



ADDENDUM B

NKU Medical Examiner & Crime Lab Renovation & Addition RFI's and Comments

- **THE BID DATE / TIME HAVE CHANGED FOR THE NKU MEDICAL EXAMINER & CRIME LAB RENOVATION & ADDITION PROJECT – BID DATE CHANGED FROM 7/29/26 TO 8/06/26 AT 2:00PM LOCAL TIME**
- All Trade Contractors are to note all highlighted modified specification sections listed on the Table of Contents as they pertain to your particular scopes.
- Per Bid Requirements, please submit bid on provided bid forms.
- **Bid Package -06 General Trades:** to remove costs associated with specification section 10 14 23 Panel Signage from their bid. NKU to provide and install signage under this specification section.
- **Bid Package -07 Roofing:** Confirm Modified Roofing Specification Sections.
- **Bid Packages – 31 Sitework & Site Demolition, Bid Package – 03 Concrete, & Bid Package – 06 General Trades:** Include in your bids to provide and install stone drive, concrete apron, and modification to existing soccer field fence as identified on attached Soccer Field Access Road Logistics Plan.

BID-011

Q: It does not appear that corner guards are in the wall and door protection spec, but they are shown on the drawings. Can you clarify who should carry this in their bid?

A: Corner Guards to be provided and installed by Bid Package 06 General Trades.

BID-012

Q: Which BP is responsible for the aluminum framed doors with Wood type J slabs? Example would be a doctors office door #025. I assumed since they were aluminum frames that BP #08 Aluminum would have in their scope. But when I check the spec section on flush wood doors, which is listed in general trades scope, it lists this type J VT Industries door. So, I am confused on which doors are included in BP #06 GT's and which doors are included in BP #08 Aluminum Storefront.

A: Bid Package 06 General Trades will be responsible to provide and install the wood doors and hardware. Bid Package 08 Storefront, Curtainwall and Skylight will be responsible to provide and install aluminum frames.

SOCCER FIELD ACCESS ROAD LOGISTICS PLAN

Louie B Nunn Dr

Louie B Nunn Dr

Louie B Nunn Dr

Curb Cut 16ft Wide
w/2ft Concrete
Apron

New 12ft wide X 320ft long Access drive and turn
around for Emergency and Maintenance vehicles.
(8 inches of #2 stone capped with 4 inches of 53's

New additional 10ft wide gate w/2 5ft wide x 10ft
tall panels to match existing gate that is located
at S.E corner of Soccer field, retrofitted into
existing perimeter fence, with new head rail.

Scudamore Stadium





Narrative

Date: July 27, 2026
Project: 24047 – NKU Civic Center Renovation
From: Jeff Fackler
Narrative: Addendum B

Drawings

- D1.01 – Demolition Plan – Lower Level
 - Revised dimensions for demolition of openings
- D1.02 – Demolition Plan – Upper Level
 - Revised extents for demolition of slab on grade for plumbing work
- A1.10 – Overall Dimension Plan
 - Added aluminum storefront tags to door openings.
 - Added dimension to one aluminum storefront opening.
- A6.00 – Door Schedules & Details
 - Revised three door hardware sets to align with the Door Hardware specifications.
 - Added aluminum storefront elevations to all doors with aluminum frames.
- A6.04 - Interior Glazing Elevations & Details
 - Added new interior storefront elevation
- E1.32 – Electrical Fire Alarm Plan – Upper Level
 - Removed Clean-Agent fire-extinguishing system keynote.

Specifications

- 00 01 10-Table of Contents
 - Revised Table of Contents to reflect all recent changes to the specifications
- 074113 - Standing Seam Metal Roof Panels – Tremco
 - Remove section noting from Table of Contents. Section was not included in the specifications.
- 074113-Standing Seam Metal Roof Panels
 - Replace existing specification section with revised section
- 07 52 16-Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing
 - Replace existing specification section with revised section
- 075323 - EPDM Thermoset Single-Ply Roofing
 - Remove from Table of Contents and scope of project
 - To be replaced with 075423 - Thermoplastic Polyolefin (TPO) Roofing
- 075423 - Thermoplastic Polyolefin (TPO) Roofing
 - Add new specification section to add TPO roofing in place of all EPDM
- 101423 - Panel Signage
 - Remove from Table of Contents and scope of project
 - Interior Panel Signage will be supplied by owner to NKU Standards and installed by owner's contractor.



Requests For Information (RFIs)

PC-001 KRSM Pre-bid RFI questions (Revised)

075323- Insulation and membrane is called out to be adhered and fastened. On a ballast system all layers are loose-laid. Should we figure an adhered or a ballast system?

Revised Answer

~~The ballasted EPDM roofs will be a ballasted system and the membrane will be laid loose and adhered at the edges and at penetrations. There are a few adhered EPDM membranes that will not be ballasted.~~

EPDM roofing membrane to be removed from the scope of the project and replaced with 075423 TPO roofing.

PC-005 Instrumentation and Controls For HVAC

Could Johnson Controls be listed as an approved manufacturer for the building automation system?

Answer

JCI is an acceptable manufacturer, they must provide a niagara based controls system in lieu of their proprietary system. JCI will be added to the updated controls specification issued as part of Addendum A.

PC-009 Modular Heat Recover Chillers, Manufacturer Approval

We would like to have Tandem Chillers added as an approved manufacturer for the Modular Heat Recover Chillers in Spec Section 23 64 23 Part 2.1.A. Below is a link to Tandem Chillers' water cooled chiller website. I have also attached an installation listing of sites that are using a similar system that is on this project.

<https://tandemchillers.com/water-cooled-chillers/>

Answer

Tandem Chillers are acceptable if they meet the modular heat recovery specifications. Manufacturers will be added as part of Addendum A.

PC-0012 Lab Equipment questions

Question

123653 - Laboratory Countertops, Drawing Drawings A4.20

We would like to substitute Kewaunee Scientific (KSC) Black Epoxy Resin Countertops in place of Durcon for cost savings.

Answer

Please submit a Substitution Request Form with spec sheets and we will review it.

Question

No Spec - Lab Equipment Schedule A1.51, A1.52 & A8.00, Drawing A8.00

Confirm BP10 is responsible for receiving and setting in place OFCI Equipment listed on Crime Lab Equipment Schedule on A8.00. Or is this the responsibility of others?

Answer

See response to BID-009 in addendum A

Question

No Spec - Lab Equipment Schedule A1.51, A1.52 & A8.00

Confirm if Metro Shelf Units per Keynote #8 on A1.51 are by BP10



Answer

Bid Package – 10 Lab Casework is to provide and install Metro Shelf Units

No Spec - Lab Equipment Schedule A1.51, A1.52 & A8.00

Confirm which Bid Package is to provide the Medical Evidence Storage per Keynote #2 on A1.52 as there is no Specification provided for this Scope.

Answer

See response to BID-009 in addendum A

No Spec - Lab Equipment Schedule A1.51, A1.52 & A8.00

Confirm the Lodox Imaging Item Tag EQ-005 (Qty-1), Located in Imaging #006 is to be Owner Furnished, Owner Installed and not part of BP10.

Answer

See response to BID-009 in addendum A

No Spec - Lab Equipment Schedule A1.51, A1.52 & A8.00

Please provide a Basis of Design Manufacturer/Model for the Washer Item Tag EQ-07 and Dryer Item Tag EQ-08 (Qty-1) Located in Laundry #009

Answer

GE® 7.4 cu. ft. Capacity Electric Dryer with Up To 120 ft. Venting and Sensor Dry Model #:GTD58BSVWS

GE® 4.5 cu. ft. Capacity Washer with Water Level Control Model #:GTW585BSVWS

Question

No Spec - Lab Equipment Schedule A1.51, A1.52 & A8.00, Drawing A1.21

Confirm which Bid Package is to supply the exam lights per Keynote #3 on reflected ceiling plans as these units are not defined elsewhere in the bid docs.

Answer

See response to BID-009 in addendum A

Question

No Spec - Lab Equipment Schedule A1.51, A1.52 & A8.00

Confirm if vendors other than Mopec are acceptable alternates such as Moby Medical, TBJ, or PMT Scientific. All as proven manufactures in the past.

Answer

Please submit a Substitution Request Form with spec sheets on the equipment and we will review it. The Medical Examiner group does not know about these other brands.

PC-0013

NKU Existing Head-End & possible alternates

RFI1- Existing NKU BAS Head-End

Question: Please confirm the existing BAS head-end currently used by Northern Kentucky University for campus BAS operations. Provide the manufacturer, platform, software version, server/head-end location, licensing requirements, integration requirements, and campus standards for graphics, trends, alarms, naming conventions, and owner access.

Reason: Specification 23 09 23 requires a Niagara Framework based open system and identifies Schneider Electric USA as the NKU Campus Standard, but the bid documents reviewed do not clearly identify the existing campus BAS head-end platform/version. This information is required for accurate



pricing of front-end licensing, integration, graphics, programming, commissioning, and warranty support.

RFI- Alerton BACnet DDC Controllers / Tridium Vykon Head-End

Question: Would the Owner/Engineer accept Alerton BACnet DDC field controllers integrated to a Tridium Vykon Niagara head-end for this project, provided the system complies with all specified BACnet, Niagara Framework, open-system, owner-license, graphics, alarming, trending, programming, commissioning, and documentation requirements? If this is not acceptable, please confirm the required BAS manufacturer/head-end and whether Schneider Electric USA is mandatory as the NKU Campus Standard.

Reason: The DDC specification lists Schneider Electric USA, Siemens, Honeywell, and Ameresco as acceptable manufacturers and identifies Schneider Electric USA as the NKU Campus Standard. Alerton and Vykon are not listed in the approved manufacturer list reviewed. Clarification is required before pricing a non-listed BAS manufacturer or substitution. Can Alerton be added to specifications as approved BACnet substitute controllers?

Answer

Alerton will be added to acceptable manufacturers. They must meet the requirements laid out in the 230923-DDC Spec.

PC-0014 Exhaust Duct

The exhaust duct on the upper level is stated to be Epoxy-Coated Stainless Steel duct. We are struggling to get any vendors to quote this duct system. Please provide an acceptable alternative for this system.

Answer

The internal coating shall be an Epoxy phenolic Resin Coating or equivalent. CMTA is open to exploring other coating options that meet the requirements of the corrosive and caustic air that they will be exhausting.

PC-0015 UE Primary Conduit

Can you clarify intent/routing of UE primary - E0.02 implies reuse and just extension of existing conduit from existing xfmer to new xfmer location - C-1.0 shows UE pathing changing to the xfmer but has no note to indicate this on E0.02 other than an unmarked line that is the same pathing on C-1.0.

Please clarify the routing of the primary ductbank for permanent power from the existing riser pole to the new upsized transformer, as identified on drawings C1.0 & E0.02 & E0.03. Routing as shown on the Drawings C1.0 and E0.03 is different than the routing shown on Drawing E0.03.

Please clarify who is to provide cabling / conduit for the primary service to the new transformer. Drawing E0.02 states existing primary feeder and conduit to be protected and reused for new transformer-Coordinate sizes and final stub up location with new work and Duke Energy. This drawing also states to extend primary conduits for utility wiring to new transformer, coordinate with utility company. Refer to Single Line for more information. Drawing E6.00 Electrical Single Line Diagram indicated the installation of (2) 4" empty conduits in SCHEDULE 40 PVC to utility pole from new transformer, per utility company standards, refer to site.

We also have a question regarding the one-line diagram as shown on E6.00 that shows the secondary going from the transformer to the CT Compartment then to the main distribution board. Drawings E0.02 identify the ductbank running directly into the building to the distribution board.



Answer

There will be some minor rework of the primaries to extend into the new concrete pad and location. Location of existing and new transformers are very close to each other. Also, verification in the field with Duke Energy of the existing primaries to ensure they are still in good working order will need to be done during construction. Ultimately this will need to be worked out in the field with Duke as they have final say and we cannot see the buried conduits and the condition. Please carry a value in the bid documents for this.

PC-0019 DDC Controls Manufacturer Consideration

This RFI is to see if "Reliable Controls by Core Controls" would be an acceptable DDC Controls Contractor for this project.

Reliable Controls specializes in designing and manufacturing Internet-connected building controls and building automation controls that are simple, flexible, and competitively priced. Known as direct digital controls, building automation systems, building management systems, energy management control systems, and facility management systems, the MACH-System is used to monitor and control the mechanical / HVAC and electrical / lighting equipment found in every kind of HVAC building control application. Their designs utilize the ASHRAE standard BACnet® protocol with an industry-recognized 5-year warranty.

We have been a Reliable Controls partner for over 15 yrs. We are licensed Electrical contractors specializing in HVAC DDC Controls. All our installers are licensed electricians and are employees of Core Controls. We do not sub-contract any of our work out, which results in a higher quality of installation than our competitors.

<https://www.reliablecontrols.com/>

<https://www.reliablecontrols.com/products/controllers/>

<https://www.reliablecontrols.com/products/bacnet/>

<https://www.reliablecontrols.com/projects/>

Answer

This is acceptable per CMTA, but this is ultimately an NKU decision.

PC-0020 HVAC questions

There is no Duct Construction Schedule listed in the Mech drawings, nor is there a Duct Application Schedule listed in 23 31 13 Metal Ductwork Spec for Static Pressure classes. o Will there be a Duct Construction/Material Schedule issued? Please advise

Answer

Ductwork is to be constructed per SMACNA standards as listed in 233113 - Metal Ductwork Specifications

Note M41 on M1.02 states "Provide welded stainless-steel epoxy coated ductwork to prevent corrosion" regarding all fume hood exhaust. o It is our experience that you would typically have one or the other in this case. It is not typical that we would see welded stainless and epoxy coated both in this application, nor is it possible to weld epoxy coated ductwork without an additional epoxy coating being applied after shop/field welding has been completed. Please advise if this note is correct.

Answer

Per CMTA response to RFI 14, ductwork should be priced as lined with Epoxy Phenolic Coating or equivalent. CMTA is open to exploring other coating options that meet the requirements of the air passing through this ductwork.

Note M1 on M1.01 regarding Autopsy Tables – Is there any specialty material type that needs to be considered when constructing this ductwork or are we to assume this can be standard galvanized ductwork?

Answer



Duct construction requirements to be coordinated with autopsy table manufacturer. Specific materials may be required due to possible galvanic corrosion. If the table manufacturer does not have specific requirement standard galvanized ductwork is acceptable.

PC-0021 Access Control System

After reviewing both the Access Control Specification and the Technology Drawings, we noticed that the documents don't identify a specific access control manufacturer or platform.

The specifications reference reader cable, signal cable, and other components as being installed "as recommended by the system manufacturer," but they don't indicate what system the project is intended to support or whether it is expected to match an existing NKU standard.

We also noticed that the scope appears to cover only the infrastructure and cabling for a future access control system that will be provided by others, rather than the actual access control equipment.

To make sure we're proposing the right solution, could you provide some guidance on the following?

- Has an access control manufacturer or platform been selected for this facility?
- If so, what system is planned, or what platform is currently standardized across NKU?
- Will the Civic Center be integrated into NKU's existing access control system, or will it operate as a separate system?
- Since the building will be occupied by multiple state organizations, is the intent to have all tenants operate on a single enterprise platform with separate permissions, or is another approach being considered

Answer

The scope of the work is as previously identified, to cover the infrastructure and cabling for a future access control system. Kentucky State Police and the Kentucky Medical Examiner's Office will be using separate access control devices. Each end user will be installing their own devices and configure the system with their own state IT professionals. The specifications of the access control system will not be divulged at this time and will not be an NKU standard.

PC-0023 Humidifier manufacturer approval

Possibly being added to the specifications for the humidifier. We represent Condair and have equals to the basis of design.

Answer

Condair is an acceptable manufacturer. Spec 238413 - Evaporative Steam Humidification Systems will be issued as part of Addendum A.

PC-0026 Medical Examiner questions

Decorative Louvers – it does not appear there is a spec for this. Can you provide a manufacturer or further details?

Answer

The question is not clear as to which louvers are being referred to.

Door Hardware – There seems to be some difference between the drawing schedule and spec regarding which doors get what hardware sets. Will a new spec/schedule be issued in an addendum?

Answer

The question is not clear as to which Hardware Sets are being referred to. There will not be a revised spec or schedule issued for the Addendum.



General Trades calls for 1 dumpster. Will you have someone that changes it out? The way it reads sounds like we only need to provide 1 dumpster in total.

Answer

See response to BID-008 in addendum A

Will we be able to hook into the existing power?

Answer

See response to BID-008 in addendum A

Note for providing trash bins calls for the use for general debris, not construction waste. On a job this size, in your opinion how often would you have these emptied for "general debris"

Answer

See response to BID-008 in addendum A

PC-0028

Jostin RFI questions

Smoot will need to respond to the following question #'s 2, 3, 4, 8, & 12 - as they refer to scope clarifications. Questions are in attached PDF.

1. Multiple discrepancies have been identified between the Architectural Demolition Drawings (D1.01 & D1.02), Architectural Plans (A1.10), and Structural Shoring Drawings (SD100 & SD110) regarding the location, width, and extent of existing and proposed wall openings requiring demolition and temporary shoring.
 - a. To ensure all BP-06 bidders are bidding the same scope of work, please review the following discrepancies and identify the governing documents:
 - i. Plan North Garage Wall – Sheet SD100 indicates removal of a 6'-0" wide section of 8" CMU wall for a new opening. Sheet D1.01 shows this location as an existing opening with no demolition keynote. Please confirm whether a new opening is required.

Answer
In the SE portion of the building SD100 shows a 6'-0" wide opening in the concrete wall being demolished. This is not correct as this is an existing opening.
 - ii. Northwest Exterior Stairwell – Sheet SD100 indicates removal of a 5'-10" wide section of the existing 10" concrete wall. Sheet D1.01 indicates only the windows are to be removed, and Sheet SD110 indicates the exterior wall above is to remain. Please clarify the intended demolition scope.

Answer
This area of demolition was further clarified in Addendum A.
 - iii. North Concrete Foundation Wall at Existing Garage – Sheet D1.01 and Sheet A1.10 indicate a 27'-10" opening is to be created. Sheet SD100 indicates two separate openings with maximum widths of 6'-3½" and 8'-8". Please identify the correct opening configuration.

Answer
This area of work will be clarified in a subsequent Addendum.
 - iv. North Side of Excavation Area – Sheet D1.01 indicates a 7'-3¼" wide opening in the existing 10" concrete wall. Sheet SD100 indicates a maximum opening width of 6'-0". Please identify the correct opening width.

Answer



This area of work will be clarified in a subsequent Addendum.

- v. Southwest Corner of Excavation Area – Sheet D1.01 indicates an 8'-3⁵/₈" wide opening. Sheet SD100 indicates a maximum opening width of 7'-7⁷/₈". Please identify the correct opening width.

Answer

This area of work will be clarified in a subsequent Addendum.

- vi. Southwest Corner of Existing Office Area Adjacent to South Entry Vestibule – Sheet D1.02 indicates a new opening in the existing 10" concrete wall. Sheet SD110 identifies only a 3'-4" maximum opening located farther east with no additional opening shown. Please clarify the intended location and width.

Answer

This area of work will be clarified in a subsequent Addendum.

- vii. North Half of Building – Sheet D1.02 indicates approximately 28 LF of existing 10" concrete wall is to be removed. Sheet SD110 indicates a maximum opening width of 18'-0" at the same location. Please clarify the required extent of demolition.

Answer

This area of work will be clarified in a subsequent Addendum.

- viii. Northern Most 10" Concrete Wall – Sheet D1.02 indicates a 4'-4" door opening. Sheet SD110 indicates a 6'-4" opening. Please identify the correct opening width.

Answer

This area of work will be clarified in a subsequent Addendum.

- b. Please identify the governing dimensions and opening locations for each condition so all BP-06 bidders include the same demolition, shoring, and structural modification scope.

Answer

This area of work will be clarified in a subsequent Addendum.

- 2. Please clarify the intended Bid Package responsibilities for all demolition items identified on Drawing D1.04, including exterior lighting, electrical devices, louvers, windows, and other building-mounted components. Please identify whether demolition of each item is included in BP-06 or the applicable trade contractor (BP-07, BP-08, BP-22, BP-23, or BP-26) so all bidders include comparable scopes of work.

Answer

See response to BID-010 in addendum A

- 3. BP-06 Scope of Work Item #15 states that no preinstalled hardware on doors will be permitted, as the doors are to be painted prior to installation.

- a. Please clarify whether this requirement applies to both hollow metal and factory-finished wood doors, or only to unfinished doors requiring field painting.
- b. Specifically, please confirm whether hardware may be factory pre-installed on prefinished wood doors or if all hardware is required to be furnished loose and field installed after the doors have been installed.

Answer

See response to BID-010 in addendum A



4. Section 08 11 13 – Hollow Metal Doors and Frames and Section 08 14 16 – Flush Wood Doors both reference Section 08 80 00 – Glazing for glass associated with doors and borrowed lites. However, BP-06 is responsible for furnishing and installing the Hollow Metal and Wood Doors.
- Please confirm that the Glazing Contractor (BP-08) is responsible for furnishing and installing all vision glass and glazing materials for the Hollow Metal and Wood Doors furnished and installed under BP-06, and that BP-06's responsibility is limited to furnishing and installing the doors and frames, with coordination for glazing by BP-08.

Answer

See response to BID-010 in addendum A

5. Discrepancies have been identified between the Door Schedule on Sheet A6.00 and the Door Hardware Schedule in Specification Section 08 71 00 regarding the required Hardware Sets for several door openings. To ensure all BP-06 bidders are carrying the same hardware scope, please identify the governing Hardware Set for the following openings:

- Door Opening 013A – Sheet A6.00 identifies Hardware Set #22, while Specification Section 08 71 00 identifies Hardware Set #36.

Answer

Door Opening 013A will be Hardware Set #36.

- Door Opening 131 – Sheet A6.00 identifies Hardware Set #20, while Specification Section 08 71 00 identifies Hardware Set #35.

Answer

Door Opening 131 will be Hardware Set #35.

- Door Opening EX-1 – Sheet A6.00 identifies Hardware Set #37, while Specification Section 08 71 00 identifies Hardware Set #31.

Answer

Door opening EX-1 will be Hardware Set #31.

- Please confirm the correct Hardware Set for each opening and identify which document shall govern where discrepancies exist between the Door Schedule and the Hardware Schedule.

Answer

The Door Schedule will be updated per future Bulletin.

6. The Fire Extinguisher Cabinets shown on Sheet A1.02 do not appear to have corresponding Cabinet Type designations identified on the Floor Plan. While cabinet locations are shown, the required Fire Extinguisher Cabinet Type at each location cannot be determined from the Contract Documents.

- Please identify the required Fire Extinguisher Cabinet Type for each Fire Extinguisher Cabinet location shown on the Architectural Drawings or provide a revised drawing or schedule identifying the required cabinet types. Also please verify where the A:B:C; B:C; and Type K Fire Extinguishers are required to be supplied.

Answer

The plans will be updated per a future Bulletin to identify the types of fire extinguisher cabinets and fire extinguishers.

7. During the pre-bid walkthrough, existing insulation was observed attached, and in some areas detached, to the underside of the existing roof deck. The Contract Documents do not clearly identify whether this insulation is to remain or be removed and replaced.



- a. Please confirm whether the existing roof deck insulation is to remain in place or if BP-06 is responsible for removing and replacing the insulation where required by the Work.

Answer

All existing below deck insulation will be removed.

8. During the pre-bid walkthrough, several areas were identified where existing soffits and ceilings will require demolition, modification, and/or patching to accommodate the new Work. However, these areas are not consistently identified on the Demolition or Architectural Drawings.

- a. Please clarify whether BP-06 is to include all required demolition, modification, and repair of existing soffits and ceilings in the Base Bid where necessary to complete the Work, even if not specifically shown. If so, please provide additional documentation identifying the required scope or establish an allowance to ensure all bidders are carrying the same scope. If neither is intended, please confirm that this work will be performed under the Unforeseen Conditions Allowance.

Answer

See response to BID-010 in addendum A

9. Architectural Sheet A1.21, Note 4, requires “overhead blocking in ceiling for hanging scale above autopsy table.” The Contract Documents do not identify the hanging scale manufacturer, operating weight, design load, attachment requirements, support detail, or the Bid Package responsible for engineering and installing the support.

- a. Given the concentrated and potentially dynamic load imposed by the hanging scale, please:
 - i. Provide the hanging scale manufacturer, model, design load, and attachment requirements.
 - ii. Confirm whether the scale is intended to be supported from the suspended ceiling framing or from independent structural support framing connected to the existing building structure.
 - iii. Provide a structural support and attachment detail, including required framing, bracing, and allowable connection points to the existing roof structure.
 - iv. Identify the Bid Package responsible for engineering, furnishing, and installing the complete support assembly.

Answer

The hanging scale and the structural design will be identified in a future Bulletin.

10. The BP-06 Scope of Work includes Specification Section 02 41 19 – Selective Demolition. However, Specification Section 02 41 19 does not appear to be included in the Contract Documents.

- a. Please provide the missing Specification Section 02 41 19 – Selective Demolition, or confirm that this specification section is not part of the Contract Documents.

Answer

02 41 19 – Selective Demolition specification is included in the Contract Documents. Please review the Civil LA Specs package for this specification section.

11. The BP-06 Scope of Work requires BP-06 to furnish and install all access panels shown on the Contract Documents. However, no ceiling access panels could be identified on the Architectural Drawings.

- a. A coordination review of the Mechanical, Electrical, Plumbing, and Fire Protection Drawings identified no ceiling access panel requirements for Electrical, HVAC, or Fire Protection systems. The only concealed MEP items identified requiring future access are



the plumbing shutoff valves located above the drywall ceilings in Rooms 003 and 005, which would require access panels. All other MEP equipment requiring future access is located either in open-to-structure areas or above accessible acoustical lay-in ceilings.

- b. Additionally, the Door Schedule on Sheet A6.00 identifies Accessible Automatic Operators at Door Openings 001, 001A, and 018A. Door Openings 001 and 001A are located beneath acoustical lay-in ceilings and would not appear to require dedicated access panels. Door Opening 018A is located beneath a drywall ceiling and would require an access panel for future maintenance; however, no access panel is shown.
- c. Please confirm the required quantity, locations, types, and sizes of all ceiling access panels to be included in the BP-06 Base Bid, including the required access panels for the plumbing shutoff valves in Rooms 003 and 005 and the automatic operator serving Door Opening 018A. Also confirm that no additional ceiling access panels are required beyond those identified above.

Answer

Contractor to include an estimated allowance in their bid for the approximate quantities and sizes required for the access panels in the project.

12. Sheet A3.40, Enlarged Floor Plan – Lodox Room – Wall Shielding Information, calls for a 2'-0" x 3'-0" leaded viewing window with 1/32" lead equivalent glazing and frame in the north wall of Imaging Room 006.
- a. The Contract Documents do not clearly identify the Bid Package responsible for furnishing and installing this specialty leaded viewing window assembly.
 - b. Please identify the Bid Package responsible for furnishing and installing the complete leaded viewing window assembly, including the leaded glazing, frame, and all required accessories.

Answer

See response to BID-010 in addendum A

PC-0029 Roofing questions

Please specify the EPDM system on 4J - A1.04. Vapor barrier called out in spec 075323, is this needed? Are we to use XPS or ISO for tapered as both are listed in spec? Also, please verify which sheathing to use.

Answer

EPDM will be removed from the scope of this project. All locations of EPDM will be replaced with TPO roof membrane. The roofing insulation question was answered in Addendum A. The roofing insulation will be Polyisocyanurate (ISO) Board Insulation to Type II, Class 1, compressive strength changed to 20 psi.

PC-0032 Landscaping questions

I see gravel path detail on L5.01, but do not see the path on L5.00 or any civil drawings. Can you point to where this path would go?

Answer

There is no gravel path in the design. The detail is used for the stone edge detail around the building.

Are there more detailed specs for the planters required?

Answer

Price out the Tournesol Downtown Planters, GFRC round.

Are there more detailed specs for the stone mulch required?

Answer

The stone mulch is described in the detail for the Gravel Path with Steel Edge.



Scope mentions underdrainage, but no drawings show details on this. Is this required?

Answer

It is not clear what "underdrainage" is being mentioned. Provide a sheet number and/ or detail for reference.

Is landscape contractor responsible for providing topsoil in all areas or will civil contractor do that?

Answer

Bid Package – 32 Landscaping will provide topsoil in all areas per the contract documents

PC-0033 Stair Landing

Can you confirm if the stair landing on the stairs near the elevator is included in 06 20 00? If so, is this also Red Oak? One solid piece?

Answer

The stair landing will be included in 06 20 00 Finished Carpentry. The wood species has not been determined. The landing will not be a single solid piece, but a grouping of finished boards glued together.

PC-0037 Transition Details

2A/A4.20 – Mortar bed under tile, where does this occur? Mortar bed is on no other transitions so this mortar bed is assumed to only be under tile at Locker 007/008 and joining rooms.

Answer

Yes.

2C/A4.20 – Sound Absorbing LVT Underlayment – No mention of sound underlayment in specs or on drawings. Assumed to be a typo as no other transition to LVT calls for sound underlayment.

Answer

The sound underlayment is not required for a concrete substrate.

Exterior floor tile T03 – what bid package is to carry this?

Answer

Bid Package – 07 Roofing / Metal Wall Panels is to provide and install Exterior Floor Tile T03

PC-0039 Plenum rated ceilings

We are bidding the plumbing for the Crime lab project, is there any plenum rated ceilings ?

Answer

There are no fire-rated plenums in this project.

PC-0040 Flooring substitute Request

Substitution Request is in attached documents

Answer

Submit product cut sheets for review for substitute for 09 67 00 Fluid-Applied Flooring - Epoxy Flooring. There is nothing to review except a product name.

PC-0041 Concrete Slat wall enclosure

Concrete Slat wall enclosure. Flange-mounted to the existing concrete pad. Attached documents have been added.

Answer

It is not clear from the supplied documentation where this substitution is supposed to be applied.

PC-0042 Metal Composite Wall Panel Substitution request



Substitution request see attached documents – Petersen Pac 4000 MCMC Wall Panel

Answer

This substitution is approved for bidding.

PC-0044

Skylight request to add Vendor

Request to add vendor. Documents have been attached - Linel Skylights

Answer

This substitution is approved for bidding.

PC-0047

Lockers

Requesting to be added to the list of approved HDPE Locker manufacturers, as Summit Lockers meets or exceeds the requirements for the specified product. Substitution request form and product information are in attached documents.

Answer

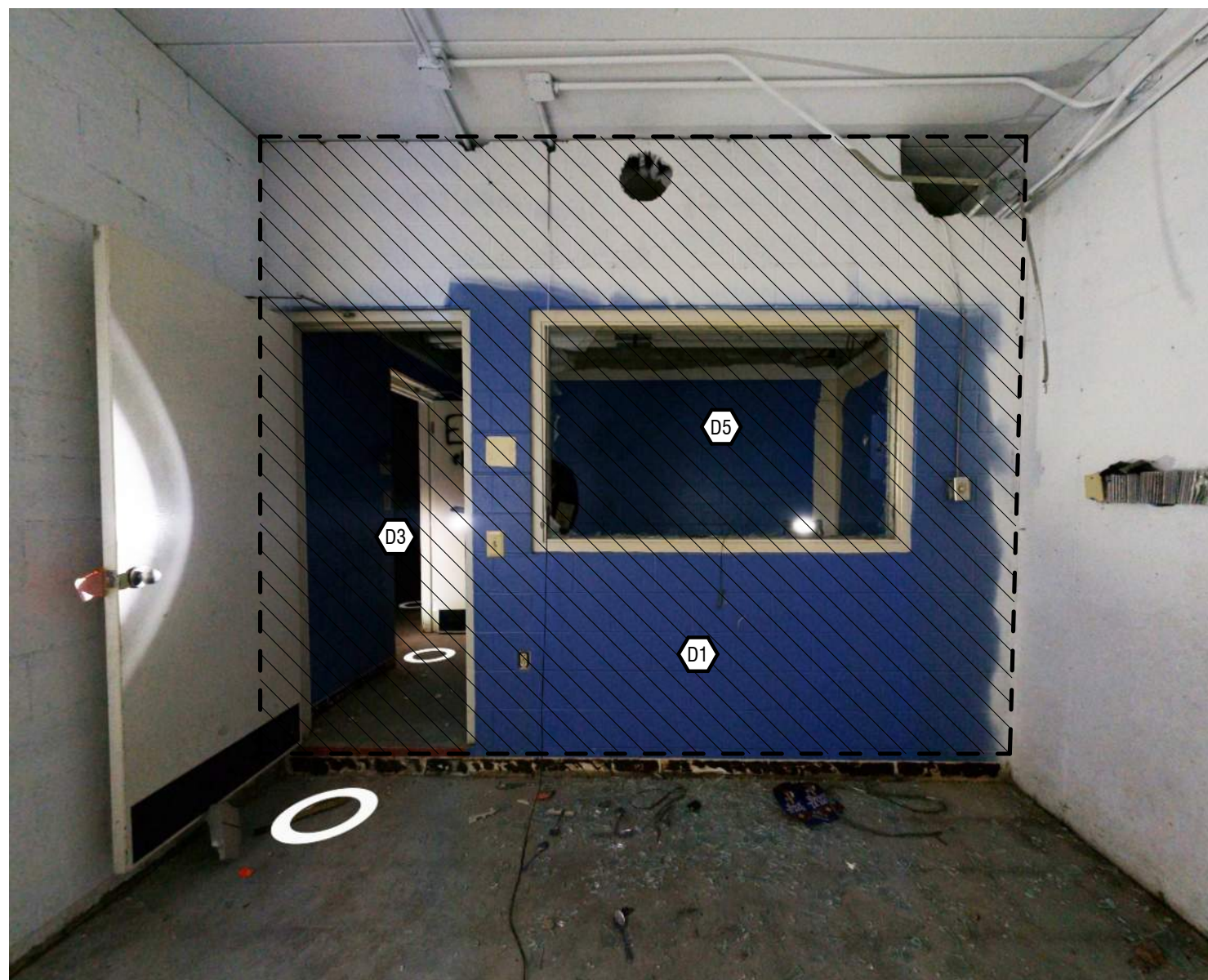
This substitution is approved for bidding.

END OF ADDENDUM B

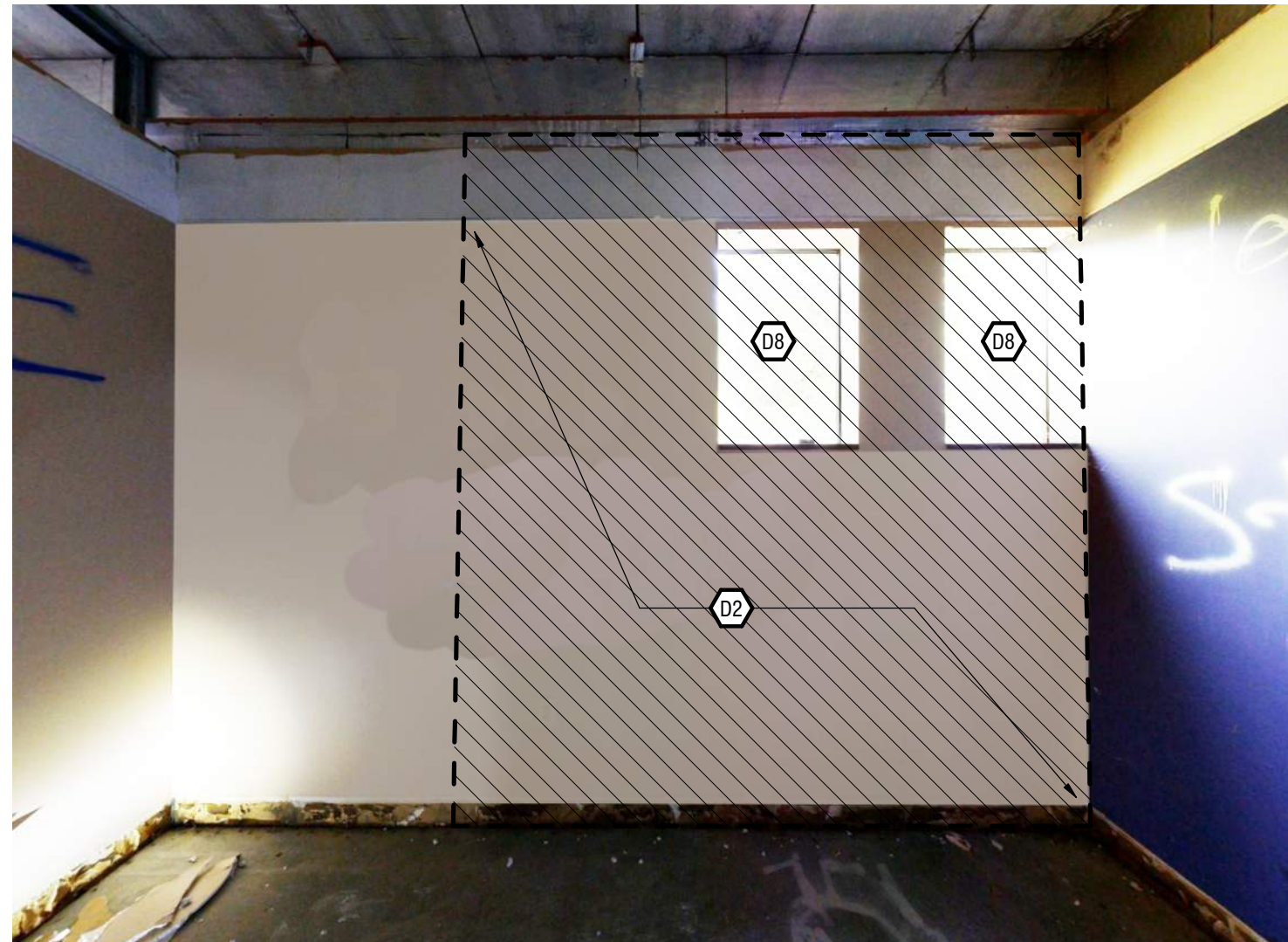




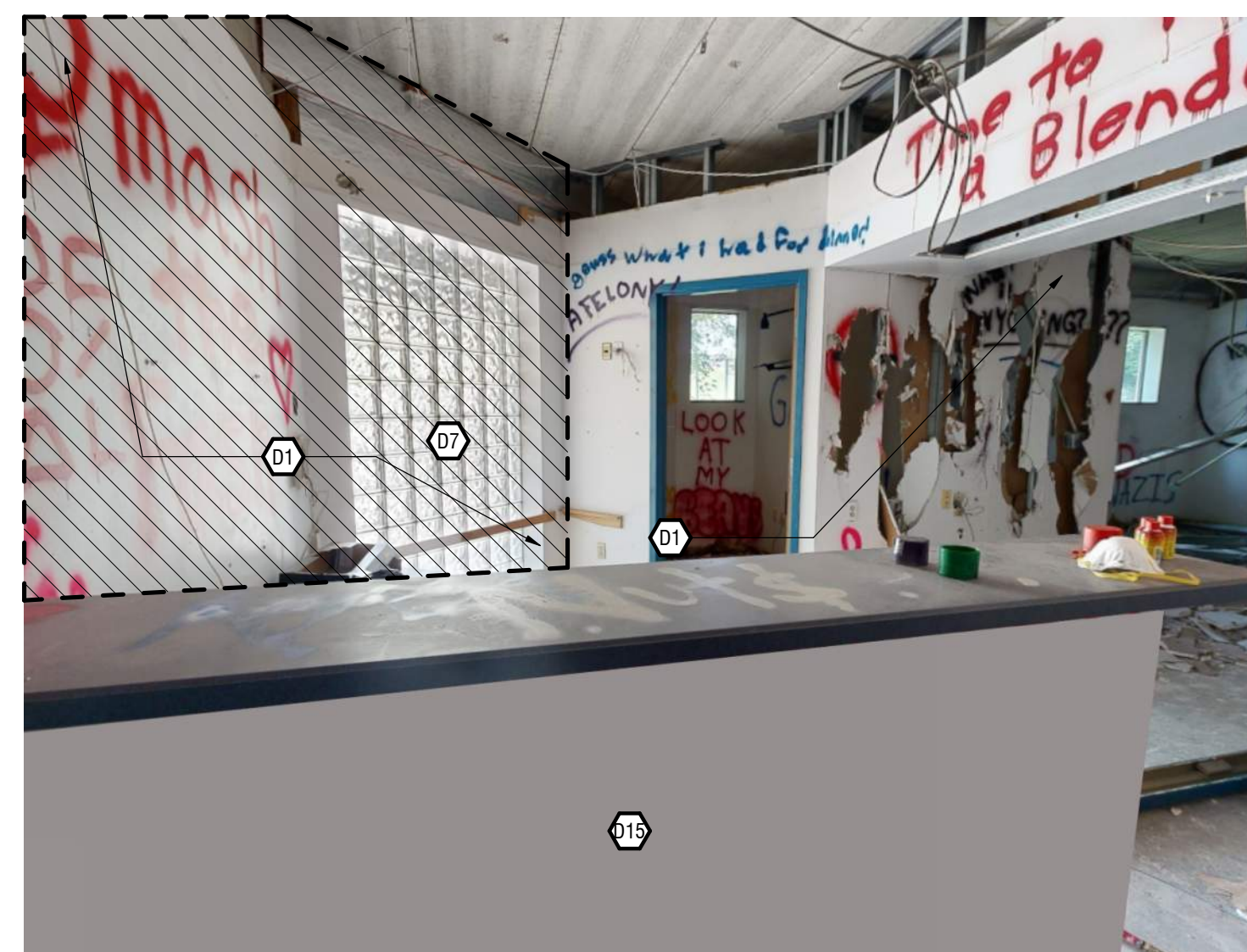
1L LOWER LEVEL DEMO - MEP RM.
D1.01 1 1/2" = 1'-0"



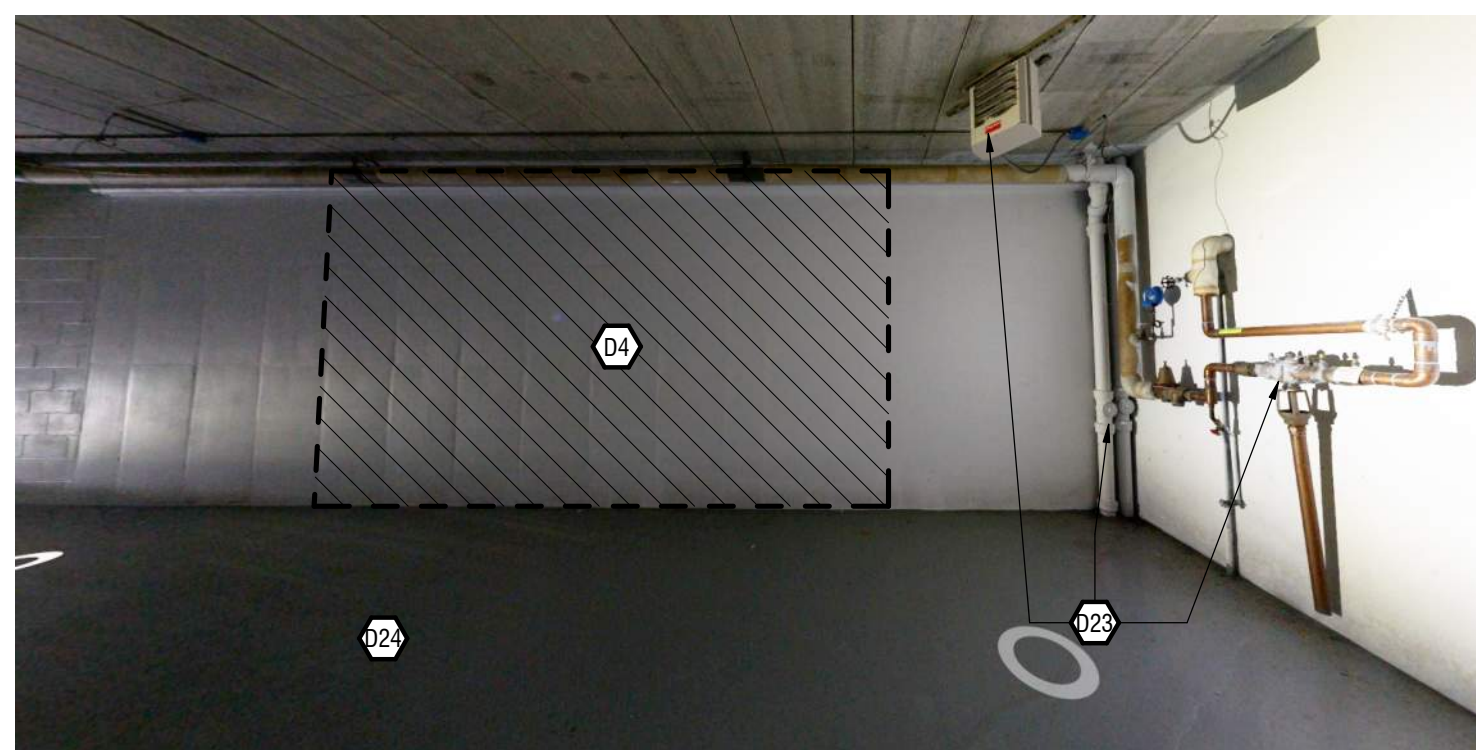
4L LOWER LEVEL DEMO AND FLOOR INFILL - GUN RANGE
D1.01 1 1/2" = 1'-0"



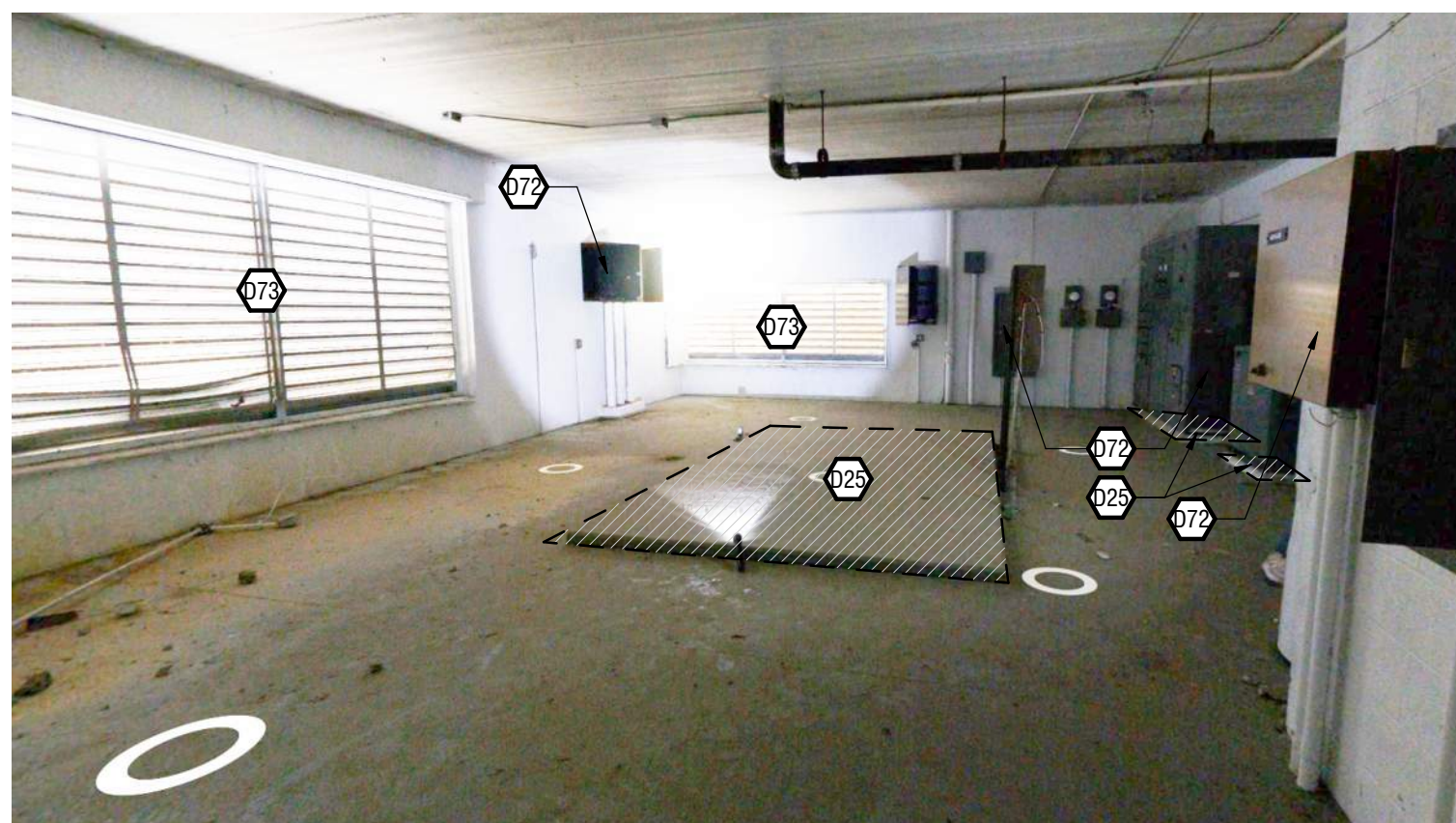
9L LOWER LEVEL DEMO - EXTERIOR WALL/WINDOWS
D1.01 1 1/2" = 1'-0"



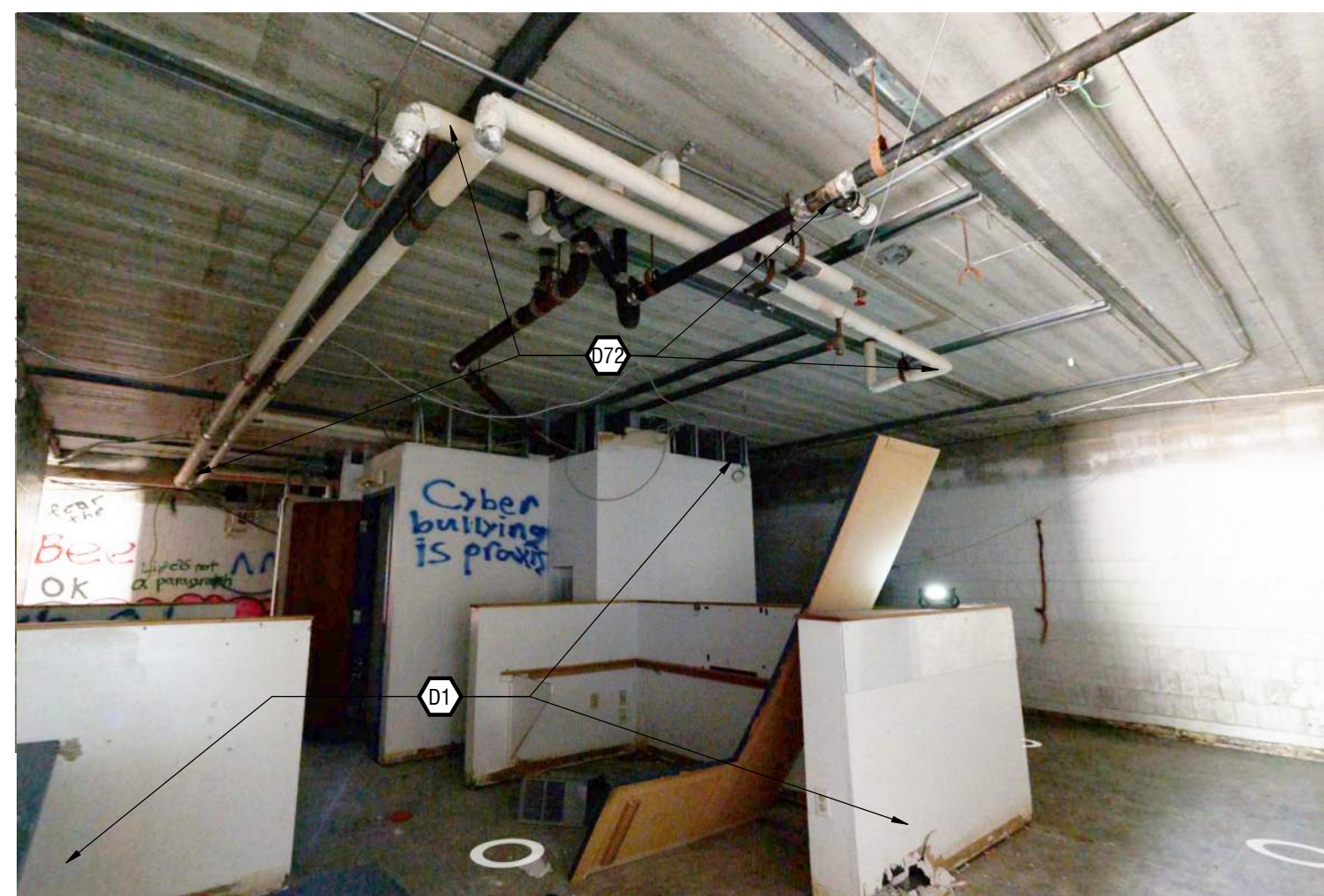
13L LOWER LEVEL DEMO - EXTERIOR WALL/CASEWORK
D1.01 1 1/2" = 1'-0"



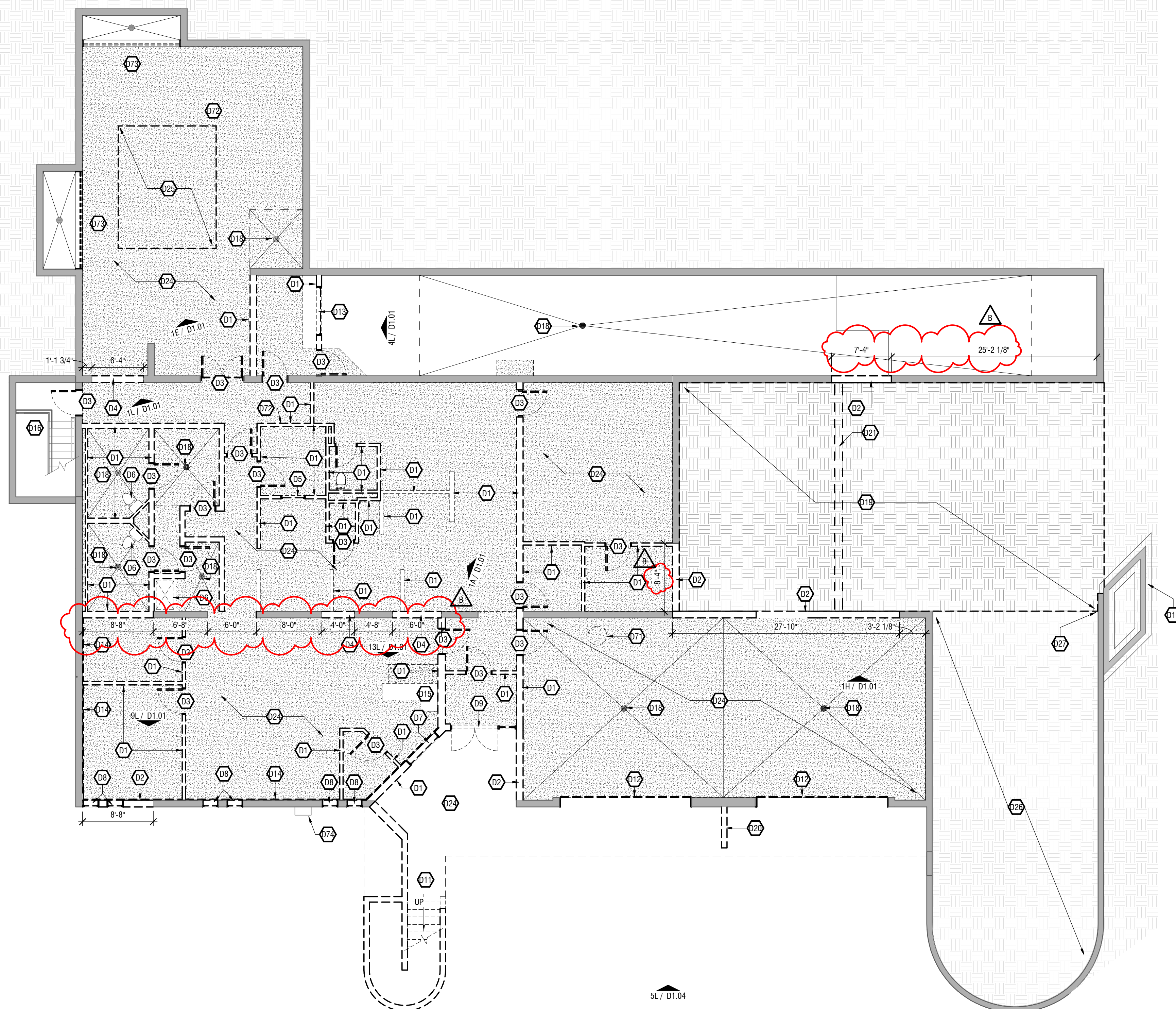
1H LOWER LEVEL DEMO - GARAGE FOUNDATION WALL
D1.01 1 1/2" = 1'-0"



1E LOWER LEVEL DEMO - MECHANICAL ROOM
D1.01 1 1/2" = 1'-0"

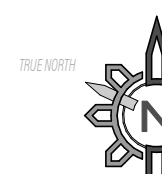


1A LOWER LEVEL DEMO - INTERIOR AREA
D1.01 1 1/2" = 1'-0"



7A OVERALL DEMOLITION PLAN - LOWER LEVEL
D1.01 1/8" = 1'-0"

DRAWING LEGEND:	
	HATCHED WALL INDICATES EXISTING WALLS TO REMAIN
	SHADED AREA INDICATES NO SCOPE
	DASHED LINE INDICATES DEMOLITION
	STIPPLED SLAB INDICATED DEMOLITION



KEYNOTES:

- D1 DEMOLISH EXISTING WALL AND ASSOCIATED CONSTRUCTION COMPLETE. REMOVE ANY ASSOCIATED MECHANICAL, ELECTRICAL, AND/OR PLUMBING TO ITS SOURCE. NOTIFY ARCHITECT OF ANY CONFLICTS. PROVIDE ADEQUATE SHORING TO PRESERVE SURROUNDING CONSTRUCTION TO REMAIN.
- D2 INDICATES AREA OF EXISTING WALL TO BE REMOVED FOR NEW CONSTRUCTION. REFER TO PLAN FOR OPENING SIZE.
- D3 DEMOLISH EXISTING DOOR, DOOR FRAME AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D4 DEMOLISH PORTION OF EXISTING WALL TO RECEIVE NEW OPENING. REF. A6.00 FOR DOOR SCHEDULE.
- D5 DEMOLISH EXISTING STOREFRONT AND ALL ASSOCIATED CONSTRUCTION COMPLETE. ABOVE AND BELOW STOREFRONT, DEMOLISH GYPSUM BOARD, RIGID INSULATION AND ALL ASSOCIATED CONSTRUCTION BACK TO CONCRETE WALL COMPLETE.
- D6 DEMOLISH EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED CONSTRUCTION COMPLETE. CAP PLUMBING TO ITS SOURCE. REFER TO PLUMBING DRAWINGS FOR MORE INFORMATION.
- D7 DEMOLISH EXISTING GLASS BLOCK WALL AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D8 DEMOLISH EXISTING WINDOW AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D9 DEMOLISH EXISTING STOREFRONT AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D10 EXISTING SITE ELEMENT AND FOUNDATIONS TO REMAIN. CONTRACTOR SHALL TAKE EXTRA PRECAUTIONS IN EXCAVATION OF THIS AREA TO NOT UNDERMINE EXISTING CONSTRUCTION.
- D11 DEMOLISH EXISTING GARAGE STAIR AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D12 DEMOLISH EXISTING GARAGE DOORS AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D13 DEMOLISH EXISTING STOREFRONT AND ALL ASSOCIATED CONSTRUCTION COMPLETE. ABOVE AND BELOW STOREFRONT, DEMOLISH GYPSUM BOARD AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D14 DEMOLISH EXISTING GYPSUM BOARD, RIGID INSULATION AND FURRING STRIPS BACK TO EXTERIOR CONCRETE WALL.
- D15 DEMOLISH EXISTING WALL WORK AND ALL ASSOCIATED CONSTRUCTION COMPLETE.
- D16 EXISTING METAL PAN STAIRS AND RAILINGS TO REMAIN.
- D18 ABANDON EXISTING PIPING AND REMOVE DRAIN, DISCONNECT PIPE AT TIE-IN. REFER TO PLUMBING DRAWINGS FOR MORE INFORMATION.
- D19 REMOVE EXISTING FILL AND GRADING TO ALLOW FOR NEW CONSTRUCTION. CONTRACTOR RESPONSIBLE FOR PROVIDING ADEQUATE SHORING AND PROTECTION OF EXISTING CONSTRUCTION TO REMAIN. REFER TO STRUCTURAL DRAWINGS.
- D20 DEMOLISH EXISTING STRUCTURAL WALL FOR WALKWAY ABOVE. REFER TO SHEET D1.02 FOR EXTENTS OF WALKWAY REMOVAL.
- D21 DEMOLISH EXISTING GRADE BEAM ABOVE.
- D23 REFER TO MEP DRAWINGS FOR EXTENTS OF DEMOLITION OF EXISTING UTILITIES.
- D24 PORTION OF EXISTING SLAB TO BE DEMOLISHED. REFER TO PLUMBING DRAWINGS.
- D25 RAISED EQUIPMENT CONCRETE SLAB TO BE DEMOLISHED BACK TO EXISTING SLAB LEVEL. VERIFY EXTENTS IN FIELD.
- D26 INDICATES AREA OF UNEXCAVATED SOIL.
- D27 CONTRACTOR SHALL TAKE EXTRA PRECAUTIONS IN EXCAVATION OF THIS AREA TO NOT UNDERMINE EXISTING WALL AND CONTROL APPROPRIATE BENCHING.
- D71 EXISTING OIL INTERCEPTOR TO BE REMOVED. CAP BELOW GRADE PIPING BACK TO DRAINAGE LINE. REFER TO PLUMBING DRAWINGS FOR MORE INFORMATION.
- D72 REFER TO MEP FOR FULL EXTENT OF DEMOLITION OF EXISTING MEP EQUIPMENT.
- D73 REMOVE EXISTING LOUVER. EXHAUST WELL TO REMAIN AND BE REUSED. CONTRACTOR TO INSPECT AND REPAIR AS NEEDED.
- D74 EXISTING DATA CABLING CONNECTION TO REMAIN. COORDINATE WITH OWNER AND SITE UTILITY LAYOUT TO ENSURE CABLING REMAINS INTACT. CABLE TO BE RE-ROUTED THROUGH BUILDING TO AVOID INTERFERENCE WITH NEW CONSTRUCTION. REFER TO LOW VOLTAGE DRAWINGS FOR MORE INFORMATION.

GENERAL NOTES:

- PERFORM ALL WORK UNDER ESTABLISHED PROJECT GUIDELINES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE OFF-SITE DISPOSAL OF ALL DEMOLITION ITEMS.
- REMOVE ALL CONSTRUCTION DEBRIS FROM THE SITE DAILY. DO NOT ALLOW DEBRIS TO BLOCK CORRIDORS, STAIRS, OR ANY OTHER TRAFFIC AREAS.
- PROVIDE TEMPORARY FIRE AND LIFE SAFETY PROTECTION THROUGHOUT THE DURATION OF THE PROJECT.
- PATCH AND REPAIR ALL ADJACENT SURFACES DISTURBED/DAMAGED BY CONSTRUCTION. CLEAN ALL FLOOR SURFACES OF ADHESIVE AND/OR GROUT RESIDUE PRIOR TO INSTALLATION OF NEW SURFACING MATERIAL.
- ANY FLOORING, CASEWORK, AND CEILING ELEMENTS THAT REMAIN, SHALL BE DEMOLISHED AS PART OF THIS PROJECT. DEMOLISH ALL WALLS, FLOORING, CASEWORK, AND CEILING ELEMENTS BACK TO CONCRETE.
- PROTECT ADJACENT EXISTING TO REMAIN CONSTRUCTION THROUGHOUT DURATION OF PROJECT. PROVIDE SHORING, BRACING OR SUPPORT AS REQUIRED TO PREVENT MOVEMENT OR SETTLEMENT OF EXISTING CONSTRUCTION.
- WHERE BLOCKING AND/OR ELECTRICAL WORK IS REQUIRED IN EXISTING WALL CONSTRUCTION, CONTRACTOR TO CAREFULLY CUT-OUT GYPSUM BOARD AT APPROPRIATE LOCATION.
- REMOVE ALL EXISTING CONSTRUCTION ITEMS AND FINISHES MADE OBSOLETE BY OR IN CONFLICT WITH NEW CONSTRUCTION. VERIFY WITH ARCHITECT, IF NEEDED. REMOVE WIRING BACK TO SOURCE AT ALL UTILITIES, ETC MADE OBSOLETE BY WALL REMOVAL OR ANY OTHER NEW CONSTRUCTION.
- REMOVE ALL ITEMS IN THEIR ENTIRETY UNLESS NOTED OTHERWISE. DESCRIPTION OF PRIMARY ITEMS TO BE REMOVED IS GENERAL IN NATURE, AND REMOVAL OF SECONDARY COMPONENTS SUCH AS BLOCKING, SUPPORTS, ANCHORS, TRIM, ADHESIVE, PIPING, WIRING, ETC. RELATED TO PRIMARY ITEMS SHALL BE INCLUDED.
- RELOCATED ITEMS SHALL BE CLEANED AND PLACED IN STORAGE PER OWNER'S DIRECTION UNTIL ITEMS ARE READY TO BE REINSTALLED. IF ITEM IS DAMAGED DURING DEMOLITION OR RELOCATION, IT SHALL BE REPAIRED WITH NEW ITEM AS APPROVED BY OWNER AT NO EXPENSE TO OWNER.
- AT OWNER'S REQUEST, SALVAGED ITEMS SHALL BE TURNED OVER TO THE OWNER OR STORED IN AN AREA DESIGNATED BY THE OWNER.
- SEE MEP DOCUMENTS FOR EXTENT OF DEMOLITION/REMOVAL OF PIPING/CASEWORK/ELECTRICAL THAT WILL OCCUR IN PREPARATION FOR NEW CONSTRUCTION.

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Project Title

NKU CIVIC CENTER

175 Johns Hill Road,
Highland Heights, KY 41076

Issue Date: JUNE 26, 2026

Issued for: BIDDING SET

Revision

ISSUED FOR BID	06/26/2026
A ADDENDUM A	07/17/2026
B ADDENDUM B	07/24/2026

Sheet Title

DEMOLITION PLAN - LOWER LEVEL

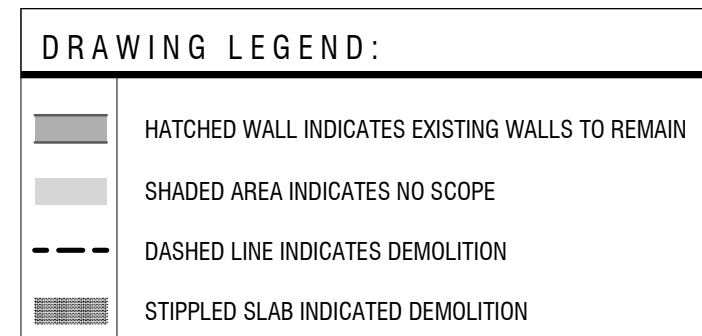
Project No. 24047

Drawn By: NAR

Reviewed By: WAI

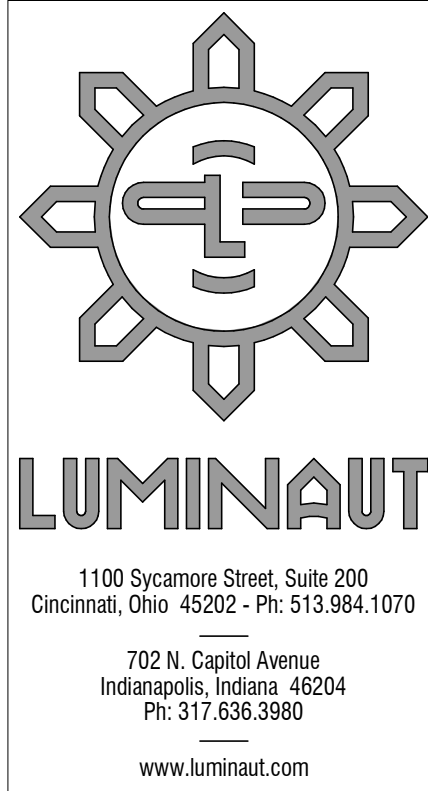
Scale: As indicated

D1.01



- | KEYNOTES: | |
|-----------|--|
| D1 | DEMOLISH EXISTING WALL AND ASSOCIATED CONSTRUCTION COMPLETE. REMOVE ANY ASSOCIATED MECHANICAL, ELECTRICAL, AND/OR PLUMBING TO ITS SOURCE. NOTIFY ARCHITECT OF ANY CONFLICTS. PROVIDE ADEQUATE SHORING TO PRESERVE SURROUNDING CONSTRUCTION TO REMAIN. |
| D2 | INDICATES AREA OF EXISTING WALL TO BE REMOVED FOR NEW CONSTRUCTION. REFER TO PLAN FOR OPENING SIZE. |
| D3 | DEMOLISH EXISTING DOOR, DOOR FRAME AND ALL ASSOCIATED CONSTRUCTION COMPLETE. |
| D4 | DEMOLISH PORTION OF EXISTING WALL TO RECEIVE NEW OPENING. REF. A6.00 FOR DOOR SCHEDULE. |
| D5 | DEMOLISH EXTERIOR STOREFRONT AND ALL ASSOCIATED CONSTRUCTION COMPLETE. ABOVE AND BELOW STOREFRONT DEMOLISH GYPSUM BOARD, RIGID INSULATION AND ALL ASSOCIATED CONSTRUCTION BACK TO CONCRETE WALL COMPLETE. |
| D6 | DEMOLISH EXISTING PLUMBING FIXTURE AND ALL ASSOCIATED CONSTRUCTION COMPLETE CAP PLUMBING TO ITS SOURCE. REFER TO PLUMBING DRAWINGS FOR MORE INFORMATION. |
| D11 | DEMOLISH EXTERIOR CONCRETE STAIR AND ALL ASSOCIATED CONSTRUCTION COMPLETE. |
| D14 | DEMOLISH EXISTING GYPSUM BOARD, RIGID INSULATION AND FURRING STRIPS BACK TO EXTERIOR CONCRETE WALL. |
| D15 | DEMOLISH EXISTING MILLWORK AND ALL ASSOCIATED CONSTRUCTION COMPLETE. |
| D16 | EXISTING METAL PAN STAIRS AND RAILINGS TO REMAIN. |
| D17 | EXISTING STRUCTURE TO REMAIN. DEMOLISH ALL SURROUNDING INSULATION AND FURRING COMPONENTS AS NOTED. |
| D24 | PORTION OF EXISTING SLAB TO BE DEMOLISHED. REFER TO PLUMBING DRAWINGS. |
| D29 | DEMOLISH EXISTING TOILET PARTITION, TOILET ACCESSORIES AND ALL ASSOCIATED CONSTRUCTION COMPLETE. |
| D30 | DEMOLISH EXISTING SLAB ON GRADE BACK TO EXTERIOR FOUNDATION WALL BELOW. EXCAVATE GRADING BELOW FOR NEW WORK ON LOWER LEVEL. CONTRACTOR RESPONSIBLE FOR PROPER SHORING AND PROTECTION REQUIRED TO MAINTAIN EXISTING SURROUNDING CONSTRUCTION. PATCH AND REPAIR AS NEEDED. |
| D31 | DEMOLISH EXISTING STAGE AND ALL ASSOCIATED CONSTRUCTION COMPLETE. |
| D32 | DEMOLISH BAY OF PRECAST CONCRETE SLAB, HOLLOW CORE PLANKS AND TYPING AS SHOWN. PROVIDE ADEQUATE SHORING AND PROTECTION OF SURROUNDING EXISTING TO REMAIN CONSTRUCTION. PATCH AND PREP FOR NEW SLAB. REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION. |
| D33 | DEMOLISH EXTERIOR CONCRETE WALKWAY, METAL RAILING AND ALL ASSOCIATED COMPONENTS. PRESERVE AND PROTECT EXISTING CONCRETE WALLS TO REMAIN. REFER TO STRUCTURAL DRAWINGS FOR MORE INFORMATION. |
| D34 | DEMOLISH ALL WALL MOUNTED EQUIPMENT, TYP. |
| D35 | DEMOLISH EXISTING CORNICE OVERHEAD |
| D36 | DEMOLISH EXISTING GYPSUM BOARD AND FURRING STRIPS BACK TO CMU WALL. |
| D37 | EXISTING WOOD AND CONCRETE INFLIT TO BE GRINDED AND SMOOTHED TO MATCH ADJACENT CONCRETE SLAB THICKNESS. |
| D38 | DEMOLISH EXISTING TILE FLOORING AND ASSOCIATED CONSTRUCTION COMPLETE DOWN TO EXISTING CONCRETE SLAB. |
| D39 | DEMOLISH EXISTING STOREFRONT AND ASSOCIATED CONSTRUCTION. |
| D40 | DEMOLISH EXISTING WOOD FLOORING AND ASSOCIATED CONSTRUCTION COMPLETE DOWN TO EXISTING CONCRETE SLAB. |
| D41 | DEMOLISH EXISTING METAL GUARDRAIL AND ASSOCIATED CONSTRUCTION COMPLETE. |
| D42 | EXISTING FLOOR DRAIN TO REMAIN. |
| D43 | EXISTING ON INTERCEPTOR TO REMAIN |
| D44 | DEMOLISH EXISTING GARGE DOOR AND ALL COMPONENTS ASSOCIATED. EXISTING ELECTRICAL CONNECTIONS TO REMAIN FOR CONNECTION TO NEW GARGE DOOR. |
| D45 | REMOVE PLYWOOD AND SPRAY FOAM INFLIT PANEL AT OPENING |
| D46 | DEMOLISH EXISTING EXTERIOR CONCRETE PATIO AND WALKWAY. EXISTING RETAINING WALLS AND PLANTERS TO REMAIN. |
| D47 | DEMOLISH EXISTING FLAG POLE AND ALL ASSOCIATED COMPONENTS. |
| D48 | REMOVE AND SALVAGE FIRE EXTINGUISHER CABINETS, TYP. |
| D49 | DASHED LINE INDICATES SKYLIGHT ABOVE TO BE REMOVED. EXISTING GUM CURB TO REMAIN. REFERS TO ROOF PLANS FOR MORE INFORMATION. |
| D72 | REFER TO MEP FOR FULL EXTENT OF DEMOLITION OF EXISTING MEP EQUIPMENT. |

- ## GENERAL NOTES:
- A. PERFORM ALL WORK UNDER ESTABLISHED PROJECT GUIDELINES.
 - B. CONTRACTOR SHALL BE RESPONSIBLE FOR THE OFF-SITE DISPOSAL OF ALL DEMOLITION ITEMS.
 - C. REMOVE ALL CONSTRUCTION DEBRIS FROM THE SITE DAILY. DO NOT ALLOW TRUCKS TO BLOCK CORRIDORS.
 - D. PROVIDE OTHER OTHER PROTECTIVE MEASURES.
 - E. PROVIDE TEMPORARY FIRE AND LIFE SAFETY PROTECTION THROUGHOUT THE DURATION OF THE PROJECT.
 - F. PROTECT EXISTING ADJACENT WORK AREAS. IMMEDIATELY DISTURBED/DAMAGED BY CONSTRUCTION. CLEAN ALL FLOOR SURFACES OF ADHESIVE AND GROUT. GRIND RESIDUE TO A FINISH. ALL WALLS, CEILING, FLOOR, AND PARTITION, ANY FLOORING, CASEWORKS, AND CEILING ELEMENTS THAT ARE TO BE DEMOLISHED SHALL BE DEMOLISHED BY PROJECT. DEMOLISH ALL WALLS, FLOORING, CASEWORK, AND CEILING ELEMENTS BACK TO CONCRETE.
 - G. REMOVE ALL EXISTING ADJACENT WORK AREAS. IMMEDIATELY DISTURBED/DAMAGED BY CONSTRUCTION THROUGHOUT DURATION OF PROJECT. PROVIDE SHORING, BRACING OR SUPPORT AS REQUIRED TO PREVENT COLLAPSE OF SETTLED FLOOR OR ANY OTHER STRUCTURE. WHEN BLOCKING AND/OR ELECTRICAL WORK IS REQUIRED IN EXISTING WALL CONSTRUCTION.
 - H. CONTINUE TO CAREFULLY MONITOR CUT-OUT SYSTEM BOARD AT APPROPRIATE LOCATION.
 - I. REMOVE ALL EXISTING CONSTRUCTION ITEMS WITHIN EXISTING WALLS OR CEILING.
 - J. REMOVE ALL EXISTING CONSTRUCTION ITEMS WITHIN CONSTRUCTION. VERIFY WITH ARCHITECT, IF NEEDED.
 - K. REMOVE WIRING BACK TO SOURCE AT ALL OUTLETS, ETC. REMOVE WIRING BY OWNER AT ANY OTHER LOCATION.
 - L. REMOVE ALL CONSTRUCTION ITEMS IN THEIR ENTIRETY UNLESS NOTED OTHERWISE. DESCRIPTION OF PRIMARY ITEMS TO BE REMOVED IS GENERAL IN NATURE, AND REMOVAL OF ALL COMPONENTS OF COMPOUND ITEMS (E.G. LIGHTS, SUPPORTS, ANCHORS, TRIM, ADHESIVE, PIPING, WIRING, ETC.) RELATED TO PRIMARY ITEMS SHALL BE INCLUDED.
 - M. ALL ITEMS SHALL BE REMOVED TO THE SPECIFIED STORAGE PER OWNER'S DIRECTION UNTIL ITEMS ARE READY TO BE REINSTALLED. IF ITEMS ARE DAMAGED DURING OR AFTER RELOCATION, THE OWNER SHALL BE NOTIFIED WITH NEW ITEM AS REQUESTED BY OWNER AT NO EXPENSE TO OWNER.
 - N. ALL ITEMS REQUESTED: SALVAGED ITEMS SHALL BE TURNED OVER TO THE OWNER OR STORED IN AREA DESIGNATED BY THE OWNER.
 - O. SEE THE INSTRUCTIONS FOR THE EXTENT OF DEMOLITION/REMOVAL OF PIPING/OUTDOOR/ELECTRICAL THAT WILL OCCUR IN PREPARATION FOR NEW CONSTRUCTION.



Project Title

NKU CIVIC CENTER

175 Johns Hill Road,
Highland Heights, KY 41076

Issue Date: JUNE 26, 2026

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B	ISSUED FOR BID 06/26/2026
	ADDENDUM B 07/24/2026

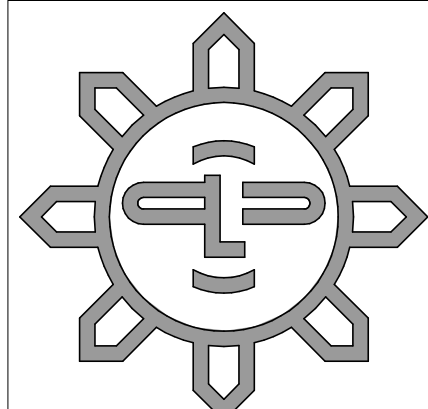
Sheet Title
**DEMOLITION PLAN - UPPER
LEVEL**

Project No. 24047

Reviewed By: MUI
Scale: As indicated

D1.02

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A	ISSUED FOR BID	06/26/2026
B	ADDENDUM B	07/24/2026

Sheet Title

**OVERALL DIMENSION PLAN
- LOWER LEVEL**

Project No.

24047

Drawn By: NAR,DKW

Reviewed By: NAI

Scale: As indicated

A1.10

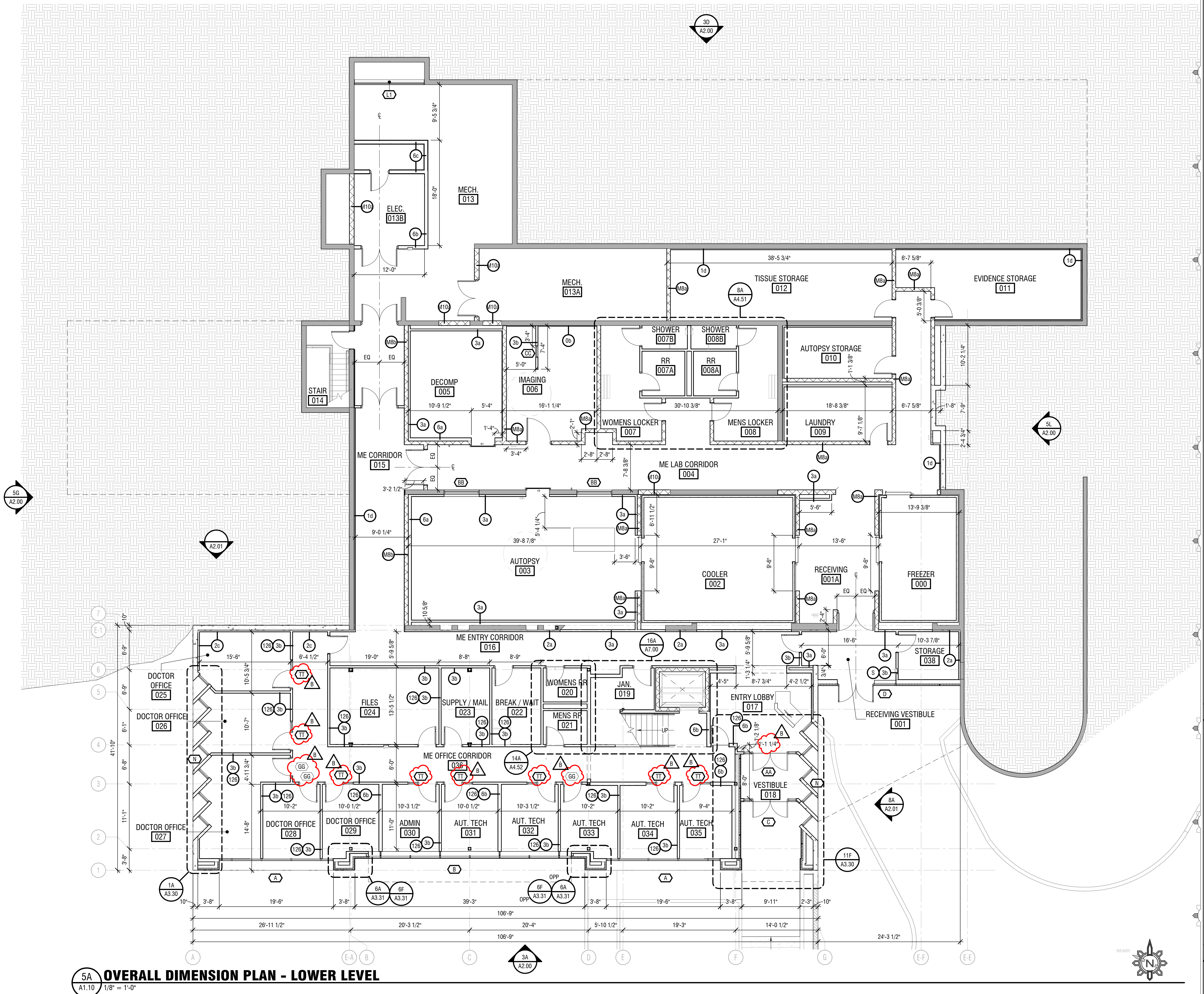
KEYNOTES:

GENERAL NOTES:

- PROVIDE IN WALL BLOCKING IN ALL LOCATION TO RECEIVE WALL MOUNTED EQUIPMENT.
- HOLD ALL DOOR AND FRAME IN MTL. STUD WALL 4" FROM ADJACENT WALL U.N.O.
- HOLD ALL DOOR AND FRAME IN MASONRY WALL 8" FROM ADJACENT WALL U.N.O.
- REFER EQUIPMENT PLANS ON A1.51 AND A1.52 FOR EQUIPMENT INFORMATION.
- REFER TO MEP SHEETS FOR MECHANICAL, ELECTRICAL AND PLUMBING SCOPE.
- REFER TO CIVIL SHEETS FOR SITEWORK AND LANDSCAPING SCOPE OF WORK.
- REFER TO STRUCTURAL SHEETS FOR STRUCTURAL SCOPE OF WORK.
- REFER TO FINISH PLANS ON A1.41 AND A1.42 FOR ALL INTERIOR FINISH INFORMATION.

DRAWING LEGEND:

- HATCHED WALL INDICATES EXISTING WALLS TO REMAIN
- HATCHED AREA INDICATES BELOW GRADE



1N HEAD + JAMB DETAILS

A6.00 1 1/2" = 1'-0"

4N HEAD + JAMB DETAILS

A6.00 1 1/2" = 1'-0"

7N HEAD/JAMB DETAILS

A6.00 1 1/2" = 1'-0"

1L INTERIOR HM HEAD DETAIL

A6.00 3\"/>

4L INTERIOR HM JAMB DETAIL

A6.00 3\"/>

7L SF INTERIOR JAMB DETAIL

A6.00 3\"/>

1H SF INTERIOR HEAD DETAIL

A6.00 3\"/>

4H SF INTERIOR HEAD DTL - CMU

A6.00 3\"/>

7H SF INTERIOR HEAD DTL - EX.CMU

A6.00 3\"/>

1F HEADER @ EX CMU OPENING

A6.00 3\"/>

4F HEADER @ NEW CMU OPENING

A6.00 3\"/>

7F HEADER @ SF DOOR

A6.00 3\"/>

1C SF INTERIOR JAMB - EX. CMU

A6.00 3\"/>

Door Types

NOTE:
ALL DOORS, THAT ARE A PART OF AN ACCESSIBLE ROUTE, SHALL PROVIDE A SMOOTH SURFACE WITHIN 10\"/>

Door Schedule

DOOR NO.	LOCATION	DOOR OPENING SIZE		DOOR		FRAME		DETAILS		HW SET	DOOR RATING	HARDWARE FINISH	REMARKS
		WIDTH	HEIGHT	TYPE	MATL	TYPE	MATL	HEAD	JAMB				
LOWER LEVEL													
000A	RECEIVING	4'-0"	7'-0"	D	-	2	AL			31			
000B	RECEIVER	4'-0"	7'-0"	D	-	2	AL			31			
001	RECEIVING VESTIBULE	6'-0"	7'-0"	E1	ALGL	D	AL			4			PROVIDE ACCESSIBLE AUTO OPERATOR, CARD READER AND VIDEO DOOR BELL. COORDINATE POWER WITH "E" SERIES DRAWINGS.
001A	RECEIVING	6'-0"	7'-0"	B	HM	2	HM			30			PROVIDE ACCESSIBLE AUTO OPERATOR. COORDINATE POWER WITH "E" SERIES DRAWINGS.
002A	COOLER	4'-0"	7'-0"	D	-	2	AL			31			
002B	AUTOPSY	4'-0"	7'-0"	D	-	2	AL			31			
003	AUTOPSY	8'-0"	7'-2 1/2"	F	ALGL	FF	AL			31	-		MOTORIZED SLIDING DOOR. PROVIDE CARD READER. COORDINATE POWER REQUIREMENTS WITH "E" DRAWINGS AND DOOR HARDWARE.
004	ME LAB CORRIDOR	6'-0"	7'-0"	C1	HM/GL	HM	HM			14			PROVIDE CARD READER AND VIDEO DOOR BELL. COORDINATE POWER WITH "E" SERIES DRAWINGS.
005	DECOMP	8'-0"	7'-2 1/2"	F	ALGL	FF	AL			31	-		MOTORIZED SLIDING DOOR. PROVIDE CARD READER. COORDINATE POWER REQUIREMENTS WITH "E" DRAWINGS AND DOOR HARDWARE.
006	IMAGING	4'-0"	7'-0"	A	HM	2	HM			17			PROVIDE RADIATION SHIELDED DOOR. SHIELDING THICKNESS TO BE VERIFIED WITH PHYSICIST REPORT.
007	WOMENS LOCKER	3'-0"	7'-0"	A	WD	2	HM			16			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
007A	RR	3'-0"	7'-0"	A	WD	1	HM			26			
007B	SHOWER	3'-0"	7'-0"	A	WD	1	HM			26			
008	MENS LOCKER	3'-0"	7'-0"	A	WD	2	HM			15			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
008A	RR	3'-0"	7'-0"	A	WD	1	HM			26			
008B	SHOWER	3'-0"	7'-0"	A	WD	1	HM			26			
009	LAUNDRY	3'-0"	7'-0"	A	HM	1	HM			29			
010	AUTOPSY STORAGE	3'-0"	7'-0"	A	HM	1	HM			16.1			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
011	EVIDENCE STORAGE	3'-0"	7'-0"	A	HM	1	HM			16.1			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
012	TISSUE STORAGE	3'-0"	7'-0"	A	HM	1	HM			16.1			
013	MECH.	6'-0"	7'-0"	B	HM	2	HM			36			
013A	MECH.	6'-0"	7'-0"	B	HM	2	HM			36			
013B	ELEC	6'-0"	7'-0"	B	HM	2	HM			36			
013C	SM ELEC	3'-0"	7'-0"	A	HM	1	HM			31	60 MIN.		
014	STAR	3'-0"	7'-0"	A	HM	1	HM			28	60 MIN.		
015	ME CORRIDOR	6'-0"	7'-0"	B	HM	2	HM			15			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
016	ME ENTRY CORRIDOR	3'-0"	7'-0"	C	WD/GL	1	HM			13			PROVIDE VIDEO CONTROL AND CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
017	RECEIVING VESTIBULE	7'-0"	7'-0"	C	WD/GL	1	HM			16			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
018A	VESTIBULE	6'-0"	7'-0"	E1	ALGL	C	AL			3			PROVIDE ACCESSIBLE AUTO OPERATOR. COORDINATE POWER WITH "E" SERIES DRAWINGS.
018B	VESTIBULE	6'-0"	7'-0"	E1	ALGL	AA	AL			8			PROVIDE VIDEO CONTROL, MAGNETIC CONTROL AND CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
019	JAN.	3'-0"	7'-0"	A	WD	1	HM			21			
020	WOMENS RR	3'-0"	7'-0"	A	WD	1	HM			25			
021	MENS RR	3'-0"	7'-0"	A	WD	1	HM			25			
022	BREAK / WAIT	3'-0"	7'-0"	C	WD/GL	1	HM			29			
023	SUPPLY / MAIL	3'-0"	7'-0"	C	WD/GL	1	HM			21			
024	FILES	3'-0"	7'-0"	C	WD/GL	1	HM			16			
025	DOCTOR OFFICE	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
026	DOCTOR OFFICE	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
027	DOCTOR OFFICE	3'-0"	7'-0"	J	WD/GL	GG	AL			19			
028	DOCTOR OFFICE	3'-0"	7'-0"	J	WD/GL	GG	AL			19			
029	DOCTOR OFFICE	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
030	ADMIN	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
031	AUT. TECH	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
032	AUT. TECH	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
033	AUT. TECH	3'-0"	7'-0"	J	WD/GL	GG	AL			19			
034	AUT. TECH	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
035	AUT. TECH	3'-0"	7'-0"	J	WD/GL	TT	AL			19			
036	ME OFFICE CORRIDOR	3'-0"	7'-0"	C	WD/GL	1	HM			13			PROVIDE VIDEO CONTROL. COORDINATE POWER WITH "E" SERIES DRAWINGS.
038	STORAGE	3'-0"	7'-0"	A	WD	1	HM			21			
LEVEL 0.5													
116	STAR	3'-0"	7'-0"	A	HM	1	HM			29	60 MIN.		
116B	CRIME LAB GARAGE	20'-0"	11'-8"	G	STL	-	-			31			ELECTRIC SECTIONAL DOOR. REFER SPECIFICATION FOR ADDITIONAL INFORMATION. PROVIDE PNPAD AND VIDEO DOOR BELL. COORDINATE POWER WITH "E" SERIES DRAWINGS.
ST-1B	STAR	3'-0"	7'-0"	A	HM	2	HM			6	80 MIN.		
UPPER LEVEL													
100A	VESTIBULE	6'-0"	6'-8"	E1	ALGL	E	AL			2			PROVIDE CARD READER AND VIDEO DOOR BELL. COORDINATE POWER WITH "E" SERIES DRAWINGS.
100B	ENTRY	6'-0"	6'-8"	E1	ALGL	DD	AL			7			
100E	ENTRY	3'-0"	7'-0"	J	WD/GL	EE	AL			9			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
101	RECP	3'-0"	7'-0"	C	WD/GL	1	HM			19			
102	CL LAB CORRIDOR	3'-0"	7'-2"	J	WD/GL	HH	AL			10			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
103	EVIDENCE STORAGE	4'-0"	7'-0"	C	HM/GL	1	HM			16.1			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
104	STORAGE	3'-0"	7'-0"	A	HM	1	HM			21			
105	RAPO DIA	3'-0"	7'-0"	C	HM/GL	1	HM			19			
106	TKX INSTRUMENT	4'-0"	7'-0"	C	HM/GL	1	HM			16.1			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
107	GAS STORAGE	4'-0"	7'-0"	A	HM	2	HM			16	60 MIN.		
107A	GAS STORAGE	4'-0"	7'-0"	E	ALGL	2	AL			1			PROVIDE VIDEO CONTROL AND CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
108	MENS RR	3'-0"	7'-0"	A	WD	1	HM			25			
109	WOMENS RR	3'-0"	7'-0"	A	WD	1	HM			25			
110	BIO SAMPLING	4'-0"	7'-0"	E	ALGL	JJ	AL			9			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
110A	BIO EVIDENCE	3'-0"	7'-0"	A	HM	1	HM			16.1			
111	DRUG SAMPLING	4'-0"	7'-0"	J	WD/GL	JJ	AL			9			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
111A	DRUG CHEM	3'-0"	7'-0"	A	HM	1	HM			16.1			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
111B	DRUG EVIDENCE	3'-0"	7'-0"	A	HM	1	HM			16.1			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
112	DRUG INSTRUMENT	4'-0"	7'-0"	E	ALGL	LL	AL			9			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
112A	DRUG SAMPLING	3'-0"	7'-0"	A	HM	1	HM			19			
113A	ELEC	5'-0"	7'-0"	B	HM	1	HM			23			
114	OPEN OFFICE	6'-0"	7'-0"	B	WD	1	HM			15			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
115	BREATHALCOHOL	4'-0"	7'-0"	E	ALGL	MM	AL			9			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
117	RR	3'-0"	7'-0"	A	WD	1	HM			25			
118	JAN	3'-0"	7'-0"	A	HM	1	HM			21			
119	HIDDLE	3'-0"	7'-0"	J	WD/GL	NN	AL			11			
120	OFFICE	3'-0"	7'-0"	J	WD/GL	PP	AL			11			
121	OFFICE	3'-0"	7'-0"	J	WD/GL	QQ	AL			11			
122	BREAK ROOM	3'-0"	7'-0"	C	WD/GL	1	HM			19			
122A	OUTDOOR PATIO	3'-0"	7'-0"	E	ALGL	F	AL			5			
123	CL OFFICE CORRIDOR	3'-0"	7'-0"	A	WD	1	HM			16			PROVIDE CARD READER. COORDINATE POWER WITH "E" SERIES DRAWINGS.
124	SHARED CORRIDOR	3'-0"	7'-0"	A	HM	1	HM			21			
125	SHARED CORRIDOR	3'-0"	7'-0"	A	HM	1	HM			20			PROVIDE KEY LOCK.
126	SMALL CONFERENCE	3'-0"	7'-0"	J	WD/GL	RR	AL			12			
127	LARGE CONFERENCE ROOM	3'-0"	7'-0"	J	WD/GL	SS	AL			12			
129	STAR ELEVATOR	3'-0"	7'-0"	E	ALGL	P	AL			32			EGRESS ONLY DOOR. EGRESS ONLY DOOR.
130	STAR ELEVATOR	3'-0"	7'-0"	E	ALGL	UU	AL			35			
131	MECHANICAL MEZZ	3'-0"	7'-0"	A	HM	2	HM			35			
132	POLYGRAPH LOBBY	3'-0"	7'-0"	J	WD/GL	2	HM			16.1			PROVIDE FROSTED GLASS PANEL WITHIN DOOR
133	OFFICE	3'-0"	7'-0"	C	WD/GL	1	HM			19			
134	POLYGRAPH	3'-0"	7'-0"	C	WD/GL	1	HM			19			
135	RR	3'-0"	7'-0"	A	WD	1	HM			26			
136	EVID. RECP.	4'-0"	3'-8"	H	HM	-	ZE			31			
EX-1	STAR	3'-0"	7'-4"	-	-	-	-			31	60 MIN.		GATE DOOR AND HARDWARE BY FABRICATOR

Door & Frame Notes

- ALL DOOR & FRAME FIRE RATINGS SHALL BE IN COMPLIANCE WITH LOCAL CODES AND JURISDICTIONS.
- PROVIDE SMOKE SEALS/GASKETING WHERE REQUIRED.
- PROVIDE WALL STOPS FOR ALL DOORS, UNLESS NOTED OTHERWISE.
- PROVIDE WEATHERSTRIPPING AND THRESHOLD AT ALL EXTERIOR DOORS AS REQUIRED.
- PROVIDE KICKPLATES WHERE REQUIRED.
- PROVIDE SLICERS ON ALL DOORS WITHOUT WEATHER STRIPPING OR SEALS ACCESSIBLE DOORS. PROVIDE A SMOOTH SURFACE WITHIN 10\"/>

Hollow Metal Frame Types

GENERAL DOOR NOTES:

- REFER TO SHEET A1.00 FOR WALL TYPES - CROSS REFERENCE AGAINST DOOR FRAME THROAT THICKNESS.
- ALL DOORS SHALL BE PRE-FINISHED (SHOP OR FACTORY) PER INTERIOR DESIGN DRAWINGS - EXTERIOR DOORS SHALL BE FINISHED PER ARCHITECTURAL ELEVATIONS.
- TOPS, BOTTOMS AND SIDES OF ALL DOORS SHALL BE PAINTED OR STAINED TO MATCH DOOR.
- PROVIDE CONSTRUCTION CYLINDERS DURING CONSTRUCTION - FOR DOORS REQUIRED TO BE LOCKED REPLACE CONSTRUCTION CYLINDERS PRIOR TO BUILDING OPENING - COORDINATE WITH GENERAL CONTRACTOR.
- ALL DOORS TO BE MASTER KEYPED - COORDINATE KEYING WITH OWNER.
- ALL LOCKSETS AND CYLINDERS ARE SUPPLIED WITH FINAL CORES - PERMANENT KEYING BY DOOR SUBCONTRACTOR, OR EFFORT.
- ALL EXIT DOORS MUST BE OPERABLE FROM THE INSIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE, OR EFFORT.
- ALL GLAZING SHALL BE TEMPERED GLASS (U.N.O.).
- ALL INTERIOR DOOR GLAZING AND SIDELITES SHALL BE CLEAR TEMPERED GLASS (U.N.O.).
- GLAZING AT EXTERIOR DOORS & SIDELITES SHALL BE INSULATED TEMPERED LITES.
- REFER TO ELEVATIONS AND WINDOW SCHEDULE(S) FOR GLASS COLOR AND SPECIFICS.
- HARDWARE IS PER LEAF, UNLESS NOTED OTHERWISE.
- ALL DOOR HARDWARE SHALL COMPLY WITH ADAAG REQUIREMENTS FOR ACCESSIBILITY - FEDERAL, STATE AND LOCAL ACCESSIBILITY CODE(S).
- MAGNETIC HOLD-OPENS SHALL BE INTERCONNECTED TO FIRE ALARM SYSTEM SO AS TO RELEASE DOOR DURING AN ALARM EVENT.
- ALL FULL/HALF VISION DOORS SHALL BE A MEDIUM STYLE (U.N.O.).
- ALL RATED DOORS SHALL BE PROVIDED W/ MIN. REQ'D DOOR HARDWARE REGARDLESS IF NOT SHOWN ON SCHEDULE - IF DIRECTION INDICATED OR NOTED IS SPECIFICALLY IN CONTRADICTION TO WHAT IS REQ'D, IN RATED DOORS, CONTACT ARCHITECT.
- REFER TO "E" SERIES SHEETS AND DOOR HARDWARE SPECIFICATION FOR POWER INFORMATION FOR DOOR HARDWARE

FINISHES LEGEND:

AN	ANODIZED
FP	FLUOROPOLYMER
ST	STAINED
PT	PAINTED
CL	CLAD
MFR	PER MANUFACTURER

LISTED UL LABELS:

A	3-HR -- "A" LABEL
B	1 1/2-HR -- "B" LABEL
B.1	1-HR -- "B" LABEL
C	3/4-HR -- "C" LABEL
D	20 MIN.

ABBREVIATIONS:

AL	ALUMINUM
COMM	COMMUNICATING DOOR
GALV GL	GALVANIZED GLASS
HC	HOLLOW CORE
HM	HOLLOW METAL
MF	4" HEADER - MASONRY FRAME
OHCD	OVERHEAD CONCEALED CLOSER
SC	SOLID CORE
STL/STL	STAINLESS STEEL
STRET	STOREFRONT (ALUM.)
ST	STAIN
WD	WOOD

--REFER ALSO TO INDEX SHEET FOR TYPICAL ABBREVIATIONS

DOOR HANDING DIAGRAM:

DOOR SCHEDULE & DETAILS

Project No. **24047**

Drawn By: SSSMAR

Reviewed By: WU

Scale: As indicated

A6.00

The image displays six architectural drawings of window and door units, each with specific dimensions and labels. The units are arranged horizontally from left to right:

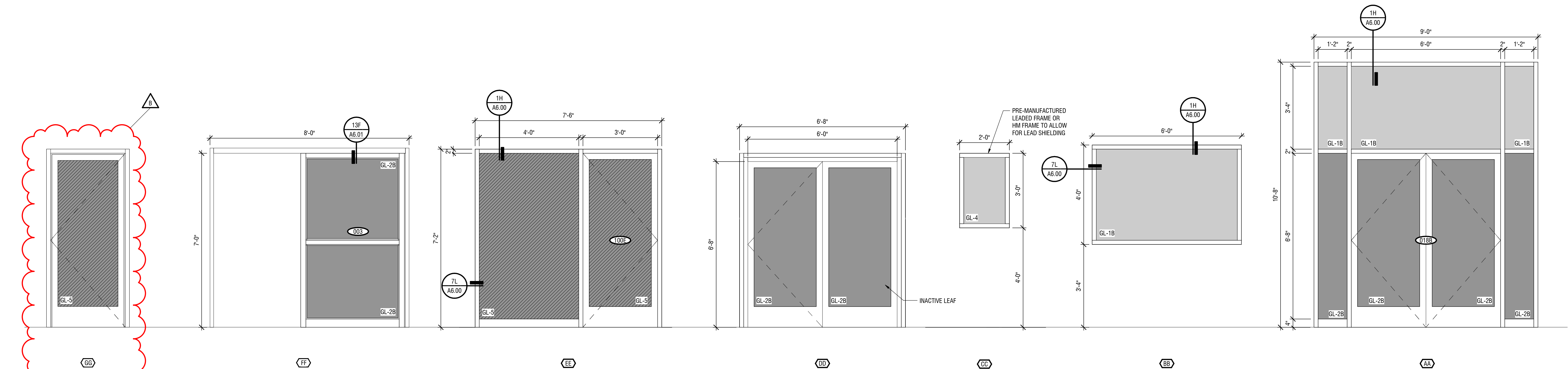
- UU:** A double-unit window with a total width of 9'-10 1/2" and a height of 9'-10". It features two vertical sections, each 3'-0" wide and 7'-11" high. The top section is labeled GL-1B and the bottom section is labeled GL-2B. A diagonal dashed line is shown in the bottom right section, labeled 130.
- TT:** A double-unit window with a total width of 5'-0" and a height of 7'-2". It features two vertical sections, each 3'-0" wide and 7'-2" high. The top section is labeled GL-5 and the bottom section is labeled GL-2B. A diagonal dashed line is shown in the bottom right section, labeled 127.
- SS:** A double-unit window with a total width of 4'-8" and a height of 7'-2". It features two vertical sections, each 3'-0" wide and 7'-2" high. The top section is labeled GL-5 and the bottom section is labeled GL-2B. A diagonal dashed line is shown in the bottom right section, labeled 127.
- BR:** A double-unit window with a total width of 9'-0" and a height of 7'-2". It features two vertical sections, each 3'-0" wide and 7'-2" high. The top section is labeled GL-5 and the bottom section is labeled GL-2B. A diagonal dashed line is shown in the bottom right section, labeled 126.
- GU:** A double-unit window with a total width of 6'-0" and a height of 7'-2". It features two vertical sections, each 3'-0" wide and 7'-2" high. The top section is labeled GL-5 and the bottom section is labeled GL-2B. A diagonal dashed line is shown in the bottom right section, labeled 121.
- EP:** A double-unit window with a total width of 6'-0" and a height of 7'-2". It features two vertical sections, each 3'-0" wide and 7'-2" high. The top section is labeled GL-5 and the bottom section is labeled GL-2B. A diagonal dashed line is shown in the bottom right section, labeled 120.

Each unit is labeled with a circled number (1H, 1L, 2H, 2L) and a corresponding value (A6.00, A6.00, A6.00, A6.00) indicating the unit's cost or value. The units are also labeled with a circled letter (UU, TT, SS, BR, GU, EP) indicating the unit type.

1L INTERIOR GLAZING ELEVATIONS

[illegible]

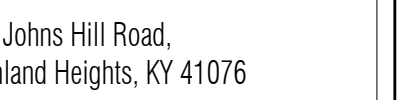
A6.04 $1/2'' = 1'-0''$



A6.04	1/2" = 1'-0"
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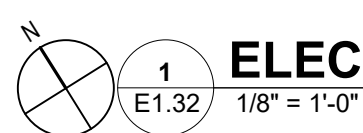
GLAZING SCHEDULE:	
ID:	DESCRIPTION:
GL-1A	1" INSULATED CLEAR GLASS PANEL
GL-1B	1/4" CLEAR GLASS PANEL
GL-2A	1" INSULATED TEMPERED GLASS PANEL
GL-2B	1/4" TEMPERED GLASS PANEL
GL-3	1" INSULATING, TEMPERED, FROSTED (ACID ETCHED) GLASS PANEL GL-2B GLASS WITH ACID ETCHING
GL-4	LEAD-BEARING GLAZING PANEL
GL-5	CLEAR GLASS WITH WF-01 FILM GL-2B GLASS WITH FILM APPLIED
GL-6	EXTERIOR LAMINATED GUARDRAIL
GL-7	INTERIOR LAMINATED GUARDRAIL WITH FLUTED GLASS
GL-8	1" INSULATING, TEMPERED, LAMINATED, FROSTED (ACID ETCHED) GLASS PANEL FOR SKYLIGHTS

* REFER TO DIMENSION PLANS (SHEETS A1.10 AND A1.11)
 * FOR TAGGING AND LOCATIONS
 * REFER TO A4.20 FOR WF-01 PRODUCT DESCRIPTION



As indicated

46.04


$$1/8^* = 1'-0^*$$


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LICENSE 28214
EXPIRES 06/30/2026

Issue Date: JUNE 26, 2026

Issued for:
BIDDING SET

[illegible]

Sheet Title

**ELECTRICAL FIRE ALARM
PLAN - UPPER LEVEL**

24047

Drawn By: M. STEARNS

Reviewed By: J. MESSNER

Scale: $1/8" = 1'-0"$

E1.32

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END OF SECTION 00 01 10

SECTION 07 41 13
STANDING SEAM METAL ROOF PANELS

PART 1 GENERAL

2.01 SECTION INCLUDES

- A. Metal roof panel system of preformed steel panels.

2.02 RELATED REQUIREMENTS

- A. Section 07 42 13.23 - Metal Composite Metal Wall Panels: Preformed wall panels.
- B. Section 07 92 00 - Joint Sealants: Sealing joints between metal roof panel system and adjacent construction.

2.03 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix); 2022.
- B. ASTM A463/A463M - Standard Specification for Steel Sheet, Aluminum-Coated, by the Hot-Dip Process; 2025.
- C. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
- D. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process; 2023.
- E. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2023.
- F. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2017 (Reapproved 2023).
- G. ASTM D1970/D1970M - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection; 2021.
- H. ASTM D2244 - Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates; 2025.
- I. ASTM D4214 - Standard Test Methods for Evaluating the Degree of Chalking of Exterior Paint Films; 2023.
- J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2024.
- K. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- L. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings; 2020a.
- M. ASTM E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference; 2015 (Reapproved 2023).
- N. ASTM E1592 - Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference; 2005 (Reapproved 2017).
- O. ASTM E1646 - Standard Test Method for Water Penetration of Exterior Metal Roof Panel Systems by Uniform Static Air Pressure Difference; 1995 (Reapproved 2018).

- P. ASTM E1680 - Standard Test Method for Rate of Air Leakage through Exterior Metal Roof Panel Systems; 2016 (Reapproved 2022).
- Q. UL 580 - Standard for Tests for Uplift Resistance of Roof Assemblies; Current Edition, Including All Revisions.

2.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Storage and handling requirements and recommendations.
 - 2. Installation methods.
 - 3. Specimen warranty.
- C. Shop Drawings: Include layouts of roof and wall panels, details, spacing and type of connections, and special conditions.
 - 1. Show fabrication and installation layouts of metal roof and wall panels; details of edge conditions, side-seam and endlap joints, panel profiles, corners, anchorages, trim, flashings, closures, and accessories; and special details specific to project, signed and sealed by the qualified professional engineer responsible for their preparation. Distinguish between factory- and field-assembled work.
- D. Delegated Design Submittal: For metal roof and wall assembly indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the metal roof panel manufacturer's qualified professional engineer responsible for their preparation. Include the following:
 - 1. Structural analysis data indicating compliance with performance required article.
- E. Accessory Details: Include details of the following items:
 - 1. Flashing and trim.
 - 2. Pipe penetration flashings.
 - 3. Roof curbs.
 - 4. Gutters.
 - 5. Downspouts.
- F. Selection Samples: For each roofing and wall system specified, submit color chips representing manufacturer's full range of available colors and patterns.
- G. Verification Samples: For each roofing and wall system specified, submit samples of minimum size 12 inches square, representing actual roofing metal, thickness, profile, color, and texture.
- H. Installer's qualification statement.
- I. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for each product. Indicate compliance with requirements in Performance Requirements Article:
 - 1. Air infiltration.
 - 2. Water Penetration.
 - 3. Hydrostatic Head Resistance
 - 4. Wind uplift resistance.
- J. Owners-Maintenance manual
- K. Warranty: Submit specified manufacturer's warranty and ensure that forms have been completed in Owner's name and are registered with manufacturer.

2.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer of plant-fabricated metal roof panel systems listed in this Section and meeting performance requirements, with a minimum of five years experience

providing metal roof panel systems for projects of similar type and scope, offering engineering, warranty, technical inspection, and maintenance inspection services specified

- B. Manufacturer's Technical Representative Qualifications: Provide a qualified technical representative to perform field quality assurance inspections of the roofing installation. The technical representative may be a full-time employee of the roofing system manufacturer or an independent third-party roofing consultant or inspection agency authorized by the roofing system manufacturer to perform warranty inspections and verify compliance with the manufacturer's published installation requirements. The technical representative shall have a minimum of five (5) years of documented experience inspecting roofing systems of similar type and complexity and shall possess credentials appropriate to the roofing system being installed, such as IIBEC Registered Roof Observer (RRO), Registered Roof Consultant (RRC), Registered Roof Professional (RRP), manufacturer certification, Professional Engineer (PE), Registered Architect (RA), or other qualifications acceptable to the Owner and Architect. The technical representative shall have no sales responsibilities associated with the Project and shall be authorized to determine the Installer's compliance with the Contract Documents and the roofing manufacturer's requirements.
- C. Source Limitations: Obtain all metal roof panels, clips, trims, system accessories and related engineered structural support members from a single source manufacturer supplier.
- D. Installer Qualifications: Manufacturer-certified installer for the specified product and system type.
- E. Minimum of 10 years of documented, continuous experience in the installation of similar products and system type.
- F. Must provide proof of successful completion of a minimum of 5 projects comparable in size, scope, and complexity.
- G. Manufacturer Acceptance: Prior to issuance of the manufacturer's warranty, the roofing system manufacturer shall perform a final inspection of the completed installation and provide confirmation that the installation complies with the manufacturer's published requirements and qualifies for the specified warranty.

2.06 MOCK-UPS

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Provide mock-up of minimum 12 sq ft, including, gutters, underlayment, eave protection membrane, associated flashings, and metal roof and wall panels.
- C. Locate as directed by Architect.
- D. Mock-up may remain as part of the work.
- E. Mock-up shall be water tested before production work.

2.07 DELIVERY, STORAGE, AND HANDLING

- A. See Section 01 74 19 - Construction Waste Management and Disposal for packaging waste requirements.
- B. Provide strippable plastic protection on prefinished roofing panels for removal after installation.
- C. Store roofing panels on project site as recommended by manufacturer to minimize damage to panels prior to installation.
- D. Unload, store, and erect metal roof panels in a manner to prevent bending, warping, twisting, and surface damage.
- E. Stack metal roof panels on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal roof panels to ensure dryness. Do not store metal roof panels in contact with other materials that might cause staining, denting, or other surface damage.

2.08 FIELD CONDITIONS

- A. Do not install metal roof panels, eave protection membrane or underlayment when surface, ambient air, or wind chill temperatures are below 45 degrees Fahrenheit.

2.09 COORDINATION

- A. Coordinate sizes and locations of roof curbs, equipment supports, and roof penetrations with actual equipment provided.
- B. Coordinate metal roof and wall panels with rain drainage work, flashing, trim, and construction of substrate, parapets, walls, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.
- C. Coordinate all roof penetrations with roofing system manufacturer prior to installation. No penetrations or attachments shall be installed after completion of the roofing system without written approval of the roofing system manufacturer.

PART 2 PRODUCTS

3.01 MANUFACTURERS

- A. Provide a complete roofing system from a single roofing system manufacturer. The manufacturer shall supply, approve and warrant all roofing panels, clips, fasteners, flashings, closures, sealants, underlayment, penetration flashings, roof curbs, attachment devices, accessories, and weather-tightness warranty as a complete integrated roofing system.
- B. Basis Of Design - Architectural Metal Roof Panel Manufacturers:
 - 1. Tremco; TremLock® SL Panel (Snapseam): www.tremcoroofing.com/
- C. Architectural Metal Roof Panel Manufacturers:
 - 1. ATAS International, Inc: www.atas.com/#sle.
 - 2. Drexel Metals Inc: www.drexmet.com/#sle.
 - 3. Elevate: www.holcimelevate.com/#sle.
 - 4. MBCI, a Cornerstone Building Brands Company: www.mbc.com/#sle.
 - 5. TitanTek; SnapSeam 175 Panel: www.titantekamp.com/
 - 6. Petersen Aluminum Corporation: www.pac-clad.com/#sle.
 - 7. Substitutions: See Section 01 60 00 - Product Requirements.

3.02 PERFORMANCE REQUIREMENTS

- A. Metal Roof Panels: Provide complete roofing assemblies, including roof panels, clips, fasteners, connectors, and miscellaneous accessories, tested for compliance with the following minimum standards:
 - 1. Structural Design Criteria: Provide panel assemblies designed to safely support design loads at support spacing indicated, with deflection not to exceed L/140 of span length(L) when tested in accordance with ASTM E1592.
 - 2. Overall: Complete weathertight system tested and approved in accordance with ASTM E1592.
 - 3. Wind Uplift: Class 90 wind uplift resistance of UL 580.
 - 4. Provide calculations sealed by a professional Engineer verifying compliance with project specific design wind pressures, including perimeter and corner zones.
 - 5. Air Infiltration: Maximum 0.06 cfm/sq ft at air pressure differential of 6.24 lbf/sq ft, when tested according to ASTM E1680.
 - 6. Water Penetration: No water penetration when tested in accordance with procedures and recommended test pressures of ASTM E1646; perform test immediately following air infiltration test.
 - 7. Thermal Movement: Design system to accommodate without deformation anticipated thermal movement over ambient temperature range of 100 degrees Fahrenheit.

3.03 METAL ROOF PANELS

- A. Metal Roof Panels: Provide complete engineered system complying with specified requirements and capable of remaining weathertight while withstanding anticipated movement of substrate and thermally induced movement of roofing system.
- B. Metal Panels: Factory-formed panels with factory-applied finish.
 - 1. Steel Panels:
 - a. Zinc-coated steel complying with ASTM A653/A653M; minimum G90 galvanizing.
 - b. Aluminum-zinc alloy-coated steel complying with ASTM A792/A792M; minimum AZ50 coating.
 - c. Aluminum-coated steel complying with ASTM A463/A463M; minimum Type 2 T2-65 coating.
 - d. Steel Thickness: Minimum 24 gauge, 0.024 inch.
 - 2. Profile: Standing seam, with minimum 1-1/2-inch seam height; concealed fastener system for snap-on application of matching standing seam batten. In locations as noted on the drawings.
 - 3. Profile: Batten seam, with separate snap-on battens of same metal as panels; concealed fastener system. In locations as noted on the drawings.
 - 4. Texture: Smooth.
 - 5. Length: Maximum possible length to minimize lapped joints. Where lapped joints are unavoidable, space laps so that each sheet spans over three or more supports.
 - 6. Width: Maximum panel coverage of 18 inches.

3.04 ATTACHMENT SYSTEM

- A. Concealed System: Provide manufacturer's standard stainless steel or nylon-coated aluminum concealed anchor clips designed for specific roofing system and engineered to meet performance requirements, including anticipated thermal movement.

3.05 SECONDARY FRAMING

- A. Miscellaneous Secondary Framing: Light gauge steel framing incidental to structural supports; fabricated from steel sheet.
- B. Framing Material: ASTM A1011/A1011M Designation SS steel sheet.
 - 1. Profile: Manufacturer's standard cee, zee, single slope eave strut, and angle.
 - 2. Thickness: 12 gauge, 0.1046 inch.
 - 3. Finish: Galvanized per ASTM A653/A653M, G90.
- C. Framing Connectors: Factory-made formed steel sheet, ASTM A653/A653M SS Grade 50, with G60/Z180 hot dipped galvanized coating and factory punched holes.

3.06 FABRICATION

- A. Panels: Provide factory fabricated panels with applied finish and accessory items, using manufacturer's standard processes as required to achieve specified appearance and performance requirements.
- B. Joints: Provide captive gaskets, sealants, or separator strips at panel joints to ensure weathertight seals, eliminate metal-to-metal contact, and minimize noise from panel movements.

3.07 FINISHES

- A. Fluoropolymer Coil Coating System: Polyvinylidene fluoride (PVDF) multi-coat superior performing organic coatings system complying with AAMA 2605, including at least 70 percent PVDF resin, and at least 80 percent of coil coated metal surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch; color and gloss as selected by Architect from manufacturer's standard line.

3.08 ACCESSORIES

- A. Miscellaneous Sheet Metal Items: Provide flashings, gutters, downspouts, trim, moldings, closure strips, and caps of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
 - 1. Downspouts: Open face, rectangular profile.
- B. Rib and Ridge Closures: Provide prefabricated, close-fitting components of steel with corrosion resistant finish or combination steel and closed-cell foam.
- C. Sealants:
 - 1. Exposed Sealant: Elastomeric; silicone, polyurethane, or silyl-terminated polyether/polyurethane.
 - 2. Concealed Sealant: Non-curing butyl sealant or tape sealant.
 - 3. Seam Sealant: Factory-applied, non-skinning, non-drying type.
- D. Thermal Insulation: Provide rigid type, faced with white, flexible, non-dusting vapor retarder tested for maximum flame spread index of 50, per ASTM E84; for installation using spacer blocks.
- E. Underlayment: Synthetic non-asphaltic sheet, intended by manufacturer for mechanically fastened roofing underlayment without sealed seams.
 - 1. Type: Woven polypropylene with anti-slip polyolefin coating on both sides.
 - 2. Self Sealability: Nail sealability in accordance with ASTM D1970/D1970M.
 - 3. Flammability: Minimum of Class A, in accordance with ASTM E108 test method.
 - 4. Low Temperature Flexibility: Comply with ASTM D1970/D1970M.
 - 5. Water Vapor Permeance: 1 perm, maximum, when tested in accordance with ASTM E96/E96M, Desiccant Method A.
 - 6. Performance: Comply with ASTM D226/D226M, Type II asphalt-saturated organic felt.
 - 7. Fasteners: As specified by manufacturer and building code qualification report or approval.
- F. Snow guards, walk pads, pipe flashings, roof curbs, equipment supports, attachments devices, and similar accessories shall be manufacturer-approved products specifically designed for use with specified roofing system and included in the manufacturer's weather tight warranty.

PART 3 EXECUTION

4.01 EXAMINATION

- A. Do not begin installation of preformed metal roof panels until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

4.02 PREPARATION

- A. Coordinate roofing work with provisions for roof drainage, flashing, trim, penetrations, and other adjoining work to ensure that completed roof will be free of leaks.
- B. Remove protective film from surface of roof panels immediately prior to installation; strip film carefully to avoid damage to prefinished surfaces.
- C. Separate dissimilar metals by applying a bituminous coating, self-adhering rubberized asphalt sheet, or other permanent method approved by metal roof panel manufacturer.
- D. At locations where metal will be in contact with wood or other absorbent material subject to wetting, seal joints with sealing compound and apply one coat of heavy-bodied bituminous paint.

4.03 THERMAL INSULATION INSTALLATION

- A. Comply with insulation manufacturer's written instructions applicable to products and application indicated. Install insulation that is undamaged, dry, and unsoiled and that has not been left exposed at any time to ice, rain, and snow. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Extend insulation in thickness indicated to cover entire roof. Provide sizes to fit applications indicated and selected from manufacturer's standard thicknesses, widths, and lengths. Seal all joints and penetrations air- and vapor-tight.

4.04 INSTALLATION

- A. Overall: Install roofing and wall system in accordance with approved shop drawings and metal roof panel manufacturer's instructions and recommendations, as applicable to specific project conditions; securely anchor components of roofing system in place allowing for thermal and structural movement.
 - 1. Install roofing system with concealed clips and fasteners, except as otherwise recommended by manufacturer for specific circumstances.
 - 2. Minimize field cutting of panels. Where field cutting is required, use methods that will not distort panel profiles. Use of torches for field cutting is prohibited.
- B. Accessories: Install necessary components that are required for complete roofing assembly, including flashings, gutters, downspouts, trim, closure strips, caps, rib closures, ridge closures, and similar roof accessory items.
- C. Install roofing felt or polypropylene underlayment on roof sheathing before installing preformed metal roof panels; secure by methods acceptable to roof panel manufacturer, minimizing use of metal fasteners; apply from eaves to ridge in shingle fashion, overlapping horizontal joints at least 2 inches and side and end laps at least 3 inches; offset seams in building paper and seams in roofing felt.
- D. Roof Panels: Install metal roof and wall panels in accordance with manufacturer's installation instructions, minimizing transverse joints except at junction with penetrations.
 - 1. Provide concealed clips at panel joints, and apply snap-on battens to provide weathertight joints.
 - 2. Provide sealant tape or other approved joint sealer at lapped panel joints.
 - 3. Install sealant or sealant tape at end laps and side joints as recommended by metal roof panel manufacturer.
 - 4. Install clips to supports with self-tapping fasteners.
 - 5. Erection Tolerances: Shim and align metal roof panel units within installed tolerance of 1/4 inch in 20 feet on slope and location lines as indicated and within 1/8-inch (0.12 inch) offset of splices and alignment of matching profiles.
 - 6. Watertight Installation:
 - a. Apply a continuous ribbon of sealant or tape to seal joints of metal panels, using sealant or tape as recommend in writing by manufacturer as needed to make panels watertight.
 - b. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
- E. Manufacturer inspections and Reporting: the manufacture shall perform daily inspections during all phases of work including substrate preparation, underlayment, initial installation, and progress through final completion and provide written reports daily.
- F. Required water testing or ASTM E1105 hose testing of representative roof areas before acceptance.

- G. Inspection Reports: Manufacturer's representative shall provide written inspection reports identifying deficiencies, required corrective actions, and verification that the corrective actions have been completed before roofing work proceeds.

4.05 ACCESSORY INSTALLATION

- A. General: Install accessories with positive anchorage to building and weathertight mounting and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal roof panel assembly including trim, copings, ridge closures, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items.
- B. Flashing and Trim: Comply with performance requirements and manufacturer's written installation instructions. Provide concealed fasteners where possible and set units true to line and level as indicated. Install work with laps, joints, and seams that will be permanently watertight and weather resistant.
1. Form trim and transition joints using compressed joints with captive butyl sealant capable of resisting static water pressure. Cleated joints and exposed joint sealants do not meet this requirement.
 2. Install exposed flashing and trim that is without excessive oil canning, buckling, and tool marks and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to result in waterproof and weather-resistant performance.
 3. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently weather resistant and waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).
- C. Gutters: Join sections with riveted and soldered or lapped, riveted, and sealed joints. Attach gutters to eave with gutter hangers spaced not more than 36 inches o.c. using manufacturer's standard fasteners. Provide end closures and seal watertight with sealant. Provide for thermal expansion.
- D. Downspouts: Join sections with telescoping joints. Provide fasteners designed to hold downspouts securely 1 inch away from walls; locate fasteners at top and bottom and at approximately 60 inches o.c. in between.
1. Provide elbows at base of downspouts to direct water away from building.
 2. Connect downspouts to underground drainage system indicated.
- E. Roof Curbs: Install curbs at locations indicated on Drawings. Install flashing around bases where they meet metal roof panels.
- F. Pipe Flashing: Form flashing around pipe penetration and metal roof panels. Fasten and seal to metal roof panels as recommended by manufacturer.
- G. Insulation: Install insulation between roof covering and supporting members to present a neat appearance; fold, staple, and tape seams unless otherwise approved by Architect.
- H. Roof penetrations: Pipe flashings, equipment supports, curbs, and roof penetrations, shall utilize factory manufactured or manufacturer approved flashing assemblies. Field fabricated pitch pockets shall not be permitted unless specifically approved in writing by the roofing system manufacturer.

4.06 CLEANING

- A. See Section 01 70 00 - Execution and Closeout Requirements for additional requirements.

- B. Clean exposed sheet metal work at completion of installation. Remove grease and oil films, excess joint sealer, handling marks, and debris from installation, leaving the work clean and unmarked, free from dents, creases, waves, scratch marks, or other damage to the finish.
- C. Remove temporary protective coverings and strippable films, if any, as metal roof panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal roof panel installation, clean finished surfaces as recommended by metal roof panel manufacturer. Maintain in a clean condition during construction.

4.07 PROTECTION

- A. Do not permit storage of materials or roof traffic on installed roof panels. Provide temporary walkways or planks as necessary to avoid damage to completed work. Protect roofing until completion of project.
- B. No roof penetrations or attachments shall be installed after completion of the roof system without written approval of the roof system manufacturer.
- C. Following substantial completion of the roof system, roof access by contractors shall be limited to designated access paths and walk pads. Any damage resulting from unauthorized roof traffic shall be repaired by the responsible party without cost to the owner.
- D. Touch-up, repair, or replace damaged roof panels or accessories before Date of Substantial Completion.

4.08 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. General: Warranties specified shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
- C. Complete System Warranty Provide a minimum 30-year comprehensive, complete system warranty, inclusive, but not limited to all roofing systems, accessories, connections, tie-ins, and associated materials
- D. Special Project Warranty: Submit roofing Installer's warranty covering Work of this Section, including roof panels, trims, transitions, accessories and all other components of roofing system for the following warranty period:
 - 1. Warranty Period: 2 years from date of Substantial Completion.
- E. Metal Roof Panel Warranty: Manufacturer agrees to repair or replace metal roof panel assemblies that fail to remain weathertight, including leaks, within specified warranty period:
.Special System Weathertightness Warranty Period:.
 - 1. Warranty Period: 30 years from Substantial Completion.
 - 2. Limit of Warranty Coverage: 30-year No-Dollar-Limit weather-tight warranty covering flashings, penetrations, accessories, labor, and materials.
 - 3. Warranty Coverage: Warranty shall specifically include roofing panels, flashings, edge metal, penetrations, curbs, gutters, clips, fasteners, sealants, closures, accessories, thermal movement, transitions to wall panels, and workmanship necessary to maintain a weather tight roofing system.
 - 4. Qualified Installer Requirement: Installer must meet requirements in Quality Assurance Article, per manufacturer's recommendation.
 - 5. Installation Inspection Requirement: By manufacturer's recommendation in accordance with requirements of Part 3 Field Quality Control Article.
 - 6. Annual Manufacturer Inspection Requirement: By qualified manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's annual inspections is included in

the Contract Sum. Inspections to occur in Years 2, 5, 10, 15, 20 and 25 following Substantial Completion. Manufacturer shall provide a written report of each visit with photos and report documentation to the Owner through an online database that is maintained the entire warranty period and that is accessible from any computer. A single manufacturer shall provide all project roof system warranties.

7. Manufacturer shall respond to emergency leak notifications within 24 hours and shall commence corrective action within 72 hours unless delayed by weather conditions.
8. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Hunter units when tested according to ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested according to ASTM D4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.

END OF SECTION 07 41 13

SECTION 07 52 16
STYRENE-BUTADIENE-STYRENE MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 - GENERAL

2.01 REFERENCE STANDARDS

- A. ASTM C208 - Standard Specification for Cellulosic Fiber Insulating Board; 2022.
- B. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing; 2017.
- C. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2023a.
- D. ASTM D1079 - Standard Terminology Relating to Roofing and Waterproofing; 2024.

2.02 SUMMARY

- A. Section includes:
 - 1. SBS-modified bituminous membrane roofing.
 - 2. Base flashing.
 - 3. Cover board.
 - 4. Roof insulation.
 - 5. Air barrier.
 - 6. Accessories.
 - 7. Warranty.
- B. Related Sections:
 - 1. Division 7 Section "Sheet Metal Flashing & Trim" for sheet metal flashing details attached to warranties specified in this section.
 - 2. Division 7 Section "Roofing Specialties" for sheet metal coping and fascia flashing attached to warranties specified in this section.

2.03 SYSTEM DESCRIPTION

- A. Roofing System: Two ply cold applied mineral surfaced SBS modified bitumen system over specified adhered coverboard, fastened polyisocyanurate roof insulation, adhered air barrier to the metal decking and all related flashings.
- B. Roof Type R-1:
 - 1. Steel deck.
 - 2. Adhered air barrier
 - 3. Mechanically attached insulation.
 - 4. Adhered cover board
 - 5. Smooth SBS base sheet with mineral surfaced, SBS modified bitumen cap sheet
- C. Roof Type R-2:
 - 1. Steel deck.
 - 2. Adhered air barrier
 - 3. Mechanically attached insulation.
 - 4. Adhered cover board
 - 5. Smooth SBS base sheet with PVC cap sheet
 - 6. Pedestals & Pavers

2.04 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

Styrene-Butadiene-Styrene
Modified Bituminous
Membrane Roofing

2.05 PERFORMANCE REQUIREMENTS

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Fire-Test-Response Characteristics: Provide roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
 - 1. Exterior Fire-Test Exposure: UL, Class A, for application and slopes.

2.06 SUBMITTALS

- A. Product Data:
 - 1. SBS membrane and adhesive, base flashing and adhesives, insulation and fasteners.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other Work. Shop drawings shall be stamped "Approved" by roofing manufacturer.
 - 1. Insulation, including slopes. Indicate thickness and confirm curb and pad heights.
 - 2. Insulation board fastening patterns.
 - 3. Installation of Base Sheet and Cap Sheet.
 - 4. Base Sheet, PVC cap sheet, pedestals & pavers.
 - 5. Details showing interface with other systems specific to this project.
 - 6. Base flashings, cants, and membrane terminations.
- C. Samples for verification: For each primary component to be used in the roofing system and the manufacturer's current literature for each component as requested.
- D. Assurance/Control Submittals:
 - 1. Certificates: Manufacturer certificate that components and products as a system meet or exceed specified standards and complies with referenced standards.
 - 2. Manufacturer's certification letter acknowledging receipt of specifications, intent to issue warranty, and intent to perform specified field inspection and reports.
 - 3. Manufacturer's field reports: Submit the following reports directly to the project construction manager, with copy to others as requested.
 - a. Inspector Requirements & Qualifications: Engage an experienced technical inspector (minimum 5 years of roofing inspection experience), without any sales related functions, to perform daily job monitoring for this project. Inspector shall be specialized in inspecting roofing similar to that required for this Project; must be employed by the roofing system manufacturer to daily inspect the manufacturer's project and provide daily written reports to the Owner Representatives. The approved inspector must be certified as a Registered Roof Observer by the Roof Consultants Institute.
 - 1) Preparatory inspection.
 - 2) Initial inspection.
 - 3) Daily inspections.
 - 4) Final inspection.
- E. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install proposed roofing system with minimum of 5 years documented experience with proposed roof system manufacturer and 10 years documented experience with roofing systems similar to specified system.

- F. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with all requirements of this Section and the overall project requirements.
 - 1. Submit evidence of meeting performance requirements.
- G. Qualification Data: For Installer and manufacturer.
- H. Certifications:
 - 1. Prior to commencement of installation submit the following:
 - a. Certification from manufacturer of roofing materials that applicator complies with qualification requirements specified.
 - b. Written statement by manufacturer accepting the proposed use of roofing materials and methods as specified under Jobsite meeting and acknowledging review of the shop drawings.
 - 2. During Installation of Work: Daily on-site inspection and periodic installation reports by manufacturers technical representative accepting the ongoing work, indicating necessary corrections to work, and verifying completion of corrections.
 - 3. Prior to Acceptance of the Work: Written statement by manufacturer's technical representative stating that materials and workmanship have been provided in conformance with Contract Documents and material manufacturers requirements.
- I. Research/Evaluation Reports: For components of roofing system.
- J. Maintenance Data: For roofing system to include in maintenance manuals.
- K. Warranties: Copies of warranties specified in this Section.
- L. Project Closeout Reports: Provide a report upon delivery of the project warranty. This report to include:
 - 1. Project Specifications.
 - 2. Project Summary.
 - 3. Progress reports as a result of roof inspections.
 - 4. Job-site progress photos.
 - 5. Executed Contractor Guarantee
 - 6. Manufacturer warranty document
 - 7. Owners' manual describing maintenance and emergency repair.

2.07 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- B. Manufacturer Technical Inspector Requirements & Qualifications: Engage an experienced technical inspector, without any sales related functions, to perform daily job monitoring for this project. Inspector shall be specialized in inspecting roofing similar to that required for this Project; must be employed by the roofing system manufacturer to daily inspect the manufacturer's project and provide daily written reports to the Owner. The approved inspector must be certified as a Registered Roof Observer by the Roof Consultants Institute.
- C. Source Limitations: Obtain all roofing system components including but not limited to air barrier, insulation, fasteners, modified bitumen felts and adhesives, edging, coping, base flashing and adhesives, walkway products, fall protection materials and all miscellaneous adhesives from a single proposed roofing system manufacturer. All components shall be supplied and warranted by the proposed roof system manufacturer.
- D. Preinstallation Conference: Conduct conference at Project site. Comply with all specified project requirements. Review methods and procedures related to roofing system including, but not limited to, the following:

1. Meet with Owner, Architect, Owner's Representatives, Owner's insurer if applicable, testing and inspecting agency representative, roofing installer, roofing system manufacturer's representative, all subcontractors 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 will affect 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.

2.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

2.09 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

PART 2 - PRODUCTS

3.01 MANUFACTURERS

- A. The intent of this specification package is to ensure that a complete roof system comprising all roof system components needed for this project is furnished from a single roof system manufacturer.
 1. Basis-of Design System; The complete roofing system specified in this section is based on the following products manufactured by Tremco Corporation 3735 Green Road, Beachwood OH 44122, Phone (800) 562-2728 www.tremcoroofing.com. Provide specified materials or Owner approved equal.
 2. Substitutions: See Section 01 60 00-Product Requirements.

3.02 AIR BARRIER

- A. Self-Adhering Sheet Air Barrier: 40-mil- (1.0-mm-) thick, polyethylene film laminated to layer of rubberized asphalt adhesive; maximum permeance rating of 0.1 perm (6 ng/Pa x s x sq. m); cold-applied, with slip-resisting surface and release-paper backing.

3.03 SBS-MODIFIED ASPHALT-SHEET MATERIALS

- A. Roofing Membrane Base Ply Sheet: ASTM D 6163, Grade S, Type II, glass-fiber-reinforced, thermoplastic polyurethane(TPU), reactive enhanced terpolymer (RET and styrene butadiene styrene (SBS) modified asphalt sheet, smooth surfaced, with integrated RFID chip providing all production dating information, suitable for application specified.
- B. Roofing Membrane Cap Sheet: ASTM D 6163, Grade G, Type II, glass-fiber-reinforced, thermoplastic polyurethane(TPU), reactive enhanced terpolymer (RET and styrene butadiene styrene (SBS) modified asphalt sheet, smooth surfaced, with integrated RFID chip providing all production dating information, suitable for application specified
- C. SBS System Adhesive: Roofing system manufacturer's, one- or two-part, asbestos-free, cold-applied adhesive specially formulated for compatibility and use with roofing membrane.

3.04 BASE FLASHING SHEET MATERIALS

- A. Backer Sheet: ASTM D 6163, Grade S, Type II, glass-fiber-reinforced, thermoplastic polyurethane(TPU), reactive enhanced terpolymer (RET and styrene butadiene styrene (SBS) modified asphalt sheet, smooth surfaced, with integrated RFID chip providing all production dating information, suitable for application specified.
 - 1. Basis of Design Product: Tremco Powerply Endure 100 Smooth
- B. Flashing Sheet: ASTM D 6163, Grade G, Type II, glass-fiber-reinforced, thermoplastic polyurethane(TPU), reactive enhanced terpolymer (RET and styrene butadiene styrene (SBS) modified asphalt sheet, smooth surfaced, with integrated RFID chip providing all production dating information, suitable for application specified.
 - 1. Granule Color: White
 - 2. Basis of Design Product: Tremco Powerply Endure 100 FR
- C. SBS Flashing Adhesive: Roofing system manufacturer's, one- or two-part, asbestos-free, cold-applied adhesive specially formulated for compatibility and use with flashing sheets.
 - 1. Basis of Design Product: Tremco ELS Asphalt Mastic

3.05 AUXILIARY ROOFING MEMBRANE MATERIALS

- A. General: Auxiliary materials provided by primary roofing system manufacturer for intended use and compatible with roofing membrane.
- B. Paver Roof Area Cap Sheet: In lieu of ASTM D 6163, Type II, Grade G mineral surfaced cap sheet, utilize ASTM D 4344, Type IV PVC sheet membrane.
 - 1. Basis of Design Field Membrane Product: Tremco TPA FB Membrane
 - a. FB Membrane Adhesive: Tremco LR Adhesive
 - 2. Basis of Design Flashing Membrane Product: Tremco TPA Membrane
 - a. Flashing Membrane Adhesive: Tremco LV Bonding Adhesive
- C. Pedestals & Pavers: Lightweight (11 psf), Porcelain Tile Pavers and Pedestal System. Manufacturer standard color options, 24" x 24" x .75" nominal dimension.
 - 1. Basis of Design Product: Tremco Bison 2CM Pavers
 - a. Tremco Bison Paver Tray with Spline Fastening System
 - b. Tremco Bison Versadjust Adjustable Pedestals
- D. Primer: ASTM D 41, asphalt primer.
 - 1. Basis of Design Product: Tremco Tremprime LV

- E. Metal Flashing Sheet: Metal flashing sheet is specified in Division 7 Section "Sheet Metal Flashing and Trim."
- F. Miscellaneous Accessories: Provide miscellaneous accessories by roofing system manufacturer.

3.06 ROOF INSULATION

- A. General: Provide preformed roof insulation that comply with requirements and referenced standards, selected from primary roof system manufacturer's standard sizes and of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C1289, faced with insulation board on one major surface, as indicated below by type, and felt or glass-fiber mat facer on the other side. Thickness and slope as noted on drawings.
 - 1. 4' x 8' board size – mechanically attached configurations
 - 2. Basis of Design Product: Tremco Trisotech Insulation
- C. Recovery Board: Factory primed, ASTM C1177/C1177M, glass-mat, water-resistant gypsum substrate, 1/2 inch thick.
 - 1. 4' x 8' board size.
 - 2. Basis of Design Product: Tremco/GP Dens Deck Prime
- D. Provide preformed 1/2" per foot tapered saddles. Provide crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to the slopes as required to prevent ponding water. Provide as necessary additional sloped insulation to make smooth transitions to wood blocking.

3.07 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.
- C. Insulation Adhesive: Manufacturer's low VOC compliant, fluid applied urethane adhesive formulated to adhere to insulation and recover boards to substrate.
 - 1. Basis of Design Product: Tremco Low Rise Foam Insulation Adhesive
- D. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and as provided or recommended by the roofing system manufacturer.
 - 1. . Basis of Design Product: Tremco #12 or #14 fasteners with 3" steel plates

PART 3 - EXECUTION

4.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
 - 1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
 - 2. Verify that wood blocking and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - 3. Proceed with installation only after unsatisfactory conditions have been corrected.

4.02 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

4.03 AIR BARRIER INSTALLATION

- A. Self-Adhering Sheet Air Barrier: Prime steel deck substrate as required by manufacturer. Install self-adhering sheet over area to receive air barrier, side and end lapping each sheet a minimum of 3-1/2 inches and 6 inches, respectively. Seal laps by rolling.
- B. Completely seal air barrier at terminations, obstructions, and penetrations to prevent air movement into roofing system. Connect to wall air barrier system to create continuous air barrier system.

4.04 INSULATION INSTALLATION

- A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with roofing system manufacturer's written instructions for installing roof insulation.
- C. Cant Strips: Install and secure preformed 45-degree insulation cant strips at junctures of built-up roofing membrane system with vertical surfaces or angle changes greater than 45 degrees.
- D. D. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
 - 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- E. Install one or more layers of insulation under area of roofing to achieve thickness indicated. Where overall insulation thickness is 2.5 inches or greater, install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches in each direction.
- F. Sump insulation at roof drains so completed surface is flush and does not restrict flow of water.
- G. Mechanically Fastened Insulation: Install each layer of insulation and secure insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type at rate required for required wind uplift pressures.
 - 1. Apply adhesive to insulation at rate approved and tested by manufacturer to comply with windstorm requirements and immediately bond cover board to insulation substrate using cold, fluid-applied adhesive.

4.05 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations of ARMA/NRCA's "Quality Control Guidelines for the Application of Polymer Modified Bitumen Roofing."
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 - 1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement with joints and edges sealed.

2. Seal installed membrane with urethane mastic at penetrations and walls daily to prevent water from entering completed sections of roofing system.
 3. Complete terminations and base flashings and provide temporary seals to maintain daily watertight system.
 4. Remove and discard temporary seals where needed before beginning work on adjoining roofing.
- D. Substrate-Joint Penetrations: Prevent roofing adhesives from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

4.06 MINERAL SURFACED SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install base ply modified bituminous roofing membrane according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
1. Install in accordance with manufacturer written instructions to conform to required windstorm requirements.
 2. If recommended by manufacturer, unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
 3. Ensure membrane embedment into cold adhesive by rolling membrane with a 75# roller.
 4. Heat weld laps.
- B. Install finish ply modified bituminous roofing membrane according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
1. Adhere to substrate in a solid application of cold process roofing membrane adhesive.
 2. If recommended by manufacturer, unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
 3. Ensure membrane embedment into cold adhesive by rolling membrane with a 75# roller.
 4. Heat weld laps.
- C. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Completely bond and seal laps, leaving no voids.
1. Repair tears and voids in laps and lapped seams not completely sealed.
- D. Install roofing membrane sheets so side and end laps shed water.

4.07 SBS FLASHING AND STRIPPING INSTALLATION

- A. Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
1. Prime substrates with asphalt primer if required by roofing system manufacturer.
 2. Backer Sheet Application: Adhere backer sheet over flashing substrate and down onto roofing membrane in cold-applied adhesive.
 3. Flashing Sheet Application: Adhere flashing sheet to substrate in adhesive at rate required by roofing system manufacturer.
- B. Extend base flashing up walls, curbs or parapets a minimum of 8 inches above roofing membrane and 4 inches onto field of roofing membrane.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
1. Fasten flashing 8" o.c. and seal top termination of base flashing with flashing mastic and reinforcing membrane DAILY.
 2. Heat weld SBS laps and provide beauty cap on all corners.

4.08 PAVERED SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

- A. Install base ply modified bituminous roofing membrane according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
 - 1. Install in accordance with manufacturer written instructions to conform to required windstorm requirements.
 - 2. If recommended by manufacturer, unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
 - 3. Ensure membrane embedment into cold adhesive by rolling membrane with a 75# roller.
 - 4. Heat weld laps.
- B. Install PVC finish ply according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:
 - 1. Install adhesive in accordance with manufacturer written instructions to conform to required windstorm requirements.
 - 2. If recommended by manufacturer, unroll roofing membrane sheets and allow them to relax for minimum time period required by manufacturer.
 - 3. Ensure membrane embedment into adhesive by rolling membrane with a 75# roller.
 - 4. Heat weld laps.
- C. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Completely bond and seal laps, leaving no voids.
 - 1. Repair tears and voids in laps and lapped seams not completely sealed.

4.09 PVC FLASHING INSTALLATION

- A. Install base flashing over cant strips and other sloping and vertical surfaces, at roof edges, and at penetrations through roof, and secure to substrates according to roofing system manufacturer's written instructions and as follows:
 - 1. Flashing Sheet Application: Adhere flashing sheet to substrate in adhesive at rate required by roofing system manufacturer.
- B. Extend base flashing up walls, curbs or parapets a minimum of 8 inches above roofing membrane and 4 inches onto field of roofing membrane.
- C. Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.
 - 1. Fasten flashing 8" o.c. and seal top termination of base flashing DAILY.
 - 2. Heat weld laps and provide end caps on all corners.

4.10 PAVER INSTALLATION

- A. Determine horizontal elevation needed to maintain level paver installation course.
- B. Install pedestals in accordance with manufacturer's instructions.
- C. Install paver tray and pedestals in accordance with manufacturer's instructions and attach as required.

4.11 FIELD QUALITY CONTROL

- A. Manufacturer's Technical Representative: Technical Inspector Requirements & Qualifications: Engage an experienced technical inspector, to perform daily job monitoring for this project. Inspector shall be specialized in inspecting roofing similar to that required for this Project; must be employed by the roofing system manufacturer to daily inspect the manufacturer's project and provide daily written reports to the Owner.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Owner's representative.

1. Notify Owner's representative 48 hours in advance of date and time of inspection.
- C. Additional testing and inspecting, at Contractor's expense, will be performed if needed, to determine compliance of replaced or additional work with specified requirements.

4.12 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

4.13 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Warranty Period: Provide a minimum 30-year comprehensive, complete system warranty, inclusive, but not limited to all roofing systems, accessories, connections, tie-ins, and associated materials.
- C. Submit manufacturer's warranty in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period. At no additional cost, the Manufacturer shall provide performance warranty visits at years 2, 5, 10, 20 & 25 to inspect, clean the roofs and provide the Owner with a list of Owner required roof maintenance to ensure warranty continuity. Manufacturer shall provide a written report of each visit with photos and report documentation to the Owner through an online database that is maintained the entire warranty period and that is accessible from any computer. A single manufacturer shall provide all project roof system warranties.
 - 1 Warranty includes all roofing system components including roof membrane, base flashings, roofing membrane accessories, coverboard, roof insulation, insulation adhesives and fasteners, air barriers, miscellaneous roof system fasteners, sheet metal work, copings, fascia, wood nailers, cants and all other components of roofing system.
- D. Roofing Installer's Warranty: The Roofing Installer shall warrant all roofing work, including materials furnished by the Installer and all workmanship, against leaks, defects, and deficiencies for the specified Warranty Period. During the Warranty Period, the Roofing Installer shall, at no cost to the Owner, repair or replace defective materials and workmanship and perform all work necessary to maintain the roofing system in a complete, watertight condition. Warranty repairs shall include all labor, materials, equipment, temporary weather protection, and restoration of the roofing system required to return the roof to its original warranted condition.

This Warranty is made subject to the following terms and conditions:

1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
 - a. lightning;
 - b. Peak gust wind speeds exceeding the project design wind speed and applicable Kentucky building code. The roofing system shall remain warranted for all wind events up to the code required design wind speed.
 - c. fire;

- d. Failure of the structural roof deck substrate not caused or contributed to by the roofing contractor or roofing system. Normal thermal movement and anticipated structural deflection within design tolerances shall not void this warranty.
 - e. Defects in parapet walls, chimneys, skylights, vents, equipment supports, or other building components not furnished or installed as part of the roofing system and not within the roofing contractors' scope of work. This exclusion shall not apply to roof flashings, counter flashings, copings, edge metal, penetrations, transitions, or other waterproofing details furnished, installed, or warranted as a part of the roof system.
 - f. vapor condensation on bottom of roofing; and
 - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
 3. The manufacturer's recommended installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
 4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
 5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
 6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
 7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

END OF SECTION 07 52 16

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SECTION 07 54 23
THERMOPLASTIC POLYOLEFIN ROOFING

PART 1 GENERAL

2.01 SUMMARY

- A. This Section includes the following:
 - 1. Adhered membrane roofing system.
 - 2. Base flashing.
 - 3. Roof insulation
 - 4. Coverboard
 - 5. Warranty
- B. Related Documents: The Contract Documents, as defined in Section 011000 - Summary of Work, apply to the Work of this Section. Additional requirements and information necessary to complete the Work of this Section may be found in other documents.
- C. Related Sections include the following:
 - 1. Division 7 Section "Sheet Metal Flashing and Trim" for metal flashings, counterflashings, reglets, roof edge flashing, covered under the warranties and service agreement specified in this section.
 - 2. Division 7 Section "Manufactured Roof Specialties" for metal coping & fascia.

2.02 SYSTEM DESCRIPTION

- A. Roofing System: Adhered TPO single ply roof system over adhered gypsum recover board, mechanically attached tapered polyisocyanurate roof insulation to steel deck and all related flashings.

2.03 DEFINITIONS

- A. Roofing Terminology: Refer to ASTM D1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definition of terms related to roofing work in this Section.

2.04 REFERENCE STANDARDS

- A. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2023a.
- B. ASTM D1079 - Standard Terminology Relating to Roofing and Waterproofing; 2024.
- C. UL 790 - Standard for Standard Test Methods for Fire Tests of Roof Coverings; Current Edition, Including All Revisions.

2.05 PERFORMANCE REQUIREMENTS

- A. General: Provide installed roofing membrane and base flashings that remain watertight; do not permit the passage of water; and resist specified uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Fire-Test-Response Characteristics: Provide roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
 - 1. Exterior Fire-Test Exposure: UL 790, Class A for application and slopes.

2.06 SUBMITTALS

- A. Product Data:
 - 1. Single ply membrane and adhesive, base flashing and adhesives, insulation, cover board, insulation adhesives as requested.

- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details in compliance with Performance Requirements, and attachments to other Work.
 - 1. Base flashings, cants, and membrane terminations.
 - 2. Tapered insulation, including slopes.
 - 3. Crickets, saddles, and tapered edge strips, including slopes.
 - 4. Insulation fastening patterns.
- C. Samples for verification: For each primary component to be used in the roofing system and the manufacturer's current literature for each component as requested.
- D. Assurance/Control Submittals:
 - 1. Certificates: Manufacturer certificate that components and products as a system meet or exceed specified standards and complies with referenced standards.
 - 2. Manufacturer's certification letter acknowledging receipt of specifications, intent to issue warranty, and intent to perform specified field inspection and reports.
 - 3. Manufacturer's Field Reports: Submit the following reports directly to the project construction manager, with copy to others as requested.
 - a. Inspector Requirements & Qualifications: Engage an experienced technical inspector, to perform daily job monitoring for this project. Inspector shall be specialized in inspecting roofing similar to that required for this Project; must be employed by the roofing system manufacturer to daily inspect the manufacturer's project and provide daily written reports to the Owner Representatives. The approved inspector must be certified as a Registered Roof Observer by the Roof Consultants Institute.
 - 1) Preparatory inspection.
 - 2) Initial inspection.
 - 3) Daily inspections.
 - 4) Final inspection.
- E. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install proposed roofing system with minimum of 5 years documented experience with proposed roof system manufacturer and 10 years documented experience with roofing systems similar to specified system.
- F. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
 - 1. Submit evidence of meeting performance requirements.
- G. Qualification Data: For Installer and manufacturer.
- H. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of roofing system.
- I. Certifications:
 - 1. Prior to commencement of installation submit the following:
 - a. Certification from manufacturer of roofing materials that applicator complies with
 - 1) qualification requirements specified.
 - b. Written statement by manufacturer's technical representative accepting the proposed use of roofing materials and methods as specified under Jobsite meeting and acknowledging review of the shop drawings.
 - c. Written statement by manufacturer's technical representative accepting the substrate conditions onto which roofing system will be applied.
 - 2. During Installation of Work: Continuous on-site inspection and installation reports by manufacturers technical representative accepting the ongoing work, indicating necessary corrections to work, and verifying completion of corrections.
 - 3. Prior to Acceptance of the Work: Written statement by manufacturer's technical representative stating that materials and workmanship have been provided in conformance with Contract Documents and material manufacturers requirements.

- J. Research/Evaluation Reports: For components of roofing system.
- K. Maintenance Data: For roofing system to include in maintenance manuals.
- L. Warranties: Copies of warranties specified in this Section.
- M. Project Closeout Reports: Provide a report upon delivery of the project warranty. This report to include:
 - 1. Project Specifications.
 - 2. Project Summary.
 - 3. Progress reports as a result of roof inspections.
 - 4. Job-site progress photos.
 - 5. Executed Contractor Guarantee
 - 6. Manufacturer warranty document
 - 7. Owners' manual describing maintenance and emergency repair.

2.07 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's warranty.
- B. Manufacturer's Field Reports: Submit the following reports directly to the project construction manager, with copy to others as requested.
 - 1. Inspector Requirements & Qualifications: Engage an experienced technical inspector, to perform daily job monitoring for this project. Inspector shall be specialized in inspecting roofing similar to that required for this Project; must have a minimum of five years experience providing roof construction monitoring and shall have no manufacturer sales responsibilities; must be full time employee of the roofing system manufacturer to daily inspect the manufacturer's project and provide daily written reports to the Owner Representatives. The approved inspector must be certified as a Registered Roof Observer by the Roof Consultants Institute.
 - a. Preparatory inspection.
 - b. Initial inspection.
 - c. Daily inspections.
 - d. Final inspection.
- C. Source Limitations: Obtain all roofing membrane components for membrane roofing system including but not limited to cover board, insulation, fasteners, coping, fascia, roofing membrane and all miscellaneous adhesives from the proposed roofing membrane manufacturer. All components shall be supplied by the primary roof system manufacturer.
- D. Preinstallation Conference: Conduct conference at Project site. Comply with requirements in Division 1 Section "Project Management and Coordination." Review methods and procedures related to roofing system including, but not limited to, the following:
 - 1. Meet with Owner; Architect; Owner's insurer if applicable; testing and inspecting agency representative; roofing Installer; roofing system manufacturer's representative; deck 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 will affect 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.

2.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturers written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

2.09 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

2.10 WARRANTY

- A. Roof System Warranty: Submit manufacturer's warranty in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period. At no additional cost, the Manufacturer shall provide performance warranty visits at years 2, 5, 10, & 15 to inspect, clean the roofs and provide the Owner with a list of Owner required roof maintenance to ensure warranty continuity. Manufacture shall provide a written report of each visit with photos and report documentation to the Owner through an online database that is maintained the entire warranty period and that is accessible from any computer. A single manufacturer shall provide all project roof system warranties.
 1. Warranty includes all roofing system components including roof membrane components, base flashings, roofing membrane accessories and coatings, roof insulation, insulation adhesives and fasteners, miscellaneous roof system fasteners, sheet metal work, copings, fascia, wood nailers, cants and all other components of roofing system.
 - a. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty including all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, all sheet metal components and walkway products, for the following warranty period:
 1. Warranty Period: Two years from date of Substantial Completion.

PART 2 PRODUCTS

3.01 MANUFACTURERS

- A. The intent of this specification package is to ensure that a complete roof system comprising all roof system components needed for this project is furnished from a single roof system manufacturer. Basis-of Design System; The complete roofing system specified in this section is

based on the following products manufactured by Tremco Corporation 3735 Green Road,
Beachwood OH 44122, Phone (800) 562-2728 www.tremcoroofing.com.

3.02 THERMOPLASTIC POLYOLEFIN MEMBRANE ROOFING SYSTEM

- A. Thermoplastic Polyolefin (TPO) fabric-reinforced roof membrane sheet, 60 mils, conforming to ASTM D6878 and with the following additional performance property enhancements.
 - 1. Basis of Design System: Tremco TremPly TPO Single Ply Roof Membrane.
 - a. Color: White, Gray or Tan.

3.03 AUXILIARY MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
- B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as sheet membrane.
 - 1. Basis of Design Product: Tremply TPO 60 mil
- C. Bonding Adhesive: Manufacturer's standard approved bonding adhesive.
 - 1. Basis of Design Products:
 - a. Tremply Tremply TPO LV3(Low VOC) Adhesive
- D. Metal Termination Bars: Manufacturer's standard predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.
 - 1. Basis of Design Product: Tremco #1211 with Tremco 2" barbed steel plates.
- F. Miscellaneous Accessories: Provide pourable sealers, coated sheet metal flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, and other accessories as recommended by primary roofing system manufacturer.
 - 1. Basis of Design Product: Tremply TPO Flashing Accessories

3.04 ROOF INSULATION

- A. General: Provide preformed roof insulation and recovery boards by the proposed primary roof system manufacturer that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C1289, faced with insulation board on one major surface, as indicated below by type, and felt or glass-fiber mat facer on the other provided by primary roofing system manufacturer. Taper and thickness as noted on roof plan.
 - 1. Basis of Design Product: Tremco Trisotech Insulation
- C. Cover Board: ASTM C 1177, impact resistant, nonstructural, fiber reinforced gypsum panels, 1/2 inch, thick provided by primary roofing system manufacturer.
 - 1. Basis of Design Product: Tremco Dens Deck Prime
- D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

3.05 INSULATION ACCESSORIES

- A. General: Furnish roof insulation accessories recommended by manufacturer for intended use and compatible with membrane roofing.
- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and as provided by the roofing system manufacturer.

1. Basis of Design Product: Tremco 1211 Fasteners or #1410 Fasteners with Tremco 3" steel plates.
- C. Insulation & Recovery Board Adhesive: Manufacturer's 100% solids, urethane adhesive formulated to adhere to insulation and recover boards to substrate.
 1. Basis of Design Product:
 - a. Tremco Low Rise Foam Insulation Adhesive.

PART 3 EXECUTION

4.01 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:
 1. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 3. Proceed with installation only after unsatisfactory conditions have been corrected.

4.02 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- C. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

4.03 INSULATION INSTALLATION

- A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with roofing system manufacturer's written instructions for installing roof insulation.
- C. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch with insulation.
 1. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- D. Install one or more layers of insulation under area of roofing to achieve thickness indicated. Install one or more layers of insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.5 inches (or greater, install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 12 inches in each direction.
- E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.
- F. Mechanically Fastened Insulation (with adhered coverboard): Install each layer of insulation and then secure insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type at rate required.
 1. Install cover board insulation adhesive at rate recommended by primary roof system manufacturer and immediately bond cover board.

4.04 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane system according to roofing system manufacturer's written instructions and applicable recommendations of SPRI "Quality Control Guidelines for the Application of Single Ply Roofing."
- B. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.
- C. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.
 - 1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in roofing cement or hot roofing asphalt with joints and edges sealed.
 - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
 - 3. Remove and discard temporary seals before beginning work on adjoining roofing.

4.05 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Install roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
- B. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.
- C. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.
- D. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Apply to adhesive at rate and manner required by manufacturer. Roll membrane into adhesive. Do not apply adhesive to splice area of membrane.
- F. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.
- G. Apply membrane roofing with side laps shingled with slope of roof deck where possible.
- H. Welded Seams: Clean seam areas, overlap membrane roofing, and hot-air weld side and end laps of membrane roofing and sheet flashings according to manufacturer's written instructions to ensure a watertight seam installation.
- I. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
- J. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
- K. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.
- L. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

4.06 FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and immediately install flashing sheet. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with sheet flashing.

- D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

4.07 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

4.08 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion and submit report to Owner's representative.
 - 1. Notify Owner's representative 48 hours in advance of date and time of inspection.
- C. Repair or remove and replace components of membrane roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed if needed, to determine compliance of replaced or additional work with specified requirements.

4.09 PROTECTING AND CLEANING

- A. Protect membrane roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to architect and Owner.
- B. Correct deficiencies in or remove membrane roofing system that does not comply with requirements, repair substrates and repair or reinstall membrane roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

4.10 WARRANTY

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Roof System Warranty: Submit manufacturer's warranty in which manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period. At no additional cost, the Manufacturer shall provide performance warranty visits at years 2, 5, 10, & 15 to inspect, clean the roofs and provide the Owner with a list of Owner required roof maintenance to ensure warranty continuity. Manufacturer shall provide a written report of each visit with photos and report documentation to the Owner through an online database that is maintained the entire warranty period and that is accessible from any computer. A single manufacturer shall provide all project roof system warranties.
 - 1. Warranty includes all roofing system components including roof membrane components, base flashings, roofing membrane accessories and coatings, roof insulation, insulation adhesives and fasteners, miscellaneous roof system fasteners, sheet metal work, copings, fascia, wood nailers, cants and all other components of roofing system.
 - a. Warranty Period: 20 years from date of Substantial Completion.
- C. Special Project Warranty: Submit roofing Installer's warranty including all components of roofing system such as roofing membrane, base flashing, roof insulation, fasteners, cover boards,

substrate boards, all sheet metal components and walkway products, for the following warranty period:

1. Warranty Period: Two years from date of Substantial Completion.

END OF SECTION 07 54 23

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