LEWIS GROUP ARCHITECTS

Addendum

Project Number:	*Client / Project Title:*
LGA Project No. *25018*	**Roane County School District** **Midway High School Roof Replacement**
Addendum Number:	*Date:*
Addendum Two (02)	**Friday, August 29, 2025**

Addendum Compiled By:

Peter Giddings, Project Architect, Lewis Group Architects – pgiddings@lewisgroup.net

Overview:

To prime contractors and all others to whom drawings have been issued. Acknowledge receipt of this Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification. This addendum forms a part of the Contract Documents dated 8/15/2025.

Prior Addenda:

Addendum 01- 08/26/2025

This addendum supplements and modifies the Contract Documents as follows:

QUESTIONS

A. Please clarify if the needed wood nailers should be F.R.T. or just pressure treated. Both are referenced in the specs.
Answer: All new wood to be F.R.T.

B. In places where the fascia board is rotting away does this need to be F.R.T. or just pressure treated?
Answer: All new wood to be F.R.T per details on Sheet A5.21.

C. Clarify the roofing system: 07 54 23-5 2.2C&D indicated 2 layers of base Iso mechanically attached, a single layer of cover board adhered, with a fully adhered membrane. Installation spec 07 54 23-8&9 and drawing details for each type of deck on the roof vary significantly from this base design.
Answer: See attached for revised Specification Section 07 54 23. Intent is detailed on 7/A5.21. Tapered board to be located between uniform thickness board and coverboard.

D. Clarify on the Retrofit over metal roof: Specs indicate a mechanically attached roof membrane, however the drawing detail shows both mechanical and fully adhered.
Answer: See attached for revised Sheet A5.11 with revised detail 4/A5.11. Intent is to mechanically attach the retrofit

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system to the existing metal roof and heat-weld the laps to deliver a monolithic surface.

E. Lastly, does the requested roof access ladders need to have any specific coatings, paint, or a set of specifications to follow.
Answer: See attached Specification Section 05 51 33.

CHANGES TO THE DRAWINGS

A. Sheet A5.11, ROOF PLAN AND NOTES, dated 08/15/2025.
   1. Remove Sheet A5.11 dated 08/15/2025 in its entirety and insert entire revised Sheet A5.11 dated 8/29/2025.
   2. Revised Roof Plan to show where soffit renovations are located. Added Keynote 531 to address the soffit renovations.
   3. Revised detail 4/A5.11.
   4. Added General Notes 8, 9, and 10.

B. Sheet A5.21, ROOF DETAILS, dated 08/15/2025.
   1. Remove Sheet A5.21 dated 08/15/2025 in its entirety and insert entire revised Sheet A5.21 dated 8/29/2025.
   2. Revised detail 11/A5.21.
   3. Revised detail 12/A5.21.
   4. Revised detail 13/A5.21.

CHANGES TO THE SPECIFICATIONS

A. Specification Section 00 01 10, TABLE OF CONTENTS, dated 08/15/2025.
   1. Remove Specification Section 00 01 10 dated 08/15/2025 in its entirety and insert entire revised Specification Section 00 01 10 dated 8/29/2025.
   2. Added Specification Section 05 51 33 to the Table of Contents.

B. Specification Section 05 51 33, FIXED VERTICAL LADDERS, dated 08/15/2025.
   1. Insert entire new Specification Section 05 51 33 dated 8/29/2025.

C. Specification Section 07 54 23, THERMOPLASTIC MEMBRANE ROOFING, dated 08/15/2025.
   1. Remove Specification Section 07 54 23 dated 08/15/2025 in its entirety and insert entire revised Specification Section 07 54 23 dated 8/29/2025.
   2. Revised Section 1.8 to add the new note ‘A’. All other notes advanced one letter.
   3. Revised Section 2.2, Subsection C and D as indicated.
   4. Revised Section 3.3, Subsection C, Item 1b as indicated.
   5. Revised Section 3.4 to add the new note ‘A’. All other notes advanced one letter.

ATTACHMENTS
Specification Sections: 3

Drawing Sheets: 2

END OF ADDENDUM / ATTACHMENTS FOLLOW

SECTION 00 01 10 - TABLE OF CONTENTS

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

DIVISION 02 - EXISTING CONDITIONS

DIVISION 03 - CONCRETE

Not Used

SECTION 05 51 33 - FIXED VERTICAL LADDERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Heavy duty fixed vertical ladders

B. Related Sections
1. Section 00 63 25 - Substitution Request Form
2. Section 01 25 00 - Substitution Procedures
3. Section 01 33 00 - Submittal Procedures
4. Section 01 60 00 - Product Requirements

1.2 REFERENCES

A. ANSI A14.3

B. OSHA 1910.23

C. OSHA 1910.28

D. OSHA 1910.29

1.3 SUBMITTALS

A. Submit under provisions of Section 01 33 00.

B. Manufacturer's data sheets on each product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Shop Drawings: Plan and section of ladder installation.

1.4 QUALITY ASSURANCE

A. Take field measurements prior to fabrication. Record field measurements on Shop Drawings

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Store products inside under cover until installation. If stored outside, store under a tarp or suitable cover.

1.6 WARRANTY

A. Limited Warranty: Five years against defective material and workmanship, covering parts only, no labor or freight. Defective parts, if deemed so by the manufacturer, will be replaced at no charge, freight excluded, upon inspection at manufacturer's plant which warrants same.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturer: Precision Ladders, LLC,

Morristown, Tennessee 37816-2279

Telephone: 800-225-7814

www.PrecisionLadders.com

B. Requests for substitutions will be considered in accordance with the provisions of Section 00 63 25, 01 25 00, and 01 60 00.

2.2 ALUMINUM FIXED VERTICAL LADDER

A. Provide Model Components:
1. Ladder Stringer: 2-1/2-inch by 1-1/16-inch by 1/8-inch (64 mm by 27 mm by 3 mm) extruded 6005-T5 aluminum channel. Pitch: 90 degrees.
2. Ladder Tread: 2-1/4-inch by 3/4-inch by 1/4-inch (57 mm by 19 mm by 6 mm) extruded 6005-T5 aluminum with deeply serrated top surface.
3. Ladder Mounting Bracket: 8-1/2-inch by 2-inch by 3-inch by 1/4-inch thick (216 mm by 51 mm by 76 mm by 6 mm) aluminum angle. Standard mill finish on aluminum ladders.
4. Capacity: Unit shall support a 1,500 lb (680 kg) loading without failure.
5. Walk-Thru:
    a. Handrails: 1-1/4-inch (32 mm) aluminum square tube with rounded edges.
    b. Mounting Brackets: 4-inch by 4-inch by 1/4-inch (102 mm by 102 mm by 6 mm) aluminum.
    c. Side Rails: 42-inch (1067 mm) side rail extension for through ladder exits.
6. Rest Platform:
    a. Bar grating.
    b. Platform Size: 30” inches by 48 inches (762 mm by 1219 mm) standard.
    c. Toe Boards. 6005 T-5 aluminum.
    d. Handrails: 1-1/4-inch (32 mm) aluminum square tube 42-inches (1067 mm) high.

2.3 FABRICATION

A. Completely fabricate ladder ready for installation before shipment to the site.

PART 3 - EXECUTION

3.1 EXAMINATION

A. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

B. Examine materials upon arrival at site. Notify the carrier and manufacturer of any damage.

3.2 INSTALLATION

A. Install in accordance with approved submittals.

3.3 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

3.4 SCHEDULE

A. Provide the following ladder as manufactured by Precision Ladders, LLC.
1. Model FL-XX Fixed Ladder

END OF SECTION

SECTION 07 54 23 - THERMOPLASTIC MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Full removal to deck of existing roof layers including insulation and roof accessories.
2. Replacing roof with fully adhered thermoplastic roofing membrane
3. Insulation, flat and tapered.
4. Flashings.
5. Roofing stack boots
6. Roofing expansion joints
7. Walkway pads.

B. Related Sections
1. Section 00 63 25 - Substitution Request Form
2. Section 01 33 00 - Submittal Procedures
3. Section 01 40 00 - Quality Requirements
4. Section 01 63 00 - Substitution Procedures
5. Section 06 10 53 - Miscellaneous Carpentry
6. Section 07 62 00 - Sheet Metal Flashing and Trim
7. Section 07 71 00 - Roof Specialties
8. Section 07 72 00 - Roof Accessories
9. Section 07 90 00 - Sealants

1.2 REFERENCE STANDARDS

A. American Society for Testing Materials (ASTM)
1. ASTM C1177/C1177M - Standard Specification for Glass Mat Gypsum Substrate for Use as Sheathing
2. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board
3. ASTM D6878/D6878M - Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing

B. Factory Mutual Global
1. FM DS 1-28 - Wind Design
2. 4450 Class 1 Insulated Steel Deck Roofs
3. 4470 Single-Ply, Polymer -Modified Bitumen Sheet, Built Up Roof (BUR) and Liquid Applied Roof Assemblies for Use in Class 1 And Noncombustible Roof Deck Construction

C. National Roofing Contractors Association (NCRA)
1. NRCA (RM) - The NRCA Roofing Manual
2. NRCA (WM) - The NRCA Waterproofing Manual

1.3 PERFORMANCE REQUIREMENTS

A. Construct the roof to ensure water is removed completely within 48 hours.

B. FMG Listing: Provide roofing membrane, base flashings, and component materials that comply with requirements in FMG 4450 and FMG 4470.
   1. Fire/Windstorm Classification: Class 1A-90
   2. Hail Resistance: SH

1.4 ADMINISTRATIVE REQUIREMENTS

A. Preinstallation Meeting: Convene one week before starting work of this section.
   1. Review preparation and installation procedures and coordinating and scheduling required with related work.
   2. Contractor, its project manager, job superintendent and all major subcontractors shall be present. Owner’s representative, Architect and Engineer will be present.

1.5 SUBMITTALS

A. Refer to Section 01 33 00 for submittal procedures.

B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, surfacing, and fasteners.

C. Samples for Verification: Submit two samples 6 by 6 inches in size illustrating insulation.

D. Shop Drawings:
   1. Submit drawings that indicate joint or termination detail conditions and conditions of interface with other materials.
   2. Submit a detailed tapered insulation plan.
   3. Submit detailed drawing of custom details.

E. Manufacturer's Installation Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.

F. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.

G. Manufacturer's Qualification Statement.

H. Manufacturer's Field Reports: Indicate procedures followed, ambient temperatures, humidity, wind velocity during application, and supplementary instructions given.

I. Installer's Qualification Statement

J. Testing Firm's Qualification Statement

K. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

1.6 QUALITY ASSURANCE

A. Perform work in accordance with NRCA Roofing and Waterproofing Manual, SMACNA, manufacturer's recommendations and the specifications.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with a minimum of five years of documented experience.

C. Installer Qualifications: Company specializing in performing the work of this section with at least five years of documented experience.
   1. Approved by roof system manufacturer.

D. Applicator for PMMA liquid flashing to have minimum two years successful experience with the product as specified.

E. Fire-Test Characteristics: Provide membrane roofing materials that have been tested according to the following:
   1. Exterior Fire-Test Exposure: Class A ANSI/UL 790
   2. Fire-Resistance Ratings: ASTM E 119

F. Pre-Installation Conference: Conduct conference two weeks before the roofing is scheduled to begin. Invite the Owner, Architect, and roof membrane Manufacturer’s Product Representative, and manufacturer representative for roof insulation, and other affected trades.
   Review the following topics:
   1. Structural loading limitations of roof deck during and after roofing.
   2. Base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs,
   3. Temporary protection requirements for roofing system during and after installation.
   4. Roof observation and repair procedures after roofing installation.
   5. Schedule
   6. Weather conditions
   7. Long lead items
   8. Product delays
   9. Manpower and Equipment

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in manufacturer's original containers, dry and undamaged, with seals and labels intact.

B. Store materials in weather protected environment, clear of ground and moisture.

C. Ensure storage and staging of materials does not exceed static and dynamic load-bearing capacities of roof decking.

D. Protect foam insulation from direct exposure to sunlight.

E. Roof insulation must be stored away from all sources of ignition and excessively high temperatures.

F. Any insulation materials found to be wet or have been wet may not be used on the Project. They must be removed from the jobsite and replaced with acceptable materials at no cost to the Owner or delay of the Project.

1.8 FIELD CONDITIONS

A. Prior to roof removal and demolition activities, the Contractor is required to water test all existing roof drains, and/or underground drainage systems and notify the Architect if any are found to be obstructed or restricted. Proceeding with roof removal activity shall indicate Contractor's acceptance that all drain lines are clear and free flowing.

B. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

C. Do not apply roofing membrane during unsuitable weather per Manufacturer's requirements.

D. Do not apply the roofing membrane when ambient temperature is below 40ºF.

E. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

F. Schedule applications so that no partially completed sections of roof are left exposed at end of workday.

1.9 WARRANTY

A. See Section 01 77 00 - Project Closeout for additional warranty requirements.

B. Correct defective work prior to Date of Substantial Completion.

C. System Warranty: Provide manufacturer's no dollar limit (NDL) system warranty.
   1. Warranty Term: 20 years.
   2. Warranty shall include all materials and workmanship installed by the approved Installer without exceptions for non-compliant materials, techniques, or details.
   3. The Roofing Contractor and Manufacturer shall be jointly and severally responsible during the initial two (2) year period; and if the Roofing Contractor is unable or unwilling to perform warranty repairs, the Manufacturer shall be fully responsible. Thereafter, for the full term of the

Warranty, the Manufacturer shall be fully responsible for all materials and workmanship by the Roofing Contractor.

4. Exceptions are not Permitted:
   a. Damage due to roof traffic.

D. Roof System Installer Warranty: The roof system installer shall warrant for a minimum period of two (2) years from the Date of Substantial Completion that the roof system, as installed, is free from defects in materials and installation workmanship, to include the roof membrane, flashing, insulation, accessories, attachments, and sheet metal installation integral to a complete watertight roof system assembly. The roof system installer is responsible for correction of defective workmanship and replacement of damaged and affected materials. The roof system installer is jointly and severally responsible with the Roof System Manufacturer for all costs associated with the repair or replacement work during the initial two-year period.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Thermoplastic Polyolefin (TPO) Membrane Roofing Materials:
   1. GAF; Everguard TPO: www.gaf.com
   2. Carlisle SynTec; Sure-Weld TPO: www.carlisle-syntec.com.
   3. Holcim Elevate; UltraPly TPO: www.holcimelevate.com.
   4. Johns Manville; JM TPO: www.jm.com.

B. Insulation
   1. GAF; EnergyGuard ISO & ISO HD
   2. Carlisle SynTec; SecurShield Insulation Polyiso: www.carlisle-syntec.com.
   3. Holcim Elevate; Isogard GL & Isogard HD: www.holcimelevate.com.
   4. Johns Manville; Flat & Tapered ENGRY 3: www.jm.com.

C. Liquid Applied Flashing System - Seamless, layered, fleece reinforced, catalyzed polymethyl methacrylate (PMMA) resin; approved for use with specified roof system.
   1. Polymethyl Methacrylate Flashing Membrane (PMMA) Flashing Membrane
      a. Rapid curing, polymethyl methacrylate (PMMA) liquid resin with an embedded polyester reinforcement fabric used for monolithic waterproofing flashing membranes.
         1) VOC content: 4.2 g/L
         2) To be selected by Architect
      b. Products and manufacturers which may be incorporated into the work are:
         1) Siplast Parapro 123 Flashing System (Basis of Design)

D. Substitutions: Under provisions of Section 01 63 00.

2.2 ROOFING - UNBALLASTED APPLICATIONS

A. Thermoplastic Membrane Roofing, Single ply membrane, fully adhered, over insulation.

B. Roofing Assembly Requirements:
1. Insulation Thermal Value (R), minimum: R-30 per IECC; provide insulation of thickness required.

C. Acceptable Insulation Types - Constant Thickness Application:
1. Minimum 2 layers of polyisocyanurate board.
2. Over metal deck: Mechanically fasten bottom layer of polyisocyanurate board. Adhere top layer of polyisocyanurate board and cover with single layer of adhered high density polyisocyanurate board.
3. Over tectum deck: Mechanically fasten vented base sheet to tectum deck. Adhere both layers of polyisocyanurate board and cover with single layer of adhered high density polyisocyanurate board.

D. Acceptable Insulation Types - Tapered Application:
1. Over metal deck: Uniform thickness polyisocyanurate board per 2.2C.2 covered with adhered tapered polyisocyanurate board and single layer of adhered high density polyisocyanurate board.
2. Over tectum deck: Uniform thickness polyisocyanurate board per 2.2C.3 covered with adhered tapered polyisocyanurate board and single layer of adhered high density polyisocyanurate board.

2.3 MEMBRANE ROOFING AND ASSOCIATED MATERIALS

A. Membrane Roofing Materials:
1. TPO: Thermoplastic polyolefin (TPO) complying with ASTM D6878/D6878M, sheet contains reinforcing fabrics or scrims.
a. Thickness: 60 mil, 0.060-inch, nominal.
2. Sheet Width: Factory fabricated into largest sheets possible.
3. Color: White.

B. Seaming Materials: As recommended by membrane manufacturer.

C. Membrane Fasteners: As recommended and approved by membrane manufacturer.

D. Flexible Flashing Material: Same material as membrane.

2.4 INSULATION

A. Polyisocyanurate Board Insulation: Rigid cellular foam, complying with ASTM C1289, Type I, Class I, kraft paper both major faces and with the following characteristics:
1. Compressive Strength: 20 psi

2. Board Size: 48 by 96 inch.
3. Tapered Board: Slope as indicated; minimum thickness 1/2 inch; fabricate of fewest layers possible.
4. Thermal Resistance: Minimum R-value of R-30 as required by 2018 IECC. The Project assumes a typical 5.2-inch thickness.

2.5 COVERBOARD

A. High Density Polyisocyanurate Cover Board: Rigid cellular foam, complying with ASTM C1289, Type II, Class 4, polymer bonded glass fiber mat both faces and with the following characteristics:
   1. Compressive Strength: 80 psi
   2. Board Size: 48 by 48 inch or 48 by 96 inch.
   3. Thermal Resistance: Minimum R-value of R-2.5 per 0.5”.

2.6 ACCESSORIES

A. Stack Boots: Prefabricated flexible boot and collar for pipe stacks through membrane; same material as membrane.

B. Insulation Joint Tape: Glass fiber reinforced type as recommended by insulation manufacturer, compatible with roofing materials; 6 inches wide; self-adhering.

C. Insulation Fasteners: Appropriate for the purpose intended and approved by roofing manufacturer.
   1. Length as required for thickness of insulation material and penetration of deck substrate with metal washers.

D. Membrane Adhesive: As recommended by membrane manufacturer.

E. Surface Conditioner for Adhesives: Compatible with membrane and adhesives.

F. Thinners and Cleaners: As recommended by adhesive manufacturer, compatible with membrane.

G. Insulation Adhesive: As recommended by insulation manufacturer.

H. Sealants: As recommended by membrane manufacturer.

I. Walkway Pads: Suitable for maintenance traffic, contrasting color or otherwise visually distinctive from roof membrane.
   1. Composition: Roofing membrane manufacturer's standard.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that surfaces and site conditions are ready to receive work.

B. Verify deck is supported and secure.

C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.

D. Verify deck surfaces are dry and free of snow or ice.

E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and nailing strips are in place.

F. Verify proper function of drainage systems. Beginning work indicates acceptance of existing conditions as properly functioning.

3.2 INSTALLATION

A. Perform work in accordance with manufacturer's instructions, NRCA (RM), and NRCA (WM) applicable requirements.

B. Do not apply roofing membrane during unsuitable weather per Manufacturer’s requirements.

C. Do not apply roofing membrane when ambient temperature is outside the temperature range recommended by manufacturer.

D. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.

E. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.

F. Coordinate this work with installation of associated counterflashings installed by other sections as work of this section proceeds.

G. 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.

H. Install night seal at end of each workday or when rain is forecast. Provide temporary seals to prevent water from entering completed sections of roofing system. Ensure stagger and offset of underlying insulation to prevent thermal breaks. Remove and discard temporary seals before beginning work on adjoining roofing.

3.3 INSTALLATION - INSULATION, UNDER MEMBRANE

A. Install vapor retarder to deck surface with adhesive in accordance with manufacturer's instructions.
   1. Extend vapor retarder under cant strips and blocking to deck edge.
   2. Install flexible flashing from vapor retarder to air seal material of wall construction, lap and seal to provide continuity of the air barrier plane.

Exception: If the roof system manufacturer does not require the vapor retarder for the new roof system warranty, the vapor retarder can be excluded from the roof system.

B. Ensure vapor retarder is clean and dry, continuous, and ready for application of insulation.

C. Attachment of Insulation:
   1. Over existing metal deck:
      a. Mechanically fasten first layer of insulation to deck in accordance with roofing manufacturer's instructions.
      b. Embed second layer if insulation into full bed of adhesive in accordance with roofing and insulation manufacturers' instructions.
      c. Embed coverboard of insulation into full bed of adhesive in accordance with roofing and insulation manufacturers' instructions.
   2. Over existing tectum:
      a. Mechanically fasten vented base sheet to tectum.
      b. Embed both layers of insulation to vented base sheet into full bed of adhesive in accordance with roofing and insulation manufacturers' instructions
      c. Embed coverboard of insulation into full bed of adhesive in accordance with roofing and insulation manufacturers' instructions.

D. Lay subsequent layers of insulation with joints staggered minimum 6 inches from joints of preceding layer.

E. Place tapered insulation to the required slope pattern in accordance with manufacturer's instructions.

F. On metal deck, place boards parallel to flutes with insulation board edges bearing on deck flutes.

G. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.

H. At roof drains, use tapered boards to slope down to roof drains over a distance of 24 inches.

I. Insulation attachment pattern to increase at perimeters and corners per FM1-28 and FM1-29. Perimeter and corner to be defined no less than 4’-0”. This applies to inside and outside corners.

J. Verify proper drainage of insulation composite prior to applications of membrane. Ponding water is not acceptable. Water must drain within 48 hours.

K. Do not install more insulation than what can be covered with membrane in same day.

3.4 INSTALLATION - MEMBRANE

A. Prior to installation of the roof membrane, the Contractor is required to verify that adequate and proper drainage has been provided. Ponding will not be accepted.

B. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.

C. Shingle joints on sloped substrate in direction of drainage.

D. Fully Adhered Application: Apply adhesive to substrate at rate of manufacturer recommended gal/square. Fully embed membrane in adhesive except in areas directly over or within 3 inches of expansion joints. Fully adhere one roll before proceeding to adjacent rolls.

E. Overlap edges and ends and seal seams by contact adhesive, minimum 3 inches. Seal permanently waterproof. Install uniform bead of sealant to joint edge.

F. At intersections with vertical surfaces:
1. Extend membrane over cant strips and up a minimum of 4 inches onto vertical surfaces.
2. Fully adhere flexible flashing over membrane and up to nailing strips.

G. Around roof penetrations, seal flanges and flashings with flexible flashing.

H. Install roofing expansion joints where indicated. Make joints watertight.

I. Coordinate installation of roof drains and sumps and related flashings.

J. Extend membrane under coping or gravel stop minimum 1” below outside face of nailer.

3.5 INSTALLATION - MEMBRANE RETROFIT OVER METAL ROOF

A. PREPARATION
1. Suitable roofs for recover shall be free of dust, dirt, debris, and any contaminants that may adversely affect the performance of the new roof. Areas of substantial deck deflection or membrane imperfections shall be corrected prior to installing any new roofing.
2. All applicable code requirements must be met for recover over an existing roofing system.
3. Pull tests must be performed by roof fastener manufacturer.
4. It is the responsibility of the roofing contractor to determine the fitness of an existing metal panel roof system that will be serving as a substrate for a specific roofing system installation.

B. INSTALLATION

1. Flute Fill: Fill all flutes with a loose applied base layer of insulation. Insulation must be of equal height as metal ribs, seams or flutes to allow for subsequent layers to be applied without interference. Minimal fastening should be performed to avoid movement of the boards
2. Upper Layers: Mechanically fasten upper layers of insulation using fasteners specifically designed and sized for fastening roof insulation to specified deck.
3. Install cover board over insulation with joints staggered from joints of insulation in accordance with manufacturer's instructions.
4. Install membrane and flashings in accordance with roofing system manufacturer's instructions.
5. Mechanically Attached Membranes: Roll membrane out perpendicular to metal deck ribs.
6. Accurately align roof membrane and maintain uniform side and end laps of minimum dimensions required by manufacturer. Shingle joints on sloped substrates in direction of drainage where possible.
7. Install membrane and mechanical attachment devices in accordance with manufacturer's instructions. Attach securely at terminations, penetrations, and perimeter of roofing.
8. Seams: Clean seam areas, overlap roof membrane, and hot-air weld side and end laps of roof membrane and sheet flashings. Test lap edges with probe to verify seam weld continuity in accordance with manufacturer’s technical bulletins.
9. Extend membrane under edge metal system and secure to outside face of wall.
10. Around roof penetrations, roof edges, seal flanges and flashings with flexible flashing.

3.6 FIELD QUALITY CONTROL

A. Owner will provide testing services in accordance with Section 01 40 00 - Quality Requirements. Contractor to provide temporary construction and materials for testing.

B. Provide daily on-site attendance of roofing and insulation manufacturer's representative during installation of this work.

C. Submit Manufacturer’s Representative detailed report of conditions to the Architect within 24 hours. Document weather, temperature highs and lows, manpower, and equipment.

3.7 CLEANING

A. In areas where finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and comply with their documented instructions.

B. Repair or replace defaced or damaged finishes caused by work of this section.

D. Remove demolished materials from the site; dispose in legal manner.

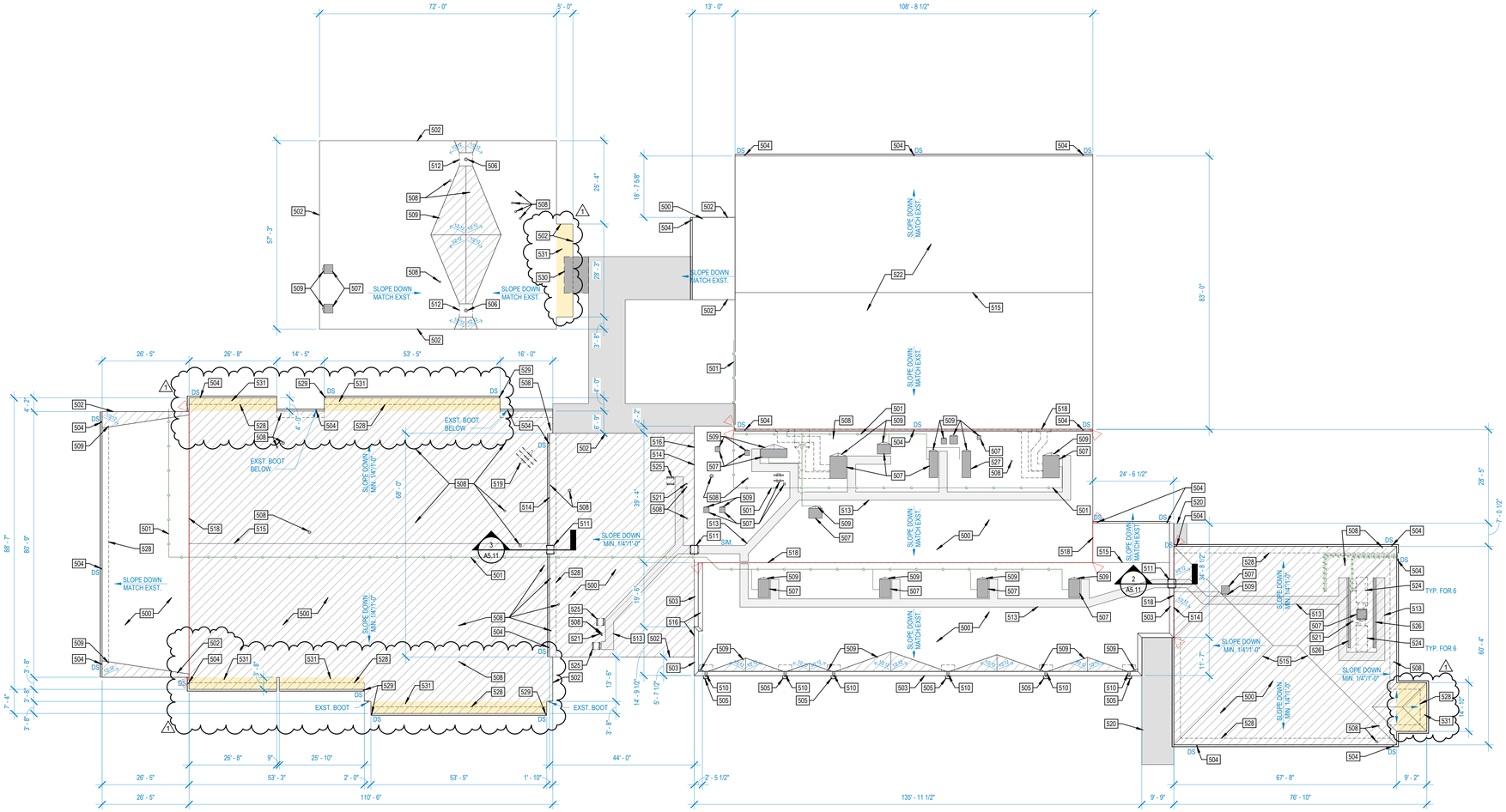
3.8 PROTECTION

A. Protect installed roofing and flashings from construction operations.

B. Where traffic must continue over finished roof membrane, protect surfaces using durable materials.

C. Correct deficiencies in work in accordance with guarantee requirements. Repair or replace defaced or damaged finishes caused by work of this section.

END OF SECTION



ROOF PLAN AND NOTES

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

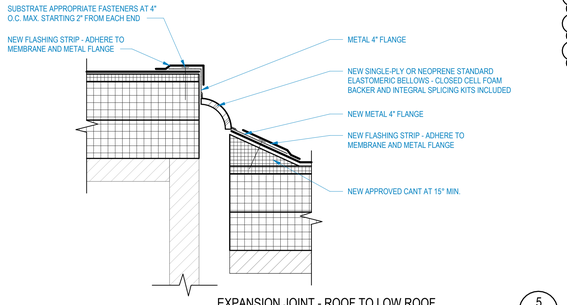
1 A5.11

GENERAL ROOF PLAN NOTES

1. REMOVE EXISTING ROOF MEMBRANE OR OTHER ROOFING MATERIAL, INSULATION, AND OTHER ROOFING ACCESSORIES TO EXISTING DECK OR SUBSTRATE. INSPECT THE EXISTING DECK CONDITION FOR MOISTURE AND/OR STRUCTURAL FAILURE. NOTIFY ARCHITECT IMMEDIATELY AND DOCUMENT CONDITIONS. INSTALL NEW ROOF MEMBRANE OVER 1/2" HD COVERBOARD OVER NEW RIGID INSULATION OVER EXISTING DECK. ANCHOR ROOFING AND INSULATION PER MANUFACTURER'S RECOMMENDATIONS. TARGET AVERAGE R-VALUE OF R-30 PER IECC 2018.
2. REMOVE EXISTING HVAC UNITS - FLASH PER ROOFING MANUFACTURER'S STANDARD DETAILS BEFORE REINSTALLING HVAC EQUIPMENT. PROVIDE CRICKETS AS SHOWN ON THE ROOF PLAN. PROVIDE CURB EXTENSIONS AS REQUIRED TO ACHIEVE 8" MINIMUM HEIGHT ABOVE FINISH ROOF SURFACE. CONFIRM PROPER WEATHERTIGHTNESS IS ACHIEVED.
3. FIELD VERIFY ROOF DRAIN SIZES AND PIPING CONTINUATION.
4. FLASH, COUNTERFLASH, AND SEAL ALL PENETRATIONS PER STANDARD WORKMANLIKE PRACTICE AND ALL ROOF MANUFACTURER'S RECOMMENDATIONS AND STANDARD DETAILS.
5. DETAILS SHOWN ARE REPRESENTATIVE IN NATURE AND SHALL BE REVISED AS REQUIRED BY ROOFING MANUFACTURER AS TO ACHIEVE FULLY SPECIFIED WARRANTY - SUBMIT REVISIONS TO ARCHITECT FOR APPROVAL.
6. CONTRACTOR TO REPLACE MISSING OR BROKEN ROOF DRAIN COVERS.
7. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS, PENETRATIONS, AND DIMENSIONS. IF CONDITIONS ARE PRESENT THAT ARE NOT SHOWN ON PLANS, TREAT IN SIMILAR MANNER AS DETAILS SHOWN.
8. CONTRACTOR SHALL PROVIDE AND INSTALL CONDENSATE DRAINS FROM EACH ROOFTOP HVAC UNIT WHICH HAS AN EXTERNAL CONDENSATE DISCHARGE ONTO THE ROOF SURFACE. EACH DRAIN SHALL EXTEND TO THE NEAREST PRIMARY ROOF DRAIN OR OFF THE ROOF SURFACE.
9. CONTRACTOR TO PROVIDE SPLASHPANS WHERE A DOWNSPOUT DISCHARGES ONTO A ROOF SURFACE. CONTRACTOR TO PROVIDE SPLASHBLOCKS WHERE A DOWNSPOUT DISCHARGES AT GRADE. CONTRACTOR TO FILL AND COMPACT WHERE EXISTING DOWNSPOUTS HAVE ERODED A DIVET AT GRADE.
10. CONTRACTOR TO PAINT ALL GAS LINES SAFETY YELLOW. THIS INCLUDED ANY GAS LINE ONE THE ROOF OR ON THE EXTERIOR WALLS.

ROOF LEGEND

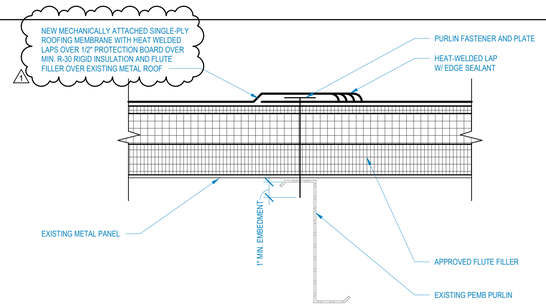
- FLAT INSULATION OVER SLOPED STRUCTURE
- NEW TAPERED INSULATION OVER EXISTING FLAT STRUCTURE
- N.I.C.
- BUILDING EXPANSION JOINT



EXPANSION JOINT - ROOF TO LOW ROOF

SCALE: 3" = 1'-0"

5 A5.11

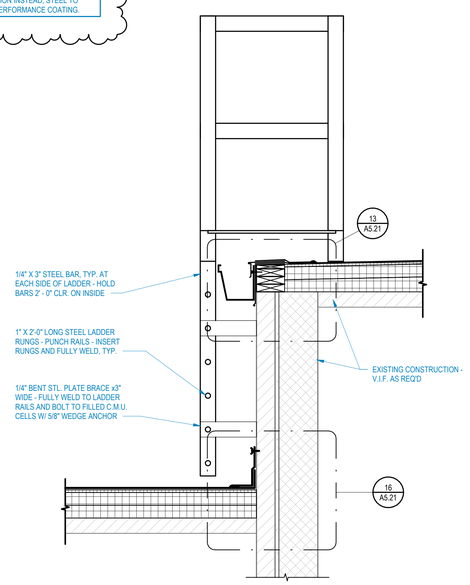


TPO RETROFIT DETAIL

SCALE: 3" = 1'-0"

4 A5.11

NOTE: BASIS OF DESIGN IS MILL FINISH ALUMINUM BY PRECISION LADDERS. IF USING STEEL FABRICATION INSTEAD, STEEL TO RECEIVE HIGH-PERFORMANCE COATING.

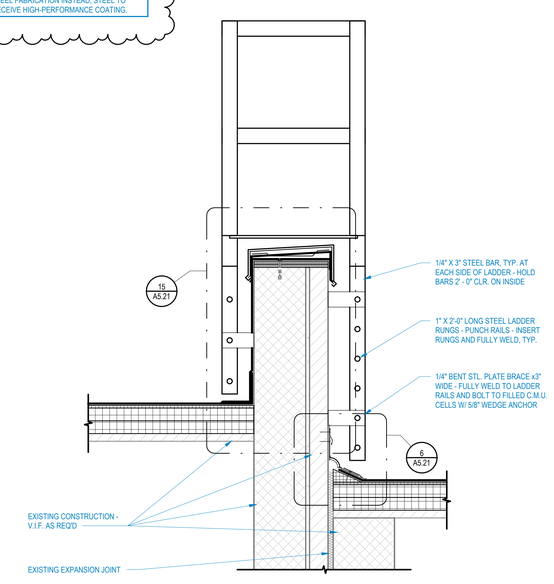


LADDER AT GRAVELSTOP DETAIL

SCALE: 1" = 1'-0"

3 A5.11

NOTE: BASIS OF DESIGN IS MILL FINISH ALUMINUM BY PRECISION LADDERS. IF USING STEEL FABRICATION INSTEAD, STEEL TO RECEIVE HIGH-PERFORMANCE COATING.



LADDER AT PARAPET DETAIL

SCALE: 1" = 1'-0"

2 A5.11

ROOF PLAN KEYNOTES

500	REMOVE EXISTING ROOF MEMBRANE OR OTHER ROOFING MATERIAL, INSULATION, AND OTHER ROOFING ACCESSORIES TO EXISTING DECK OR SUBSTRATE - INSPECT THE EXISTING DECK CONDITION FOR MOISTURE AND/OR STRUCTURAL FAILURE - NOTIFY ARCHITECT IMMEDIATELY AND DOCUMENT CONDITIONS - INSTALL NEW ROOF MEMBRANE OVER 1/2" HD COVERBOARD OVER NEW RIGID INSULATION OVER EXISTING DECK - ANCHOR ROOFING AND INSULATION PER MANUFACTURER'S RECOMMENDATIONS - TARGET AVERAGE R-VALUE OF R-30 PER IECC 2018
501	EXISTING GAS SUPPLY LINE TO REMAIN - PIPE SUPPORTS AND BASES TO BE REPLACED - SUPPORTS AND BASES SPACED AT 8'-0" O.C. MAX. - EXISTING RUSTED GAS LINE TO BE CLEANED, SCRAPED, AND PAINTED W/ NEW HIGH PERFORMANCE COATING - COLOR: SAFETY YELLOW - SEE DETAIL 10/A5.21
502	NEW CONTINUOUS PREFINISHED METAL GRAVELSTOP W/ ALL ACCESSORIES AS REQUIRED FOR PROPER INSTALLATION - SEE DETAIL 12/A5.21
503	NEW CONTINUOUS PREFINISHED METAL COPING W/ ALL ACCESSORIES AS REQUIRED FOR PROPER INSTALLATION - SEE DETAIL 15/A5.21
504	NEW PREFINISHED METAL GUTTER AND DOWNSPOUTS - SEE DETAIL 13/A5.21 FOR GUTTER SIZING - SEE DETAIL 11/A5.21 FOR DOWNSPOUT SIZING
505	NEW PREFINISHED METAL CONDUCTOR HEAD AND DOWNSPOUT - SEE DETAIL 11/A5.21 - MATCH EXISTING LOCATIONS - DOWNSPOUT TO ALIGN W/ EXISTING STORM SEWER ACCESS WHERE AVAILABLE - DOWNSPOUT SIZE TO BE 3.5" X 4"
506	EXISTING ROOF DRAIN - REMOVE DRAIN FOR INSTALLATION OF MEMBRANE AND REINSTALL EXISTING - SEE DETAIL 1/A5.21 - REPLACE MISSING OR DAMAGED ROOF DRAIN COVERS
507	EXISTING ROOF CURB TO REMAIN - REMOVE EXISTING EQUIPMENT AND INSPECT 2x CURB AND NAILERS - REPLACE AS REQUIRED - INSTALL FLASHING AND REINSTALL EXISTING EQUIPMENT - SEE DETAIL 2/A5.21
508	EXISTING PIPE PENETRATION TO REMAIN - INSTALL NEW PIPE BOOT - SEE DETAIL 3/A5.21
509	NEW CRICKET
510	EXISTING THRU-WALL SCUPPER W/ NEW SLEEVE, FLASHING, AND NEW MEMBRANE - SEE DETAIL 14/A5.21
511	NEW LADDER - SEE DETAILS 2.3/A5.11
512	NEW SUMP AREA
513	NEW ROOF WALK PADS
514	SIGNIFICANT CHANGE IN ROOF ELEVATION
515	RIDGE
516	EXISTING CONNECTION OF ADDITION - FILL GAP W/ RIGID INSULATION - APPLY NEW FLASHING UP BRICK 8" MIN. TO TERMINATION BAR - SEE DETAILS 16.17/A5.21
518	NEW EXPANSION JOINT COVER NOTED W/ RED DASH LINE - SEE DETAILS 5.6/A5.21
519	EXISTING ROOF-MOUNTED DISH, FRAME, BLOCKS, AND ELECTRICAL SUPPLY TO BE REMOVED
520	EXISTING CANOPY - N.I.C.
521	EXISTING PITCH POCKET TO BE REMOVED - INSTALL NEW LIQUID APPLIED FLASHING - SEE DETAIL 9/A5.21
522	EXISTING METAL ROOF TO RECEIVE TPO RETROFIT - SEE DETAIL 4/A5.11
524	EXISTING MECHANICAL UNIT SUPPORT - INSTALL NEW LIQUID APPLIED FLASHING - SEE DETAIL 8/A5.21
525	EXISTING EXPOSED WOOD SUPPORT TO BE REMOVED - REPLACE W/ NEW PRE-MANUFACTURED CURB - REINSTALL EXISTING EQUIPMENT - SEE DETAIL 2/A5.21
526	EXISTING ROOF-MOUNTED TRANSITION TO REMAIN - SEE DETAIL 9/A5.21
527	OWNER TO REPLACE EXISTING MECHANICAL EQUIPMENT AND CONNECTION TO GAS LINE PRIOR TO THE ROOF REPLACEMENT PROJECT - PROCEED WITH KEYNOTE 507
528	AT 2'-0" FROM GUTTER, INCREASE SLOPE TO 1/2"/1'-0"
529	NEW PREFINISHED METAL GUTTER AND DOWNSPOUTS - SEE DETAIL 13/A5.21 FOR GUTTER SIZING - SEE DETAIL 11/A5.21 FOR DOWNSPOUT SIZING - CONNECT NEW DOWNSPOUT TO EXISTING STORM SEWER CONNECTION - MATCH ANGLE OF AWNING WHEN APPLICABLE
530	EXISTING PORTION OF CANOPY TO BE REMOVED
531	YELLOW FIELD INDICATES EXISTING PLYWOOD SOFFIT TO BE RENOVATED - SCRAPE AND CLEAN ALL EXPOSED METAL - PREPARE ALL OTHER SOFFIT SURFACES TO RECEIVE A NEW FINISH PER MANUF. REQUIREMENTS - APPLY HIGH-PERFORMANCE COATING - COLOR TO MATCH NEW EDGE METAL

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PETER ZACKERY GIDDINGS — REGISTERED ENGINEER — AGRICULTURE — No. 107575 — STATE OF TENNESSEE — 08/15/2025

A ROOF REPLACEMENT FOR:

MIDWAY HIGH SCHOOL

ROANE COUNTY SCHOOLS

KINGSTON, TN

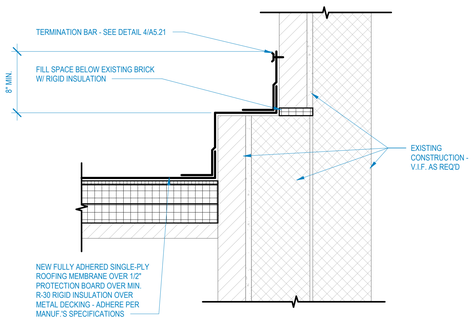
DATE: 08/15/2025
PROJECT NO: 25018
BID NO: 2026-02-177

PROJECT REVISIONS

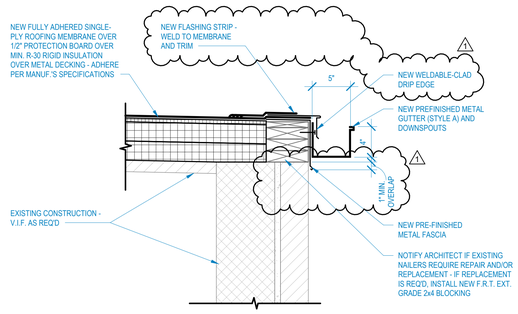
#	DATE	DESCRIPTION
1	08/27/2025	ADD-02

ROOF PLAN AND NOTES

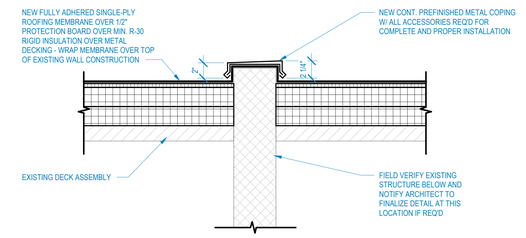
A5.11



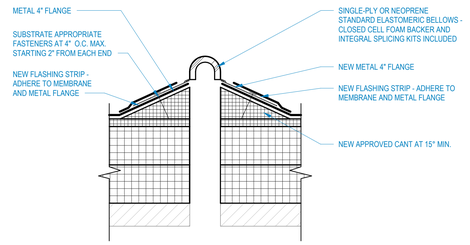
ROOF TRANISITION - ROOF TO DOUBLE WALL
SCALE: 1 1/2" = 1'-0"
17 A5.21



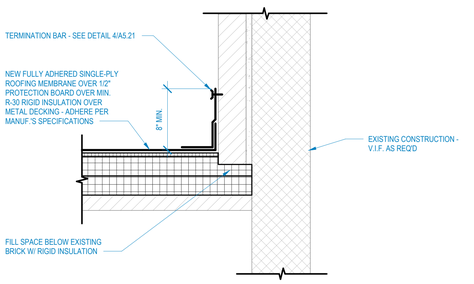
GUTTER DETAIL
SCALE: 1 1/2" = 1'-0"
13 A5.21



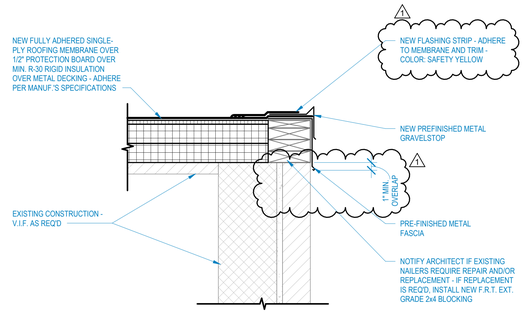
ROOF TRANSITION - CURB DETAIL
SCALE: 1 1/2" = 1'-0"
9 A5.21



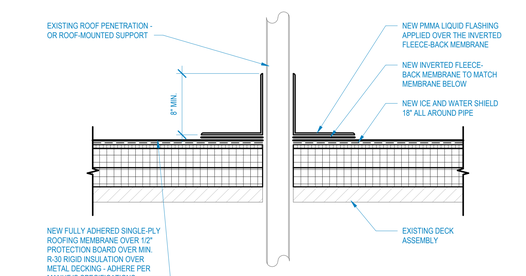
EXPANSION JOINT - ROOF TO ROOF
SCALE: 3" = 1'-0"
5 A5.21



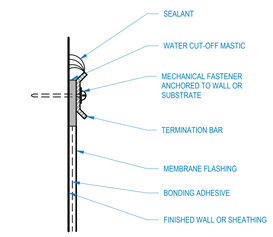
ROOF TRANISITION - ROOF TO WALL
SCALE: 1 1/2" = 1'-0"
16 A5.21



GRAVELSTOP DETAIL
SCALE: 1 1/2" = 1'-0"
12 A5.21



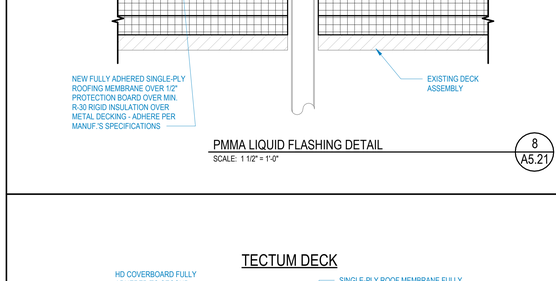
PMMA LIQUID FLASHING DETAIL
SCALE: 1 1/2" = 1'-0"
8 A5.21



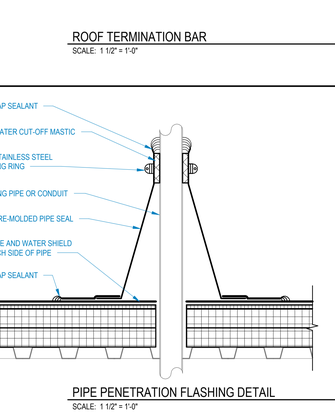
ROOF TERMINATION BAR
SCALE: 1 1/2" = 1'-0"
4 A5.21

PARAPET DETAIL
SCALE: 1 1/2" = 1'-0"
15 A5.21

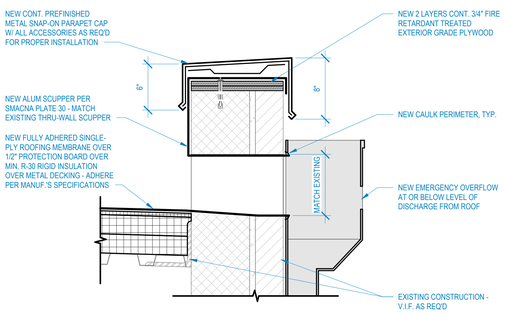
CONDUCTOR HEAD DETAIL
SCALE: 1 1/2" = 1'-0"
11 A5.21



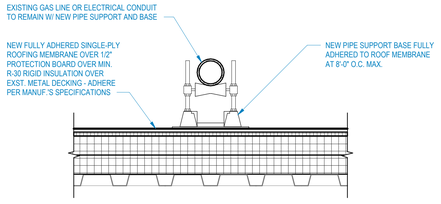
ROOF LAYER INSTALLATION DETAIL
SCALE: 1 1/2" = 1'-0"
7 A5.21



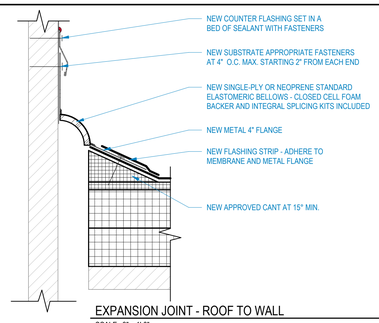
PIPE PENETRATION FLASHING DETAIL
SCALE: 1 1/2" = 1'-0"
3 A5.21



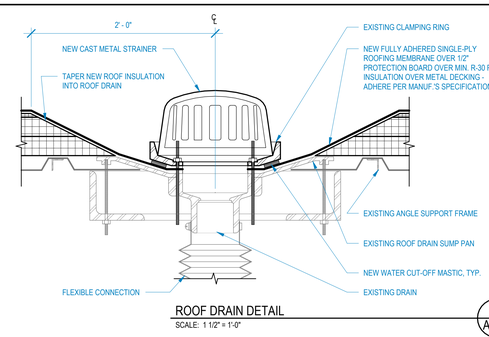
SCUPPER DETAIL
SCALE: 1 1/2" = 1'-0"
14 A5.21



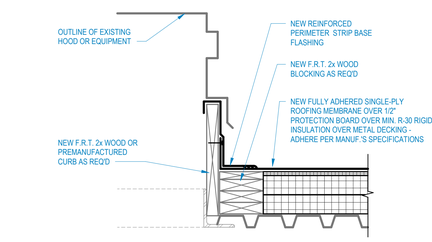
PIPE SUPPORT DETAIL
SCALE: 1 1/2" = 1'-0"
10 A5.21



EXPANSION JOINT - ROOF TO WALL
SCALE: 3" = 1'-0"
6 A5.21



ROOF DRAIN DETAIL
SCALE: 1 1/2" = 1'-0"
1 A5.21



ROOF EQUIPMENT CURB DETAIL
SCALE: 1 1/2" = 1'-0"
2 A5.21

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PETER ZACKERY GIDDINGS — REGISTERED ENGINEER — AGREEMENT — No. 101757 — STATE OF TENNESSEE
08/15/2025

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ROOF DETAILS

A5.21