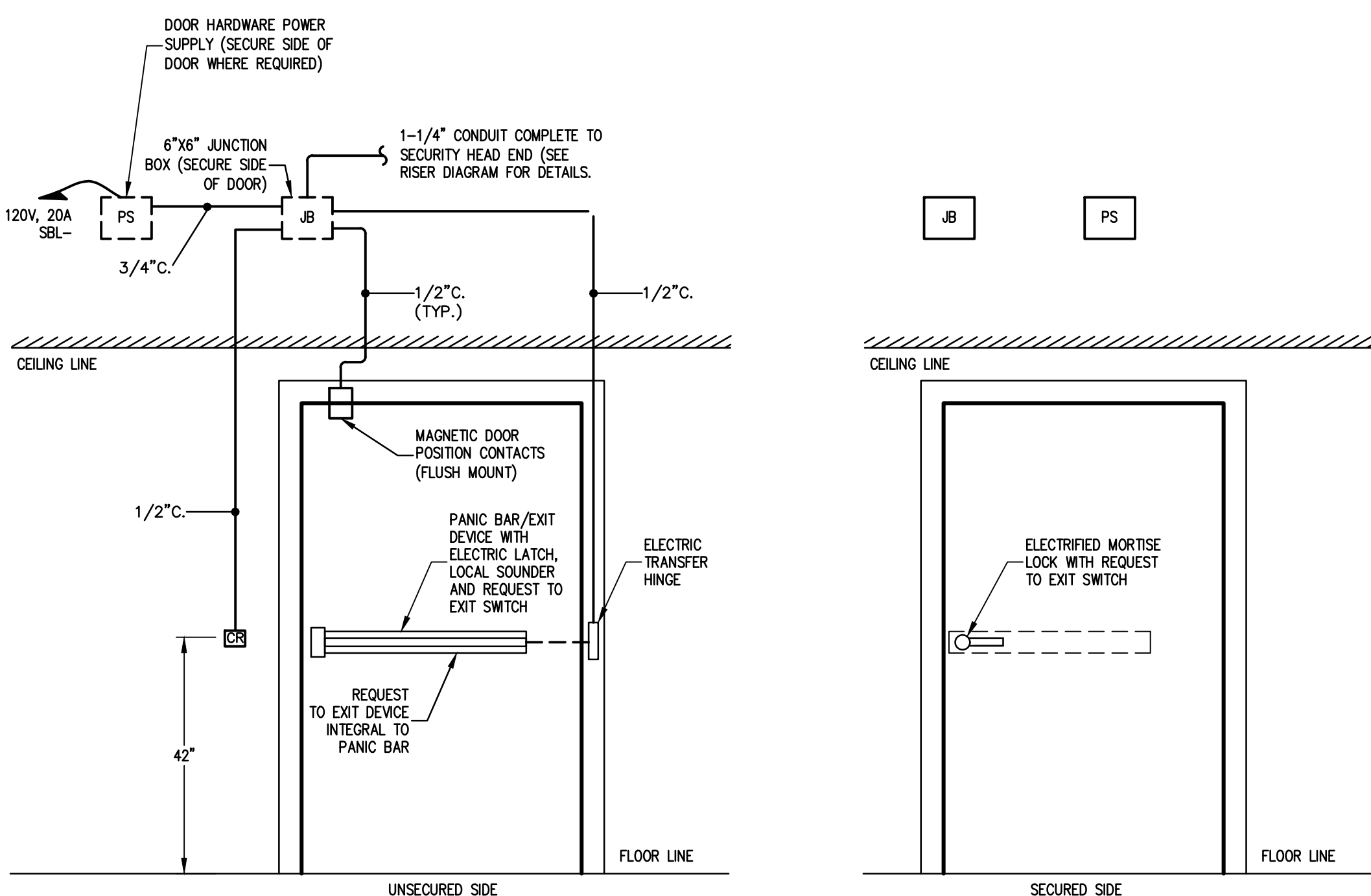
1. THIS DETAIL REPRESENTS A TYPICAL INSTALLATION FOR LARGER SPACES WITH MULTIPLE ZONES OF SWITCHING OR DIMMING, OCCUPANCY CONTROL, AND EMERGENCY LIGHTING. SEE PLANS FOR EXACT EQUIPMENT SIZES AND LOCATIONS.
2. OCCUPANCY SENSOR (POWER PACK) IS AHEAD OF ALL ZONE CONTROLS.
3. SWITCHED OR DIMMED LEGS FOR EMERGENCY 'EM' FIXTURES ARE ROUTED THROUGH AN EMERGENCY LIGHTING TRANSFER SWITCH (ELTS). 0-10V DIMMING CONTROL CIRCUIT TO 'EM' FIXTURES IS ALSO ROUTED THROUGH ELTS.
4. UNDER NORMAL CONDITIONS THE 'EM' FIXTURES ARE CONTROLLED BY OCCUPANCY SENSORS AND ROOM LIGHTING CONTROLS VIA THE NORMAL LIGHTING CIRCUIT. IN THE EVENT OF LOSS OF POWER FROM NORMAL SOURCE, THE ELTS TRANSFERS TO THE EMERGENCY POWER SOURCE AND DISCONNECTS DIMMING CONTROL CIRCUIT RESULTING IN 'EM' FIXTURES TURNING FULL ON.



8 Corridor Lighting Control Schematic
E701 SCALE: Not To Scale

NOTES:

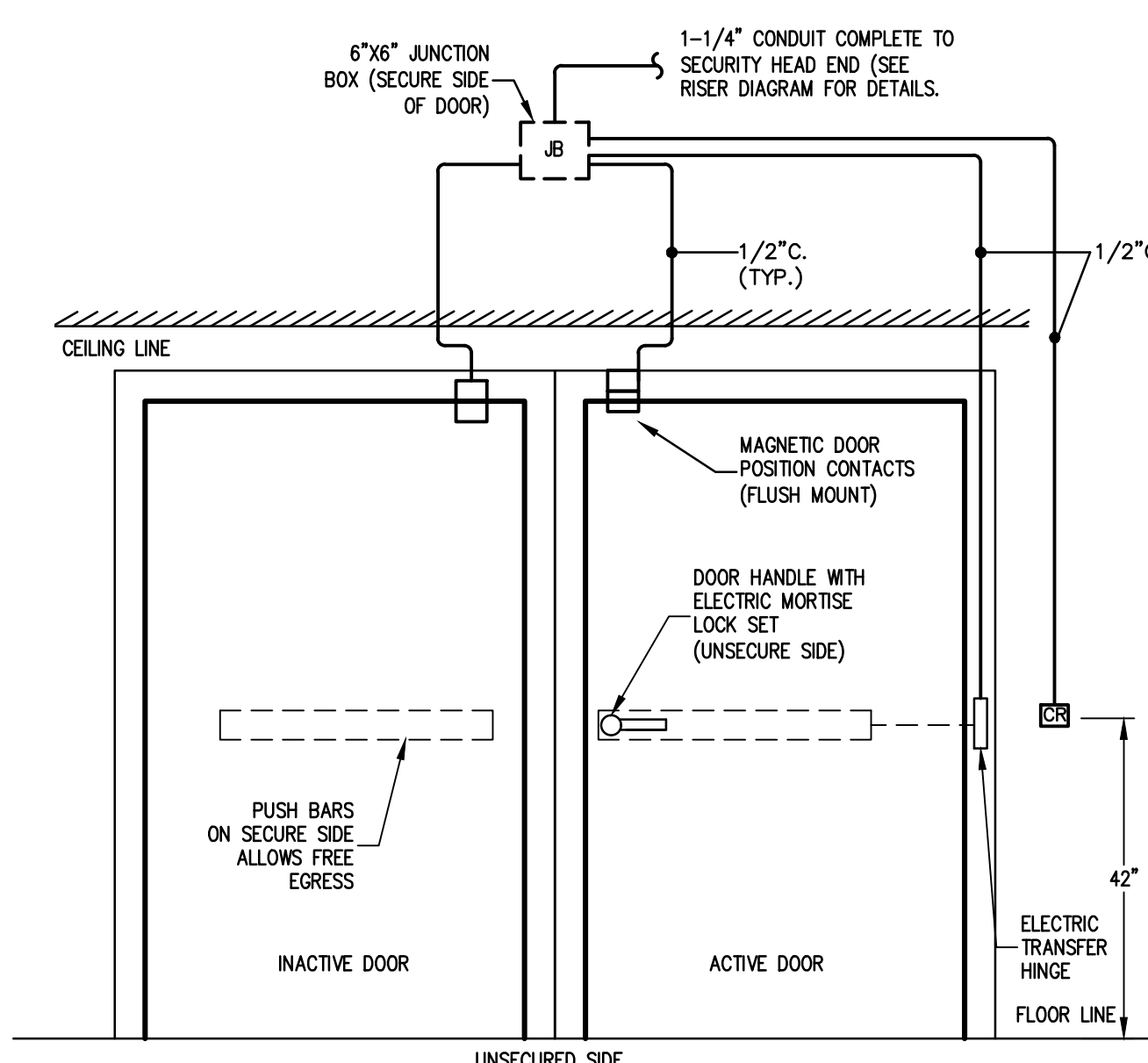
1. THIS DETAIL REPRESENTS A TYPICAL CORRIDOR INSTALLATION. SEE PLANS FOR EXACT EQUIPMENT SIZES AND LOCATIONS.
2. 'EM' FIXTURES ARE CONTROLLED BY OCCUPANCY SENSORS DURING NORMAL OPERATION. AN EMERGENCY LIGHTING TRANSFER SWITCH TO BE INSTALLED TO BYPASS OCCUPANCY SENSORS (POWER PACK) IN THE EVENT OF NORMAL POWER LOSS RESULTING IN ALL 'EM' FIXTURES GOING TO FULL ON POWERED FROM EMERGENCY POWER SOURCE.
3. ALL OTHER CORRIDOR FIXTURES ARE SWITCHED AS SHOWN.
4. EXIT AND STAR FIXTURES WIRING DIRECTLY TO UNSWITCHED EMERGENCY LIGHTING CIRCUIT.
5. EMERGENCY LIGHTING TRANSFER SWITCH SENSING VOLTAGE TO BE FROM UNSWITCHED LEG OF CORRIDOR NORMAL POWER LIGHTING CIRCUIT.



9 Single Door Security Detail
E701 SCALE: NONE (WITH TRANSFER HINGE)

GENERAL DOOR SCHEMATIC NOTES:

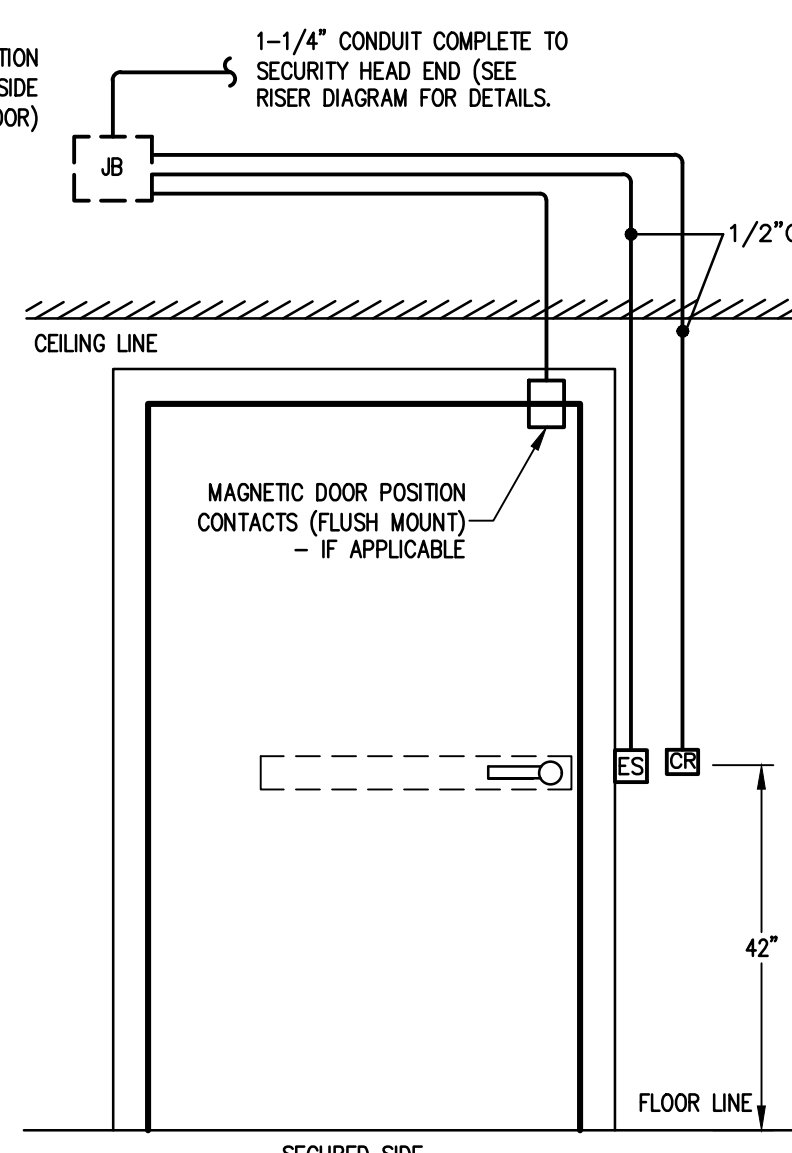
1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND BOXES. FIELD COORDINATE WITH OWNER'S SECURITY VENDOR, ARCHITECTS DOOR HARDWARE SCHEDULE, DOOR HARDWARE VENDOR AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN AT DOOR.
2. SECURITY EQUIPMENT BY OWNER'S SECURITY VENDOR.
3. LOW VOLTAGE SECURITY CABLING BY OWNER'S SECURITY VENDOR.
4. SEE ARCHITECTURAL DOOR ACCESS CONTROL NOTES AND SCHEDULES FOR ADDITIONAL HARDWARE REQUIREMENTS AT EACH DOOR.



10 Double Door Security Detail
E701 SCALE: NONE

GENERAL DOOR SCHEMATIC NOTES:

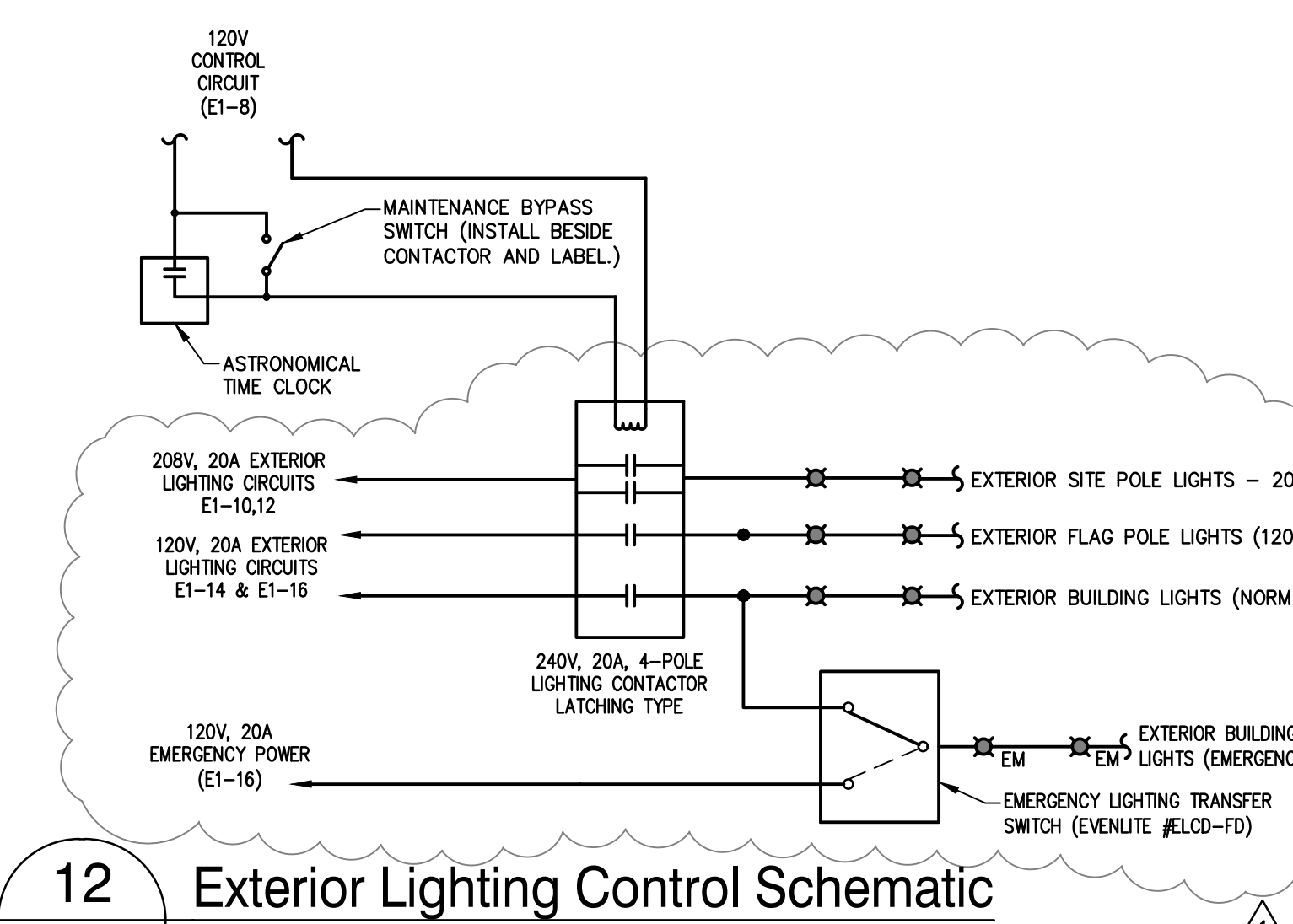
1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND BOXES. FIELD COORDINATE WITH OWNER'S SECURITY VENDOR, ARCHITECTS DOOR HARDWARE SCHEDULE, DOOR HARDWARE VENDOR AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN AT DOOR.
2. SECURITY EQUIPMENT BY OWNER'S SECURITY VENDOR.
3. LOW VOLTAGE SECURITY CABLING BY OWNER'S SECURITY VENDOR.
4. SEE ARCHITECTURAL DOOR ACCESS CONTROL NOTES AND SCHEDULES FOR ADDITIONAL HARDWARE REQUIREMENTS AT EACH DOOR.



11 Single Door (With Electric Strike) Security Detail
E701 SCALE: NONE

GENERAL DOOR SCHEMATIC NOTES:

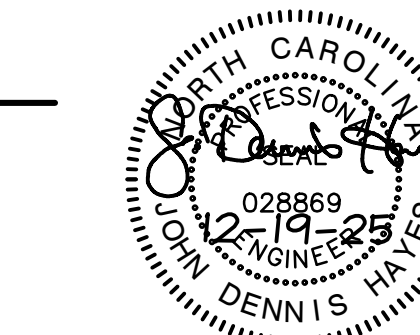
1. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL RACEWAYS AND BOXES. FIELD COORDINATE WITH OWNER'S SECURITY VENDOR, ARCHITECTS DOOR HARDWARE SCHEDULE, DOOR HARDWARE VENDOR AND GENERAL CONTRACTOR PRIOR TO ROUGH-IN AT DOOR.
2. SECURITY EQUIPMENT BY OWNER'S SECURITY VENDOR.
3. LOW VOLTAGE SECURITY CABLING BY OWNER'S SECURITY VENDOR.
4. SEE ARCHITECTURAL DOOR ACCESS CONTROL NOTES AND SCHEDULES FOR ADDITIONAL HARDWARE REQUIREMENTS AT EACH DOOR.



12 Exterior Lighting Control Schematic
E701 SCALE: Not To Scale

IN ASSOCIATION WITH:

PROFESSIONAL SEALS



PROJECT INFORMATION:

Town of Hillsborough
Adron F. Thompson
Addition & Renovation
and Vehicle Storage
Building

715 Dimmocks Mill Road, Hillsborough, NC

KEY PLAN:

Plan North

No.	Date	Description
1	1/21/26	ADDENDUM #3

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Original drawing is 30"x42". Do not scale contents.

PROJECT:	DRAWN:	CHECKED:	DATE:
2231.01	JLH	JDH	2025.12.19

SHEET NAME:

Electrical Details

E701