SCHRADERGROUP
A HORD COPLAN MACHT STUDIO

ADDENDUM #4

To:	All Bidders
Project Name:	Alamance County Emergency Services Center 780 Plantation Drive Burlington, NC 27215
Prepared for:	Alamance County, NC 124 W Elm Street Graham, NC 27253
Date:	10 October 2025

Notice to all Contractors bidding the **Alamance County Emergency Services Center**. This Addendum is to amend or clarify the Contract documents as follows:

GENERAL:

A. This Addendum constitutes part of the Project Manual and Contract. Should conflict occur between the Project Manual and items in this Addendum or between Drawings and this Addendum, the Addendum shall govern.

B. Work described in this Addendum shall be in accordance with Specifications for like items in remainder of building and complete with all labor and materials required.

C. Bidders are requested to attach a copy of this Addendum to the Project Manual in their possession.

D. Work affected by items in this Addendum shall be appropriately adjusted to accommodate these changes.

E. Acknowledge receipt of this Addendum by inserting its number and date in the space provided in the Bid Form. Failure to do so may subject Bidder to disqualification.

F. Bids shall only be based on the products specified. No pre-bid substitutions shall be considered. Products that meet or exceed the product specifications will be considered for use during the Shop Drawing Submittal Phase.

G. STANDARD OF QUALITY: The various materials and products specified in the specifications by name or description are given to establish a standard of quality and of cost for bid purposes. **In general**, it is not the intent to limit the bidder, the bid or the evaluation of the bid to any one material or product specified but rather to describe the minimum standard, **except where listed without the following clause**. When proprietary names are used, they shall generally be followed by the words "or alternatives of the quality necessary to meet the specifications". Where proprietary names are used and are not followed by a clause similar to that listed above, the contractor is limited to providing that specified product to keep a standard product already established by the County. A bid containing an alternative which does not meet the specifications may not be accepted, but, if an award is made to the bidder, the bidder will be required to replace any alternatives which do not meet the specifications at no additional cost. The intent of the bid documents is based on this STANDARD OF QUALITY and not to be proprietary in nature in any way.

H. **Bid Due Date: REVISED Bid Due Date:** Tuesday, October 28, 2025, by 2:00 PM at Alamance County, County Managers, 124 W Elm Street, Graham, NC 27253.

I. **Bidders shall identify on their bid proposal the minority business participation it will use on the project (Identification of Minority Business Participation) form and shall include either *Affidavit A* or *Affidavit B*, as applicable. Forms and instructions are included in this addendum and should be included with your bid documents. Failure to complete these forms is grounds for rejection of the bid.**

SPECIFICATIONS

A. Identification of HUB Certified / Minority Business Participation; ADD section in its entirety.
B. State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts; ADD section in its entirety.
C. State of North Carolina AFFIDAVIT B – Intent to Perform Contract with OWN Workforce; ADD section in its entirety.
D. State of North Carolina AFFIDAVIT C – Portion of Work to Be Performed by HUB Certified/Minority Businesses; ADD section in its entirety.
E. State of North Carolina AFFIDAVIT D – Good Faith Efforts; ADD section in its entirety.
F. Specifications Section 083400 – Security Hollow Metal Doors and Frames; DELETE section in its entirety.
G. Specifications Section 095110 – Suspended Acoustical Ceilings; REPLACE section in its entirety.
H. Specifications Section 122413 – Roller Window Shades; REPLACE section in its entirety.

DRAWINGS

Architectural

A. Drawing A003 – Spray Fireproofing Plans; REPLACE sheet in its entirety
B. Drawing A111 – First Floor Dimension Plan; REPLACE sheet in its entirety
C. Drawing A121 – First Floor Reflected Ceiling Plan; REPLACE sheet in its entirety
D. Drawing A122 – Second Floor Reflected Ceiling Plan; REPLACE sheet in its entirety
E. Drawing A701 – Ramp Plans and Sections; REPLACE sheet in its entirety
F. Drawing A721 – Stair & Ramp Details; REPLACE sheet in its entirety
G. Drawing A814 – Admin Enlarged Plans and Interior Elevations; REPLACE sheet in its entirety
H. Drawing A900 – Finish Specs, Schedule & Transitions; REPLACE sheet in its entirety
I. Drawing AD010 – Basement & First Floor Demolition Plan; REPLACE sheet in its entirety
J. Drawing ALT1-A122 – Second Floor Reflected Ceiling Plan (Alternate 1) ; REPLACE sheet in its entirety

Civil

A. Drawing C30; REPLACE sheet in its entirety

Electrical

A. Drawing E001; REPLACE sheet in its entirety
B. Drawing E403; REPLACE sheet in its entirety
C. Drawing E404; REPLACE sheet in its entirety

Structural

A. Drawing S101; REPLACE sheet in its entirety
B. Drawing S302; REPLACE sheet in its entirety
C. Sketch S01; ADD in its entirety

BIDDERS QUESTIONS

A. **Question:** Unit Price RC-2 Mechanical Curb and Flashing and the associated allowance of 200lnft. We are unaware of how to price and express a roof curb on a lnft basis. Please clarify your intent here.
Response: Eliminate unit price RC-2

B. **Question:** Plans showing a barrier board are you looking for 5/8" densdeck here?

Response: Refer to modified specification 075419, which includes 5/8" HD ISO Cover board. Revise typical roof construction to be: single-ply PVC roof system over 5/8" cover board over tapered rigid insulation on 6" rigid insulation (R-30 MIN.) over existing mtl deck.

C. **Question:** Plans stating ½" coverboard and 2" polyiso board. Are you looking for a ½" HD polyiso board for the coverboard? If not HD ISO why not a single layer of 2.6" polyiso?
Response: Refer to response to question B.

D. **Question:** Are there any MWBE requirements for the project? If so, forms need to be issued to be submitted with bids.
Response: Forms have been included in the addendum. See General note I above.

E. **Question:** Fence details – typically 3" terminal posts and 2.5" line posts are used for a fence this height. Specs call for 4" and 3". Can 3" and 2.5" be used? Specs also call for a bottom rail – most cases only require a bottom tension wire. Please advise if the bottom rail is required.
Response: No changes to the design are needed.

F. **Question:** C3.0 – provide concrete pad details at AC unit and generator pad at rear of building. Is it on asphalt, grass?
Response: Refer to attached pad construction detail; Drawing SK-S01

G. **Question:** A701 / A721 – please confirm handrail finish for both interior ramp railings and exterior ramp railings. Both anodized aluminum and painted steel pipe rails are called out.
Response: Refer to replaced drawings A701 and A721.

H. **Question:** The IT Jack schedule has a note to "see detail #8 on drawing E403," there is no detail #8? Will there be a revision to E403?
Response: See updated E403 attached.

I. **Question:** On E404 IT Jack Detail refers to E403 Detail #8 for backbox detail (more specifically for 12 port) but that detail does not exist.
Response: See updated E403 attached.

J. **Question:** On E403 detail 7 the word "shielded cat 6" is shown but not referenced anywhere else, is the cabling suppose to be shielded for a typical wall oulet?
Response: Follow the IT Jack Schedule on E404.

K. **Question:** Specs 095110 and finish schedule A900 for the suspended acoustical ceilings are conflicting on which tile to use. Please advise
Response: Updated specification 095100 attached.

L. **Question:** It looks like the whole building is not being renovated. Is there an existing control system that this project integrates into?
Response: Per Alamance County there is an older Alerton System that can integrated into. The current design was not integrating into the existing system.

M. **Question:** Spec Section 13 85 00 1.1 A. Calls for the system to utilize JENE Edge 534-AX controller with BACnet drivers. N4 is the latest version of JENE. This looks like an old specification. Will a standard N4 JACE be acceptable from Building Logix?
Response: Yes, this is acceptable.
Question: Will a BMS system that is not a JACE be acceptable alternative?
Response: Yes, a Building system that is not JACE will be acceptable.

N. **Question:** 3 85 00 2.1 Will Trane SC+ using the Mitsubishi integration software be an acceptable manufacturer?
Response: Yes, this is acceptable. System integration will need to be equal to BOD for the DVM Control network solution as listed in the specifications.

O. **Question:** 13 85 00 2.3 An operator workstation is specified for the project. The newer systems are web based and can be accessed with a standard workstation. Is the workstation on this project required?
Response: A web-based system accessed by a standard workstation or laptop is acceptable.

P. **Question:** M702 DOAS controls show an input for status of D-1-1, D-1-2, for DOAS-1A.
Response: Dampers D-1-1, D-1-2 for DOAS-1A and D-2-1 and D-2-2 for DOAS-1B are used for isolation of the units. One unit runs to provide outside air. Units are alternated monthly. When DOAS-1A is switched over to DOAS-1B, DOAS-1A dampers will close and DOAS-1B dampers will open.
Question: Are these the fire dampers shown on M101 or some other isolation damper to be provided for the units?
Response: The fire damper and MOD provided on M101 at the Data center 104 space are for the inert gas system. Fire dampers for the 2hr rated wall. MOD's for the supply and return for OA are interlocked with the fire suppression system. If the fire suppression system activates, it sends a signal to close the dampers to seal off all penetrations to the space.

Q. **Question:** The specs call for Security Hollow Metal Doors and frames, and I cannot differentiate or find anything that indicates a security door in the plans or on the door schedule.
Response: Specifications Section 083400 has been removed, utilize 083113 Hollow Metal Doors and Frames.

ATTACHMENTS

Specifications:

A. Identification of HUB Certified / Minority Business Participation
B. State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts
C. State of North Carolina AFFIDAVIT B – Intent to Perform Contract with OWN Workforce
D. State of North Carolina AFFIDAVIT C – Portion of Work to Be Performed by HUB Certified/Minority Businesses
E. State of North Carolina AFFIDAVIT D – Good Faith Efforts
F. Specifications Section 122413 – Roller Window Shades
G. Specifications Section 095110 – Suspended Acoustical Ceilings

Drawings:

A. Drawing A003 – Spray Fireproofing Plans
B. Drawing A111 – First Floor Dimension Plan
C. Drawing A121 – First Floor Reflected Ceiling Plan
D. Drawing A122 – Second Floor Reflected Ceiling Plan
E. Drawing A701 – Ramp Plans and Sections
F. Drawing A721 – Stair & Ramp Details
G. Drawing A814 – Admin Enlarged Plans and Interior Elevations
H. Drawing A900 – Finish Specs, Schedule & Transitions
I. Drawing AD010 – Basement & First Floor Demolition Plan
J. Drawing ALT1-A122 – Second Floor Reflected Ceiling Plan (Alternate 1)
K. Drawing C3.0 – Site and Grading Plan
L. Drawing E001 – Electrical Legend & Abbreviations
M. Drawing E403 – Electrical Details
N. Drawing E404 – Electrical Details
O. Drawing SK-S01 – AC Unit and Generator Pad
P. Drawing S101 – Existing First Level Plan
Q. Drawing S302 – Foundation Details

END OF ADDENDUM

Identification of HUB Certified/ Minority Business Participation

I,_____,
(Name of Bidder)
do hereby certify that on this project, we will use the following HUB Certified/ minority business as construction subcontractors, vendors, suppliers or providers of professional services.

Firm Name, Address and Phone #	Work Type	*Minority Category	**HUB Certified (Y/N)

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

The total value of minority business contracting will be ($)_____.

Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid

State of North Carolina AFFIDAVIT A – Listing of Good Faith Efforts

County of _____

(Name of Bidder)

Affidavit of_____

I have made a good faith effort to comply under the following areas checked:

Bidders must earn at least 50 points from the good faith efforts listed for their bid to be considered responsive. (1 NC Administrative Code 30 I.0101)

- ❑ **1 – (10 pts)** Contacted minority businesses that reasonably could have been expected to submit a quote and that were known to the contractor, or available on State or local government maintained lists, at least 10 days before the bid date and notified them of the nature and scope of the work to be performed.
- ❑ **2 --(10 pts)** Made the construction plans, specifications and requirements available for review by prospective minority businesses, or providing these documents to them at least 10 days before the bids are due.
- ❑ **3** – **(15 pts)** Broken down or combined elements of work into economically feasible units to facilitate minority participation.
- ❑ **4 – (10 pts)** Worked with minority trade, community, or contractor organizations identified by the Office of Historically Underutilized Businesses and included in the bid documents that provide assistance in recruitment of minority businesses.
- ❑ **5** – **(10 pts)** Attended prebid meetings scheduled by the public owner.
- ❑ **6** – **(20 pts)** Provided assistance in getting required bonding or insurance or provided alternatives to bonding or insurance for subcontractors.
- ❑ **7 – (15 pts)** Negotiated in good faith with interested minority businesses and did not reject them as unqualified without sound reasons based on their capabilities. Any rejection of a minority business based on lack of qualification should have the reasons documented in writing.
- ❑ **8** – **(25 pts)** Provided assistance to an otherwise qualified minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letters of credit, including waiving credit that is ordinarily required. Assisted minority businesses in obtaining the same unit pricing with the bidder's suppliers in order to help minority businesses in establishing credit.
- ❑ **9** – **(20 pts)** Negotiated joint venture and partnership arrangements with minority businesses in order to increase opportunities for minority business participation on a public construction or repair project when possible.
- ❑ **10 - (20 pts)** Provided quick pay agreements and policies to enable minority contractors and suppliers to meet cash-flow demands.

The undersigned, if apparent low bidder, will enter into a formal agreement with the firms listed in the Identification of Minority Business Participation schedule conditional upon scope of contract to be executed with the Owner. Substitution of contractors must be in accordance with GS143-128.2(d) Failure to abide by this statutory provision will constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of the minority business commitment and is authorized to bind the bidder to the commitment herein set forth.

Date:_____Name of Authorized Officer:_____

Signature:_____

Title:_____

SEAL

State of_____, County of_____

Subscribed and sworn to before me this _____day of _____20____

Notary Public_____

My commission expires _____

Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid

State of North Carolina --AFFIDAVIT B-- Intent to Perform Contract with Own Workforce.

County of _____

Affidavit of_____
(Name of Bidder)

I hereby certify that it is our intent to perform 100% of the work required for the _____

_____contract.
(Name of Project)

In making this certification, the Bidder states that the Bidder does not customarily subcontract elements of this type project, and normally performs and has the capability to perform and will perform all elements of the work on this project with his/her own current work forces; and

The Bidder agrees to provide any additional information or documentation requested by the owner in support of the above statement. The Bidder agrees to make a Good Faith Effort to utilize minority suppliers where possible.

The undersigned hereby certifies that he or she has read this certification and is authorized to bind the Bidder to the commitments herein contained.

Date:_____Name of Authorized Officer:_____

Signature:_____

Title:_____

SEAL

State of _____, County of_____

Subscribed and sworn to before me this _____day of _____20___

Notary Public _____

My commission expires_____

Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid Attach to Bid

Do not submit with bid Do not submit with bid Do not submit with bid Do not submit with bid

State of North Carolina - AFFIDAVIT C - Portion of the Work to be Performed by HUB Certified/Minority Businesses

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the portion of the work to be executed by HUB certified/minority businesses as defined in GS143-128.2(g) and 128.4(a),(b),(e) is equal to or greater than 10% of the bidders total contract price, then the bidder must complete this affidavit.
This affidavit shall be provided by the apparent lowest responsible, responsive bidder within **72 hours** after notification of being low bidder.

Affidavit of _____ I do hereby certify that on the
(Name of Bidder)

_____
(Project Name)

Project ID#_____ Amount of Bid $_____

I will expend a minimum of _____% of the total dollar amount of the contract with minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. Attach additional sheets if required

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date:_____ Name of Authorized Officer:_____

SEAL

Signature:_____

Title:_____

State of _____, County of _____
Subscribed and sworn to before me this _____day of _____20____
Notary Public_____
My commission expires_____

State of North Carolina AFFIDAVIT D – Good Faith Efforts

County of _____

(Note this form is to be submitted only by the apparent lowest responsible, responsive bidder.)

If the goal of 10% participation by HUB Certified/ minority business **is not** achieved, the Bidder shall provide the following documentation to the Owner of his good faith efforts:

Affidavit of _____ I do hereby certify that on the
(Name of Bidder)

_____
(Project Name)

Project ID#_____ Amount of Bid $_____

I will expend a minimum of _____% of the total dollar amount of the contract with HUB certified/ minority business enterprises. Minority businesses will be employed as construction subcontractors, vendors, suppliers or providers of professional services. Such work will be subcontracted to the following firms listed below. (Attach additional sheets if required)

Name and Phone Number	*Minority Category	**HUB Certified Y/N	Work Description	Dollar Value

*Minority categories: Black, African American (**B**), Hispanic (**H**), Asian American (**A**) American Indian (**I**), Female (**F**) Socially and Economically Disadvantaged (**D**)

**** HUB Certification with the state HUB Office required to be counted toward state participation goals.**

Examples of documentation that may be required to demonstrate the Bidder's good faith efforts to meet the goals set forth in these provisions include, but are not necessarily limited to, the following:

A. Copies of solicitations for quotes to at least three (3) minority business firms from the source list provided by the State for each subcontract to be let under this contract (if 3 or more firms are shown on the source list). Each solicitation shall contain a specific description of the work to be subcontracted, location where bid documents can be reviewed, representative of the Prime Bidder to contact, and location, date and time when quotes must be received.

B. Copies of quotes or responses received from each firm responding to the solicitation.

C. A telephone log of follow-up calls to each firm sent a solicitation.

D. For subcontracts where a minority business firm is not considered the lowest responsible sub-bidder, copies of quotes received from all firms submitting quotes for that particular subcontract.

E. Documentation of any contacts or correspondence to minority business, community, or contractor organizations in an attempt to meet the goal.

F. Copy of pre-bid roster

G. Letter documenting efforts to provide assistance in obtaining required bonding or insurance for minority business.

H. Letter detailing reasons for rejection of minority business due to lack of qualification.

I. Letter documenting proposed assistance offered to minority business in need of equipment, loan capital, lines of credit, or joint pay agreements to secure loans, supplies, or letter of credit, including waiving credit that is ordinarily required.

Failure to provide the documentation as listed in these provisions may result in rejection of the bid and award to the next lowest responsible and responsive bidder.

Pursuant to GS143-128.2(d), the undersigned will enter into a formal agreement with Minority Firms for work listed in this schedule conditional upon execution of a contract with the Owner. Failure to fulfill this commitment may constitute a breach of the contract.

The undersigned hereby certifies that he or she has read the terms of this commitment and is authorized to bind the bidder to the commitment herein set forth.

Date:_____Name of Authorized Officer:_____

Signature:_____

Title:_____

SEAL

State of_____, County of _____

Subscribed and sworn to before me this _____day of _____20____

Notary Public_____

My commission expires _____

075419 - PVC MEMBRANE ROOFING SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

A. Furnish and install a complete PVC roofing system, including:

1. Roofing Manufacturer's requirements for the specified warranty.
2. Preparation of roofing substrates.
3. Wood nailers for roofing attachment.
4. Insulation.
5. Mechanically Fastened PVC membrane.
6. Metal roof edging and copings.
7. Flashings.
8. Walkway pads.
9. Other roofing-related items specified or indicated on the Drawings or otherwise necessary to provide a complete weatherproof roofing system.

1.2 RELATED SECTIONS

A. Section 06 10 53 - Miscellaneous Rough Carpentry

B. Section 07 62 00 - Sheet Metal Flashing and Trim.

C. Section 07 71 00 - Roof Specialties.

D. Section 07 72 00 - Roof Accessories.

E. Section 22 14 26.13 - Roof Drains.

1.3 DEFINITIONS

A. The following apply to work of this Section:

1. Definitions in the current editions of ASTM D1079, “Standard Terminology Relating to Roofing and Waterproofing.”
2. NRCA's “The NRCA Roofing Manual: Membrane Roof Systems,” latest edition.

1.4 PREINSTALLATION MEETINGS

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

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing installer, roofing system manufacturer's representative, deck installer, air barrier installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.

2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.

3. Review and finalize construction schedule, and verify availability of materials, installer's personnel, equipment, and facilities needed to make progress and avoid delays.

4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.

5. Review structural loading limitations of roof deck during and after roofing.

6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.

7. Review governing regulations and requirements for insurance and certificates if applicable.

8. Review temporary protection requirements for roofing system during and after installation.

9. Review roof observation and repair procedures after roofing installation.

1.5 SUBMITTALS

A. Product Data:

1. Provide membrane manufacturer's printed data sufficient to show that all components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane.

2. Where UL or FM requirements are specified, provide documentation that shows that the roofing system to be installed is UL-Classified or FM-approved, as applicable. Include data itemizing the components of the classified or approved system.

3. Provide manufacturer's instructions to installer, marked up to show exactly how all components will be installed.

4. Where instructions allow installation options, clearly indicate which option will be used.

B. Shop Drawings:

1. Provide roof plan indicating orientation of steel deck, fastener and adhesive layouts, and orientation of roof membrane.

2. Provide the roof membrane manufacturer's standard details customized for this project for all relevant conditions, including flashings, base tie-ins, roof edges, terminations, expansion joints, penetrations, and drains.

3. Layout and thickness of insulation.

4. Base flashings and membrane terminations.

5. Flashing details at penetrations.

6. Tapered insulation thickness and slopes.

7. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

8. Tie-in with air barrier.

C. Provide copy of Pre-Installation Notice to show that manufacturer's required Pre-Installation Notice (PIN) has been accepted and approved by the manufacturer.

D. Submit samples of each product to be used including:

1. Roof membrane and flashing in color selected by Architect.

2. Walkway pads or rolls in color selected by Architect.

E. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

F. Manufacturer System Conformation: Assembly Letter: Signed by roof membrane manufacturer, stating that roofing system complies with requirements specified in “Performance Requirements” paragraph.

1. Submit evidence of compliance with performance requirements.

2. Pre-Installation Notice (PIN): Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.

G. Specimen Warranty.

H. Closeout Submittals:

1. Executed Warranty.

2. Maintenance data.

1.6 QUALITY ASSURANCE

A. Applicator Qualifications:

1. Current Elevate Master Contractor status.

2. At least five years' experience installing specified system.

1.7 DELIVERY, STORAGE AND HANDLING

A. Deliver products in Manufacturer's original containers, dry and undamaged, with seals and labels intact and legible, and within temperature range required by roofing manufacturer.

B. Discard and legally dispose of material that cannot be applied within its stated shelf life.

C. Store materials clear of ground and moisture with weather protective covering.

D. Keep combustible materials away from ignition sources.

E. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck and/or structural overloading.

1.8 FIELD CONDITIONS

A. Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed in accordance with Manufacturer's written instructions and warranty requirements.

1.9 WARRANTY

A. Provide Elevate **25-year** Red Shield™ Roofing System Limited Warranty covering membrane, roof insulation, and system accessories. Comply with all warranty procedures required by Manufacturer, including notifications, scheduling, and inspections.

B. Limit of Liability: No dollar limitation (NDL).

C. Scope of Coverage: Repair leaks in the roofing system caused by:

1. Ordinary wear and tear.

2. Normal exposure to the elements.

3. Manufacturing defect in Elevate materials.

4. Defective workmanship used to install these materials.

5. Damage due to winds up to **120 mph**.

6. Not Covered:

a. Damage due to winds in excess of 120 mph

b. Damage due to hurricanes or tornadoes.

c. Hail.

d. Intentional damage.

e. Unintentional damage due to normal rooftop inspections, maintenance, or service.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Acceptable Manufacturer - Roofing System: Elevate roofing, lining, and wall systems, Nashville, TN, http://www.holcimelevate.com

1. Roofing systems manufactured by others may be acceptable provided the roofing system is completely equivalent in materials and warranty conditions and the manufacturer meets the following qualifications:

a. Specializing in manufacturing the roofing system to be provided.

B. Minimum ten years of experience manufacturing the roofing system to be provided.

a. Able to provide a no dollar limit, single source roof system warranty backed by corporate assets in excess of one billion dollars.

b. ISO 9001 certified.

c. Able to provide polyisocyanurate insulation produced in own facilities.

C. Manufacturer of Insulation and Cover Board: Same manufacturer as roof membrane.

D. Manufacturer of Metal Roof Edging: Same manufacturer as roof membrane.

1. Metal roof edging products by other Manufacturers are not acceptable.

a. Field- or shop-fabricated metal roof edgings are not acceptable.

E. Substitution Procedures:

1. Submit evidence that the proposed substitution complies with the specified requirements.

2.2 PERFORMANCE REQUIREMENTS

A. General Performance: Installed roofing and base flashings to withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roof system and flashings to remain watertight.

1. Accelerated Weathering: Roof membrane to withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.

2. Impact Resistance: Roof membrane to resist impact damage when tested according to ASTM D3746, ASTM D4272, or the “Resistance to Foot Traffic Test” in FM Approvals 4470.

B. Material Compatibility: Roofing materials to be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

C. Wind Uplift Resistance: Design roofing system to resist the following wind-uplift pressures when tested in accordance with FM Approvals 4474, UL 580, or UL 1897:

1. Determine wind-uplift pressures according to ASCE/SEI7 using wind speed criteria indicated on Structural Drawings.

D. Membrane Pull-Off Resistance: 100 lbs./ft (1460 N/m), minimum, when tested in accordance with ANSI/SPRI ES-1 Test Method RE-1, current edition.

E. Wind Performance: Comply with applicable building codes.

1. Metal Roof Edging and Fascia:

a. Fascia Pull-Off Resistance: At least the minimum required when tested in accordance with ANSI/SPRI ES-1 Test Method RE-2, current edition.

2. Parapet Copings:

a. At least the minimum required when tested in accordance with ANSI/SPRI ES-1 Test Method RE-3, current edition.

F. Fire Classification:

1. Performance testing shall be in accordance with UL 790, ASTM E108, FM 4450 or FM 4470 to meet the (0):12 roof slope requirement.

a. Meets requirements of UL Class A.

1) Performance testing shall be in accordance with UL 1256, FM 4450, or FM 4470 to meet the specified requirements for interior flame spread and fuel contribution.

2.3 ROOFING SYSTEM DESCRIPTION

A. Roofing System:

1. Membrane: MAX Polyvinyl chloride (PVC).

a. Thickness: As specified elsewhere.

b. Membrane Attachment: Mechanically Attached

2. Slope: 1/4:12 (2 percent) by means of tapered insulation.

3. Comply with applicable local building code requirements.

4. Provide assembly having Underwriters Laboratories, Inc. (UL) Class A Fire Hazard Classification.

B. Insulation:

1. Total System R-Value: 30 min.

a. Maximum Board Thickness: 4 inches.

b. Use as many layers as necessary to achieve required R-value

c. Stagger joints in adjacent layers.

2. Base Layer: Polyisocyanurate foam board, non-composite.

a. Attachment: Mechanical fastening

3. Fill Layers (Tapered): Polyisocyanurate foam board, non-composite.

a. Attachment: Low-rise polyurethane adhesive

4. Top Layer: Polyisocyanurate foam board, non-composite.

a. Attachment: Low-rise polyurethane adhesive

1) High Density Polyisocyanurate Cover Board:

a) Thickness: 0.625 inch (15.875 mm).

b) R-Value: 2.5 based on ASTM C158 and ASTM C177.

c) Attachment: Low-rise polyurethane adhesive

2.4 MAX PVC MEMBRANE MATERIALS

A. Roofing and Flashing Membrane: Flexible, heat weldable sheet composed of polyvinyl chloride; complying with ASTM D4434 Type III, with polyester weft inserted scrim reinforcement and the following additional characteristics:

1. Weft-Inserted Scrim: 18 x 9 polyester fabric construction composed of 840 x 1000 treated, denier threads to prevent wicking.

2. Color: White

3. Thickness:

a. 0.060 inch

4. Thickness Over Scrim: Greater than or equal to 0.016 inch (0.406 mm) per ASTM D7635; Pass. Typical Performance:

a. (0.031 inch (31 mil)).

5. Breaking Strength: Greater than 200 lbf/in per ASTM D751 Grab Method; Pass. Typical Performance:

a. (437 x 304 lbf/inches).

6. Sheet Width: (Use widest sheet practical for jobsite conditions to minimize field seams) (Use sheet width required to meet wind uplift and fastener spacing requirements).

7. Acceptable Product: Elevate MAX PVC Membrane by Elevate.

B. Bonding Adhesive: Formulated for compatibility with PVC membrane and wide variety of substrate materials; Jet Bond PVC Spray Adhesive by Elevate.

C. Seam Edge Treatment: Clear polymer-based sealant, formulated for sealing exposed edges of membrane; PVC Clear Cut Edge Sealant LVOC by Elevate.

D. Pourable Sealer: One part polyurethane; White One-Part Pourable Sealer by Elevate.

E. Water Block Seal: Butyl rubber sealant for use between two surfaces, not exposed; Water Block Seal S-20 by Elevate.

2.5 ROOF INSULATION AND COVER BOARDS

A. Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam with glass reinforced mat laminated to facers, complying with ASTM C1289 Type II Class 1, with the following additional characteristics:

1. Thickness: As indicated elsewhere.

2. Size: 48 inches (1.22 m) by 96 inches (2.44 m), nominal (if mechanically fastened) or 48 inches (1.22 m) by 48 inches (1.22 m), nominal (if adhered).

3. R-Value (LTTR) per inch (25 mm): min. 6.2R at 40 degrees F (4.4 degrees C) and min. 5.7R at 75 degrees F (23.9 degrees C).

4. Compressive Strength: 20 psi (138 kPa).

5. Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.

6. Acceptable Product: ISOGARD GL polyiso board insulation by Elevate.

B. Cover Board:

1. High Density Polyisocyanurate Cover Board: Non-combustible, water-resistant high density, closed cell polyisocyanurate core with coated glass mat facers, complying with ASTM D1623, and with the following additional characteristics:

a. Size: 48 inches (1.22 m) by 96 inches (2.44 m), nominal (if mechanically fastened) or 48 inches (1.22 m) by 48 inches (1.22 m), nominal (if adhered).

b. Thickness: 0.5 inches (12.7 mm).

c. R-Value: 2.5 based on ASTM C158 and ASTM C177.

d. Surface Water Absorption: 3 percent, maximum, when tested in accordance with ASTM C209.

e. Compressive Strength: 120 psi (827 kPa), when tested in accordance with ASTM D1621.

f. Density: 5 pcf (80 kg/m3), when tested in accordance with ASTM D1622.

g. Factory Mutual approved for use with FM 1-60 and 1-90 rated roofing assemblies.

h. Mold Growth Resistance: Passed, when tested in accordance with ASTM D3273.

i. Acceptable Product: ISOGARD HD Cover Board by Elevate.

C. Insulation Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.

D. Low Rise Foam Adhesive: Two-component, low-rise polyurethane adhesive designed to attach polyisocyanurate insulation to a variety of acceptable substrates; I.S.O.Spray™ R by Elevate.

2.6 ACCESSORIES

A. Metal Roof Edging and Fascia: Continuous metal edge member serving as termination of roof membrane and retainer for metal fascia; watertight with no exposed fasteners; mounted to roof edge nailer.

1. Description: Two-piece, 45 degree sloped galvanized steel sheet edge member securing top and bottom edges of formed metal fascia:

a. Fascia Face Height: 5 inches (127 mm).

b. Edge Member Height Above Nailer: 1.25 inches (31.75 mm).

c. Fascia Material and Finish: 0.024 inch (0.609 mm) galvanized steel with Kynar 500 finish in manufacturer's standard color; matching concealed joint splice plates; factory-installed protective plastic film.

d. Length: Minimum of 120 inches (3.048 m).

e. Functional Characteristics: Fascia retainer supports while allowing for free thermal cycling of fascia.

f. Acceptable Product: Appropriate Elevate pre-manufactured fascia system.

B. Weldable Metal: Flexible non-reinforced polyvinyl chloride membrane factory laminated to hot-dipped galvanized steel, color to match roof membrane; PVC Clad Metal by Elevate.

C. Weldable Cover Strip: Pre-cut, 60 mil, reinforced PVC membrane factory laminated to white seam tape; Elevate PVC 8 inch Cover Strip by Elevate.

D. Coated Metal Plates for Induction Welding*:* PVC InvisiWeld™ Plate by Elevate.

E. Reinforced Membrane Flashing: Flexible PVC roofing membrane that is produced with polyester weft-inserted reinforcement. Meets or exceeds ASTM D4434, Type III PVC. Use thickness recommended by manufacturer for Project conditions. Use one thickness for flashings.

1. Elevate MAX PVC Reinforced Membrane Flashing.

F. Clad Metal: Sheet of 0.0201 inch (0.5105 mm), hot-dipped galvanized, Grade 90 metal laminated to a 17-mil Elevate MAX PVC vinyl film on one side. Use for welding to the Elevate MAX PVC membrane when the Vinyl-Coated metal is incorporated into roofing details.

1. Elevate MAX PVC Clad Metal.

G. Aluminum Bar: Continuous 6063-T6 alloy aluminum extrusion with pre-punched slotted holes; miters welded; injection molded EPDM splices to allow thermal expansion.

H. Anchor Bar Cleat: 0.036-inch (0.914 mm) G90 coated commercial type galvanized steel with pre-punched holes.

I. Curved Applications: Factory modified.

J. Fasteners: Factory-provided corrosion resistant fasteners, with drivers; no exposed fasteners permitted.

K. Membrane Fasteners: Type and size as required by roof membrane manufacturer for roofing system and warranty to be provided; use only fasteners furnished by roof membrane manufacturer.

L. Scuppers: Welded watertight.

M. Special Shaped Components: Provide factory-fabricated pieces necessary for complete installation, including miters, scuppers, and end caps; minimum 14 inches (355 mm) long legs on corner pieces.

1. Elevate Max PVC Inside and Outside Corner.

N. Provide matching wall cap, downspout, extenders, and other special fabrications as shown on the Drawings.

O. Roof Walkway Pads: PVC pad designed to provide protection from essential rooftop services and traffic and maintain the integrity of the existing roof surface; 0.5625-inch (14 mm) PVC X-Tred™ Walkway Pad White by Elevate.

P. Parapet Copings: Formed metal coping with galvanized steel anchor/support cleats for capping any parapet wall; watertight, maintenance free, without exposed fasteners; butt type joints with concealed splice plates; mechanically fastened as indicated:

1. Description: Coping sections allowed to expand and contract freely while locked in place on anchor cleats by mechanical pressure from hardened stainless steel springs factory attached to anchor cleats; 8 inches (203.2 mm) wide splice plates with factory applied dual non-Curing sealant strips capable of providing watertight seal.

2. Material and Finish: 0.024 inches (0.61 mm) thick galvanized steel with Kynar 500 finish in Manufacturer's standard color; matching concealed joint splice plates; factory-installed protective plastic film.

3. Dimensions:

   a. Wall Width: As indicated on the Drawings.

   b. Piece Length: Minimum 144 inches (3.657 m).

4. Curved Application: Factory fabricated in true radius.

5. Anchor/Support Cleats: 0.036 inches (0.914 mm) thick pre-punched galvanized cleat with 12 inches (304.8 mm) wide stainless-steel spring mechanically locked to cleat at 72 inches (1.82 m) on center.

6. Special Shaped Components: Provide factory-fabricated pieces necessary for complete installation, including miters, corners, intersections, curves, pier caps, and end caps; minimum 14.000 inches (355.600 mm) long legs on corner, intersection, and end pieces.

7. Fasteners: Factory-furnished; electrolytically compatible; minimum pull out resistance of 240 lbs. (109 kg) for actual substrate used; no exposed fasteners.

8. Acceptable Product: Appropriate Elevate pre-manufactured coping system.

Q. Pitch Pan: 0.0201-inch (0.5105 mm) vinyl-coated metal and a 6-inch (152.4 mm) PVC membrane skirt; 4 inch (101.6 mm) height minimum. Filler is easy flowing, self-leveling sealant for use in pitch pans; UV and impact resistant with high tack for weather-tight seal around penetrations.

1. Elevate MAX PVC Metal Pitch Pan with appropriate Elevate pourable sealer.

R. Termination Bars: Aluminum bars with integral caulk ledge; 1.3 inches (33.02 mm) wide by 0.1 inches (2.54 mm) thick; Termination Bar by Elevate.

S. Lap Patch: Made of Elevate MAX PVC reinforced membrane and designed to cover and seal T-joints formed at seam intersections and at angle changes 1:12 or greater for Elevate MAX PVC reinforced membranes.

1. Elevate MAX PVC T-Lap Patch.

   a. Round Penetration Flashing: Pre-fabricated using same material as roof membrane.

2. Elevate MAX PVC Stack Flashing.

    a. Caulk: Single-component, non-sag, elastomeric, neutral-cure silicone sealant.

3. Elevate MAX PVC Caulk.

T. Wood Nailers: PS 20-dimension lumber, Structural Grade No. 2 or better Southern Pine, Douglas Fir; or PS 1, APA Exterior Grade plywood; pressure preservative treated.

1. Width: 3.5 inches (88.9 mm), nominal minimum, or as wide as the nailing flange of the roof accessory to be attached to it.

2. Thickness: Same as thickness of roof insulation.

PART 3 - INSTALLATION

3.1 GENERAL

A. Install roofing, insulation, flashings, and accessories in accordance with roofing Manufacturer's published instructions and recommendations for the specified roofing system. Where Manufacturer provides no instructions or recommendations, follow good roofing practices and industry standards. Comply with federal, state, and local regulations.

B. Obtain instructions and maintain copies at project site for duration of installation period.

C. Do not start work until Pre-Installation Notice has been approved by manufacturer as confirmation that this project qualifies for a manufacturer's warranty.

D. Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.

E. Install roofing membrane only when surfaces are clean, dry, smooth, and free of snow or ice; do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application; consult manufacturer for recommended procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60 to 80 degrees F (15 to 25 degrees C).

F. Protect adjacent construction, property, vehicles, and persons from damage related to roofing work; repair or restore damage caused by roofing work.

G. Protect from spills and overspray from bitumen, adhesives, sealants, and coatings.

H. Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of wind-borne overspray.

I. Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.

J. Until ready for use, keep materials in their original containers as labeled by the manufacturer.

K. Consult membrane manufacturer's instructions, container labels, and Safety Data Sheets (SDS) for specific safety instructions. Keep all adhesives, sealants, primers, and cleaning materials away from all sources of ignition.

3.2 EXAMINATION

A. Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment, and that deflection will not strain or rupture roof components or deform deck.

B. Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing roofing work. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.

C. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.

D. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.

E. Examine roof substrate to verify that it is properly sloped to drains.

F. Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations and instructions; start of work constitutes acceptance of project conditions and requirements.

3.3 PREPARATION

A. Prior to proceeding, prepare roof surface so that it is clean, dry, and smooth, and free of sharp edges, fins, roughened surfaces, loose or foreign materials, oil, grease, and other materials that may damage the membrane.

B. Fill all surface voids in the immediate substrate that are greater than 0.25 inches (6.35 mm) wide with fill material acceptable to membrane manufacturer.

C. Seal, grout, or tape deck joints, where needed, to prevent seepage into building.

3.4 INSULATION AND COVER BOARD INSTALLATION

A. Install insulation in configuration and with attachment method(s) specified in PART 2, under Insulation.

B. Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before the onset of inclement weather.

C. Lay roof insulation in courses parallel to roof edges.

D. Neatly and tightly fit insulation to all penetrations, projections, and nailers, with gaps not greater than 0.25 inch (6.35 mm). Fill gaps greater than 0.25 inch (6.35 mm) with acceptable insulation. Do not leave the roofing membrane unsupported over a space greater than 0.25 inch (6.35 mm).

E. Mechanical Fastening (If applicable): Using specified fasteners and insulation plates engage fasteners through insulation into deck to depth and in pattern required by Factory Mutual for specified FM Class and membrane Manufacturer, whichever is more stringent.

F. Adhesive Attachment *(If applicable)*: Apply in accordance with membrane manufacturer's instructions and recommendations; "walk-in" individual roof insulation boards to obtain maximum adhesive contact.

3.5 SINGLE-PLY MEMBRANE INSTALLATION

A. Beginning at low point of roof, place membrane without stretching over substrate and allow to relax at least 30 minutes before attachment or splicing; in colder weather allow for longer relax time.

B. Lay out the membrane pieces so that field and flashing splices are installed to shed water.

C. Install membrane without wrinkles and without gaps or fish mouths in seams, and bond and test seams and laps in accordance with membrane Manufacturer's instructions and details.

1. Adhered Membrane: Bond membrane sheet to substrate using membrane manufacturer's recommended bonding material, application rate, and procedures.

D. Edge Securement: Secure membrane at all locations where membrane terminates or goes through an angle change greater than 1:12 inches (8.3 percent) using mechanically fastened reinforced perimeter fastening strips, plates, or metal edging as indicated or as recommended by roofing manufacturer. Exceptions: Round pipe penetrations less than 18 inches (457.2 mm) in diameter and square penetrations less than 4 inches (101.6 mm) square.

1. Metal edging is not merely decorative; ensure anchorage of membrane as intended by roofing manufacturer and compliant with IBC.

3.6 FLASHING AND ACCESSORIES INSTALLATION

A. Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as required by membrane manufacturer's recommendations and details.

1. Metal Accessories: Install metal edgings, gravel stops, and copings in locations indicated on the Drawings, with horizontal leg of edge member over membrane and flashing over metal onto membrane.

2. Follow roofing manufacturer's instructions.

3. Use weldable PVC clad metal where membrane-to-metal connections occur.

4. Remove protective plastic surface film immediately before installation.

5. Install water block sealant under the membrane anchorage leg.

6. Flash with manufacturer's recommended flashing sheet unless otherwise indicated.

7. Where single application of flashing will not completely cover the metal flange, install additional piece of flashing to cover the metal edge.

8. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, install an additional piece of self-adhesive flashing membrane over the metal lap to the top of the gravel stop; apply seam edge treatment at the intersections of the two flashing sections.

9. When the roof slope is greater than 1:12 (8.3 percent), apply seam edge treatment along the back edge of the flashing.

B. Scuppers: Set PVC clad metal scuppers in sealant and weld to membrane as recommended by manufacturer.

C. Roofing Expansion Joints: Install as shown on Drawings and as recommended by roofing manufacturer.

D. Flashing at walls, curbs, and other vertical and sloped surfaces:

1. Install weathertight flashing at all walls, curbs, parapets, skylights, and other vertical and sloped surfaces that the roofing membrane abuts; extend flashing at least 8 inches (203.2 mm) above membrane surface.

2. Use the longest practical flashing pieces.

3. Evaluate the substrate and overlay and adjust installation procedure in accordance with membrane manufacturer's recommendations.

4. Complete the splice between flashing and the main roof sheet with specified splice adhesive before adhering flashing to the vertical surface.

5. Provide termination directly to the vertical substrate as shown on roof Drawings.

E. Roof Drains:

1. Taper insulation around drain to provide smooth transition from roof surface to drain. Use specified pre-manufactured tapered insulation with facer or suitable bonding surface to achieve slope; slope not to exceed manufacturer's recommendations.

2. Position membrane, then cut a hole for roof drain to allow 0.5 inch to 0.75 inch (12.7 to 19.05 mm) of membrane to extend inside clamping ring past drain bolts.

3. Make round holes in membrane to align with clamping bolts; do not cut membrane back to bolt holes.

4. Apply sealant on top of drain bowl where clamping ring seats below the membrane.

F. Install roof drain clamping ring and clamping bolts; tighten clamping bolts to achieve constant compression.

G. Flashing at Penetrations: Flash all penetrations passing through the membrane; make flashing seals directly to the penetration.

H. Pipes, Round Supports, and Similar Items: Flash with specified pre-molded pipe flashings wherever practical; otherwise use specified self-curing elastomeric flashing.

I. Pipe Clusters and Unusual Shaped Penetrations: Provide penetration pocket at least 2 inches (50.8 mm) deep, with at least 1-inch (25.4 mm) clearance from penetration, sloped to shed water.

J. Structural Steel Tubing: If corner radii are greater than 0.25 inch (6.35 mm) and longest side of tube does not exceed 12 inches (304.8 mm), flash as for pipes; otherwise, provide a standard curb with flashing.

K. Flexible and Moving Penetrations: Provide weathertight gooseneck set in sealant and secured to deck, flashed as recommended by manufacturer.

3.7 WALKWAY INSTALLATION

A. Install walkways at access points to the roof, around rooftop equipment that may require maintenance, and where indicated on the Drawings.

1. Use specified walkway pads unless otherwise indicated.

2. Walkway Pads: Adhere to the roofing membrane, spacing each pad at minimum of 1 inch (25.4 mm) and maximum of 3 inches (76.2 mm) from each other to allow for drainage.

3. If installation of walkway pads over field fabricated splices or within 6 inches (152.4 mm) of a splice edge cannot be avoided, adhere another layer of flashing over the splice and extending beyond the walkway pad a minimum of 6 inches (152.4 mm) on either side.

4. Prime the membrane, remove the release paper on the pad, press in place, and walk on pad to ensure proper adhesion.

3.8 FIELD QUALITY CONTROL

A. Inspection by Manufacturer: Provide final inspection of the roofing system by a Technical Representative employed by roofing system Manufacturer specifically to inspect installation for warranty purposes (e.g., not a sales representative).

B. Perform all corrections necessary for issuance of warranty.

C. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion, in presence of Architect, and to prepare inspection report.

D. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.

E. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.9 CLEANING

A. Clean all contaminants generated by roofing work from building and surrounding areas, including bitumen, adhesives, sealants, and coatings.

B. Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with recommendations of manufacturers of components and surfaces.

C. Remove leftover materials, trash, debris, equipment from project site and surrounding areas.

3.10 PROTECTION

A. Where construction traffic must continue over finished roof membrane, provide durable protection, and replace or repair damaged roofing to original condition. When remaining construction does not affect or endanger roofing, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

END OF SECTION

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SECTION 095110 – SUSPENDED ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This Section includes

1. Suspended metal ceiling grid system(s).
2. Perimeter trim and accessories.
3. Acoustical ceiling units, types as specified. Refer to "REFLECTED CEILING PLAN" for locations.

B. Related Sections
1. Division 21 Section - Fire Detection and Alarm System: Fire alarm components in ceiling system.
2. Division 23 - Diffusers, Registers, and Grilles within ceiling system.
3. Division 26 Section - Interior Lighting: Lighting fixtures within ceiling system.

1.3 REFERENCE STANDARDS

A. American Society for Testing and Materials (ASTM):

1. ASTM C635 - Metal Suspension System for Acoustical Tile and Lay-In Panel Ceilings.
2. ASTM C636 - Recommended Practices of Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
3. ASTM C665 - Mineral Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
4. ASTM E84 - Surface Burning Characteristics of Building Materials.
5. ASTM E1264 - Classification of Acoustical Ceiling Products.

B. Underwriters Laboratories Inc. (UL):

1. UL - Fire Resistance Directory and Building Material Directory.

1.4 SYSTEM DESCRIPTION

A. Suspension system shall rigidly secure acoustical ceiling system, including integral mechanical and electrical components, with maximum deflection of 1/360.

1.5 SUBMITTALS

A. Shop Drawings, Product Data and Samples: Submit in accordance with Division1.

B. Shop Drawings: Prior to delivery and installation, submit shop drawings clearly indicating:

1. Grid layout with reflected ceiling plan of typical rooms and other spaces.
2. Insert and hanger spacing and fastening details accompanied by catalog illustrations.
3. Splicing method for main and cross runners.
4. Change in level details.
5. Acoustical unit support at ceiling fixtures.

C. Product Data: Submit two copies of manufacturer's descriptive literature and recommended installation instructions and procedures.

D. Samples: Deliver to job site, samples of each of the following:

1. One of each type of acoustical unit showing specified texture, pattern, and exposed-to-view finish.
2. One 12-inch length of runner, tees, intermediate support member, hanger wire, and edge and corner moldings.

1.6 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacture of ceiling suspension systems and acoustical ceiling tile/panels with minimum five years experience.

B. Installer Qualifications: Company specializing in installation of acoustical ceiling systems with minimum three years experience and approved by Ceiling Manufacturer.

1.7 REGULATORY REQUIREMENTS

A. Conform to requirements of the applicable building code, for flammability classification of materials.

B. Conform to UL Design No. indicated on drawings for ceiling-floor and/or ceiling-roof assembly.

1.8 MAINTENANCE MATERIAL

A. Provide extra quantity of acoustical units under provisions of closeout section.

B. Furnish extra materials equal to 2% of each type of acoustical units supplied.

C. Maintenance Instructions: Submit manufacturer's recommendations for replacement, cleaning and refinishing of acoustical units. Include precautions against materials and methods detrimental to finish and acoustics efficiency.

1.9 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Delivery:

1. Do not deliver materials to job site until building is ready for their installation.
2. Deliver materials in manufacturer's original, unopened protective packaging, with labels indicating brand name, pattern, size, thickness and fire rating as applicable, legible and intact.

B. Storage and Handling:

1. Store and handle materials in original protective packaging to prevent soiling, physical damage or wetting.

C. Acclimate:

1. Not less than 24 hrs. before installation, store cartons of tile, open at each end, in areas to be installed to stabilize temperature and moisture content.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Maintain uniform temperature of minimum 60 degrees F, and humidity of 20 to 40 percent in areas where acoustical materials are to be installed, 24 hrs. prior to, during, and 24 hrs. after installation.

1.11 SEQUENCING/SCHEDULING

A. Do not commence installation of acoustical ceilings until building is permanently, sufficient heat is provided, dust generating activities have terminated, and overhead mechanical and Electrical work is completed, tested, and approved.

B. Schedule installation of acoustical systems after all interior wet work is dry and cured.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Suspension System(s):

1. Basis-of-Design Product: The design for acoustical ceiling suspension system(s), type(s) specified, are based on Armstrong World Industries,

Lancaster, PA. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

a. Armstrong Commercial Ceilings
b. USG Interiors, Inc., Chicago IL

B. Acoustical Unit(s):

1. Basis-of-Design: The design for acoustical units, type(s) specified, are based on Armstrong World Industries, Lancaster, PA. Subject to compliance with requirements, provide the named product or a comparable product by one of the following:

a. Armstrong Commercial Ceilings
b. USG Interiors, Inc. Chicago, IL

2.2 SUSPENSION SYSTEM(S)

A. Non-Fire Rated System (SS-1):

1. Type: Exposed tee grid, ASTM C635.
2. Structural Classification: Provide intermediate duty system main runner grid with equivalent cross tees and accessories.
3. Main, Cross, and Concealed Members:

a. Web Design: Double thickness with cap.
b. Material: Cold-rolled steel, hot dipped galvanized and steel cap with standard factory applied high-baked enamel finish, color(s) as selected by Architect.
c. Exposed Flange: 15/16-inch width.
d. Recycled Content: 25%.

4. Design: Armstrong's "Prelude XL" 15/16-inch exposed tee grid.

B. Non-Fire Rated System (SS-2):

1. Type: Exposed tee grid, ASTM C635.
2. Structural Classification: Provide intermediate duty system main runner grid with equivalent cross tees and accessories.
3. Main, Cross, and Concealed Members:

a. Web Design: Double thickness with cap.
b. Material: Aluminum construction with PVC face.
c. Exposed Flange: 15/16-inch width.
d. Recycled Content: 50%.

4. Design: Armstrong's "Clean Room" 15/16-inch exposed tee grid.

C. Edge Molding: Minimum 0.017-inch cold-rolled steel, electro-galvanized, angle or channel shaped, minimum 15/16-inch flange width, with standard factory finish, color to match grid system, complete with internal and external corner caps.

D. Special Moldings/Sections: In addition to standard manufactured edge moldings, ceiling contractor shall also provide any special fabricated moldings/sections required for special conditions where ceilings abut other elements.

E. Accessories: Hold down clips (in all entry vestibules), splices, furring clips, and stabilizer bars as required to complete ceiling system and supplied by suspension system manufacturer.

F. Provide concealed cross “TEE” and main runner anchor clips (Chicago Metallic # 1499) to secure same to edge molding. Exposed pop rivets are not permitted.

G. Rough Suspension:

1. Hanger Wire: Minimum 12 ga. galvanized, soft-annealed, mild steel wire.
2. Wire Ties: 18 gage, galvanized annealed steel wire.
3. Carrying Channels: 16 gage, 1-1/2 inch, cold-rolled steel.

H. Ceiling Expansion Joint Cover

1. Material: Flexible white vinyl filler.

2.3 ACOUSTICAL UNIT MATERIALS

A. Acoustical Panel (ACT-1A): ASTM E1264, Type IV, Form A2.2, Pattern E, conforming to the following:

1. Size: nominal 2-ft. by 2-ft.x 3/4”
2. Edge Detail: Square lay-in.
3. Surface Finish: Factory applied latex paint on DuraBrite acoustically transparent membrane
4. Style: Armstrong Ultima Lay-in.
5. Number: 1910 Square Lay-in
6. “HumiGuard Plus” no sag warranty.
7. Suspension System: SS-1.

B. Acoustical Panel (ACT-2A): ASTM E1264, Type IV, Form A2.2, Pattern E, conforming to the following:

1. Size: nominal 2-ft. by 4-ft.x 3/4”
2. Edge Detail: Square lay-in.
3. Surface Finish: Factory applied latex paint on DuraBrite acoustically transparent membrane
4. Style: Armstrong Ultima Lay-in.
5. Number: 1913 Square Lay-in

6. “HumiGuard Plus” no sag warranty.
7. Suspension System: SS-1.

C. Acoustical Panel (ACT-2C): ASTM E1264, Type IV, Form A2.2, Pattern E conforming to the following:

1. Size (nominal 2-ft. by 2-ft x 3/4”):
2. Edge Detail: Square Lay-in.
3. Surface Finish: Factory applied latex paint.
4. Style: Armstrong "Calla”
5. Number: 2824 Square Lay-in,
6. “HumiGuard Plus” no sag warranty.
7. Suspension System: SS-1.

2.4 ACCESSORIES

A. Touch-Up Paint: Type and color required to match acoustical units and grid system.

PART 3 - EXECUTION

3.1 INSPECTION/COORDINATION

A. Verify that all major above-ceiling work is completed.

B. Coordinate the locations and installation of hangers with the work of other trades.

C. Ensure the layout of hangers and carrying channels are located to accommodate fixtures and equipment which will be placed after the installation of ceiling grid system(s).

D. Where ducts or other equipment prevent the regular spacing of hangers, provide “Unistrut trapezes.

E. Coordinate mechanical and electrical fixtures/equipment to be incorporated into the suspended ceiling and grid system as indicated or as required.

1. Provide four grid hanger wires at each lay-in light corner and at HVAC diffuser corners.
2. All other items placed into lay-in grid: support of such items shall be by separate independent supports installed by the respective trades.

3.2 INSTALLATION - SUSPENSION SYSTEM

A. Install fire rated ceiling system(s), when indicated, in accordance with applicable UL Design requirements.

B. Install in accordance with ASTM C636 and manufacturer's recommendations to produce finished ceiling true to lines and levels and free from warped, soiled or damaged grid.

C. Install ceiling system(s) in a manner capable of supporting all superimposed loads, with maximum permissible deflection of 1/360 of span and maximum surface deviation of 1/8-inch in 12 ft.

D. In the absence of "Reflected Ceiling Plan(s)", lay out ceiling system(s) on room axis to a balanced grid design leaving equal border pieces no less than 50 percent of acoustical unit size.

E. Rough Suspension:

1. Hanger Clips on Inserts: Install as recommended by manufacturer.
2. Hanger Wire: Space 4 ft. o.c., each direction unless specified otherwise.
3. Do not splay wires more than 5-inches in a 4 ft. vertical drop.
4. Wrap wire a minimum of three times horizontally, turning ends upward.
5. Saddle tie carrying channels to main structure for indirect hung suspension system, as appropriate.

F. Main and Cross Runners:

1. Space main runners at 4 ft. o.c., in direction of lighting pattern.

    a. At right angle to carrying channel, wire clip to channels at intersections, if indirect suspension is required.
    b. Level and square to adjacent walls.

2. Space cross runners at 2 ft. o.c.
3. Suspend grid system(s) independently of walls, columns, ducts, lighting fixtures, pipes and conduit.

G. Mechanical and Electrical Components: Where mechanical and electrical components are an integral part of the ceiling system, support such components by supplementary hangers attached to the grid system and located within 6 inches of each corner of such component. Extremely heavy components shall be supported independently of grid system.

H. Do not eccentrically load system, or produce rotation of runners.

I. Wall Molding:

1. Install wall molding at intersection of suspended ceiling and vertical surfaces.

2. Install inside and outside corner caps where wall moldings intersect, and preformed closers where bullnose corners occur matching edge molding.
3. Attach to vertical surface with mechanical fasteners using maximum lengths; straight, true to line and level.
4. Install hold-down clips on all lay-in units, to hold panels tight to grid system where air up-lift might occur, such as areas adjacent to exterior doors, and at all lay in units in a fire-rated ceiling system.

3.3 INSTALLATION - ACOUSTICAL UNITS

A. Install acoustical ceiling units in strict accordance with manufacturer's printed installation instructions and recommended procedures.

B. Install ceiling units level, in uniform plane, in straight line courses, and free from twist, warp and dents.

C. Fit acoustic lay-in panels to bear all four sides on suspension members, free from damaged edges or other defects detrimental to appearance and function.

D. Minimum width of border tiles: One-half unit dimension.

E. Lay directionally patterned tile, as directed by Architect, with longest dimension of tile parallel to longest dimension of room, unless indicated otherwise on "Reflected Ceiling Plan(s)".

F. Where bullnose concrete block corners, and other round obstructions occur, provide preformed closers to match edge molding.

G. Hold-down Clips:

1. Non-Rated System: Install to retain all panels, weighing less than 1 lb. per sq. ft., tight to grid system within 15 ft. of exterior doors and entrances and main Corridors.

3.4 CLEANING AND ADJUSTMENTS

A. Clean soiled or discolored unit surface after installation.

B. Touch up scratches, abrasions, voids, and other defects in painted surfaces.

C. Remove and replace damaged, uncleanable, or improperly installed units.

D. Adjust any sags or twist which develop in the ceiling system(s).

END OF SECTION

SECTION 122413 - ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Manually operated roller shades with single rollers.
2. Motor-operated roller shades with single rollers.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions for roller shades.

B. Shop Drawings: Show fabrication and installation details for roller shades, including shadeband materials, their orientation to rollers, and their seam and batten locations.

C. Samples: For each type of roller shade.

1. Shadeband Material: Not less than 10 inches square. Mark inside face of material if applicable.
2. Roller Shade: Full-size operating unit, not less than 16 inches wide by 36 inches long for each type of roller shade indicated.
3. Installation Accessories: Full-size unit, not less than 10 inches long.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Certificates: For each type of shadeband material, signed by product manufacturer.

C. Product Test Reports: For each type of shadeband material, for tests performed by manufacturer and witnessed by a qualified testing agency.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roller shades to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Roller Shades: Full-size units equal to 5 percent of quantity installed for each size, color, and shadeband material indicated, but no fewer than two units.

1.7 QUALITY ASSURANCE

A. Installer Qualifications: Fabricator of products.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Deliver roller shades in factory packages, marked with manufacturer, product name, and location of installation using same designations indicated on Drawings.

1.9 FIELD CONDITIONS

A. Environmental Limitations: Do not install roller shades until construction and finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operating hardware of operable glazed units through entire operating range. Notify Architect of installation conditions that vary from Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 MANUALLY OPERATED - MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide products manufactured by MechoShade Systems, Inc. or comparable product by one of the following:

1. DFB Sales.
2. Draper Inc.

3. Hunter Douglas Contract.
4. Lutron Electronics Co., Inc.
5. OEM Shades Inc.
6. Shade Techniques, LLC.
7. Silent Gliss USA, Inc.

B. Source Limitations: Obtain roller shades from single source from single manufacturer.

2.2 MANUALLY OPERATED SHADES WITH SINGLE ROLLERS

A. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.

1. Bead Chains: Manufacturer's standard.

a. Loop Length: As indicated on Drawings.
b. Limit Stops: Provide upper and lower ball stops.

B. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.

1. Roller Drive-End Location: As indicated on Drawings.
2. Direction of Shadeband Roll: Reverse, from front of roller.
3. Shadeband-to-Roller Attachment: Manufacturer's standard method.

C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

D. Shadebands:

1. Shadeband Material: As selected by Architect.
2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.

a. Type: Enclosed in sealed pocket of shadeband material.
b. Color and Finish: As selected by Architect from manufacturer's full range.

E. Installation Accessories:

1. Exposed Headbox: Rectangular, extruded-aluminum enclosure including front fascia, top and back covers, endcaps, and removable bottom closure.
2. Endcap Covers: To cover exposed endcaps.

2.3 MOTOR-OPERATED - MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide MechoShade Systems, Inc.; ElectroShade Systems for motorized shades, or comparable product by one of the following:

1. Draper Inc.
2. Hunter Douglas Contract.
3. Lutron Electronics Co., Inc.
4. Nysan Solar Control Inc.
5. OEM Shades Inc.
6. Shade Techniques, LLC.

B. Source Limitations: Obtain roller shades from single source from single manufacturer.

2.4 MOTOR-OPERATED, SINGLE-ROLLER SHADES

A. Motorized Operating System: Provide factory-assembled, shade-operator system of size and capacity and with features, characteristics, and accessories suitable for conditions indicated, complete with electric motor and factory-prewired motor controls, power disconnect switch, enclosures protecting controls and operating parts, and accessories required for reliable operation without malfunction. Include wiring from motor controls to motors. Coordinate operator wiring requirements and electrical characteristics with building electrical system.

1. Electrical Components: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
2. Electric Motor: Manufacturer's standard tubular, enclosed in roller.

    a. Electrical Characteristics: Single phase, 110 V, 60 Hz.

3. Remote Control: Electric controls with NEMA ICS 6, Type 1 enclosure for flush mounting. Provide the following for remote-control activation of shades:

    a. Control Station: Momentary-contact, three-position, switch-operated control station with open, close, and off functions.

4. Limit Switches: Provide programming of upper and lower stopping points (operating limits) of shadebands into motors via a hand held removable program module/configurator.
5. Operating Features:

    a. Capable of interface with audiovisual control system.

B. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required for accommodating operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.

1. Roller Drive-End Location: As indicated on Drawings.
2. Direction of Shadeband Roll: Regular, from back of roller.

3. Shadeband-to-Roller Attachment: Removable spline fitting integral channel in tube.

C. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.

D. Shadebands:

1. Shadeband Material: Light-filtering fabric.
2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.

a. Type: Enclosed in sealed pocket of shadeband material.
b. Color and Finish: As selected by Architect from manufacturer's full range.

E. Installation Accessories:

1. Front Fascia: Aluminum extrusion that conceals front and underside of roller and operating mechanism and attaches to roller endcaps without exposed fasteners.

a. Shape: L-shaped.
b. Height: Manufacturer's standard height required to conceal roller and shadeband when shade is fully open.
c. Endcap Covers: To cover exposed endcaps.
d. Installation Accessories Color and Finish: As selected from manufacturers' full range.

2. Installation Accessories Color and Finish: As selected from manufacturer's full range.

2.5 SHADEBAND MATERIALS

A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

B. Light-Filtering Fabric: 1% light filtering woven fabric, stain and fade resistant, type selected by Architect.

~~C. Light-Blocking Fabric: 1% light blocking opaque fabric, stain and fade resistant, type selected by Architect.~~

2.6 ROLLER-SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1, including requirements for flexible, chain-loop devices; lead content of components; and warning labels.

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F:

1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/4 inch per side or 1/2-inch total, plus or minus 1/8 inch. Length equal to head-to-sill or -floor dimension of opening in which shade is installed less 1/4 inch, plus or minus 1/8 inch.
2. Installation Locations: As indicated on Drawings.

C. Shadeband Fabrication: Fabricate shadebands without battens or seams to extent possible except as follows:

1. Vertical Shades: Where width-to-length ratio of shadeband is equal to or greater than 1:4, provide battens and seams at uniform spacings along shadeband length to ensure shadeband tracking and alignment through its full range of movement without distortion of the material.

PART 3 - EXECUTION

3.1 EXAMINATION

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

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROLLER-SHADE INSTALLATION

A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions.

1. Opaque Shadebands: Located so shadeband is not closer than 2 inches to interior face of glass unless indicated otherwise. Allow clearances for window operation hardware.

B. Electrical Connections: Connect motor-operated roller shades to building electrical system.

C. Turn-Key Single-Source Responsibility for Motorized Interior Roller Shades: To control the responsibility for performance of motorized roller shade systems, assign the design, engineering, and installation of motorized roller shade systems, motors, controls, and low voltage electrical control wiring specified in this Section to a single manufacturer and their authorized installer/dealer. The Architect will not produce a set of electrical drawings for the installation of control wiring for the motors, or motor controllers of the motorized roller shades. Power wiring (line voltage), shall be provided by the roller shade installer/dealer, in accordance with the requirements provided by the manufacturer. Coordinate the following with the roller shade installer/dealer:

1. Main Contractor shall provide power panels and circuits of sufficient size to accommodate roller shade manufacturer's requirements, as indicated on the mechanical and electrical drawings.
2. Main Contractor shall coordinate with requirements of roller shade installer/dealer, before inaccessible areas are constructed.
3. Roller shade installer/dealer shall run line voltage (of sufficient quantity, in sufficient capacity as required) terminating in junction boxes in locations designated by roller shade dealer.
4. Roller shade installer/dealer shall provide and run all line voltage (from the terminating points) to the motor controllers, wire all roller shade motors to the motor controllers, and provide and run low voltage control wiring from motor controllers to switch/ control locations designated by the Architect. All above-ceiling and concealed wiring shall be plenum-rated, or installed in conduit, as required by the electrical code having jurisdiction
5. Main Contractor shall provide conduit with pull wire in all areas, which might not be accessible to roller shade contractor due to building design, equipment location or schedule.

3.3 ADJUSTING

A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

A. Clean roller-shade surfaces after installation, according to manufacturer's written instructions.

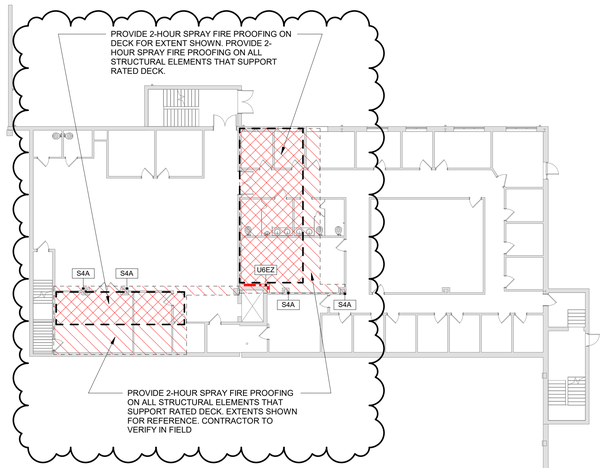
B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.

C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

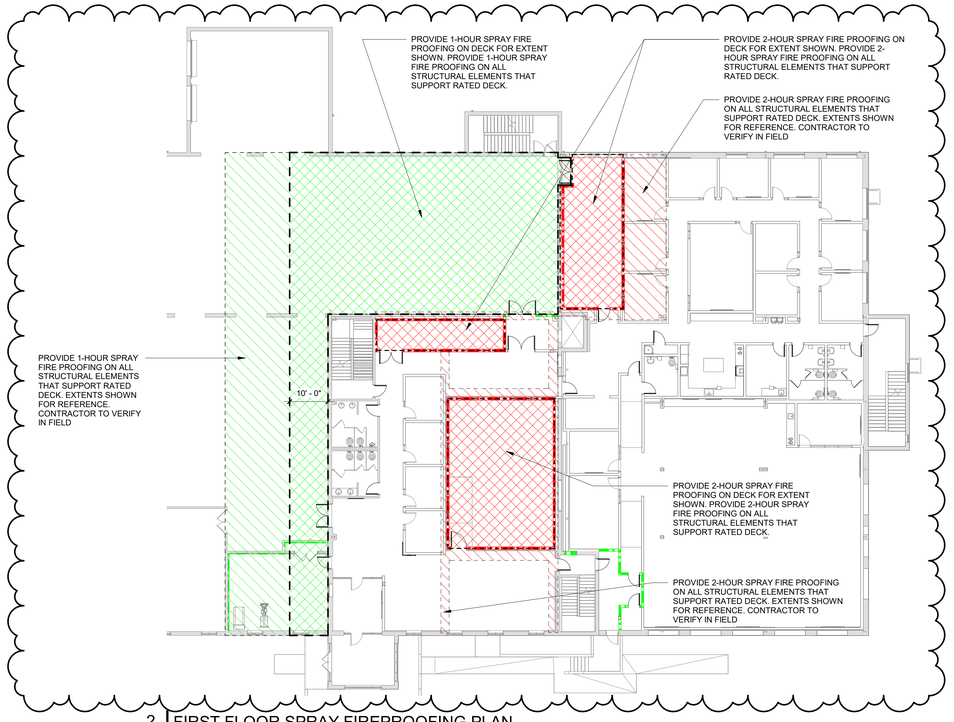
3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain motor-operated roller shades.

END OF SECTION 122413



1 BASEMENT SPRAY FIREPROOFING PLAN
A003 SCALE: 1/16" = 1'-0"

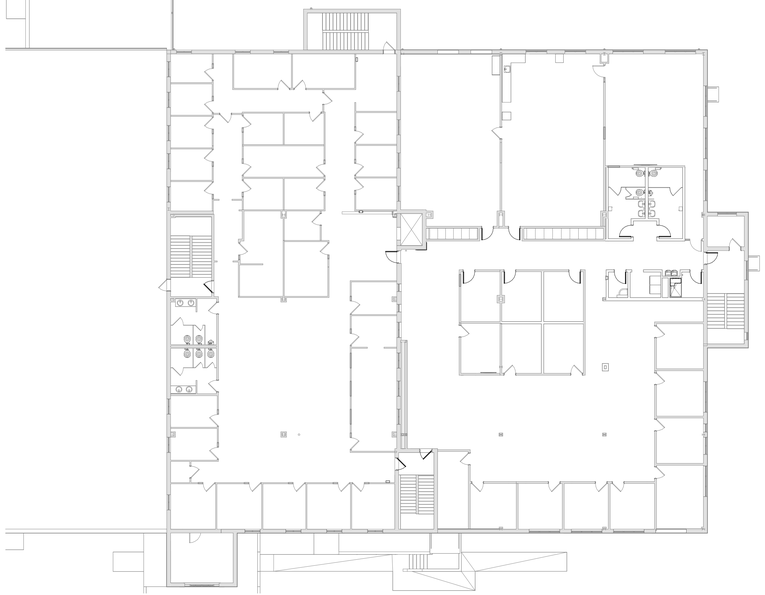


2 FIRST FLOOR SPRAY FIREPROOFING PLAN
A003 SCALE: 1/16" = 1'-0"

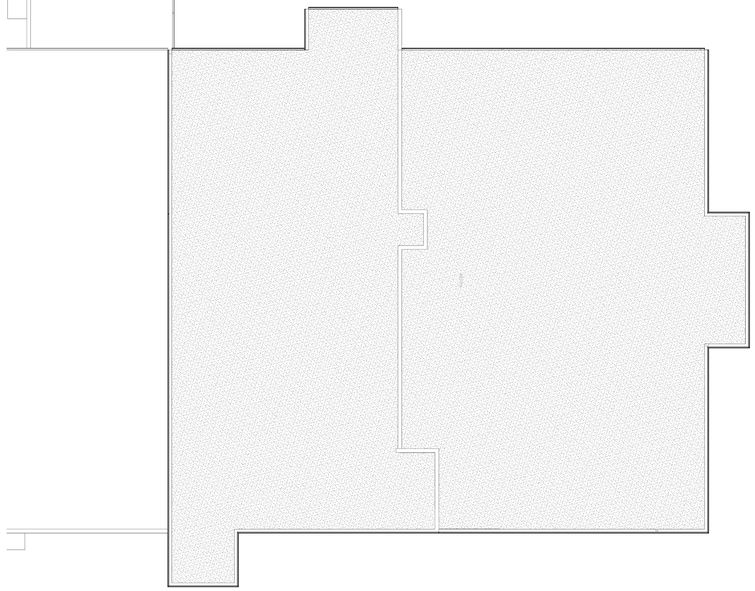
GC RESPONSIBLE FOR ANY INCIDENTAL WORK REQUIRED TO PROVIDE PROPER FIRE PROOFING INCLUDING BUT NOT LIMITED TO CEILING REMOVAL AND REPLACEMENT, PARTIAL DEMO, RECEPTICAL RELOCATION, WALL MOUNTED EQUIPMENT, WALL DISPLAYS, MARKERBOARDS.

WHERE DEMO IS REQUIRED, GC REQUIRED TO PATCH, REPAIR, AND/OR REPLACE IN KIND FINISHES, WALLS, CEILINGS, FLOORS, FIXTURES, EQUIPMENT TO MATCH EXISTING.

WHERE WALL DEMO IS REQ'D, GC TO PROVIDE NEW PNT GWB WALL TO MATCH EXISTING.



3 SECOND FLOOR SPRAY FIREPROOFING PLAN
A003 SCALE: 1/16" = 1'-0"



4 ROOF SPRAY FIREPROOFING PLAN
A003 SCALE: 1/16" = 1'-0"

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Owner:
ALAMANCE COUNTY

124 West Elm Street
Graham, NC 27253

Renovations to:
ALAMANCE COUNTY EMERGENCY OPERATIONS AND COMMUNICATIONS CENTER
780 PLANTATION DRIVE
BURLINGTON, NC 27215

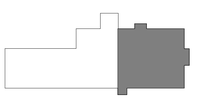
ISSUED FOR:

NO.	DESCRIPTION	DATE
	BUILDING PERMIT SET	04/18/2025
	ISSUED FOR BIDDING	09/02/2025
AD4	ADDENDUM #4	10/10/2025

DATE: 09/02/2025

SG PROJECT NUMBER: 23-041

Key Plan:



Drawing Title:
SPRAY FIREPROOFING PLANS

Drawing Number:
A003

N True N Project

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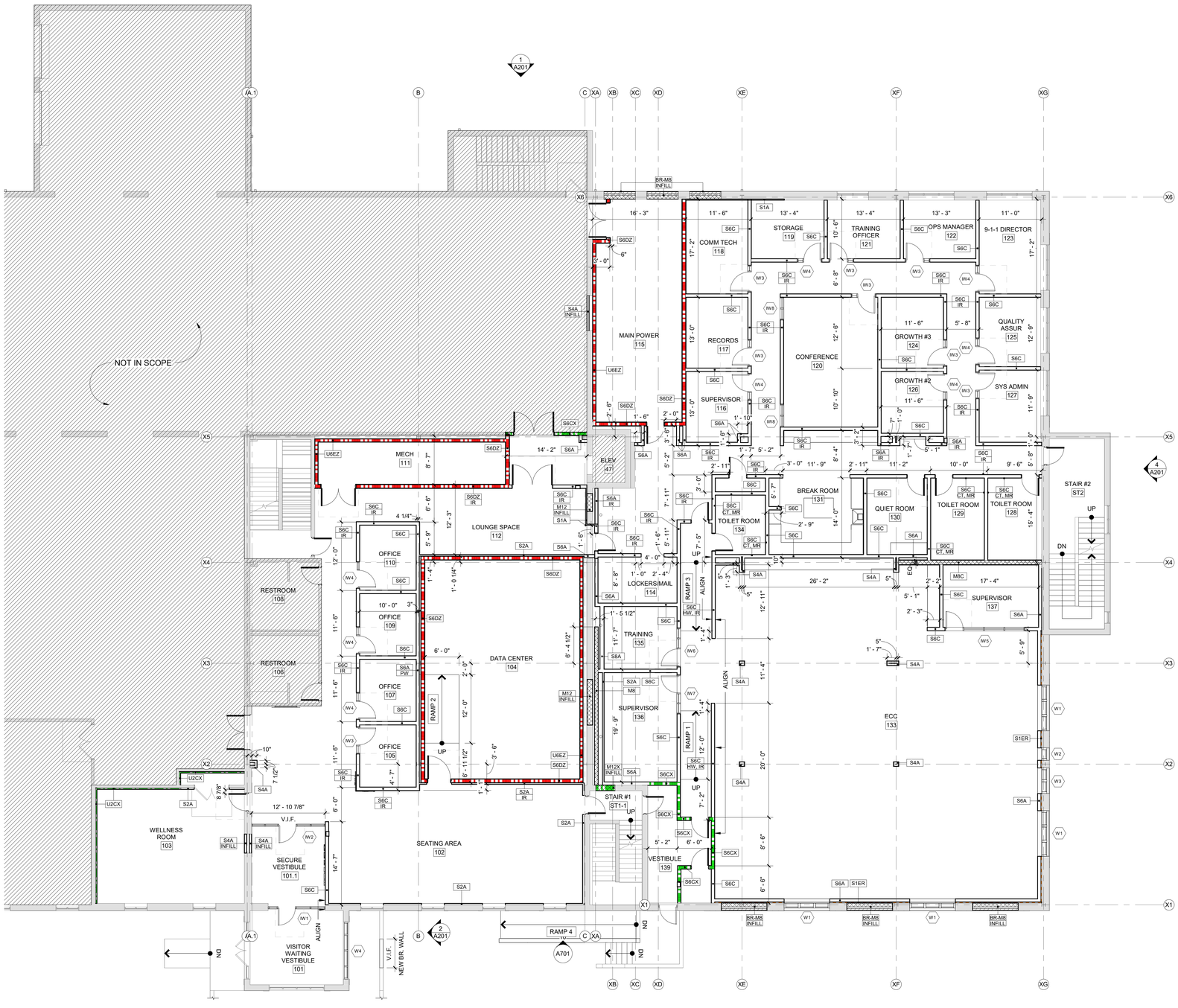

1 FIRST FLOOR DIMENSION PLAN

A111 SCALE: 1/8" = 1'-0"

GENERAL PLAN NOTES

1. ALL DIMENSIONS ARE TO OUTSIDE FACE OF FOUNDATIONS, COLUMN LINE, OR FACE OF FRAMING UNLESS NOTED OTHERWISE. CONTRACTOR SHALL VERIFY DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.
2. SEE ENLARGED PLANS FOR TYPICAL INTERIOR ELEVATIONS.

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	BUILDING PERMIT SET	04/18/2025
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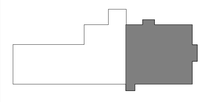
DATE: 09/02/2025

SG PROJECT NUMBER: 23-041

Key Plan:



Drawing Title:

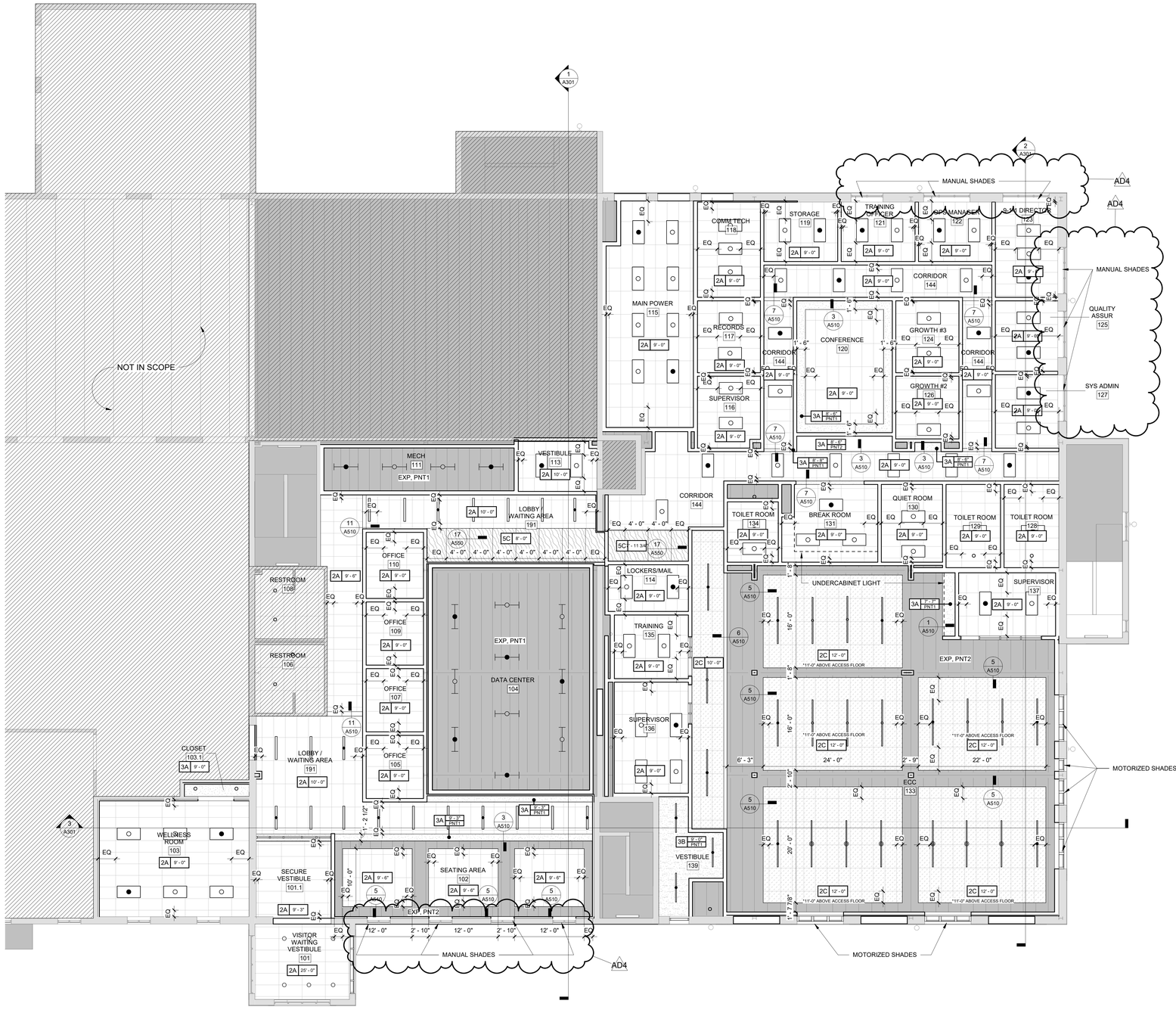
FIRST FLOOR
DIMENSION PLAN

Drawing Number:

A111

N True N Project

0' 2' 4' 8' 16' 24'



1 FIRST FLOOR REFLECTED CEILING PLAN
A121 SCALE: 1/8" = 1'-0"

CEILING NOTES

1. ALL CEILING TILE TO BE CENTERED IN ROOMS, UNLESS OTHERWISE NOTED.
2. CEILING HEIGHTS REFERENCE ROOMS FINISHED FLOOR ELEVATION.
3. CONTRACTOR TO PROVIDE CEILING EXPANSION JOINTS PER SPECIFICATION REQUIREMENTS AND MANUFACTURER'S RECOMMENDATIONS AT ALL BUILDING EXPANSION JOINT LOCATIONS.
4. REFERENCE MECHANICAL DRAWINGS FOR CEILING MOUNTED DUCTS, PIPES, ETC.
5. REFERENCE ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE TYPES AND LOCATIONS.
6. "EXPOSED, PTD" INCLUDES STRUCTURE, DUCTWORK, PIPING, CONDUIT, HANGERS AND ACCESSORIES.

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF MASONRY, ROUGH FRAME OR CENTER LINE OF COLUMN - TYPICAL, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL VERIFY **ALL** DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

RCP LEGEND

6A 10' - 0" PT-1 — INDICATES CEILING TYPE (SEE LEGEND), HEIGHT ABOVE FINISHED FLOOR & FINISH

EXPOSED TO STRUCTURE ABOVE, PAINTED

CEILING LEGEND

1A 2x2 ACOUSTICAL CEILING TILE SYSTEM

2A 2x4 ACOUSTICAL CEILING TILE SYSTEM

2C 2x4 HIGH NRC CEILING TILE SYSTEM

3A GWB CEILING FINISH

3B 1 HR FIRE RATED GWB CEILING FINISH (NER 258)

5C CUSTOM PLAM WOOD LOOK CEILING

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NO.	DESCRIPTION	DATE
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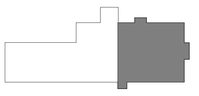
	ISSUED FOR BIDDING	09/02/2025
AD4	ADDENDUM #4	10/10/2025

DATE: 09/02/2025

SG PROJECT NUMBER: 23-041

Key Plan:

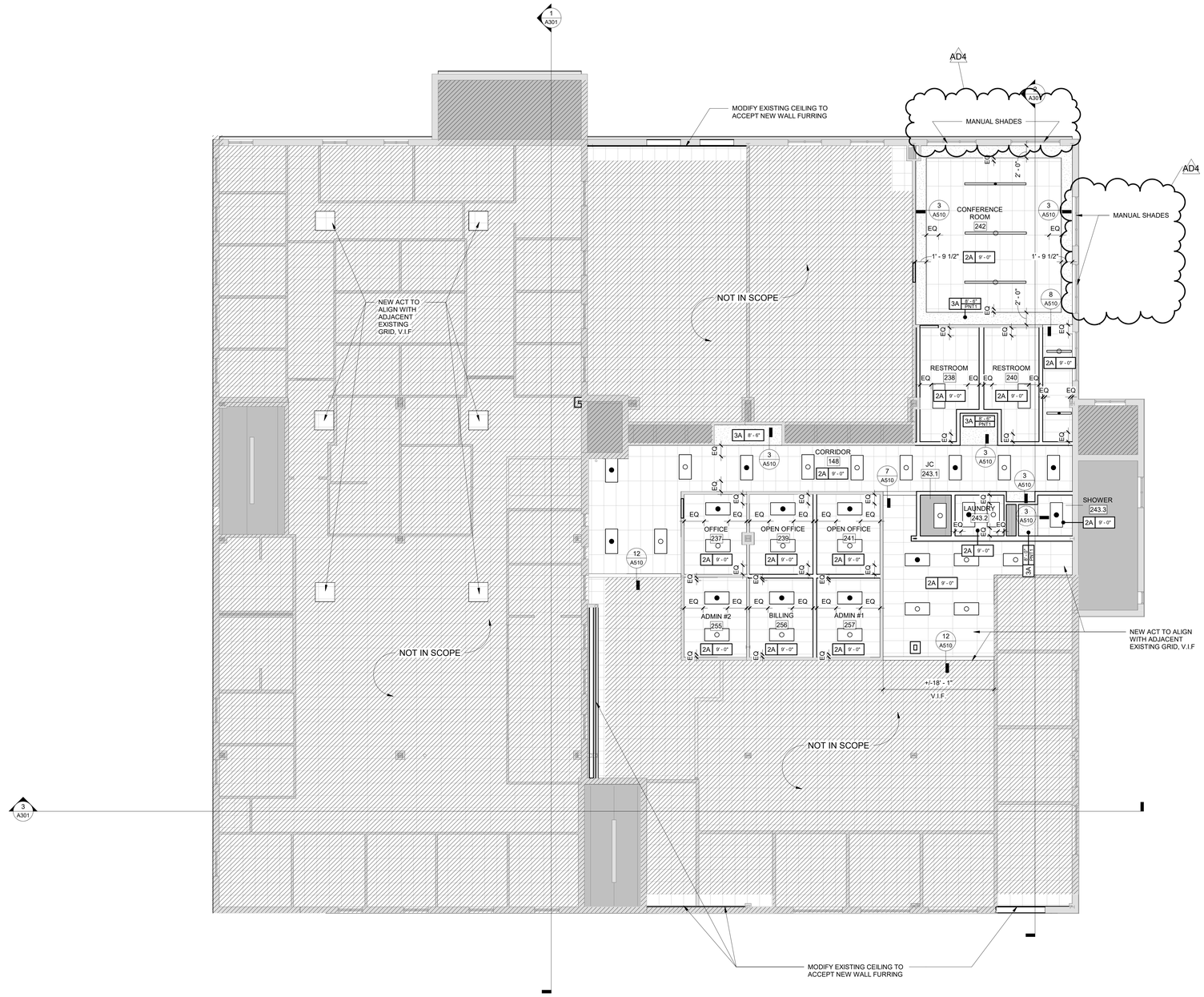


Drawing Title:
FIRST FLOOR REFLECTED CEILING PLAN

Drawing Number:
A121

N True N Project

0' 2' 4' 8' 16' 24'



1 SECOND FLOOR REFLECTED CEILING PLAN
A122 SCALE: 1/8" = 1'-0"

CEILING NOTES

1. ALL CEILING TILE TO BE CENTERED IN ROOMS, UNLESS OTHERWISE NOTED.
2. CEILING HEIGHTS REFERENCE ROOMS FINISHED FLOOR ELEVATION.
3. CONTRACTOR TO PROVIDE CEILING EXPANSION JOINTS PER SPECIFICATION REQUIREMENTS AND MANUFACTURER'S RECOMMENDATIONS AT ALL BUILDING EXPANSION JOINT LOCATIONS.
4. REFERENCE MECHANICAL DRAWINGS FOR CEILING MOUNTED DUCTS, PIPES, ETC.
5. REFERENCE ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE TYPES AND LOCATIONS.
6. "EXPOSED, PTD" INCLUDES STRUCTURE, DUCTWORK, PIPING, CONDUIT, HANGERS AND ACCESSORIES.

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF MASONRY, ROUGH FRAME OR CENTER LINE OF COLUMN - TYPICAL, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL VERIFY **ALL** DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

RCP LEGEND

6A 10' - 0" PT-1 — INDICATES CEILING TYPE (SEE LEGEND), HEIGHT ABOVE FINISHED FLOOR & FINISH

EXPOSED TO STRUCTURE ABOVE, PAINTED

CEILING LEGEND

1A — 2x2 ACOUSTICAL CEILING TILE SYSTEM

2A — 2x4 ACOUSTICAL CEILING TILE SYSTEM

2C — 2x4 HIGH NRC CEILING TILE SYSTEM

3A — GWB CEILING FINISH

3B — 1 HR FIRE RATED GWB CEILING FINISH (NER 258)

5C — CUSTOM PLAM WOOD LOOK CEILING

N True N Project

0' 2' 4' 8' 16' 24'

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	ISSUED FOR BIDDING	09/02/2025
AD4	ADDENDUM #4	10/10/2025

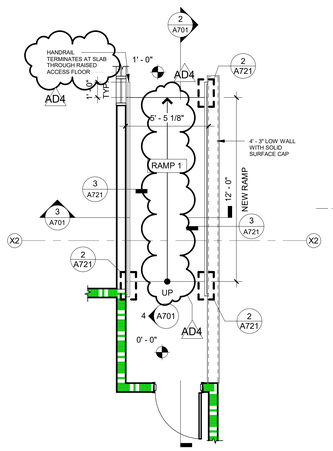
DATE: 09/02/2025

SG PROJECT NUMBER: 23-041

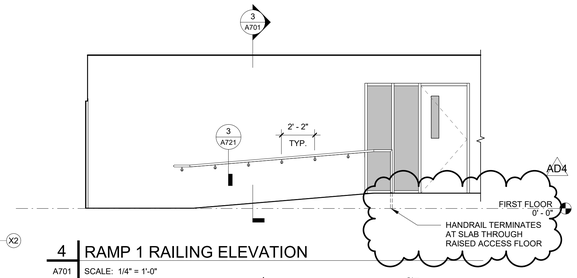
Key Plan:

Drawing Title:
SECOND FLOOR REFLECTED CEILING PLAN

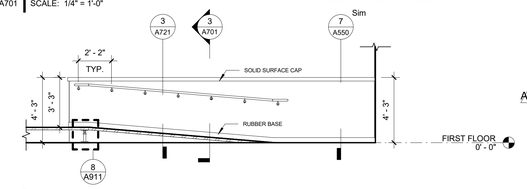
Drawing Number:
A122



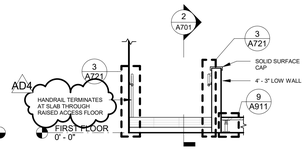
1 RAMP 1 PLAN
A701 SCALE: 1/4" = 1'-0"



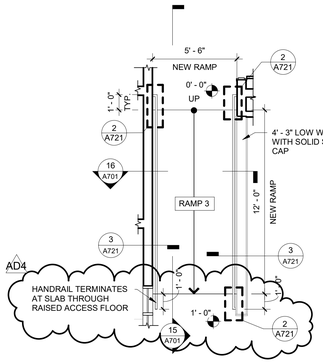
4 RAMP 1 RAILING ELEVATION
A701 SCALE: 1/4" = 1'-0"



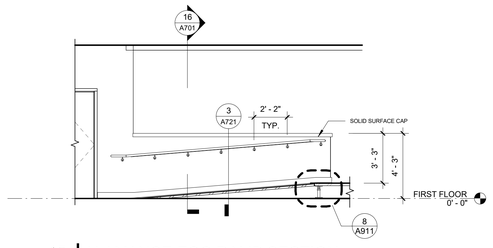
2 RAMP 1 SECTION
A701 SCALE: 1/4" = 1'-0"



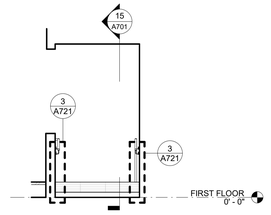
3 RAMP 1 SECTION
A701 SCALE: 1/4" = 1'-0"



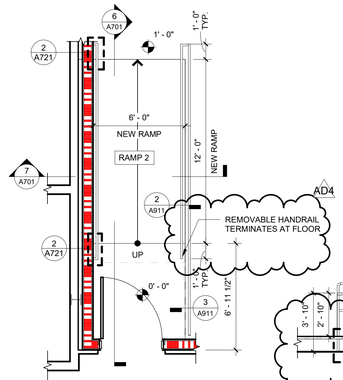
14 ALAMANCE EOC RAMP PLAN
A701 SCALE: 1/4" = 1'-0"



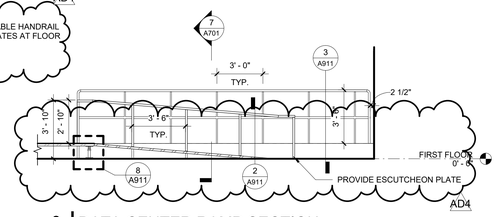
15 ALAMANCE EOC RAMP SECTION
A701 SCALE: 1/4" = 1'-0"



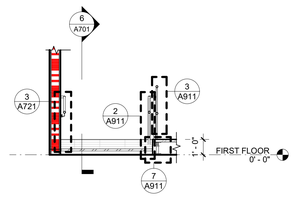
16 ALAMANCE EOC RAMP SECTION 02
A701 SCALE: 1/4" = 1'-0"



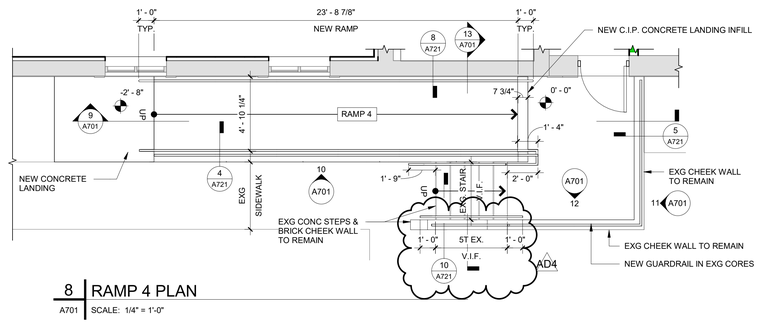
5 DATA CENTER RAMP
A701 SCALE: 1/4" = 1'-0"



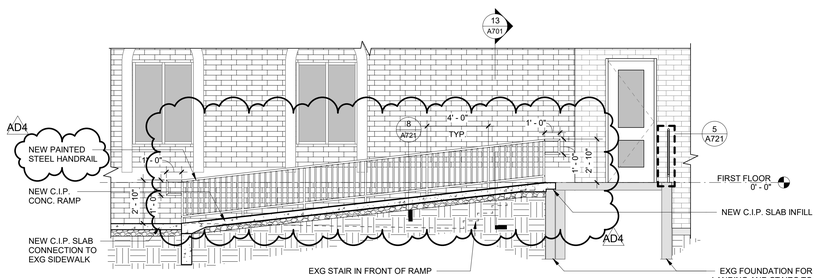
6 DATA CENTER RAMP SECTION
A701 SCALE: 1/4" = 1'-0"



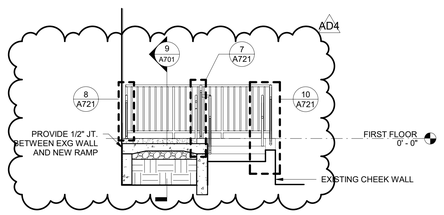
7 DATA CENTER RAMP SECTION
A701 SCALE: 1/4" = 1'-0"



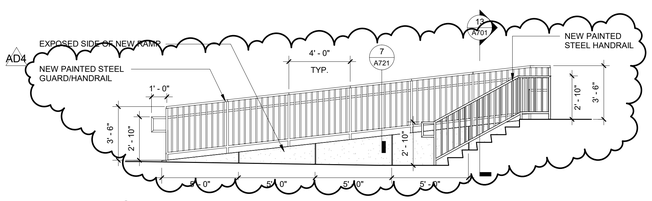
8 RAMP 4 PLAN
A701 SCALE: 1/4" = 1'-0"



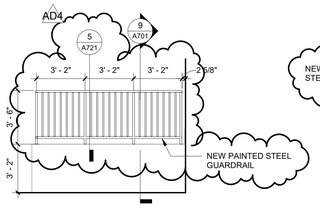
9 LONGITUDINAL SECTION THROUGH EXT. RAMP
A701 SCALE: 1/4" = 1'-0"



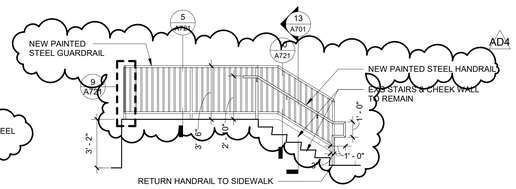
13 CROSS SECTION THROUGH EXT. RAMP
A701 SCALE: 1/4" = 1'-0"



10 RAMP 4 GUARDRAIL & EXG STAIR HANDRAIL ELEVATION
A701 SCALE: 1/4" = 1'-0"



11 GUARDRAIL ELEVATION @ EXG LANDING
A701 SCALE: 1/4" = 1'-0"



12 NEW HAND/GUARDRAIL @ EXG STAIR
A701 SCALE: 1/4" = 1'-0"

N True N Project

0' 2' 4' 8' 16' 24'

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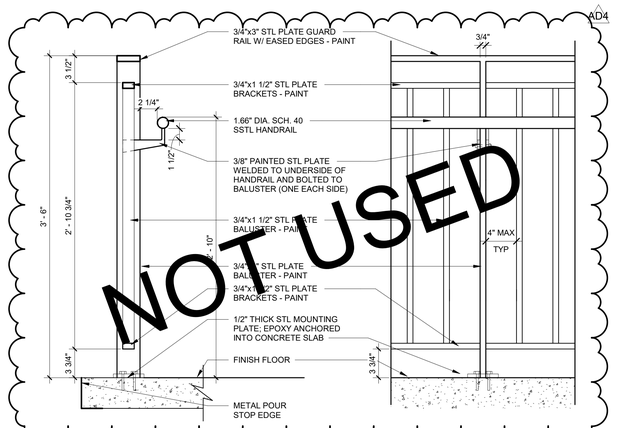
SG PROJECT NUMBER: 23-041

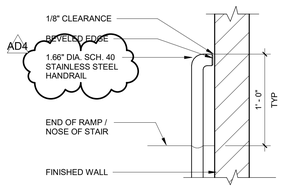
Key Plan:

Drawing Title:
RAMP PLANS AND SECTIONS

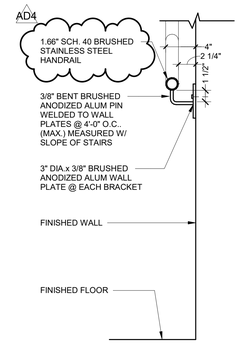
Drawing Number:
A701



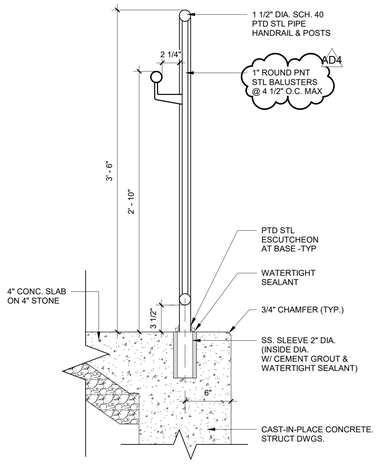
1 SURFACE MOUNTED GUARD/HANDRAIL SECTION & ELEVATION PICKETS
A721 SCALE: 1 1/2" = 1'-0"



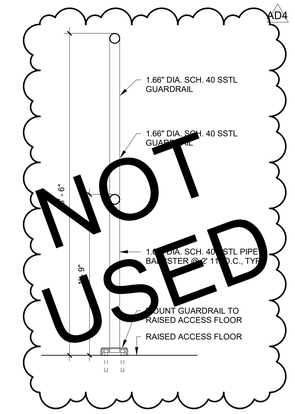
2 HANDRAIL RETURN TO WALL
A721 SCALE: 1 1/2" = 1'-0"



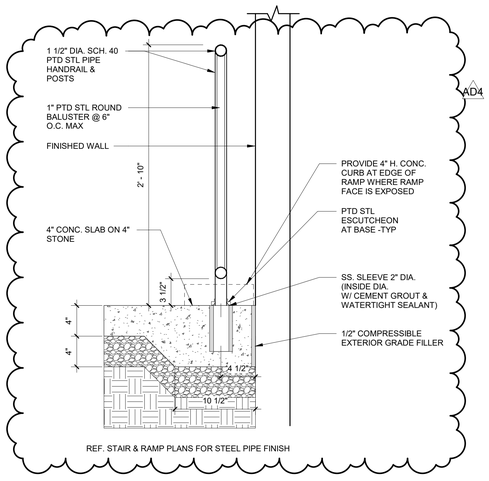
3 WALL MOUNTED HANDRAIL
A721 SCALE: 1 1/2" = 1'-0"



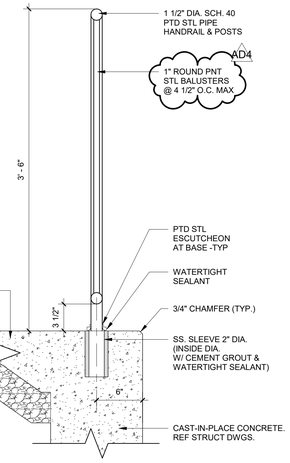
4 EXTERIOR GUARDRAIL
A721 SCALE: 1 1/2" = 1'-0"



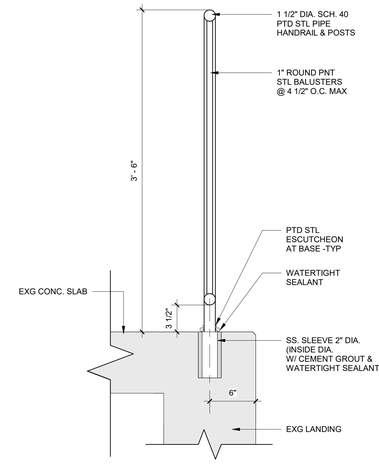
6 GUARDRAIL - DATA CENTER
A721 SCALE: 1 1/2" = 1'-0"



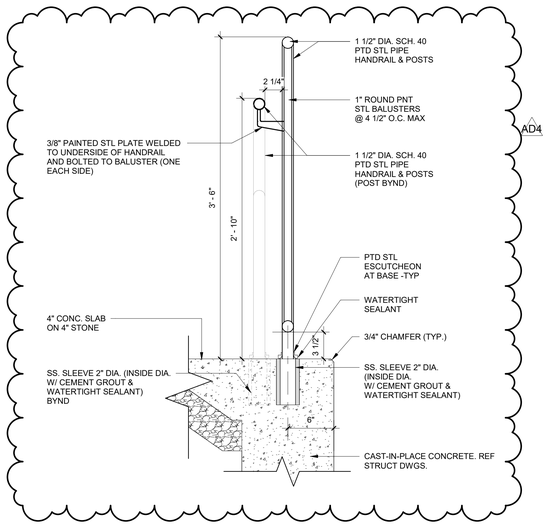
8 CORED HANDRAIL - EXTERIOR
A721 SCALE: 1 1/2" = 1'-0"



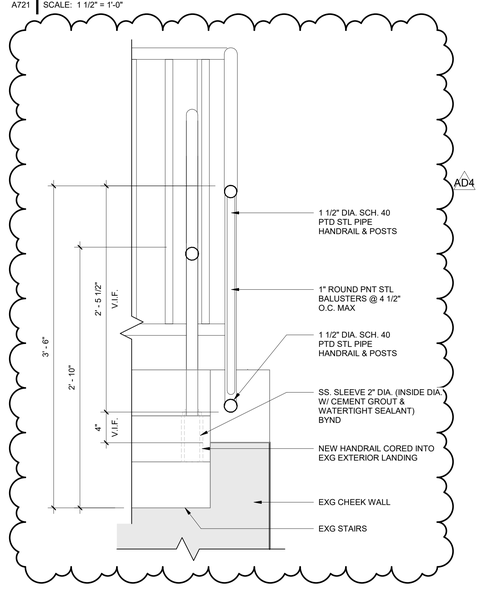
9 EXTERIOR GUARDRAIL ONLY
A721 SCALE: 1 1/2" = 1'-0"



5 EXTERIOR GUARDRAIL - EXISTING LANDING
A721 SCALE: 1 1/2" = 1'-0"



7 EXTERIOR GUARDRAIL W/ FLOOR MOUNTED HANDRAIL
A721 SCALE: 1 1/2" = 1'-0"



10 EXTERIOR STAIR - HANDRAIL
A721 SCALE: 1 1/2" = 1'-0"

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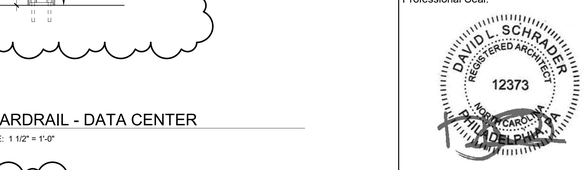

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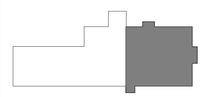
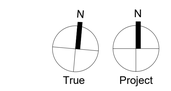
Key Plan:

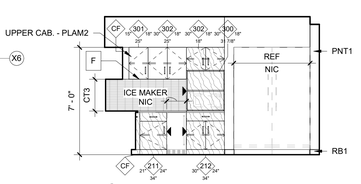


Drawing Title:
STAIR & RAMP DETAILS

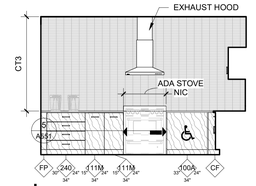
Drawing Number:
A721



1 | FIRST FLOOR BREAK ROOM
A814 | SCALE: 1/4" = 1'-0"



1.1 | IE - BREAKROOM
A814 | SCALE: 1/4" = 1'-0"



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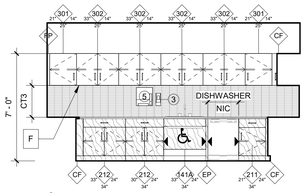
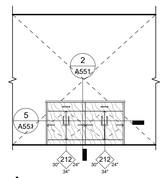
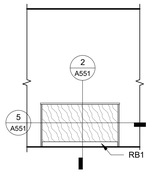
A814 | SCALE: 1/4" = 1'-0"



1.3 | IE - BREAKROOM
A814 | SCALE: 1/4" = 1'-0"

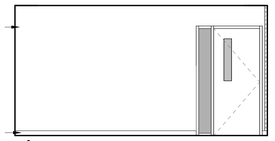


1.4 | IE - BREAKROOM
A814 | SCALE: 1/4" = 1'-0"

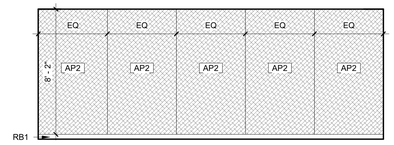


1.5 | IE - BREAKROOM
A814 | SCALE: 1/4" = 1'-0"

2.1 | IE - CONFERENCE ROOM
A814 | SCALE: 1/4" = 1'-0"



2.2 | IE - CONFERENCE ROOM
A814 | SCALE: 1/4" = 1'-0"



2.3 | IE - CONFERENCE ROOM
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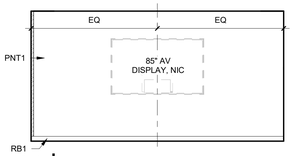
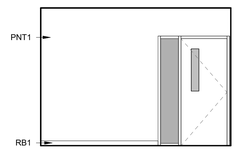
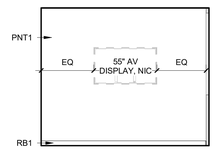


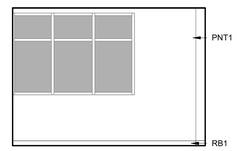
2.4 | IE - CONFERENCE ROOM
A814 | SCALE: 1/4" = 1'-0"



3.1 | IE - TYP OFFICE
A814 | SCALE: 1/4" = 1'-0"



3.2 | IE - TYP OFFICE
A814 | SCALE: 1/4" = 1'-0"



3.3 | IE - TYP OFFICE
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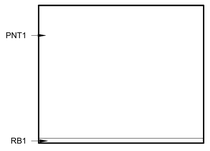
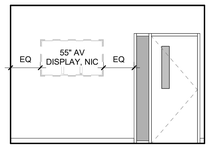


3.4 | IE - TYP OFFICE
A814 | SCALE: 1/4" = 1'-0"



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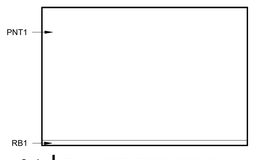
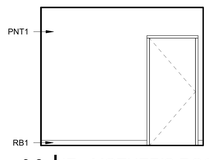


6.1 | IE - MOTHER'S ROOM
A814 | SCALE: 1/4" = 1'-0"



6.2 | IE - MOTHER'S ROOM
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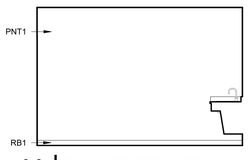

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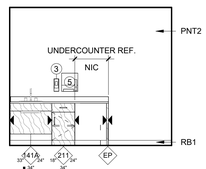
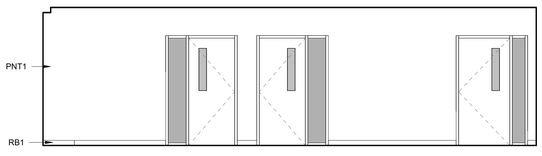
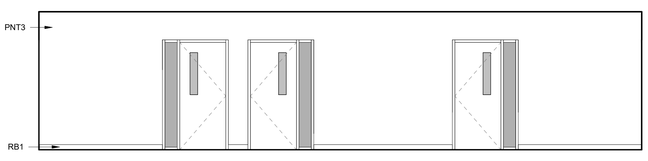


6.4 | IE - MOTHER'S ROOM
A814 | SCALE: 1/4" = 1'-0"



4.1 | TYP CORRIDOR
A814 | SCALE: 1/4" = 1'-0"



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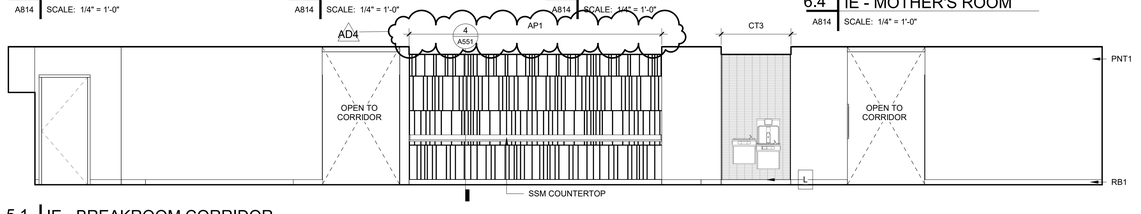
A814 | SCALE: 1/4" = 1'-0"



5.1 | IE - BREAKROOM CORRIDOR
A814 | SCALE: 1/4" = 1'-0"

KEYNOTE LEGEND

A	SCHLUTER COVE BASE, SEE 1 / A550
B	SCHLUTER QUADEC, SEE 2 / A550
C	SCHLUTER FLAT TRANSITION, SEE 3 / A550
D	WOOD RAISED LETTERS (FLUSH STUD MOUNT), PROVIDE 14 WOOD LETTERS, 1/2" THICK
E	SOLID SURFACE NOSING, SEE 7 / A550
F	UNDERCABINET STRIP LIGHT
G	WOOD SIGNAGE ON STANDOFFS, SEE 9 / A550
H	Z LOCKER WITH 2 DOORS, HAMILON CASEWORK SOLUTIONS, MCLZ, PLAM1
J	WALL GRAPHIC ON 3FORM PANEL, HOSTED USING STANDOFFS, WP1
K	LETTERS TO BE ROUTED OUT AND FILLED WITH PAINTED WOOD LETTERING, PNT4; VERBAGE TO BE CONFIRMED WITH OWNER
L	RUBBER/SCHLUTER DETAIL, SEE 8 / A550

N True N Project

0' 2' 4' 8' 16' 24'

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Owner:
ALAMANCE COUNTY

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Graham, NC 27253

Renovations to:
ALAMANCE COUNTY EMERGENCY OPERATIONS AND COMMUNICATIONS CENTER
780 PLANTATION DRIVE BURLINGTON, NC 27215

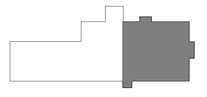
ISSUED FOR:

NO.	DESCRIPTION	DATE
	BUILDING PERMIT SET	04/18/2025
	ISSUED FOR BIDDING	09/02/2025
AD4	ADDENDUM #4	10/10/2025

DATE: 09/02/2025

SG PROJECT NUMBER: 23-041

Key Plan:



Drawing Title:
ADMIN ENLARGED PLANS AND INTERIOR ELEVATIONS

Drawing Number:
A814

FINISH SPECIFICATIONS

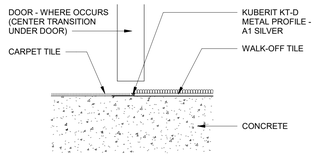
Tag	BASIS OF DESIGN MATERIAL	MANUFACTURER	PRODUCT	COLOR	SIZE	INSTALLATION METHOD	COMMENTS	PHASE
ACT1A	ACOUSTICAL CEILING TILE	ARMSTRONG	ULTIMA-SQUARE LAY-IN (1910)	WHITE	2'X2'X3/4"	GRID: 15/16" PRELUDE, GRID COLOR: WHITE		
ACT2A	ACOUSTICAL CEILING TILE	ARMSTRONG	ULTIMA-SQUARE LAY-IN (1913)	WHITE	2'X4'X3/4"	GRID: 15/16" PRELUDE, GRID COLOR: WHITE		
ACT2C	ACOUSTICAL CEILING TILE	ARMSTRONG	CALLA - SQUARE LAY-IN (2824)	WHITE	2'4'X3/4"	GRID: 15/16" PRELUDE, GRID COLOR: WHITE		
AP1	ACOUSTICAL WALL PANEL	ACOUFELT	FRACTURE TWO TONE, BARCODE	IVORY(FACE), SEA SALT(BACK)	14MM			
AP2	ACOUSTIC PANELS	KINETICS NOISE CONTROL	HARDSIDE PANELS	FABRIC: GUILDFORD OF MAINE - 2100 FR701 - SILVER NEUTRAL 406	1" THICK		REFERENCE ELEVATIONS FOR DIMENSIONS	
CG1	CORNER GUARD	CS CONSTRUCTION SPECIALTIES	LG300	CLEAR				
CPT1	CARPET TILE	INTERFACE	OPEN AIR 403 STRIA	103268 LINEN	50CMX50CM	VERTICAL ASHLAR		
CPT2	CARPET TILE	INTERFACE	OPEN ENDED	103177 GULF	25CMX1M	VERTICAL ASHLAR		
CPT3	CARPET TILE	INTERFACE	ICE BREAKER, WINNING TEAM	105779 GRAYFOX	50CMX50CM	VERTICAL ASHLAR		
CPT3A	STATIC DISSIPATIVE CARPET TILE	STATIC SMART	VERMONT SLATE	CHAMPLAIN SHORELINE	50CMX50CM	VERTICAL ASHLAR		
CT1	CERAMIC FLOOR/WALL TILE	GARDEN STATE TILE	TITAN	ASH NATURAL RET	12X24	FLOOR: 1/3 OFFSET, WALL: STACKED	EPOXY GROUT: LATICRETE 87 STORMY GREY	
CT2	CERAMIC WALL TILE	GARDEN STATE TILE	TRIBECA	PURE	3X12	STACKED	GLOSSY: EPOXY GROUT: LATICRETE 09 FROSTY	
CT3	CERAMIC WALL TILE	MARAZZI	CONTO REVIVAL	CV54 GRAY CRACKLE	1X6	STACKED	GLOSSY: EPOXY GROUT: LATICRETE 87 STORMY GREY	
FAB1	ROLLER SHADE MESH	DRAPER	PW4800 SHEERWEAVE 1% OPENNESS	V59 FLEECE				
HDW1	CASEWORK HARDWARE	MYKNOBS	EDGEWELL CENTERS BAR PULL	POLISHED CHROME	6 5/16"			
LVT1	LUXURY VINYL TILE	INTERFACE	TEXTURED STONES, A003 LEVEL SET	A00308 LIGHT CONCRETE	50CMX50CM	MONOLITHIC	INSTALL LVT ON INTERMEDIATE STAIR LANDINGS	
LVT2	LUXURY VINYL TILE	INTERFACE	BRUSHED LINES	A01620 TEAL OXIDE	25CMX1M	VERTICAL ASHLAR		
PLAM1	PLASTIC LAMINATE	WILSONART		7981K-12 LANDMARK WOOD				
PLAM2	PLASTIC LAMINATE	WILSONART		5012K-19 MAGNOLIA				
PNT1	TYPICAL WALL/CEILING PAINT	SHERWIN WILLIAMS		SW 7005 PURE WHITE				
PNT2	ACCENT PAINT	SHERWIN WILLIAMS		SW 6221 MOODY BLUE				
PNT3	ACCENT PAINT	SHERWIN WILLIAMS		SW 7669 SUMMIT GRAY				
PNT4	DOOR FRAME/TRIM PAINT	SHERWIN WILLIAMS		SW 7674 PEPPERCORN				
RB1	RUBBER BASE	JOHNSONITE		122 SHARK WING	4"			
RF1	STATIC DISSIPATIVE LAMINATE FLOOR	NEVAMAR	ST6025 HPL	GRAY ESD				
RS1	RUBBER STAIR TREAD/RISER & RUBBER TILE	ROPPE	896 VANTAGE TREAD WITH RISER	574 SMOKE	12"X12"			
SC1	SEALED CONCRETE							
SSM1	SOLID SURFACE MATERIAL	WILSONART		9252SS MASONED CONCRETE	1/2" THICK			
STN1	STAIN	WOOD SPECIES: PLAIN SLICED WHITE OAK		TO MATCH PLAM1				
TP1	TOILET PARTITION	BOBRICK COMPACT LAMINATE DURLINE 1080 SERIES		PLAM1				
WD1	WOOD DOOR	WOOD SPECIES: PLAIN SLICED WHITE OAK		TO MATCH PLAM1				
WOM1	WALK OFF MATT	INTERFACE	SR899 STEP REPEAT	104919 KHAKI	50CMX50CM	MONOLITHIC		
WP1	WALL PANEL	3FORM	VARIA STANDOFF WALL FEATURE	LINEA IVORY			GRAPHIC TO BE COORDINATED WITH OWNER	

AD4

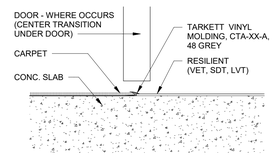
AD4

FINISH ABBREVIATIONS

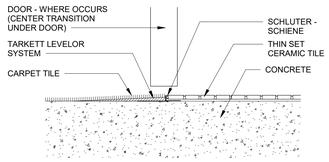
ACT	ACOUSTICAL CEILING PANEL
CAB	CABINETS
CG	CORNER GUARDS
CPT	CARPET
CT	CERAMIC TILE
HDW	DECORATIVE HARDWARE
LC	LOCKER COLOR
LFT	LAMINATE FLOOR TILE
LVT	LUXURY VINYL TILE
PC	PAINTED CONCRETE
PF	PANEL FABRIC
PLAM	PLASTIC LAMINATE
PNT	PAINT
RB	RUBBER BASE
RF	RUBBER FLOOR
RP	RESIN PANELS
SC	SEALED CONCRETE
SSM	SOLID SURFACE MATERIAL
STN	STAIN
TP	TOILET PARTITION
WOM	WALK-OF MAT



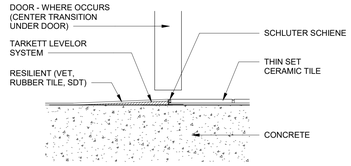
CARPET TO WALK-OFF TILE



CARPET TILE TO RESILIENT



CARPET TILE TO CERAMIC TILE



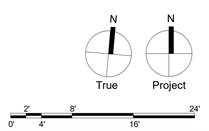
RESILIENT TO CERAMIC TILE

1 TRANSITION DETAILS

A900 SCALE: 3" = 1'-0"

ROOM FINISH SCHEDULE

ROOM #	Name	FLOOR FINISH	BASE TYPE	WALL FINISH	WINDOW SILL FINISH	CEILING MATERIAL	CEILING FINISH	CASEWORK FINISH COUNTERTOP	CASEWORK FINISH CABINET	COMMENTS
101	VISITOR WAITING VESTIBULE	WOM1	RB1	-	-	ACT	-	-	-	
101.1	SECURE VESTIBULE	CPT3	RB1	PNT1	-	GWB	PNT1	-	-	
102	SEATING AREA	CPT3	RB1	PNT1,PNT2	-	GWB	PNT1	-	-	
103	WELLNESS ROOM	LVT1	RB1	PNT1	-	ACT	-	-	-	
103.1	CLOSET	LVT1	RB1	PNT1	-	ACT	-	-	-	
104	DATA CENTER	RF1	RB1	PNT1	-	ACT	-	-	-	
105	OFFICE	CPT1	RB1	PNT1	-	GWB	PNT1	-	-	
107	OFFICE	CPT1	RB1	PNT1	-	ACT	-	-	-	
109	OFFICE	CPT1	RB1	PNT1	-	ACT	-	-	-	
110	OFFICE	CPT1	RB1	PNT1	-	ACT	-	-	-	
111	MECH	SC1	RB1	PNT1	-	EXP	-	-	-	
112	LOUNGE SPACE	LVT2	RB1	WD1,AP1	-	GWB	PNT1	-	-	
113	VESTIBULE	LVT1	RB1	PNT1	-	ACT	-	-	-	
114	LOCKERS/MAIL	LVT2	RB1	PNT1	-	ACT	-	-	PLAM1	
115	MAIN POWER	SC1	RB1	PNT1	-	ACT	-	-	-	
116	SUPERVISOR	CPT1	RB1	PNT1	-	ACT	-	-	-	
117	RECORDS	CPT1	RB1	PNT1	-	ACT	-	-	-	
118	COMM TECH	CPT1	RB1	PNT1	SSM1	ACT	-	-	-	
119	STORAGE	CPT1	RB1	PNT1	-	ACT	-	-	-	
120	CONFERENCE	CPT1	RB1	PNT1,WD1	-	ACT	-	-	-	
121	TRAINING OFFICER	CPT1	RB1	PNT1	-	ACT	-	-	-	
122	OPS MANAGER	CPT1	RB1	PNT1	-	ACT	-	-	-	
123	9-1-1 DIRECTOR	CPT1	RB1	PNT1	-	ACT	-	-	-	
124	GROWTH #3	CPT1	RB1	PNT1	-	ACT	-	-	-	
125	QUALITY ASSUR	CPT1	RB1	PNT1	-	ACT	-	-	-	
126	GROWTH #2	CPT1	RB1	PNT1	-	ACT	-	-	-	
127	SYS ADMIN	CPT1	RB1	PNT1	-	ACT	-	-	-	
128	TOILET ROOM	CT1	-	CT1,CT2	-	GWB	PNT1	-	-	
129	TOILET ROOM	CT1	-	CT1,CT2	-	GWB	PNT1	-	-	
130	QUIET ROOM	LVT1	RB1	PNT1	-	ACT	-	SSM1	PLAM1	
131	BREAK ROOM	LVT1	RB1	PNT1,CT3	-	ACT	-	SSM1	PLAM1/PLAM2	PLAM2 ON UPPER CABINETS AND OPEN SIDE CABINETS(NO HATCH), PLAM1 ON BASE CABINETS (WOOD HATCH)
132	JC	LVT1	RB1	PNT1	-	ACT	-	-	-	
133	ECC	CPT3A	RB1	PNT1,PNT2,CT3	SSM1	EXP/ACT	PNT2	SSM1	PLAM2	
134	TOILET ROOM	CT1	-	CT1,CT2	-	GWB	PNT1	-	-	
135	TRAINING	CPT3A	RB1	PNT1	-	ACT	-	-	-	
136	SUPERVISOR	CPT3A	RB1	PNT1	-	ACT	-	-	-	
137	SUPERVISOR	CPT3A	RB1	PNT1	-	ACT	-	-	-	
138	MECH	SC1	RB1	PNT1	-	EXP	-	-	-	
139	VESTIBULE	LVT1	RB1	PNT1	-	GWB	PNT1	-	-	
144	CORRIDOR	LVT1,LVT2	RB1	PNT1,PNT2,PNT3	-	ACT	-	-	-	
148	CORRIDOR	LVT1,LVT2	RB1	PNT1,PNT2,PNT3	-	ACT	-	-	-	
191	LOBBY / WAITING AREA	LVT1,CPT3	RB1	PNT1	-	ACT,EXP	PNT1	-	-	



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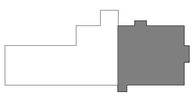
DATE: 09/02/2025

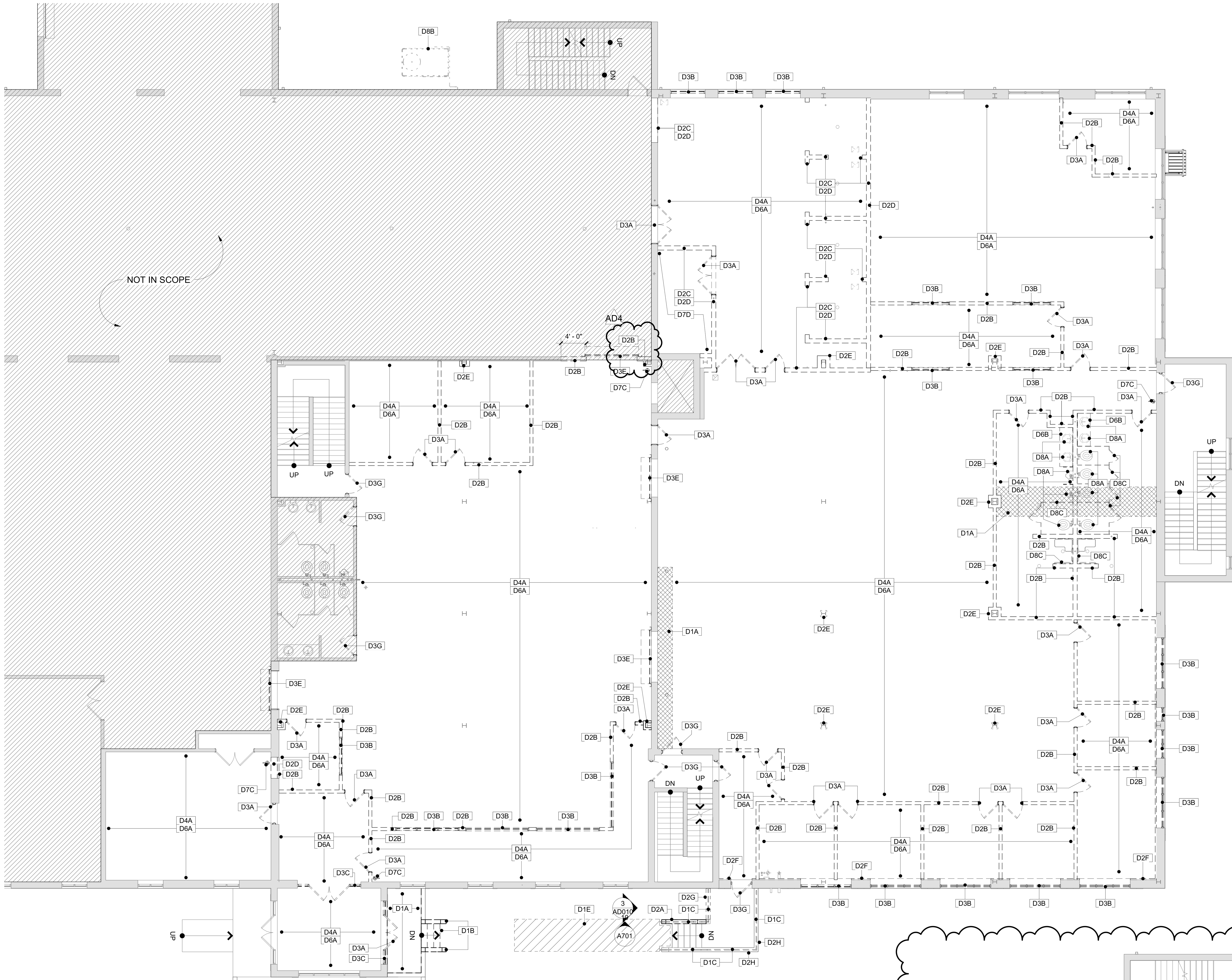
SG PROJECT NUMBER: 23-041

Key Plan:

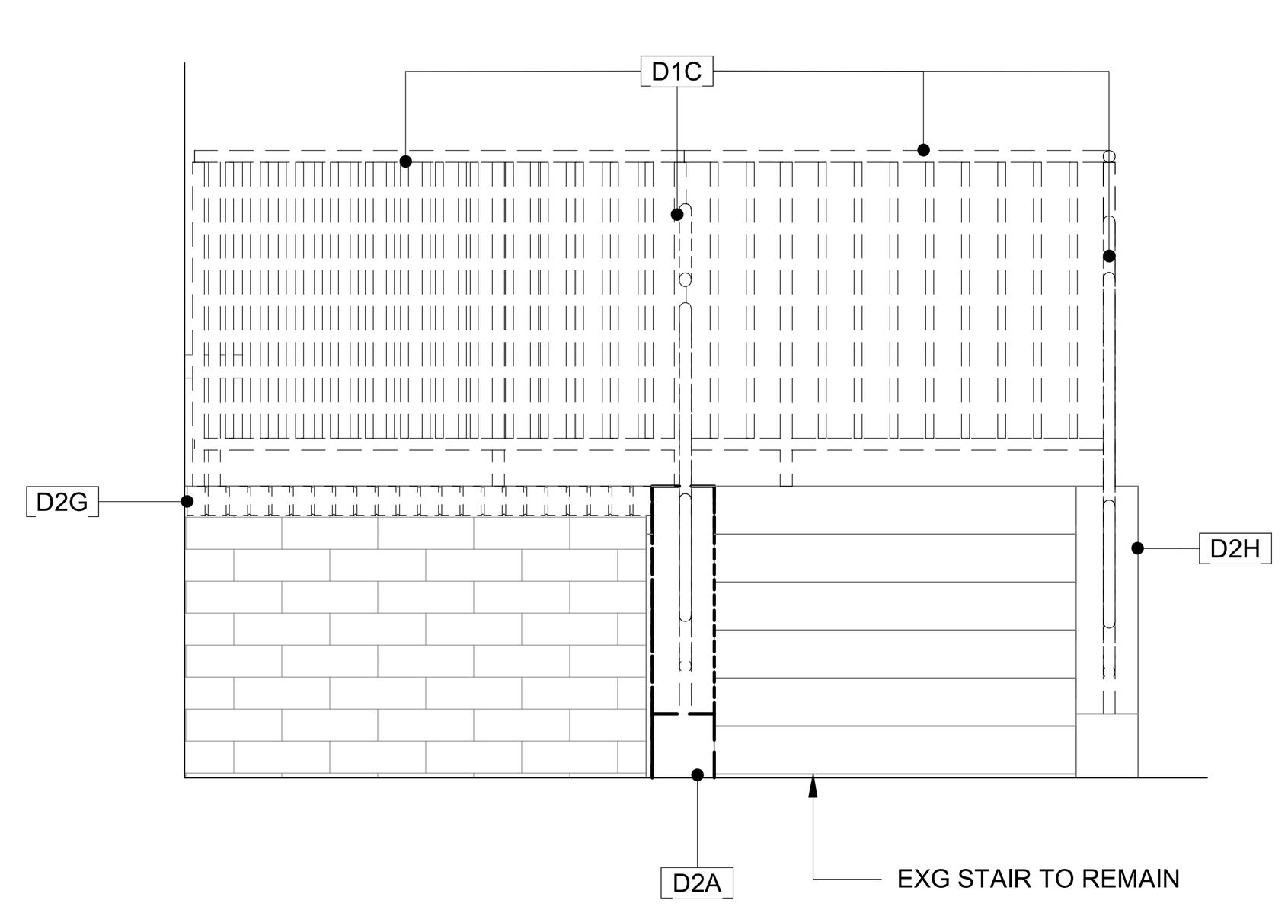


Drawing Title:
FINISH SPECS, SCHEDULE, & TRANSITIONS

Drawing Number:
A900



1 DEMO FIRST FLOOR PLAN
AD010 SCALE: 1/8" = 1'-0"

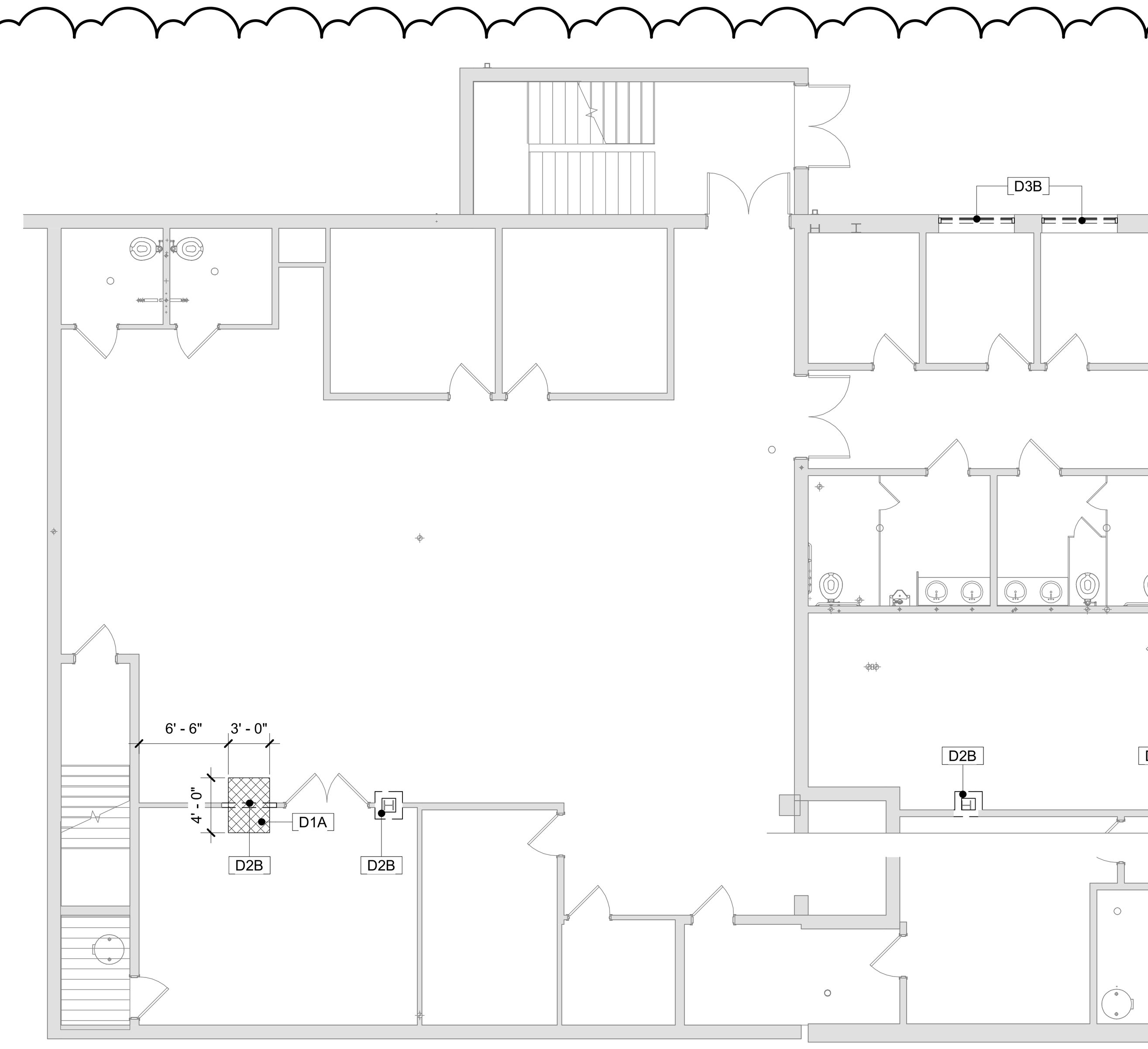


3 EX. STAIR DEMO ELEVATION
AD010 SCALE: 1/2" = 1'-0"

DEMOLITION KEYNOTES

KEY VALUE	KEYNOTE TEXT
D1A	REMOVE CONCRETE SLAB ON GRADE FLOOR SYSTEM TO EXTENT SHOWN
D1B	REMOVE CONCRETE STAIR SYSTEM, ASSOCIATED COMPONENTS AND FOUNDATION COMPLETELY
D1C	REMOVE EXTERIOR HAND/GUARDRAIL. PREP CHEEK WALL FOR INSTALLATION OF NEW HAND/GUARDRAIL.
D1E	REMOVE PORTION OF SIDEWALK TO EXTENT SHOWN
D2A	REMOVE PORTION OF EXTERIOR WALL SYSTEM TO EXTENT SHOWN
D2B	REMOVE WALL PARTITION SYSTEM AND ASSOCIATED COMPONENTS COMPLETELY
D2C	REMOVE CONCRETE CURB AT WALL BASE AND ASSOCIATED COMPONENTS COMPLETELY
D2D	REMOVE CMU WALL PARTITION SYSTEM AND ASSOCIATED COMPONENTS COMPLETELY
D2E	REMOVE COLUMN ENCLOSURE, STRUCTURAL COLUMN TO REMAIN
D2F	REMOVE 5/8" G.W.B. AND 1-5/8" MTL STUD SYSTEM
D2G	REMOVE BRICK ROWLOCK CAP. PREP FOR NEW RAMP INSTALLATION.
D2H	CONTRACTOR TO REMOVE AND SALVAGE EXG BRICK TO EXPOSE UNDERLYING STRUCTURE. COORDINATE NEW GUARDRAIL DETAIL WITH EXG STRUCTURE. REINSTALL SALVAGED BRICK, PATCH AND REPAIR BRICK AS REQUIRED.
D3A	REMOVE DOOR SYSTEM COMPLETELY
D3B	REMOVE WINDOW SYSTEM COMPLETELY
D3C	REMOVE STOREFRONT ENTRY SYSTEM COMPLETELY
D3E	REMOVE HIGH SPEED COILING OVERHEAD DOOR
D3G	REMOVE EX. DOOR LEAF FROM EX. FRAME. PREPARE EX. FRAME FOR NEW DOOR LEAF.
D4A	REMOVE CEILING SYSTEM COMPLETELY
D6A	REMOVE FLOOR FINISH SYSTEM COMPLETELY
D6B	REMOVE EXISTING CASEWORK AND COUNTERTOP WHERE INDICATED. PATCH AS REQUIRED FOR NEW CONSTRUCTION.
D7C	REMOVE AND SALVAGE FIRE EXTINGUISHER
D7D	REMOVE WATER TREATMENT EQUIPMENT COMPLETELY
D8A	REMOVE PLUMBING FIXTURE(S) COMPLETELY, SEE MEP DEMOLITION DRAWINGS FOR FULL EXTENT OF SCOPE.
D8B	REMOVE MECHANICAL UNIT, SEE MEP DEMOLITION DRAWINGS FOR FULL EXTENT OF SCOPE.
D8C	REMOVE EXISTING TOILET ACCESSORIES, INCLUDING: SOAP DISPENSERS, TOILET PAPER DISPENSERS, GRAB BARS, TOILET PARTITIONS, MIRRORS, AND PAPER TOWEL DISPENSERS.

-GC TO COORDINATE AND PERFORM DEMO AND/OR TEMPORARY REMOVAL & REPLACEMENT REQ'D FOR SPRAY FIREPROOFING.
-GC TO PROVIDE NEW PNT GWB WALL, FINISH FLOOR, AND RUBBER BASE TO MATCH EXISTING AS REQ'D
-GC TO REMOVE AND REPLACE EXISTING CEILING AFTER NEW WORK IS COMPLETE.



2 DEMO BASEMENT PLAN
AD010 SCALE: 1/8" = 1'-0"

DEMOLITION DEFINITIONS

REMOVE: DETACH ITEMS FROM EXISTING CONSTRUCTION AND LEGALLY DISPOSE OF THEM OFF-SITE UNLESS INDICATED TO BE REMOVED AND SALVAGED OR REMOVED AND REINSTALLED.

REMOVE AND SALVAGE: CAREFULLY DETACH FROM EXISTING CONSTRUCTION, IN A MANNER TO PREVENT DAMAGE, AND DELIVER TO OWNER.

REMOVE AND REINSTALL: DETACH ITEMS FROM EXISTING CONSTRUCTION, PREPARE FOR REUSE, AND REINSTALL WHERE INDICATED.

EXISTING TO REMAIN: EXISTING ITEMS OF CONSTRUCTION THAT ARE NOT TO BE PERMANENTLY REMOVED AND THAT ARE NOT OTHERWISE INDICATED TO BE REMOVED, REMOVED AND SALVAGED, OR REMOVED AND REINSTALLED.

FLOOR SYSTEM - THE CONCRETE SLAB, SETTING BEDS, SUBFLOOR, FINISH FLOOR MATERIALS AND ANY FINISH ATTACHED ABOVE OR CEILING SYSTEM OR ATTACHMENT SUSPENDED BELOW. THE FLOOR SYSTEM DOES NOT INCLUDE ANY STRUCTURAL STEEL MEMBERS UNLESS NOTED OTHERWISE.

STAIR SYSTEM - ALL CONSTRUCTION RELATED TO A STAIR SYSTEM INCLUDING TREADS, RISERS, STRINGERS, SUPPORT FRAMING, FINISHES, BLOCKING, HANDRAILS, GUARD RAILS, BRACKETS, NOSINGS, PANS, AND CONCRETE.

WALL PARTITION SYSTEM - ALL WALL CONSTRUCTION FROM FLOOR SLAB, INCLUDING ALL ASSOCIATED STEEL, DOOR AND WINDOW SYSTEMS, BLOCKING, CORNICES, TRIM, BASE, FINISHES, TRACKS AND ALL RELATED ATTACHMENTS AND COMPONENTS. REFERENCE MEP DRAWINGS FOR ADDITIONAL REQUIREMENTS. DOES NOT INCLUDE BUILDING STRUCTURE UNLESS NOTED OTHERWISE (U.N.O.).

DOOR SYSTEM - ALL CONSTRUCTION RELATED TO A DOOR OPENING, INCLUDING DOOR, FRAME, TRIM, THRESHOLD, STOPS, CLOSURES, TRANSOMS, SIDELIGHTS AND ALL RELATED ATTACHMENTS AND ANCHORS, ECT., TO PROVIDE A CLEAR ROUGH OR MASONRY OPENING. THE DOOR SYSTEM DOES NOT INCLUDE STRUCTURAL LINTELS UNLESS NOTED OTHERWISE.

WINDOW SYSTEMS - ALL CONSTRUCTION RELATED TO A WINDOW OPENING, INCLUDING SASH, FRAME, TRIM, SILL, WEIGHTS, LOCKS, BLINDS, AND ALL RELATED ATTACHMENTS AND COMPONENTS TO PROVIDE A CLEAR ROUGH OR MASONRY OPENING. THE WINDOW SYSTEM DOES NOT INCLUDE STRUCTURAL LINTELS OR EXTERIOR SILLS UNLESS NOTED OTHERWISE.

CEILING SYSTEM - ALL SUSPENDED CONSTRUCTION OR CEILING CONSTRUCTION SUPPORTED BY A WALL SYSTEM BEING REMOVED INCLUDING ALL RELATED ATTACHMENTS AND COMPONENTS (INCLUDING BUT NOT LIMITED TO LIGHTS, SPEAKERS, EXIT SIGNS. DIFFUSERS/REGISTERS, ECT.) UP TO THE UNDERSIDE OF THE BUILDING SLAB OR SUPPORTING STRUCTURE. REFERENCE MEP DRAWINGS FOR ADDITIONAL REQUIREMENTS.

FLOOR FINISH SYSTEM - ALL FLOOR FINISHES, INCLUDING BASE PADDING, FILLER STRIPS, THRESHOLDS, TRANSITION STRIPS, AND SPOT LEVELING UNDERLAYMENT, (U.O.N.) TO TOP OF SUBFLOOR CONSTRUCTION. REMOVE MASTICS ONLY AS REQUIRED TO PREP FLOOR FOR NEW FINISH, U.O.N.

CASEWORK SYSTEM - INCLUDING SHELVING, COUNTERS, CABINETRY, SINKS, ECT., AND ALL RELATED HARDWARE AND ATTACHMENTS REMOVED TO THE FINISHED WALL AND FLOOR.

DEMOLITION GENERAL NOTES

1. EXISTING BUILDING INFORMATION WAS OBTAINED FROM DRAWINGS OF "1997 RENOVATION AND ADDTION" AND "2004 RENOVATION AND ADDITION". EXISTING INFORMATION IS FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
2. BEFORE STARTING WORK, MAKE A THOROUGH EXAMINATION OF THOSE PORTIONS OF THE STRUCTURE IN WHICH THE WORK IS TO BE PERFORMED. CHECK ALL THE WORK ADJOINING OR AT UNDERLYING LOCATIONS. REPORT TO THE ARCHITECT ANY AND ALL CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT THE PROPER EXECUTION AND COMPLETION OF THE WORK. DO NOT START THE WORK UNTIL SUCH CONDITIONS HAVE BEEN EXAMINED AND A COURSE OF ACTION MUTUALLY AGREED UPON.
3. CONTRACTOR SHALL PERFORM ALL NECESSARY DEMOLITION AS REQUIRED FOR INSTALLATION OF NEW WORK AS SHOWN ON THE DRAWINGS. ALL DEMOLITION NOT SPECIFICALLY SHOWN BUT NECESSARY TO COMPLETE THE PROJECT AS SHOWN SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. PRIOR TO THE START OF DEMOLITION, THE CONTRACTOR SHALL CALL TO THE ATTENTION OF THE OWNER: ANY DAMAGE, CRACKS OR OTHER IMPERFECTIONS IN THE WORK ADJACENT TO DEMOLITION AREAS.
5. CONTRACTORS SHALL INSPECT AND ASSESS EACH SPACE AND FULFILL THE INTENT OF THE WORK REQUIRED BY THE CONTRACT DOCUMENTS. DEVIATIONS REQUIRED BY FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT BEFORE PROCEEDING.
6. ANY CUTTING AND REMOVAL INDICATED ON THE DRAWINGS ARE GENERAL INDICATIONS ONLY AND DO NOT NECESSARILY SHOW THE FULL EXTENT OF CUTTING AND REMOVAL WHICH MAY BE REQUIRED BY JOB CONDITIONS.
7. CONSTRUCTION AND EXISTING FINISHES SHALL REMAIN UNLESS NOTED OTHERWISE. DURING DEMOLITION WORK, PROPERLY PROTECT ALL EXISTING WORK SHOWN TO REMAIN. EXERCISE CARE WHEN REMOVING ADJACENT WORK. PROPERLY REPAIR TO THE ORIGINAL CONDITIONS. ANY DAMAGE TO ITEMS SHOWN TO REMAIN, CAUSED BY DEMOLITION PROCEDURES, TO THE SATISFACTION OF, AND AT NO ADDITIONAL COST, TO THE OWNER. PATCH SURFACE FINISHES BEHIND DEMOLITION WORK (I.E. FLOORS. WALLS. CEILINGS, ETC.) TO MATCH SURROUNDING CONDITIONS.
8. BEFORE STARTING DEMOLITION OPERATIONS, PROVIDE THE NECESSARY PROTECTIVE BARRIERS AROUND TRAFFIC AREAS NEAR INTERIOR WORK AS REQUIRED AND IN STRICT ACCORDANCE WITH OSHA RULES AND REGULATIONS. PROTECT ALL EXISTING EQUIPMENT NOT DESIGNATED TO BE REMOVED. PERFORM ALL WORK REQUIRED TO PROTECT THE PUBLIC AND UTILITIES.
9. TAKE NECESSARY PRECAUTIONS TO PREVENT DUST AND DIRT FROM RISING BY WETTING DEMOLISHED DEBRIS. EXCESSIVE USE OF WATER WILL NOT BE PERMITTED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY, TEMPORARY BRACING AND / OR SHORING REQUIRED TO MAINTAIN THE INTEGRITY AND STRUCTURAL STABILITY OF THE BUILDING AND ITS INDIVIDUAL ELEMENTS.
11. EXCEPT WHERE NOTED OTHERWISE, REMOVE ALL DEMOLISHED MATERIALS FROM THE SITE. DO NOT BURN OR BURY MATERIALS ON THE SITE. AT THE COMPLETION OF WORK FOR EACH DAY, CLEAN THE ENTIRE AREA INVOLVED AND LEAVE IT IN A NEAT CONDITION, FREE OF DEBRIS AND RUBBISH. KEEP ALL ADJOINING PUBLIC AREAS CLEAN AND FREE OF DEBRIS OR CONSTRUCTION MATERIALS DURING WORKING HOURS. AND MAKE AN EFFORT TO PROVIDE SAFE CONDITIONS FOR THE GENERAL PUBLIC AND WORKMEN. REFERENCE DIVISION 01 SPECIFICATION SECTION "CONSTRUCTION WASTE MANAGEMENT' FOR CONTRACTORS RESPONSIBILITY FOR WASTE REMOVAL / DISPOSAL.
12. THE OWNER WILL REMOVE ALL EXISTING ITEMS THAT THE OWNER WISHES TO SALVAGE PRIOR TO START OF DEMOLITION. CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL REMAINING ITEMS.
13. ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING, LAND DEVELOPMENT DRAWINGS, AND PROJECT SPECIFICATIONS MAY PROVIDE ADDITIONAL DEMOLITION REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR BEING FAMILIAR WITH THESE DRAWINGS AND PROJECT SPECIFICATIONS AND ANY REQUIREMENTS PROVIDED BY THEM.
14. PRIOR TO THE DEMOLITION OF THOSE ITEMS WHICH HAVE UTILITY CONNECTIONS (WATER, GAS, ELECTRICITY, STEAM, ETC.) THE CONTRACTOR SHALL ARRANGE WITH THE OWNER TO LOCATE SHUTOFF VALVES, PANEL BOXES AND OTHER CONTROL ELEMENTS, SO THAT WATER DAMAGE AND OTHER POTENTIALLY INCONVENIENT OR DANGEROUS SITUATIONS ARE AVOIDED.
15. REFERENCE PARTIAL DEMOLITION PLANS FOR SPECIFIC DEMOLITION REQUIREMENTS.
16. REFERENCE DIVISION 01 SPECIFICATION SECTIONS FOR SELECTIVE DEMOLITION, CUTTING, AND PATCHING. TEMPORARY FACILITIES AND CONTROLS, SITE AND BUILDING DEMOLITION, CONSTRUCTION WASTE MANAGEMENT, AND RELATED SECTIONS FOR ADDITIONAL DEMOLITION REQUIREMENTS.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DEMOLITION REQUIREMENTS WITH PROJECT PHASING. NOTIFY ARCHITECT PRIOR TO START OF WORK WITH ANY CONDITIONS WHICH MAY INTERFERE WITH OR OTHERWISE AFFECT OR PREVENT PROPER EXECUTION OF THE WORK.

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Owner:
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Renovations to:
ALAMANCE COUNTY EMERGENCY OPERATIONS AND COMMUNICATIONS CENTER
780 PLANTATION DRIVE
BURLINGTON, NC 27215

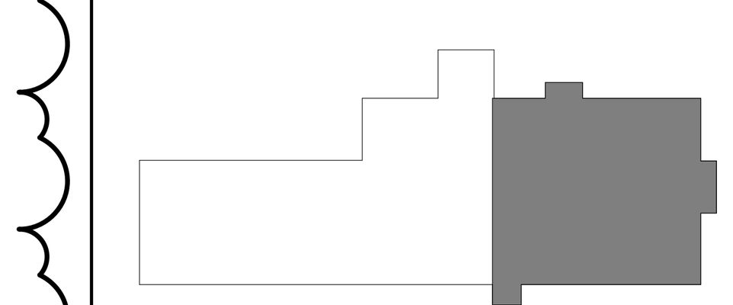
ISSUED FOR:

NO.	DESCRIPTION	DATE
	BUILDING PERMIT SET	04/18/2025
	ISSUED FOR BIDDING	09/02/2025
AD4	ADDENDUM #4	10/10/2025

DATE: 09/02/2025

SG PROJECT NUMBER: 23-041

Key Plan:



Drawing Title:
BASEMENT & FIRST FLOOR DEMOLITION PLAN

Drawing Number:
AD010

1 SECOND FLOOR REFLECTED CEILING PLAN
ALT1-A122 SCALE: 1/8" = 1'-0"

CEILING NOTES

1. ALL CEILING TILE TO BE CENTERED IN ROOMS, UNLESS OTHERWISE NOTED.
2. CEILING HEIGHTS REFERENCE ROOMS FINISHED FLOOR ELEVATION.
3. CONTRACTOR TO PROVIDE CEILING EXPANSION JOINTS PER SPECIFICATION REQUIREMENTS AND MANUFACTURER'S RECOMMENDATIONS AT ALL BUILDING EXPANSION JOINT LOCATIONS.
4. REFERENCE MECHANICAL DRAWINGS FOR CEILING MOUNTED DUCTS, PIPES, ETC.
5. REFERENCE ELECTRICAL DRAWINGS FOR LIGHTING FIXTURE TYPES AND LOCATIONS.
6. "EXPOSED, PTD" INCLUDES STRUCTURE, DUCTWORK, PIPING, CONDUIT, HANGERS AND ACCESSORIES.

GENERAL NOTES

1. ALL DIMENSIONS ARE TO FACE OF MASONRY, ROUGH FRAME OR CENTER LINE OF COLUMN - TYPICAL, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL VERIFY **ALL** DIMENSIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES.

RCP LEGEND

6A 10' - 0" PT-1 — INDICATES CEILING TYPE (SEE LEGEND), HEIGHT ABOVE FINISHED FLOOR & FINISH

EXPOSED TO STRUCTURE ABOVE, PAINTED

CEILING LEGEND

- 1A — 2x2 ACOUSTICAL CEILING TILE SYSTEM
- 2A — 2x4 ACOUSTICAL CEILING TILE SYSTEM
- 2C — 2x4 HIGH NRC CEILING TILE SYSTEM
- 3A — GWB CEILING FINISH
- 3B — 1 HR FIRE RATED GWB CEILING FINISH (NER 258)
- 5C — CUSTOM PLAM WOOD LOOK CEILING

N True N Project

0' 2' 4' 8' 16' 24'

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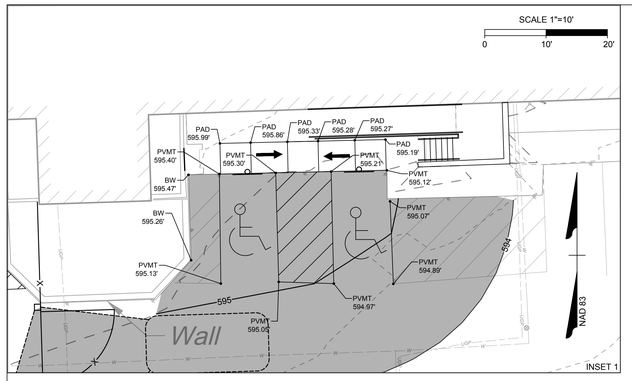
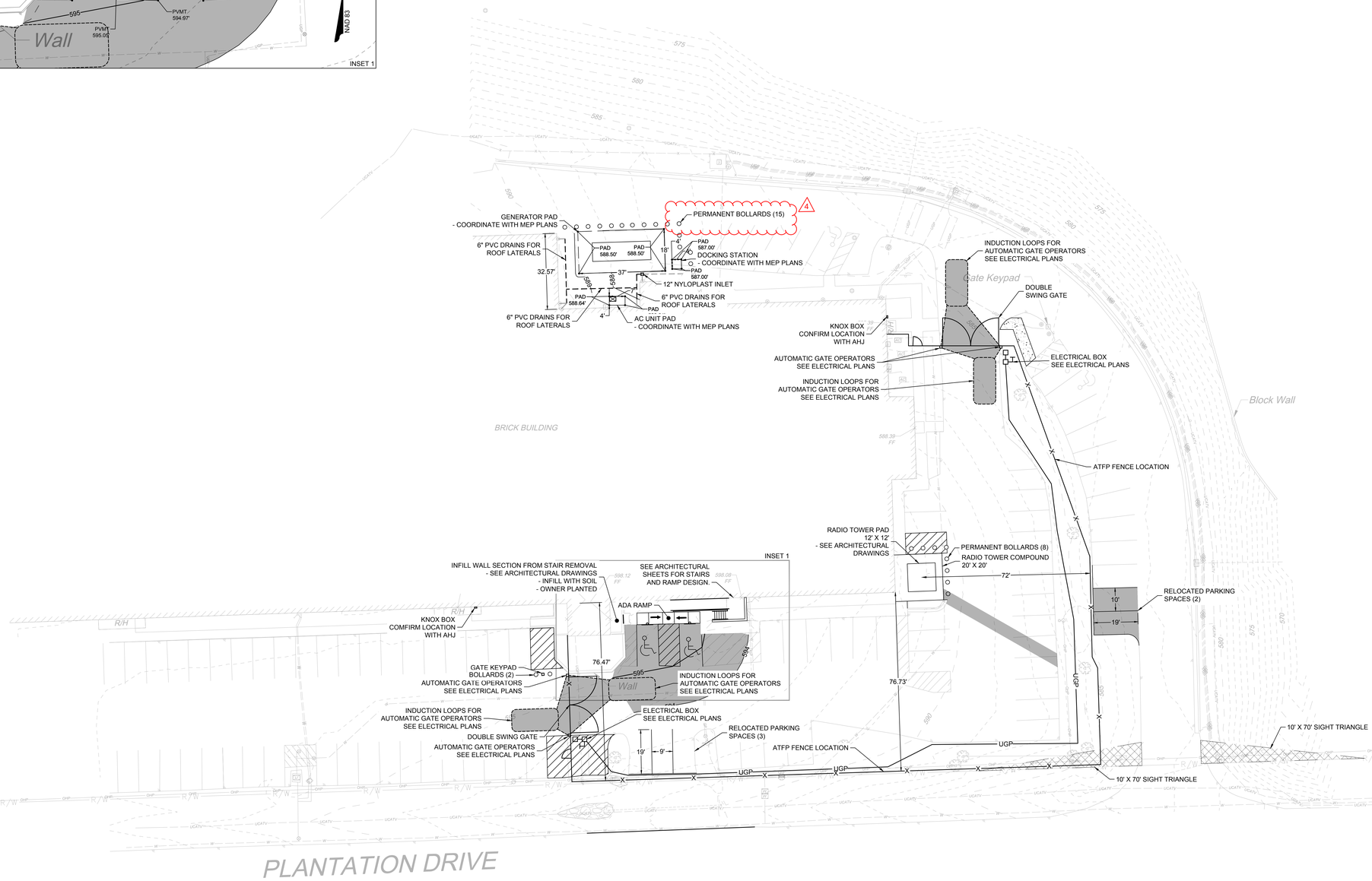
SG PROJECT NUMBER: 23-041

Key Plan:

Drawing Title:
SECOND FLOOR REFLECTED CEILING PLAN (ALTERNATE 1)

Drawing Number:
ALT1-A122





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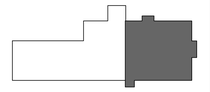
Key Plan:



Drawing Title:

SITE AND GRADING PLAN

Drawing Number:

C3.0

ELECTRICAL SYMBOLS

POWER SYMBOLS

SYMBOL	DESCRIPTION	MH (UON)
$	COMBINATION SWITCH AND SIMPLEX RECEPTACLE	48" TOD
$	COMBINATION SWITCH AND DUPLEX RECEPTACLE	48" TOD
	SIMPLEX RECEPTACLE	18" CTR
E	DUPLEX RECEPTACLE: 'E' (IF SHOWN) INDICATES CONNECTED TO EMERGENCY CIRCUIT	18" CTR
	DUPLEX RECEPTACLE: FLOOR MOUNTED	
	DUPLEX RECEPTACLE: SPLIT WIRED, BOTTOM HALF SWITCHED	18" CTR
	DUPLEX RECEPTACLE: CEILING MOUNTED	
	DUPLEX RECEPTACLE: PEDESTAL TYPE	
	DUPLEX RECEPTACLE: MOUNTED 6" ABOVE BACKSPLASH OR COUNTER	
GFI	DUPLEX RECEPTACLE: GROUND FAULT INTERRUPTER TYPE	18" CTR
GFI	DUPLEX RECEPTACLE: GFI MOUNTED 6" ABOVE BACKSPLASH OR COUNTER	
H	DUPLEX RECEPTACLE: MOUNTED HIGH	84" CTR
IG	DUPLEX RECEPTACLE: ISOLATED GROUND	18" CTR
	DUPLEX RECEPTACLE: AT 54" A.F.F.	54" CTR
	DOUBLE DUPLEX RECEPTACLE	18" CTR
IG	DOUBLE DUPLEX RECEPTACLE ISOLATED GROUND	18" CTR
C	SIMPLEX RECEPTACLE: CART RECHARGE	36" CTR
C	DUPLEX RECEPTACLE: CART RECHARGE	36" CTR
P	DUPLEX RECEPTACLE: PAY PHONE	54" CTR
A	SPECIAL RECEPTACLE: NEMA 6-20R (20A, 2P, 3W, 208V)	18" CTR
B	SPECIAL RECEPTACLE: NEMA 6-30R (30A, 2P, 3W, 208V)	18" CTR
C	SPECIAL RECEPTACLE: NEMA 14-30R (20A, 3P, 4W, 208/120V)	18" CTR
D	SPECIAL RECEPTACLE: NEMA 15-30R (30A, 3P, 4W, 208V)	18" CTR
A	SPECIAL RECEPTACLE: FLOOR MOUNTED, NEMA 6-20R	
A	SPECIAL RECEPTACLE: PEDESTAL TYPE, NEMA 6-20R	
TV	TELEVISION RECEPTACLE	72" CTR
H	TELEVISION RECEPTACLE	18" BFC
	CLOCK HANGER OUTLET	84" CTR
1 2	PROGRAM CLOCK OUTLET: SINGLE FACE, DOUBLE FACE	84" CTR
EPO	EMERGENCY POWER OFF SWITCH	48" TOD
	JUNCTION BOX	
	JUNCTION BOX - WALL MOUNTED	48" TOD
E	EQUIPMENT CONNECTION AS NOTED	
E	EQUIPMENT CONNECTION AS NOTED - WALL MOUNTED	48" TOD
H 3	HEATER CONNECTION - NUMBER INDICATES KILOWATTS (3KW)	
H	HEATER FAN - CEILING MOUNTED	
CB	ENCLOSED CIRCUIT BREAKER	
	NON-FUSED DISCONNECT SWITCH: 30A, 3P (UON)	
(40A)	FUSED DISCONNECT SWITCH: FUSE SIZE AS INDICATED (40A)	
MS	MAGNETIC MOTOR STARTER	
FVNR	COMBINATION MAGNETIC MOTOR STARTER: ABBREVIATION INDICATES TYPE - FVNR, FVR, RVAT, 2S1W, 2S2W, SST	
VFC	VARIABLE FREQUENCY CONTROLLER W/ FUSED DISCONNECT SWITCH	
VFD	VARIABLE FREQUENCY DRIVE W/ DISCONNECT SWITCH	
M HP	MOTOR: NUMERALS (IF SHOWN) INDICATE HP	
G kW	GENERATOR: NUMERALS (IF SHOWN) INDICATE KW	
1M	MANUAL MOTOR STARTER W/ THERMAL OVERLOADS	
M	MOTOR SWITCH	
M	MECHANICAL EQUIPMENT CONNECTION - WITH MOTOR	
M	MECHANICAL EQUIPMENT CONNECTION - NO MOTOR	
CP	CONTROL PANEL: TYPE AS INDICATED	
PB	MOMENTARY CONTACT START-STOP PUSHBUTTON STATION	48" TOD
PBM	MAINTAINED CONTACT START-STOP PUSHBUTTON STATION	48" TOD
ES	MAINTAINED CONTACT EMERGENCY STOP PUSHBUTTON STATION	48" TOD
	BRANCH PANELBOARD	90" TOC
	DISTRIBUTION PANELBOARD	
T	TRANSFORMER, CONCRETE PAD MOUNTED	

SYMBOL	DESCRIPTION
	RACEWAY "UP" OR "TOWARDS"
	RACEWAY "DOWN" OR "AWAY"
	CIRCUIT CONCEALED IN WALLS OR CEILING SPACE: CONDUCTORS SHALL BE MINIMUM 2#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT (UON)
	RACEWAY CONCEALED IN SLAB OR BELOW GRADE
	BRANCH CIRCUIT HOMERUN TO PANELBOARD: QUANTITY OF CIRCUITS INDICATED BY ARROWS NUMBER OF CONDUCTORS SHALL BE MINIMUM 4#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT (UON)
	RACEWAY RUN EXPOSED: CONDUCTORS SHALL BE MINIMUM 2#12 AWG AND 1#12 AWG GROUND IN 3/4" CONDUIT (UON)
	BUS DUCT OR CABLE TRAY "UP" OR "TOWARDS"
	BUS DUCT OR CABLE TRAY "DOWN" OR "AWAY"
	BUS DUCT: TYPE AND SIZE AS INDICATED
	TELEPHONE AND POWER POLE ASSEMBLY
	CONCRETE ENCASED DUCTBANK BELOW GRADE
W	SURFACE MOUNTED RACEWAY ASSEMBLY WITH REMOVABLE COVER
	MULTI-OUTLET ASSEMBLY: DARK SQUARES INDICATE PREWIRED RECEPTACLE LOCATIONS SIZE AS INDICATED
	MULTI-OUTLET ASSEMBLY: WITH RECEPTACLES LOCATED WHERE INDICATED
	2 CELL MULTI-OUTLET ASSEMBLY: WITH COMMUNICATION DEVICES AND RECEPTACLES LOCATED WHERE INDICATED
	MULTI-OUTLET ASSEMBLY: WITH COMMUNICATION DEVICES LOCATED WHERE INDICATED
	FLEXIBLE CONDUIT
	CABLE TRAY CCT - CEILING CABLE TRAY UCT - UNDERGROUND CABLE TRAY
	GROUND ROD
	LIGHTNING PROTECTION AIR TERMINAL
G G	GROUND WIRE CONNECTION
G G G	GROUND WIRE
	LIGHTNING PROTECTION DOWN LEAD
	UTILITY POLE

LIGHTING SYMBOLS

SYMBOL	DESCRIPTION	MH (UON)
$	SINGLE POLE TOGGLE SWITCH	48" TOD
$a	SWITCH: SUB-LETTER INDICATES FIXTURES CONTROLLED (a)	48" TOD
$2	DOUBLE POLE TOGGLE SWITCH	48" TOD
$3	THREE-WAY TOGGLE SWITCH (SPDT)	48" TOD
$4	FOUR-WAY TOGGLE SWITCH (DPDT)	48" TOD
$K	KEY OPERATED SWITCH	48" TOD
$3Da	THREE WAY DIMMER SWITCH: SUBLETTER INDICATES FIXTURES CONTROLLED (a)	48" TOD
$M	MANUAL STARTER W/ OVERLOADS	48" TOD
$P	SWITCH W/ PILOT LIGHT	48" TOD
$D	DIMMER SWITCH	48" TOD
$4D	4 BUTTON DIMMER SWITCH	48" TOD
$LV	LOW VOLTAGE CONTROL SWITCH	48" TOD
$T	MANUAL TIME SWITCH	48" TOD
$C	MOMENTARY CONTACT SWITCH	48" TOD
$WP	SWITCH WITH WEATHERPROOF ENCLOSURE	48" TOD
OS OS	OCCUPANCY SENSOR (CEILING & WALL MOUNTED)	
VS	VACANCY SENSOR	
T	TIME CLOCK	
R	RELAY	
L	LIGHTING CONTACTOR	
P	PHOTOCELL OR PUSHPLATE SWITCH	
DP	LIGHTING CONTROL POWER PACK	
DE	LIGHTING CONTROL EMERGENCY RELAY, UL 924 LISTED	
	LIGHTING FIXTURE: RECESSED, SURFACE, OR PENDANT MOUNTED - TYPE AS SPECIFIED	
	LIGHTING FIXTURE: 2 BALLAST	
	LIGHTING FIXTURE: INDUSTRIAL	
	LIGHTING FIXTURE: WALL MOUNTED - TYPE AS SPECIFIED	
	LIGHTING FIXTURE: RECESSED, SURFACE, OR PENDANT MOUNTED	
	LIGHTING FIXTURE: WALL MOUNTED - TYPE AS SPECIFIED	
	WALL WASHER	
	ADJUSTABLE WALL WASHER	
	LIGHTING FIXTURE ON EMERGENCY OR NIGHT LIGHT CIRCUIT (NL)	
	EMERGENCY BATTERY PACK: W/ NUMBER OF HEADS INDICATED	
B	EMERGENCY BATTERY PACK: W/ REMOTE HEADS	
	REMOTE EMERGENCY HEAD	
	EMERGENCY BATTERY PACK: SEMI RECESSED, CEILING MOUNT	
	EXIT SIGN: CEILING OR PENDANT MOUNTED (SHADED PORTION INDICATES FACE)	
	EXIT SIGN: WALL MOUNTED - END, BACK	
	EXIT SIGN: W/ DIRECTIONAL ARROWS	
	POLE MOUNTED LIGHTING FIXTURE: SINGLE HEAD, DOUBLE HEAD	
	POLE MOUNTED LIGHTING FIXTURE: SINGLE, POLE TOP	
	LIGHTING POLE (SPORTS)	

CIRCUIT DESIGNATIONS

LIGHTING — A # a
- A: FIXTURE TYPE
- #: CIRCUIT DESIGNATION (#12AWG MINIMUM)
- a: SWITCH DESIGNATION

POWER — #
- #: CIRCUIT DESIGNATION (#12AWG MINIMUM)

SPECIAL SYSTEMS SYMBOLS

SYMBOL	DESCRIPTION	MH (UON)
H	FIRE ALARM HORN TYPE SPEAKER	NOTE 5
F	FIRE ALARM FLASHING STROBE LIGHT - WALL MOUNTED	NOTE 5
F	FIRE ALARM HORN	NOTE 5
F	COMBINATION FIRE ALARM HORN AND FLASHING STROBE LIGHT	NOTE 5
S	FIRE ALARM SPEAKER W/ STROBE	
H	MAGNETIC DOOR HOLDER	
DACT	DIGITAL ALARM COMMUNICATOR TRANSMITTER	
FAAP	FIRE ALARM ANNUNCIATOR PANEL	
FACP	FIRE ALARM CONTROL PANEL	
TP	FIRE ALARM TRANSPONDER	
DS ES	DOOR SOLENOID, ELECTRIC STRIKE - LOCKING DEVICE CONNECTION POINT	
F	FIRE ALARM PULL STATION	48" TOD
H E	HEAT DETECTOR: E = ELEVATOR CONTROLS	
P AB E	SMOKE DETECTOR (PHOTOELECTRIC): AB = AUDIBLE BASE, E = ELEVATOR CONTROLS	
I	SMOKE DETECTOR (IONIZATION)	
I U	SMOKE DETECTOR (IONIZATION) UNDER RAISED FLOOR	
D	FIRE ALARM DUCT DETECTOR WITH RELAY	
C	CARBON MONOXIDE DETECTOR	
ARC	FIRE ALARM SYSTEM ADDRESSABLE RELAY - CONTROL	
ARM	FIRE ALARM SYSTEM ADDRESSABLE RELAY - MONITOR	
RAL	FIRE ALARM SYSTEM REMOTE ALARM LIGHT	
FS	FLOW SWITCH CONNECTION	
TS	TAMPER SWITCH CONNECTION	
M	MONITOR SYSTEM JUNCTION BOX	36" CTR
A	AMPLIFIER	
K	KEYPAD	48" TOD
CR	CARD READER	48" TOD
	ROUGH-IN JUNCTION BOX FOR CCTV CAMERA WITH 1-1/4" CONDUIT BACK TO CABLE TRAY. INSTALL AND TERMINATE ONE CAT-6A CABLE PER LOCATION.	
P	PUSH BUTTON PLATE	
	TELEVISION ANTENNA OUTLET	18" CTR
2D	DATA/TELEPHONE OUTLET: NUMERALS INDICATE QUANTITY OF WIRED JACKS	18" CTR
	COMBINATION POWER & TELEPHONE OUTLET, FLOOR MOUNTED	
	COMBINATION POWER & DATA OUTLET, FLOOR MOUNTED	
	COMBINATION POWER & DATA/TELEPHONE OUTLET, FLOOR MOUNTED	
WAP	WIRELESS ACCESS POINT	

ELECTRICAL ABBREVIATIONS

NOTE: THIS IS A STANDARD ABBREVIATION LIST. SOME ABBREVIATIONS MAY NOT APPEAR ON THE ACCOMPANYING DRAWINGS.

2S1W	2 SPEED SINGLE WINDING
2S2W	2 SPEED DOUBLE WINDING
A, AMP	AMPERE
A/C	AIR CONDITIONING
AC	ALTERNATING CURRENT
AFCI	ARC FAULT CIRCUIT INTERRUPTER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINAL GRADE
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CAPACITY
ALT	ALTERNATE
ANN	ANNUNCIATOR
APPROX	APPROXIMATELY
ARCH	ARCHITECT
ATC	AUTOMATIC TEMPERATURE CONTROL
ATS	AUTOMATIC TRANSFER SWITCH
AV	AUDIOVISUAL
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BFC	BELOW FINISHED CEILING
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
BOD	BOTTOM OF DEVICE
C, CND	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CCTV	CLOSED CIRCUIT TELEVISION
CKT, CCT	CIRCUIT
CL	CURRENT LIMITING
CLG	CEILING
CONN	CONNECT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CTR	CENTER
CU, CO	COPPER
CX	CONNECT TO EXISTING
DC	DIRECT CURRENT
DISC	DISCONNECT
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
DT	DOUBLE THROW
DWG	DRAWING
E, EMERG	EMERGENCY
EA	EACH
EC	EMPTY CONDUIT
EF	EXHAUST FAN
EH	ELECTRIC HEATER
ELEC	ELECTRIC
ELEV	ELEVATION, ELEVATOR
ETR	EXISTING TO REMAIN
EWC	ELECTRIC WATER COOLER
EX	EXISTING
EXP	EXPOSED
FA	FIRE ALARM
FAAP	FIRE ALARM ANNUNCIATOR PANEL
FACP	FIRE ALARM CONTROL PANEL
FBO	FURNISHED BY OTHERS
FC	FAN COIL
FDR	FEEDER
FLA	FULL LOAD AMPERES
FLR	FLOOR
FR	FRAME
FU	FUSED, FUSIBLE
FUSS	FUSED SAFETY SWITCH
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
GEN	GENERATOR, GENERAL
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT PROTECTED
GFR	GROUND FAULT RELAY
GRD	GROUND
GRS	GALVANIZED RIGID STEEL
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HEAT PUMP, HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HTR	HEATER
HV	HIGH VOLTAGE
HZ	HERTZ
IG	ISOLATED GROUND
JB	JUNCTION BOX
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATTS
KWH	KILOWATT HOUR
LA	LIGHTNING ARRESTOR
LC	LIGHTING CONTACTOR
LP	LIGHTING PANEL
LRA	LOCKED ROTOR AMPERES
LTG	LIGHTING
LTNG	LIGHTNING
MATV	MASTER ANTENNA TELEVISION
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MEH	METAL HALIDE
MH	MANHOLE, MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MSP	MOTOR STARTER PANEL
MTD	MOUNTED
MV	MERCURY VAPOR
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NFSS	NON-FUSED SAFETY SWITCH
NO	NUMBER, NORMALLY OPEN
OC	ON CENTER
OFCI	OWNER FURNISHED CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED OWNER INSTALLED
OH	OVERHEAD
P	POLE
PB	PUSHBUTTON
PF	POWER FACTOR
PFCC	POWER FACTOR CORRECTION CAPACITOR
PL	PILOT LIGHT
PLC	PROGRAMMABLE LIGHTING CONTROL
PNL	PANEL
PP	POWER PANEL
Pp	PUMP
PR	PAIR
PRN	PRINTER
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
Ø, PH	PHASE
QTY	QUANTITY
RCS	REMOTE CONTROL SWITCH
REC, RECPT	RECEPTACLE
REL	RELOCATED
REQ'D	REQUIRED
RFI	RADIO FREQUENCY INTERFERENCE
RLA	RUNNING LOAD AMPERES
RM	ROOM
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RX	REMOVE EXISTING
SC	SURGE CAPACITOR
SEC	SECONDARY
SN, S/N	SOLID NEUTRAL
SP	SURGE PROTECTION
SPD	SURGE PROTECTION DEVICE
SPDT	SINGLE POLE DOUBLE THROW
SS	SAFETY SWITCH
SST	SOLID STATE
ST	SINGLE THROW
SW	SWITCH
SWBD	SWITCHBOARD
TBR	TO BE REMOVED
TC	TIME CLOCK
TEL, TELE	TELEPHONE
TH	TUNGSTEN HALOGEN
TOC	TOP OF CABINET
TOD	TOP OF DEVICE
TRANS, XFMR	TRANSFORMER
TTB	TELEPHONE TERMINAL BOARD
TW	TWISTED
TYP	TYPICAL
UCB	UNIT CIRCUIT BREAKER
UG	UNDERGROUND
UH	UNIT HEATER
UON	UNLESS OTHERWISE NOTED
UV	UNIT VENTILATOR
V	VOLTS
VFC	VARIABLE FREQUENCY CONTROLLER
VFD	VARIABLE FREQUENCY DRIVE
W	WATTS, WIRE
W/	WITH
WP	WEATHER-PROOF
XP	EXPLOSION PROOF

Sheet List	
Sheet Number	Sheet Name
E001	ELECTRICAL LEGEND & ABBREVIATIONS
E002	NEW WORK SITE PLAN
E003	NEW WORK LIGHTNING PROTECTION PLAN
E004	PARTIAL EXISTING ELECTRICAL SINGLE LINE DIAGRAM
E005	FIRE ALARM RISER DIAGRAM & DETAILS
ED100	ELECTRICAL DEMOLITION - BASEMENT
ED101	ELECTRICAL DEMOLITION - FIRST FLOOR
ED102	ELECTRICAL DEMOLITION - SECOND FLOOR
ED103	ELECTRICAL DEMOLITION - ROOF PLAN
E100	NEW WORK POWER PLAN - BASEMENT
E101	NEW WORK POWER PLAN - FIRST FLOOR
E101A	NEW WORK POWER PLAN - FIRST FLOOR - MECHANICAL CONNECTIONS
E102	NEW WORK POWER PLAN - SECOND FLOOR
E102A	NEW WORK POWER PLAN - SECOND FLOOR - MECHANICAL CONNECTIONS
E103	NEW WORK POWER PLAN - ROOF PLAN
E201	NEW WORK LIGHTING PLAN - FIRST FLOOR
E202	NEW WORK LIGHTING PLAN - SECOND FLOOR
E301	NEW WORK SPECIAL SYSTEMS PLAN - FIRST FLOOR
E302	NEW WORK SPECIAL SYSTEMS PLAN - SECOND FLOOR
ALT1-E101	NEW WORK POWER PLAN - FIRST FLOOR (ALT 1)
ALT1-E102	NEW WORK POWER PLAN - SECOND FLOOR (ALT 1)
ALT1-E102A	NEW WORK POWER PLAN - SECOND FLOOR (ALT 1) - MECH CONNECTIONS
ALT1-E103	NEW WORK POWER PLAN - ROOF PLAN (ALT 1)
ALT1-E202	NEW WORK LIGHTING PLAN - SECOND FLOOR (ALT 1)
ALT1-E301	NEW WORK SPECIAL SYSTEMS PLAN - FIRST FLOOR (ALT 1)
ALT1-E302	NEW WORK SPECIAL SYSTEMS PLAN - SECOND FLOOR (ALT 1)
E401	ELECTRICAL PART PLANS
E402	ELECTRICAL DETAILS
E403	ELECTRICAL DETAILS
E404	ELECTRICAL DETAILS
E405	IT CABINET LAYOUTS
E406	SWITCHBOARD ELEVATIONS
E407	CARD READER DOOR DETAILS
E601	ELECTRICAL SCHEDULES
E602	ELECTRICAL SCHEDULES
E603	ELECTRICAL SCHEDULES
E604	ELECTRICAL SCHEDULES

N True N Project

0' 2' 4' 8' 16' 24'

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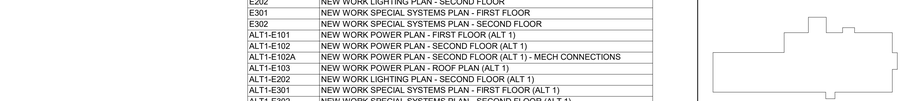
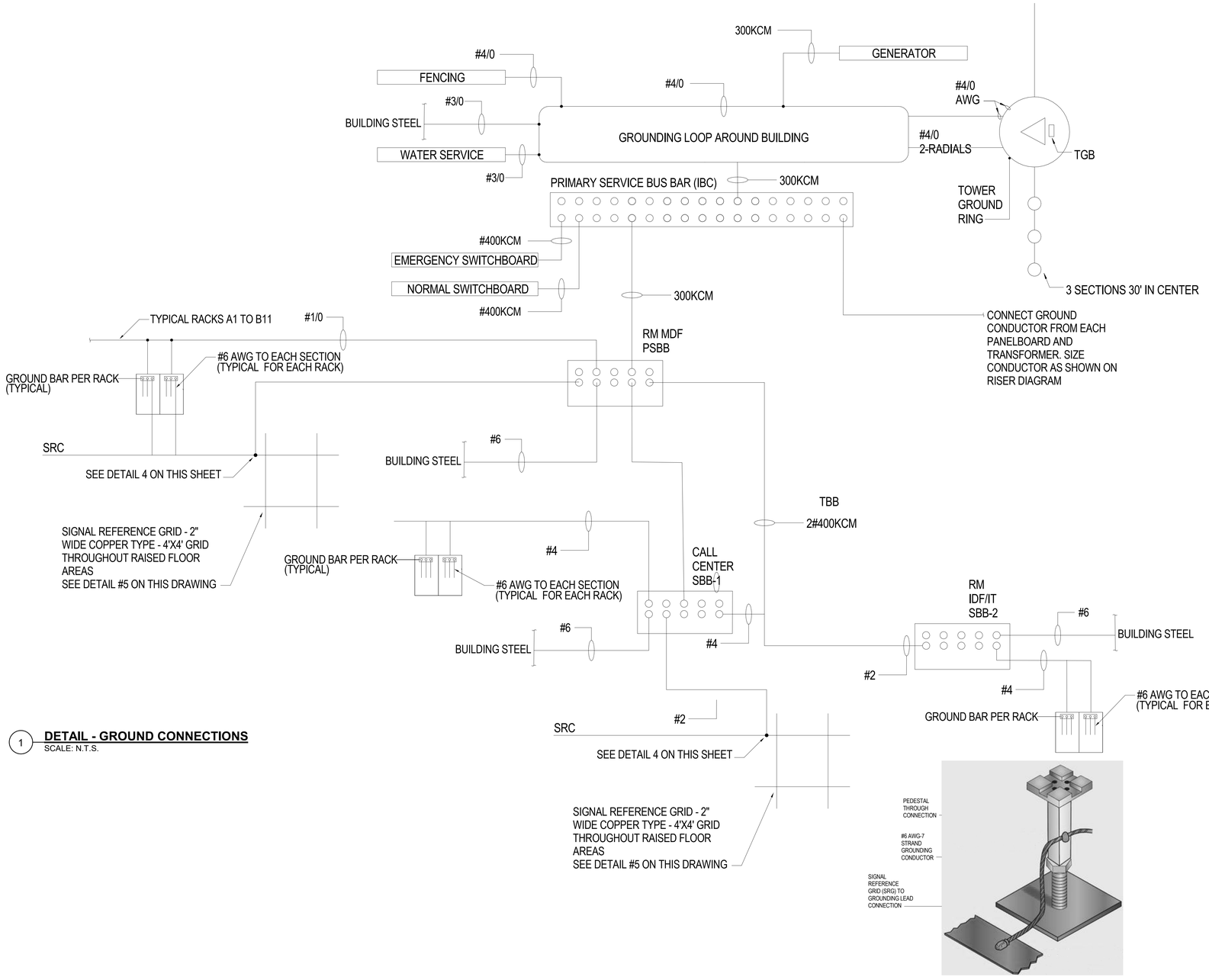
Key Plan:

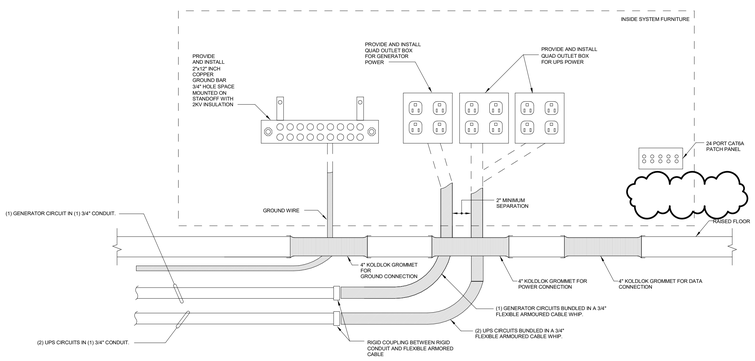


Drawing Title:
ELECTRICAL LEGEND & ABBREVIATIONS

Drawing Number:
E001

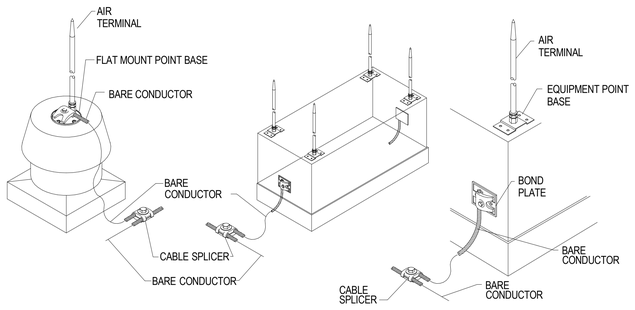


1 DETAIL - GROUND CONNECTIONS
SCALE: N.T.S.

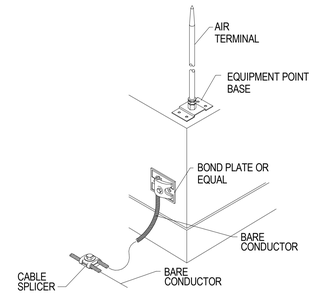


2 DETAIL - WORKSTATION POWER CONNECTIONS
SCALE: N.T.S.

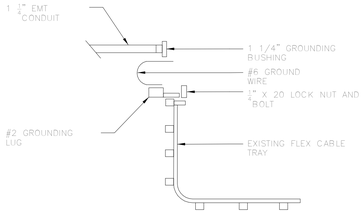
5 DETAIL - RAISED FLOOR GROUNDING
SCALE: N.T.S.



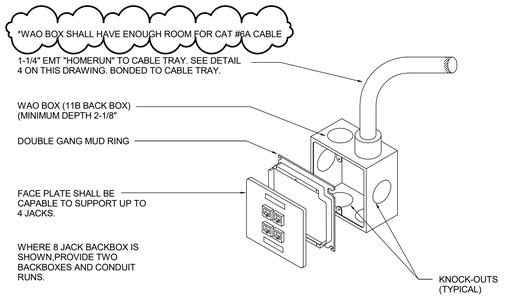
6 DETAIL - ROOFTOP MECHANICAL METALLIC EQUIPMENT BONDING DETAIL (TYP.)
SCALE: N.T.S.



3 DETAIL - ROOFTOP P.V. EQUIPMENT BONDING DETAIL (TYP.)
SCALE: N.T.S.



4 DETAIL - BONDING CONDUIT TO CABLE TRAY
SCALE: N.T.S.



7 DETAIL - STANDARD WORK AREA OUTLET
SCALE: N.T.S.

NOTES:

1. DETAIL APPLIES TO ALL LOW VOLTAGE OUTLET BOXES FOR PHONES, AV, DATA, CAMERA, SECURITY, ETC.

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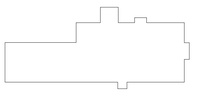
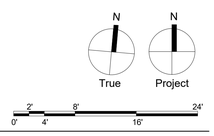
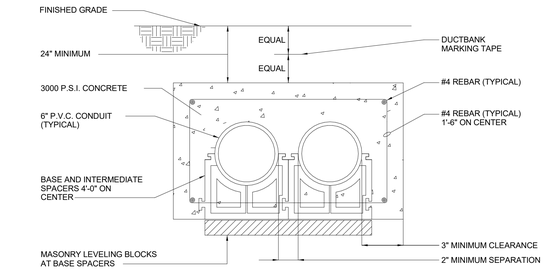


Drawing Title:
ELECTRICAL DETAILS

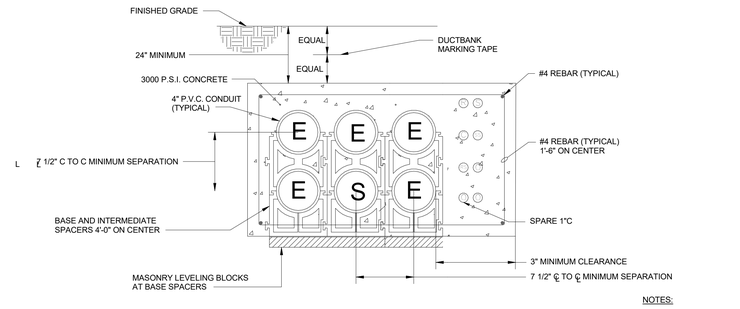
Drawing Number:
E403





NOTE: REBAR REQUIRED UNDER ROADWAYS ONLY

1 DETAIL - 2-WAY U.G PVC LAYOUT
SCALE: N.T.S.

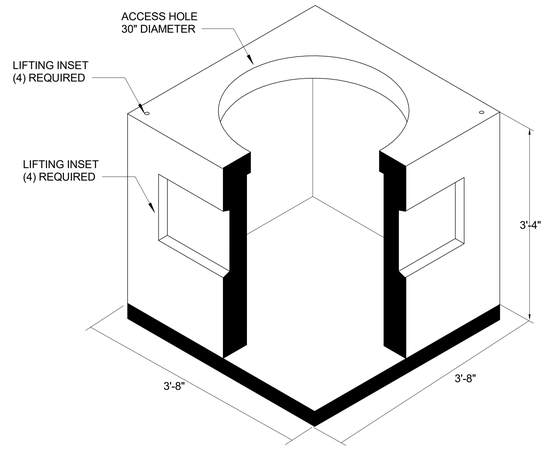


NOTE: REBAR REQUIRED UNDER ROADWAYS ONLY

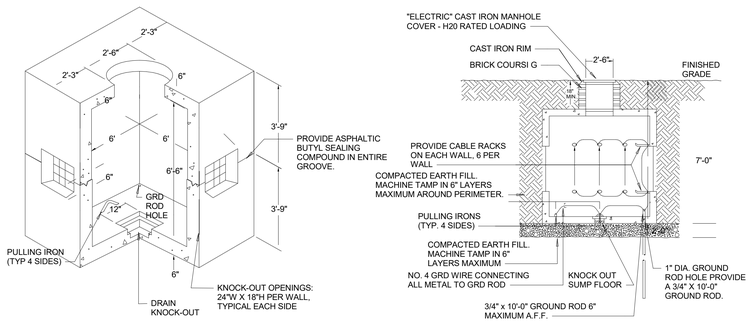
NOTES:

E - EMERGENCY POWER
S - SPARE
C - CONTROL WIRING 1 1/4"C
SS - TO GENERATOR PANELBOARD 1 1/2"C
RS - REMOTE START 1"C
O - SPARE

2 DETAIL - 6-WAY EMERGENCY DUCTBANK
SCALE: N.T.S.

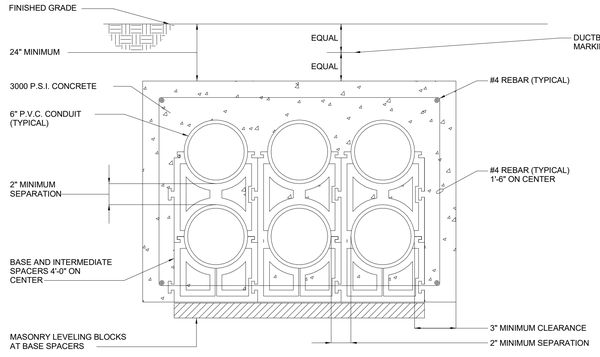


3 DETAIL - HANDHOLE
SCALE: N.T.S.



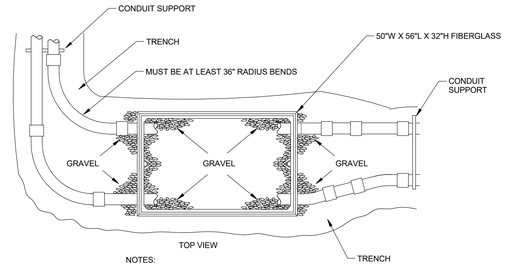
PROVIDE PRE-CAST MANHOLE BY SMITH-MIDLAND IN MIDLAND VA., OR APPROVED EQUAL. MANHOLE SHALL BE MODEL 660MH WITH TYPE B PULLING IRONS, BOLTING INSERTS FOR CABLE RACKS, AND LADDER No. 87CL.

4 DETAIL - MANHOLE
SCALE: N.T.S.



NOTE: REBAR REQUIRED UNDER ROADWAYS ONLY

5 DETAIL - 6-WAY U.G PVC LAYOUT
SCALE: N.T.S.



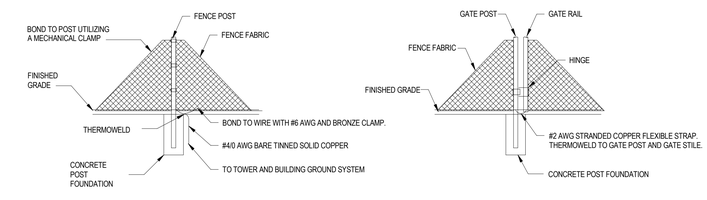
NOTES:

1. TOP OF SPLICE BOX SHOULD MATCH FINISHED GRADE.
2. THIS SPLICE BOX IS NOT FOR ROADWAY USE.
3. STABILIZE THE BOTTOM OF THE EXCAVATION WITH 6" OF PEA GRAVEL. THE BOTTOM FLANGE OF THE SPLICE/PULL BOX MUST BE ON A FIRM LEVEL FOUNDATION.
4. DUCTS CAN ONLY ENTER AND EXIT THE SPLICE/PULL BOX AT OPPOSITE ENDS FROM EACH OTHER.
5. INSTALL THE DUCTS NO MORE THAN 2" INTO THE SPLICE/PULL BOX. USE AEROSOL FOAM SEALER OR DUCT SEALING COMPOUND AROUND THE DUCTS ON THE OUTSIDE OF THE SPLICE/PULL BOX TO SEAL OPENINGS.
6. BACKFILL EVENLY AROUND THE SPLICE/PULL BOX WITH CLEAN, DRY EARTH AND MECHANICALLY TAMP IN 8" LAYERS.
7. HANDHOLE TO BE APPROVED BY DUKE ENERGY.

6 DETAIL - DUKE ENERGY SPLICE/PULL BOX
SCALE: N.T.S.

IT JACK SCHEDULE

SYMBOL	CONDUIT SIZE	WIRING	JACK	MOUNTING HEIGHT	BACKBOX
2D	1 1/4"	2-CAT6A	2-RJ45	18"	SEE DETAIL #7 ON THIS DRAWING E403
4D	1 1/4"	4-CAT6A	4-J45	18"	SEE DETAIL #7 ON THIS DRAWING E403
8D	1 1/4"	8-CAT6A	8-J45	18"	SEE DETAIL #7 ON THIS DRAWING E403
12D	1 1/4"	12-CAT6A	12-J45	18"	SEE DETAIL #2 ON THIS DRAWING E403
WAP	1 1/4"	1-CAT6A	1-J45	CEILING	SEE DETAIL #7 ON THIS DRAWING E403



DETAIL NOTES:

1. TYPICAL GROUNDING OF FENCE AND TYPICAL GROUND OF GATE TO GATE POST.
2. BOND EACH POST TO GROUND RING. FOR FOLLOWING POSTS SHALL BE GROUNDED: GATE, CORNER, SPLICE IN FABRIC AND AT 40FT INTERVALS. FENCE THAT IS GREATER THAN 20FT AWAY FROM THE GROUNDING SYSTEM AND/OR ANY GROUNDED OBJECT DO NOT REQUIRE GROUNDING.
3. TOP AND BOTTOM RAILS OF FENCE SHALL BOND TO POSTS

7 DETAIL - FENCE GROUNDING
SCALE: N.T.S.

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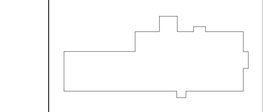
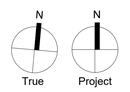
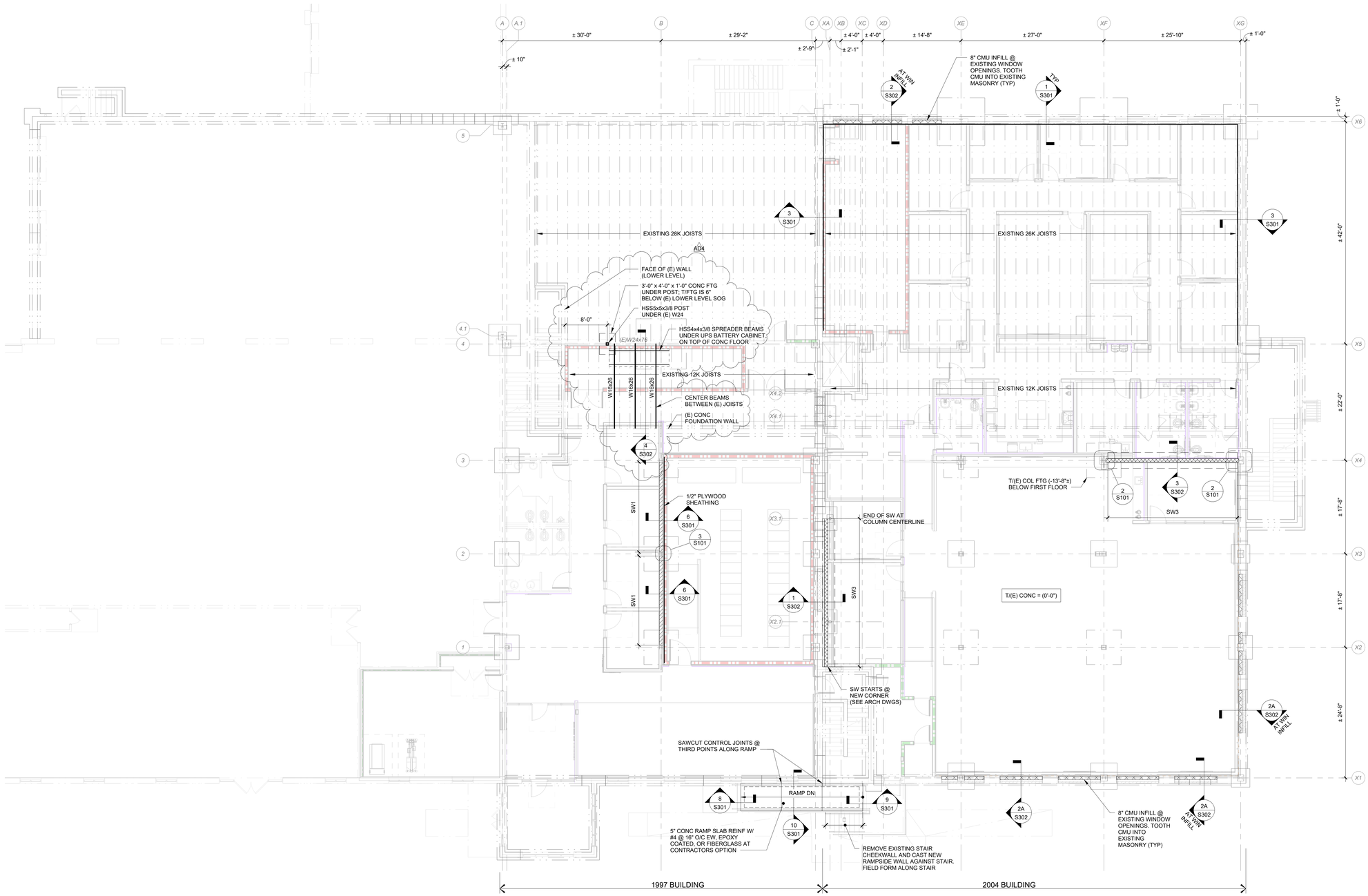
Key Plan:



Drawing Title:
ELECTRICAL DETAILS

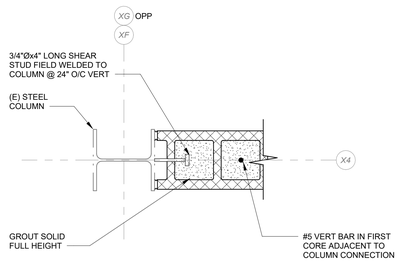
Drawing Number:
E404





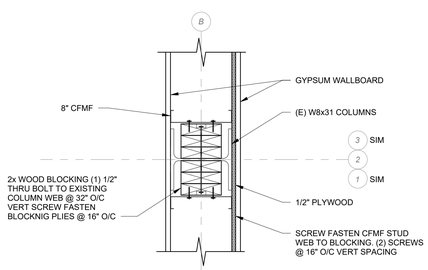
1 EXISTING FIRST LEVEL PLAN

S101 SCALE: 1/8" = 1'-0"



2 PLAN DETAIL

S101 SCALE: 1 1/2" = 1'-0"



3 PLAN DETAIL

S101 SCALE: 1 1/2" = 1'-0"

SHEAR WALL SCHEDULE

SW1	GYPSUM SHEATHING 1/2" PLYWOOD GYPSUM SHEATHING	8", 16 GA CFMF, CENTERED ON GIRD LINE. STUDS @ 12" O/C
SW2	GYPSUM SHEATHING 1/2" PLYWOOD 1/2" PLYWOOD GYPSUM SHEATHING	8", 16 GA CFMF, CENTERED ON GIRD LINE. STUDS @ 12" O/C
SW3	(1) #5 EACH END #5 @ 48" O/C BETWEEN ENDS L	8" CMU WITH GROUT AT BAR LOCATIONS

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N Project

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Professional Seal:

NORTH CAROLINA PROFESSIONAL SEAL 041919 ENGINEER THOMAS E. FORSBERG

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ALAMANCE COUNTY

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New Construction of:

ALAMANCE COUNTY EMERGENCY OPERATIONS AND COMMUNICATIONS CENTER

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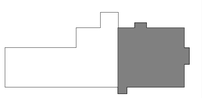
Key Plan:

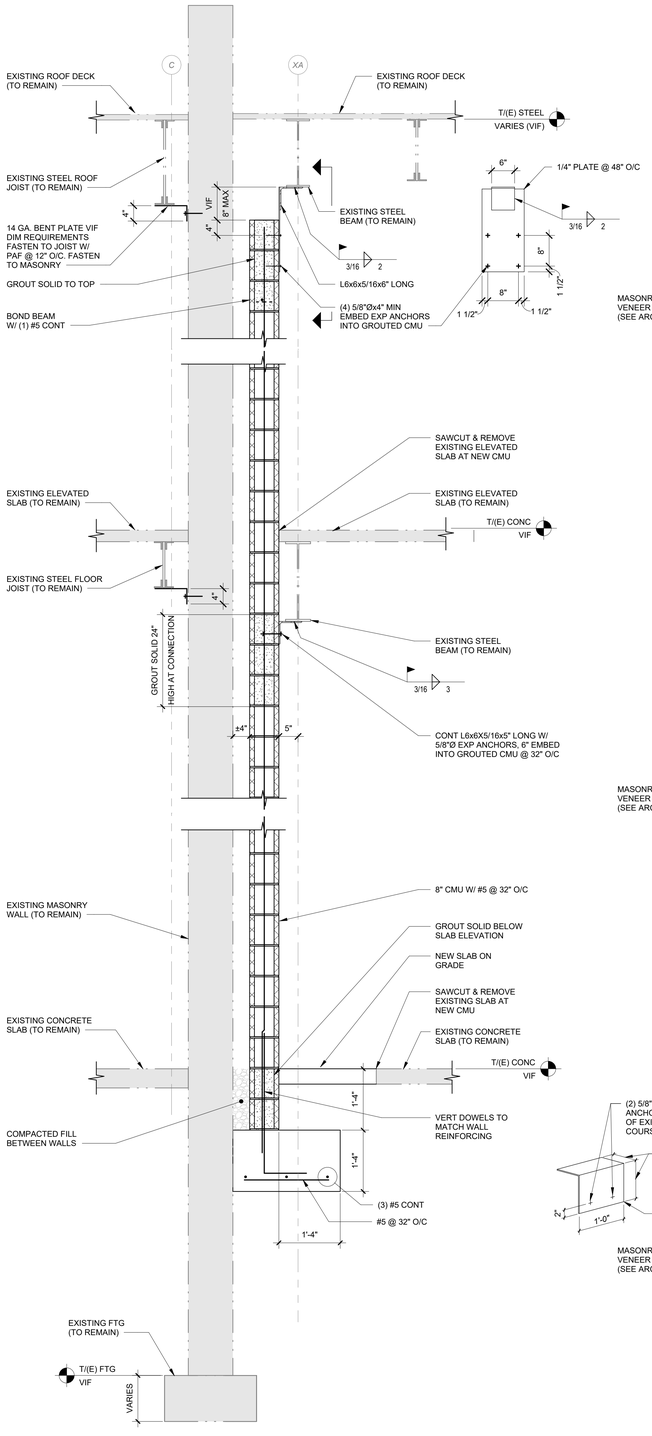


Drawing Title:

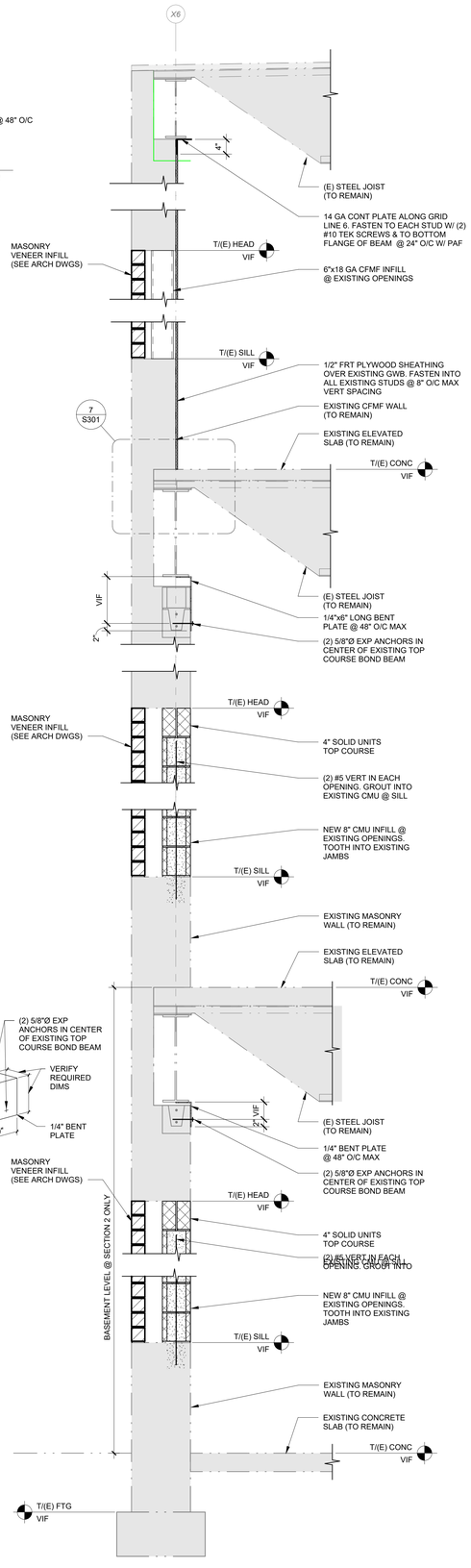
EXISTING FIRST LEVEL PLAN

Drawing Number:

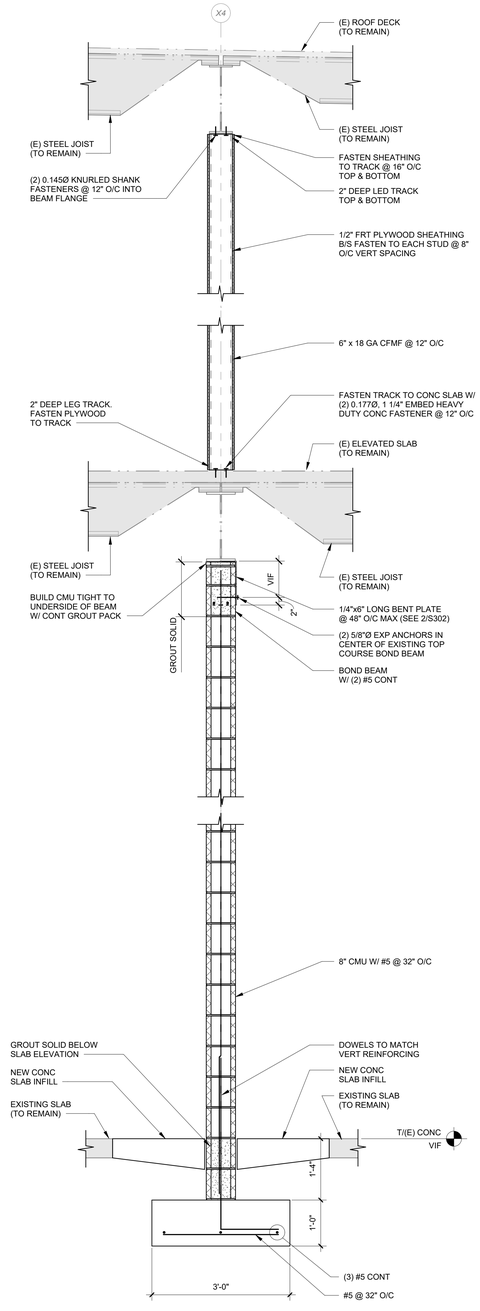
S101



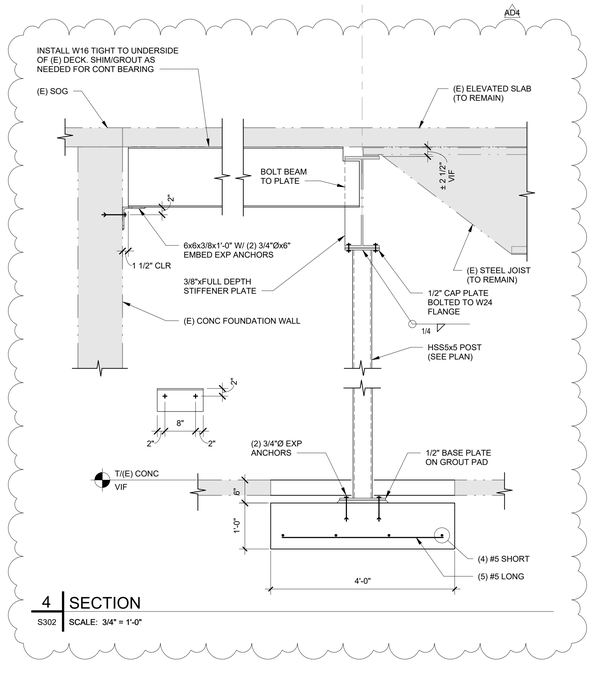
1 | SECTION
S302 | SCALE: 3/4" = 1'-0"



2,2A | SECTION
S302 | SCALE: 3/4" = 1'-0"



3 | SECTION
S302 | SCALE: 3/4" = 1'-0"



4 | SECTION
S302 | SCALE: 3/4" = 1'-0"

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Professional Seal:

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Owner:
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Graham, NC 27253

New Construction of:
ALAMANCE COUNTY
EMERGENCY OPERATIONS
AND COMMUNICATIONS
CENTER
780 PLANTATION DRIVE
BURLINGTON, NC 27215

ISSUED FOR:

NO.	DESCRIPTION	DATE
	BUILDING PERMIT	04/18/2025
	ISSUED FOR BIDDING	09/02/2025
AD4	ADDENDUM #4	10/10/2025

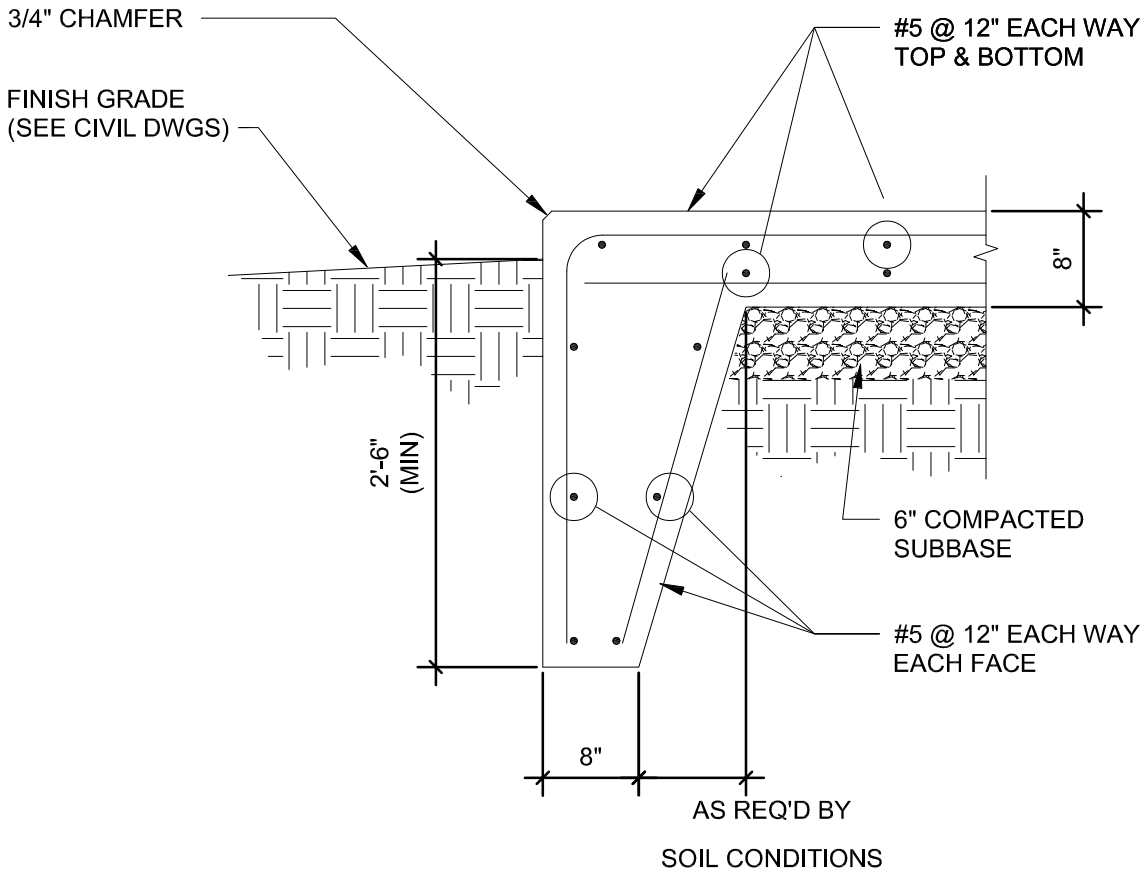
DATE: 09/02/2025

SGA PROJECT NUMBER: 23-041

Key Plan:

Drawing Title:
FOUNDATION DETAILS

Drawing Number:
S302



COORDINATE PAD SIZE WITH APPROVED
EQUIPMENT SUBMITTALS AND MFR REQUIREMENTS

SK-S01 - 10/10/2025