ADDENDUM

CSO
ARCHITECTURE · INTERIOR DESIGN

ADDENDUM NO: 2

PROJECT: New Palestine High School Pool Renovation

PROJECT NO: 2024106 DATE: December 19, 2025 BY: Emery Hunt

This Addendum is issued in accordance with the provisions of "The General Conditions of the Contract for Construction," Article 1, "Contract Documents" and becomes a part of the Contract Documents as provided therein. This Addendum includes:

Addendum Pages: **1-2**

Attached Documents: ?

Attached Specifications: 07 53 23, 07 54 23, 20 10 80.

Attached Drawing Sheets: AD202, A202, A203, E202

PART 1 - GENERAL INFORMATION

1.1 NOT USED

PART 2 - BIDDING REQUIREMENTS

2.1 NOT USED

PART 3 - SPECIFICATIONS

3.1 01 23 00 – ALTERNATES

A. Revise 3.01.B.1 as follows:

1. Base Bid: Do not include the cost of the equipment ~~and installation.~~

3.2 07 53 23 – ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING

A. Add specification section in its entirety.

3.3 07 54 23 – THERMOPLASTIC POLYOLEFIN (TPO) ROOFING (ALTERNATE BID)

A. Add specification section in its entirety.

3.4 20 01 80 – Common Insulation for PL & HVAC

A. Replace this specification in its entirety with the attached.

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B. Ductwork insulation added.

C. All supply, outside air, and relief(exhaust) air ductwork serving the PDU within the mechanical mezzanine to be externally insulated.

PART 4 - DRAWINGS

4.1 AD202 - SECOND FLOOR DEMOLITION PLAN

A. Add demolition note 5 to Mechanical Mezzanine A103:

1. **INSTALL NEW BOND BEAM AND SHORE WALL OVER DEMO WORK AS REQUIRED, COORDINATE WITH STRUCTURAL DRAWINGS**

4.2 A202 - ENLARGED SECOND FLOOR PL.AN, ROOF PLAN, & SECTIONS

A. Add sections **1/A203** and **2/A203** to Mechanical Mezzanine A103 in detail 1/A202 – ENLARGED SECOND FLOOR PLAN.

B. Add section **2/A203** to detail 2/A202 – ENLARGED – ROOF PLAN.

C. Add **ROOFING TYPES SCHEDULE**.

4.3 A203 – ROOF SECTIONS (ALTERNATE)

A. Add sheet in its entirety.

4.4 E202 - SECOND FLOOR PLAN – ELECTRICAL

A. Replace this Drawing in its entirety with the attached.

B. Added weatherproof service receptacle at RTU-1.

C. Removed neutral wire from RTU-1 connection.

PART 5 - QUESTIONS AND ANSWERS

5.1 What is the required flashing for the curbs or units?

A. Flashing of the curbs as manufacturers standards is acceptable.

5.2 Are there wall details showing the coping or edge metal for replacement?

A. See attached for details on sheet A203.

5.3 Are there details for the existing roof system to be infilled following the base scope of work?

A. The existing EPDM roof appears to be mechanically fastened but this needs to be verified. There are no good drawings or information available beyond what can be observed in person.

5.4 The description of alternate 1 is to provide and install controls by Conserv. Is it safe to assume that base bid will be temperature controls by owner?

A. For the alternate number 1, there is no control work in the base bid, all control work will by alternate.

END ADDENDUM #2

SECTION 07 53 23 - ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section Includes:

1. Adhered EPDM membrane roofing system.
2. Cover board
3. Roof insulation.
4. **Vapor retarder.**

B. Section includes the installation of acoustical roof deck rib insulation strips furnished under Division 05 Section "Steel Decking."

1.03 DEFINITIONS

A. Roofing Terminology: See ASTM D 1079 and glossary of NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.04 PERFORMANCE REQUIREMENTS

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

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.

C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7 or as indicated on Structural Drawings.

D. FM Approvals Listing: Provide membrane roofing, base flashings, and component materials that comply with requirements in FM Approvals 4450 and FM Approvals 4470 as part of a membrane roofing system, and that are listed in FM Approvals' "RoofNav" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals' markings.

1. Fire/Windstorm Classification: Class 1A-90.
2. Hail Resistance: MH.

1.05 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.

1. Base flashings and membrane terminations.
2. Tapered insulation, including slopes.
3. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples for Verification: For the following products, in manufacturer's standard sizes:

1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
2. Walkway pads or rolls.

1.06 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer and manufacturer.

B. Manufacturer Certificate: Signed by roofing manufacturer certifying that membrane roofing system complies with requirements specified in "Performance Requirements" Article.

1. Submit evidence of complying with performance requirements.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.

D. Research/Evaluation Reports: For components of membrane roofing system, from the ICC-ES.

E. Field quality-control reports.

1.07 CLOSEOUT SUBMITTALS

A. Maintenance Data: For membrane roofing system to include in maintenance manuals.

B. Warranties: Special warranties specified in this Section.

1.08 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is UL listed or FM Approvals approved for membrane roofing system identical to that used for this Project.

B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

C. Source Limitations: Obtain components including roof insulation fasteners for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer.

D. Exterior Fire-Test Exposure: ASTM E 108, Class A ; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.

E. Fire-Resistance Ratings: Where indicated, provide fire-resistance-rated roof assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

F. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site .

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, 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. Review deck substrate requirements for conditions and finishes, 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.

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

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, 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.

1.09 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, approval or listing agency markings, 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 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.

1.10 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.

1.11 WARRANTY

A. Installer's Special Warranty: Specified form, signed by Installer, covering Work of this Section, for warranty period of ten years.

1. Warranty includes removing and reinstalling protection board, drainage panels, insulation, pedestals, and pavers and/or ballast.

B. Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.

1. Total systems warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, substrate board, roofing accessories and other components of membrane roofing system.
2. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 EPDM MEMBRANE ROOFING

A. EPDM: ASTM D 4637, Type II, scrim or fabric internally reinforced, uniform, flexible EPDM sheet.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

a. Carlisle Syntec Systems.
b. Elevate; Holcim Building Envelope (formerly Firestone Roofing)
c. GenFlex Roofing Systems.
d. Johns Manville
e. Mule-Hide Products Co., Inc.
f. Versico Roofing Systems; Carlisle Construction Materials.

2. Thickness: 60 mils (1.5 mm), unreinforced, nominal.
3. Exposed Face Color: Black.

2.02 AUXILIARY MEMBRANE ROOFING MATERIALS

A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

B. Sheet Flashing: 60-mil- (1.5-mm-) thick EPDM, partially cured or cured, according to application.

C. Bonding Adhesive: Manufacturer's standard.

D. Seaming Material: Manufacturer's standard, synthetic-rubber polymer primer and 3-inch- (75-mm-) wide minimum, butyl splice tape with release film.

E. Lap Sealant: Manufacturer's standard, single-component sealant, colored to match membrane roofing.

F. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.

G. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.

H. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick (25 mm wide by 1.3 mm thick), prepunched.

I. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening membrane to substrate, and acceptable to roofing system manufacturer.

J. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, reinforced EPDM securement strips, T-joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.

2.03 ROOF INSULATION

A. General: Preformed roof insulation boards manufactured or approved by EPDM membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated and that produce FM Approvals-approved roof insulation.

B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class I, Grade 3 (for 25 psi), felt or glass-fiber mat facer on both major surfaces.

1. Aged R-value shall be as designated at mean temperatures indicated and as follows: R 5.6 at 75 deg F for 1" thick insulation board.
2. Surface Burning Characteristics: Maximum flame spread of 75.
3. Compressive Strength: Grade 2, 20 psi per ASTM D 1621-94 Test Method for Compressive Properties of Rigid Cellular Plastics.
4. Occasional Compressive Strength: Grade 3, 25 psi (special order) per ASTM D 1621-94 Test Method for Compressive Properties of Rigid Cellular Plastics.
5. Dimensional Stability: Less than 2.0 percent change in length, width and thickness per ASTM D 2126-94 Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
6. Acceptable Manufacturers:

a. Carlisle Syntec Systems.
b. GAF Materials Corp.
c. Johns Manville International, Inc.
d. CertainTeed; Saint-Gobain.
e. Elevate; Holcim Building Envelope.

C. Tapered Insulation: Where low slope is not built in to the roof structure, provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches, unless otherwise indicated.

1. Fabricate with taper as indicted per ft. in the 24 inch dimension.

D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.04 INSULATION ACCESSORIES

A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.

C. Cover Board: Provide one of the following:

1. ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/2 inch thick.

a. Products: Subject to compliance with requirements, provide one of the following:
b. CertainTeed Corporation; GlasRoc Sheathing Type X.
c. Georgia-Pacific Corporation; Dens Deck DuraGuard.
d. National Gypsum Company; Gold Bond eXP Extended Exposure Sheathing.
e. Temple-Inland, Inc; GreenGlass Exterior Sheathing.
f. USG Corporation; Securock Glass Mat Roof Board.

2.05 WALKWAYS

A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, solid-rubber, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch (5 mm) thick, and acceptable to membrane roofing system manufacturer.

2.06 SUBSTRATE BOARDS

A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, Type X, 5/8 inch (16 mm) thick.

1. Products: Subject to compliance with requirements, provide one of the following:

a. CertainTeed; Saint-Gobain.
b. Georgia-Pacific Gypsum; Dens Deck.
c. Gold Bond Building Products, LLC provided by National Gypsum Co.
d. USG Corporation.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate panel to roof deck.

2.07 VAPOR RETARDER

A. Polyethylene Film: ASTM D 4397, 6 mils (0.15 mm) thick, minimum, with maximum permeance rating of 0.13 perm (7.5 ng/Pa x s x sq. m).

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

PART 3 - EXECUTION

3.01 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 curbs are set and braced and that roof drain bodies 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. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 05 31 00 "Steel Decking."
4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
5. Verify that concrete substrate is visibly dry and free of moisture. Test for capillary moisture by plastic sheet method according to ASTM D 4263.
6. Verify that concrete curing compounds that will impair adhesion of roofing components to roof deck have been removed.

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

3.02 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.

D. Install acoustical roof deck rib insulation strips, specified in Section 05 31 00 "Steel Decking," according to acoustical roof deck manufacturer's written instructions, immediately before installation of overlying construction and to remain dry.

3.03 INSULATION INSTALLATION

A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.

C. Install tapered insulation under area of roofing to conform to slopes indicated.

D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (68 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) 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. 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 (6 mm) with insulation.

1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.

G. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.

1. Fasten insulation according to requirements in FM Approvals' "RoofNav" for specified Windstorm Resistance Classification.
2. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

H. Install cover boards over insulation with long joints in continuous straight lines with end

3.04 ADHERED MEMBRANE ROOFING INSTALLATION

A. Adhere membrane roofing over area to receive roofing according to membrane roofing system manufacturer's written instructions. Unroll membrane roofing and allow to relax before installing.

1. Roofing membrane may be adhesively applied at Contractor’s option according to which method can be accomplished in prevailing weather.

B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.

C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.

E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeters.

F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

G. Tape Seam Installation: Clean and prime both faces of splice areas, apply splice tape, and firmly roll side and end laps of overlapping membrane roofing according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of membrane roofing terminations.

H. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

I. Spread sealant or mastic bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

J. Install membrane roofing and auxiliary materials to tie in to existing membrane roofing to maintain weather-tightness of transition and to not void warranty for existing membrane roofing system.

K. Adhere protection sheet over membrane roofing at locations indicated.

3.05 BASE 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 allow to partially dry. Do not apply to seam area of flashing.

C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.

E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.06 WALKWAY INSTALLATION

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

3.07 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified independent testing agency to perform inspections.

B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

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

D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.08 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.

3.09 SUBSTRATE BOARD

A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

1. Fasten substrate board to top flanges of steel deck according to recommendations in FM Approvals' "RoofNav" and FM Global Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification.

3.10 VAPOR-RETARDER INSTALLATION

A. Polyethylene Film: Loosely lay polyethylene-film vapor retarder in a single layer over area to receive vapor retarder, side and end lapping each sheet a minimum of 2 inches (50 mm) and 6 inches (150 mm), respectively.

1. Continuously seal side and end laps with tape.

B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into membrane roofing system.

END OF SECTION

SECTION 07 54 23 - THERMOPLASTIC POLYOLEFIN (TPO) ROOFING (ALTERNATE BID)

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section Includes:

1. Adhered TPO membrane roofing system.
2. Coverboard
3. Roof insulation.
4. **Vapor retarder.**

B. Section includes the installation of acoustical roof deck rib insulation strips furnished under Division 05 Section "Steel Decking."

1.03 DEFINITIONS

A. TPO: Thermoplastic polyolefin.

B. Roofing Terminology: See ASTM D 1079 and glossary in NRCA's "The NRCA Roofing and Waterproofing Manual" for definitions of terms related to roofing work in this Section.

1.04 PERFORMANCE REQUIREMENTS

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

B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by membrane roofing manufacturer based on testing and field experience.

C. Roofing System Design: Provide membrane roofing system that is identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist uplift pressure calculated according to ASCE/SEI 7.

D. FM Approvals Listing: Provide membrane roofing, base flashings, and component materials that comply with requirements in FM Approvals 4450 and FM Approvals 4470 as part of a membrane roofing system, and that are listed in FM Approvals' "RoofNav" for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals markings.

1. Fire/Windstorm Classification: Class 1A-90.
2. Hail Resistance: MH.

1.05 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.

1. Base flashings and membrane terminations.
2. Tapered insulation, including slopes.
3. Roof plan showing orientation of steel roof deck and orientation of membrane roofing and fastening spacings and patterns for mechanically fastened membrane roofing.
4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples for Verification: For the following products:

1. Sheet roofing, of color specified, including T-shaped side and end lap seam.
2. Roof insulation.
3. Walkway pads or rolls.

1.06 INFORMATIONAL SUBMITTALS

A. Qualification Data: For qualified Installer and manufacturer.

B. 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.

C. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.

1. Submit evidence of compliance with performance requirements.

D. Product Test Reports: Based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified testing agency, for components of membrane roofing system.

E. Research/Evaluation Reports: For components of membrane roofing system, from the ICC-ES .

F. Field quality-control reports.

G. Warranties: Sample of special warranties.

1.07 CLOSEOUT SUBMITTALS

A. Maintenance Data: For roofing system to include in maintenance manuals.

1.08 QUALITY ASSURANCE

A. Manufacturer Qualifications: A qualified manufacturer that is UL listed or FM Approvals approved for membrane roofing system identical to that used for this Project.

B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

C. Source Limitations: Obtain components including roof insulation fasteners for membrane roofing system from same manufacturer as membrane roofing or approved by membrane roofing manufacturer.

D. Exterior Fire-Test Exposure: ASTM E 108, Class A ; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.

E. Fire-Resistance Ratings: Where indicated, provide fire-resistance-rated roof assemblies identical to those of assemblies tested for fire resistance per ASTM E 119 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

F. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site .

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, 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. Review deck substrate requirements for conditions and finishes, 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.

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

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, 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.

1.09 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, approval or listing agency markings, 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 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.

1.10 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.

1.11 WARRANTY

A. Warranty: Manufacturer's standard or customized form, without monetary limitation, in which manufacturer agrees to repair or replace components of membrane roofing system that fail in materials or workmanship within specified warranty period.

1. Total systems warranty includes membrane roofing, base flashings, roof insulation, fasteners, cover boards, substrate board, roofing accessories and other components of membrane roofing system.
2. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 TPO MEMBRANE ROOFING

A. Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, internally fabric or scrim reinforced, uniform, flexible TPO sheet.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Carlisle Syntec Systems.
    b. Custom Seal Roofing.
    c. Elevate; Holcim Building Envelope (formerly Firestone Roofing)
    d. GAF Materials Corporation.
    e. GenFlex Roofing Systems.
    f. Johns Manville.
    g. Mule-Hide Products Co., Inc.
    h. Versico Roofing Systems; Carlisle Construction Materials.

2. Thickness: 60 mils (1.5 mm), nominal.
3. Exposed Face Color: White.
4. Physical Properties:

    a. Breaking Strength: 225 lbf (1 kN); ASTM D 751, grab method.
    b. Elongation at Break: 15 percent; ASTM D 751.
    c. Tearing Strength: 55 lbf (245 N) minimum; ASTM D 751, Procedure B.
    d. Brittleness Point: Minus 22 deg F (30 deg C).
    e. Ozone Resistance: No cracks after sample, wrapped around a 3-inch-(75-mm-) diameter mandrel, is exposed for 166 hours to a temperature of 104 deg F (40 deg C) and an ozone level of 100 pphm (100 mPa); ASTM D 1149.
    f. Resistance to Heat Aging: 90 percent minimum retention of breaking strength, elongation at break, and tearing strength after 166 hours at 240 deg F (116 deg C); ASTM D 573.
    g. Water Absorption: Less than 4 percent mass change after 166 hours' immersion at 158 deg F (70 deg C); ASTM D 471.
    h. Linear Dimension Change: Plus or minus 2 percent; ASTM D 1204.

2.02 AUXILIARY MEMBRANE ROOFING MATERIALS

A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use, and compatible with membrane roofing.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

B. Sheet Flashing: Manufacturer's standard sheet flashing of same material, type, reinforcement, thickness, and color as PVC sheet membrane.

C. Sheet Flashing: Manufacturer's standard unreinforced thermoplastic polyolefin sheet flashing, 55 mils (1.4 mm) thick, minimum, of same color as sheet membrane.

D. Bonding Adhesive: Manufacturer's standard.

E. Slip Sheet: Manufacturer's standard, of thickness required for application.

F. Metal Termination Bars: Manufacturer's standard, predrilled stainless-steel or aluminum bars, approximately 1 by 1/8 inch (25 by 3 mm) thick; with anchors.

G. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick (25 mm wide by 1.3 mm thick), pre-punched.

H. Water Cutoff Mastic: Manufacturer's standard butyl mastic sealant.

I. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer.

J. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.03 ROOF INSULATION

A. General: Preformed roof insulation boards manufactured[**or approved**] by TPO membrane roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated and that produce FM Approvals-approved roof insulation.

B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 2, **Grade 3 (for 25 psi)**, glass-fiber mat facer on both major surfaces.

1. Aged R-value shall be as designated at mean temperatures indicated and as follows: R 5.6 at 75 deg F for 1" thick insulation board.
2. Surface Burning Characteristics: Maximum flame spread of 75.
3. Compressive Strength: 20 psi per ASTM D 1621-94 Test Method for Compressive Properties of Rigid Cellular Plastics.
4. Occasional Compressive Strength: 25 psi (special order) per ASTM D 1621-94 Test Method for Compressive Properties of Rigid Cellular Plastics.
5. Dimensional Stability: Less than 2.0 percent change in length, width and thickness per ASTM D 2126-94 Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging.
6. Acceptable Manufacturers:

    a. Carlisle SynTec Incorporated.
    b. Firestone Building Products Company.
    c. GAF Materials Corp.
    d. Johns Manville International, Inc.

C. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48) unless otherwise indicated.

D. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.04 INSULATION ACCESSORIES

A. General: Furnish roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with membrane roofing.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.

C. Cover Board: Provide one of the following:

1. ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, 1/2 inch thick.

a. Products: Subject to compliance with requirements, provide one of the following:
b. CertainTeed Corporation; GlasRoc Sheathing Type X.
c. Georgia-Pacific Corporation; Dens Deck DuraGuard.
d. National Gypsum Company; Gold Bond eXP Extended Exposure Sheathing.
e. Temple-Inland, Inc; GreenGlass Exterior Sheathing.
f. USG Corporation; Securock Glass Mat Roof Board.

2.05 WALKWAYS

A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch (5 mm) thick, and acceptable to membrane roofing system manufacturer.

2.06 SUBSTRATE BOARDS

A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum substrate, Type X, 5/8 inch (16 mm) thick.

1. Products: Subject to compliance with requirements, provide one of the following:

a. CertainTeed; Saint-Gobain.
b. Georgia-Pacific Gyspum; Dens Deck.
c. Gold Bond Building Products, LLC provided by National Gypsum Co.
d. USG Corporation.

B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate panel to roof deck.

2.07 VAPOR RETARDER

A. Polyethylene Film: ASTM D 4397, 6 mils (0.15 mm) thick, minimum, with maximum permeance rating of 0.13 perm (7.5 ng/Pa x s x sq. m).

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

PART 3 - EXECUTION

3.01 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 curbs are set and braced and that roof drain bodies 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. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Division 05 Section "Steel Decking."

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

3.02 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.

D. Install acoustical roof deck rib insulation strips, specified in Division 05 Section "Steel Decking," according to acoustical roof deck manufacturer's written instructions, immediately before installation of overlying construction and to remain dry.

3.03 INSULATION INSTALLATION

A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.

C. Install tapered insulation under area of roofing to conform to slopes indicated.

D. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (68 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.

1. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.

E. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

F. 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 (6 mm) with insulation.

1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.

G. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.

1. Fasten insulation according to requirements in FM Approvals' "RoofNav" for specified Windstorm Resistance Classification.
2. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

3.04 ADHERED MEMBRANE ROOFING INSTALLATION

A. Adhere membrane roofing over area to receive roofing and install according to membrane roofing system manufacturer's written instructions.

B. Start installation of membrane roofing in presence of membrane roofing system manufacturer's technical personnel.

C. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

D. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.

E. In addition to adhering, mechanically fasten membrane roofing securely at terminations, penetrations, and perimeter of roofing.

F. Apply membrane roofing with side laps shingled with slope of roof deck where possible.

G. 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.

1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of sheet membrane.
2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
3. Repair tears, voids, and lapped seams in roofing that does not comply with requirements.

H. Spread sealant bed over deck drain flange at roof drains and securely seal membrane roofing in place with clamping ring.

I. Install membrane roofing and auxiliary materials to tie in to existing roofing to maintain weathertightness of transition and to not void warranty for existing membrane roofing system.

3.05 BASE 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 allow to partially dry. Do not apply to seam area of flashing.

C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.

D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air 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**].

3.06 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.

3.07 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

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

D. Additional inspections, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.08 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.

3.09 SUBSTRATE BOARD

A. Install substrate board with long joints in continuous straight lines, perpendicular to roof slopes with end joints staggered between rows. Tightly butt substrate boards together.

1. Fasten substrate board to top flanges of steel deck according to recommendations in FM Approvals' "RoofNav" and FM Global Loss Prevention Data Sheet 1-29 for specified Windstorm Resistance Classification.

3.10 VAPOR-RETARDER INSTALLATION

A. Polyethylene Film: Loosely lay polyethylene-film vapor retarder in a single layer over area to receive vapor retarder, side and end lapping each sheet a minimum of 2 inches (50 mm) and 6 inches (150 mm), respectively.

1. Continuously seal side and end laps with tape.

B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into membrane roofing system

END OF SECTION

SECTION 20 01 80 – COMMON INSULATION FOR PLUMBING AND HVAC

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. This section includes field applied insulation and jacket materials for all systems. These systems include:

1. System Insulation Schedule 1:
   Heating Water Pipe

2. System Insulation Schedule 2:
   Chilled Water Pipe

3. System Insulation Schedule 3:
   Coil Condensate Pipe

4. System Insulation Schedule 9:
   Heating and Air Conditioning:
   Supply Air Ductwork

5. System Insulation Schedule 9A:
   Outside Air Intake/Relief Air Ductwork

B. Any equipment that is to be factory insulated is specified with respective equipment.

C. All PVC piping installed in a ceiling plenum shall be insulated to provide a flame-spread rating of 25 or less, and smoke-developed rating of 50 or less.

D. Any piece of equipment, pipe, or duct, installed in this contract, which is typically insulated to prevent condensation, shall be insulated unless specifically noted otherwise.

E. Internally lined sheet metal is specified in Metal Ducts, Section 23 31 13.

F. Related sections include all applicable Mechanical Sections.

1.3 SUBMITTALS

A. Submit product data for insulation, jacket materials and fittings used in each system as required in Section 20 00 10, “Shop Drawings”.

B. Product data shall include thermal conductivity, thickness, jacket material, insulation material, sealing compounds, flame-spread and smoke-developed ratings for each type of product to be used.

C. Submit test reports of independent testing agency showing conformance with flame-spread and smoke-developed ratings.

1.4 QUALITY ASSURANCE

A. Insulation Contractor shall have completed a minimum of two (2) projects of similar scope. Upon request, the Insulation Contractor shall provide a list of similar projects and references to the Engineer. The engineer may wish to inspect work previously installed by the Insulation Contractor.

B. Insulation Installed Indoors: Flame-spread rating of 25 or less, and smoke-developed rating of 50 or less.

C. Insulation Installed Outdoors: Flame-spread rating of 75 or less, and smoke-developed rating of 150 or less.

1.5 DELIVERY, STORAGE, AND HANDLING

A. All insulation to be shipped to site in unopened containers as packaged by Insulation Manufacturers.

B. All containers shall state contents within.

C. Store in clean dry area properly protected from weather and physical damage.

D. Open only containers required to be opened as construction progresses.

1.6 COORDINATION

A. Coordinate size and location of supports, hangers and insulation shields.

B. Coordinate hanger sizes and piping penetrations for pipes requiring insulation, wood blocking and saddles with piping installer.

1.7 SCHEDULING

A. Schedule insulation application after pipe testing and heat trace has been installed.

PART 2 - PRODUCTS

2.1 INSULATION MATERIALS

A. Refer to Insulation Material Schedules in Execution portion of this Section for Insulation types to be used for each system. When more than one is shown, contractor may choose which type is to be installed.

B. Fiberglass Insulation

1. Glass fiber bonded with a thermosetting resin with thermal conductivity of .27 or less @ 75°F. Designed for use to 650°F.

a. Preformed Pipe Insulation with Jacket: 3 lb/ft^3, ASTM C547, Type 1, Class 1 with factory applied all-purpose, vapor-retarder ASJ jacket, 0.02 perm max water vapor permeance. Designed for use to 850°F max.
b. Board Insulation: 3 lb/ft^3, ASTM C 612, Type IB, without facing and with FSK jacket manufactured from kraft paper, reinforcing scrim, aluminum foil and vinyl film. Verify jacketing with Engineer prior to insulating exposed ductwork with board insulation within finished spaces. Design for use to 450°F max.
c. Blanket Insulation: 3/4 lb/ft^3, ASTM C 553, Type II, without facing and with FSK manufactured from kraft paper, reinforcing scrim, aluminum foil, and vinyl film. Designed for use to 250°F max.

2. Fire-Resistant Adhesive: Comply with MIL-A-3316C in the following classes and grades:

a. Class 1, Grade A for bonding glass cloth and tape to un-faced glass-fiber insulation, for sealing edges of glass-fiber insulation, and for bonding lagging cloth to un-faced glass-fiber insulation.
b. Class 2, Grade A for bonding glass-fiber insulation to metal surfaces.

3. Vapor-Retarder Mastics: Fire- and water-resistant, vapor-retarder mastic for indoor applications. Comply with MIL-C-19565C, Type II.
4. Mineral-Fiber Insulating Cements: Comply with ASTM C 195.
5. Expanded or Exfoliated Vermiculite Insulating Cements: Comply with ASTM C 196.
6. Mineral-Fiber, hydraulic-setting insulating and finishing cement: Comply with ASTM C 449/C 449M.
7. Manufacturers:

a. CertainTeed Manson
b. Knauf Insulation.
c. Owens-Corning Fiberglas Corp.
d. Schuller International, Inc.
e. Johns Manville

C. Flexible Elastomeric Insulation

1. Closed cellular or expanded rubber material of high insulating efficiency (K of .25 or better @ 75°F) and designed for use with temperatures from -40°F to 210°F. Odorless, self-extinguishing and vapor resistant in compliance with ASTM E-84, 25/50 flame smoke rating. Approved for use in return air plenums.

a. Preformed pipe insulation: ASTM C 534, Type I.
b. Sheet insulation: ASTM C 534, Type II.

2. Adhesive: As recommended by Insulation Material Manufacturer.
3. Ultraviolet – Protective Coating: As recommended by Insulation Manufacturer.
4. Manufacturers:

a. Armacell AP
b. K-Flex
c. Aeroflex

D. Duct Liner: See Section 23 31 13.

2.2 ADHESIVES

A. Adhesives or mastics used in the application or manufacture of insulating materials shall be fire retardant with UL flame rating not exceeding 25 and smoke developed rating not exceeding 50 (on dry film) when tested in accordance with ASTM E 84. All adhesives specifically designed for respective application as noted by insulation manufacturer.

2.3 JACKETS

A. PVC Jacket

1. High-impact

a. Fittings – Gloss White, preformed, 30 Mill, PVC jacket designed for use with and provided by same manufacturer of insulation. Fiberglass insert wrapped around fitting and covered by PVC preformed jacket piping insulation system.
b. Sheet – Gloss White, preformed, pre-cut and curled 20 mil PVC jacket designed for use with and provided by same manufacturer of piping insulation system. Ultraviolet-resistant suitable for outdoor service and temperature range 0 – 150°F. Jacket to be completely sealed with solvent weld for vapor proof barrier where noted in schedule.

B. Foil, Scrim and Kraft-Paper (FSK) Jacket

1. Laminated, glass-fiber-reinforced, flame-retardant kraft paper and aluminum foil. Maximum of .02 perms moisture vapor transmission, ASTM C 921, Type I, Max 25/50 flame smoke rating.

C. All-Service Jacket (ASJ)

1. White, kraft-paper fiberglass-reinforced scrim with aluminum-foil backing; complying with ASTM C1136, Type 1.

2.4 ACCESSORIES AND ATTACHMENTS

A. Glass Cloth and Tape

1. Comply with MIL-C-20079H, Type I for cloth and Type II for tape. Woven glass-fiber fabrics, plain weave, pre-sized a minimum of 8 oz./sq. yd. (270 g/sq. m). Tape Width: 4 inches (100 mm).

B. Bands

1. 3/4 inch (19 mm) wide, in one of the following materials compatible with jacket:

a. Stainless Steel: ASTM A 666, Type 304; 0.020 inch (0.5 mm) thick.
b. Aluminum: 0.007 inch (0.18 mm) thick.

C. Wire

1. 0.080-inch (2.0 mm), nickel-copper alloy; 0.062-inch (1.6 mm), soft-annealed, stainless steel; or 0.062-inch (1.6 mm), soft-annealed, galvanized steel.

D. Welded-Attached Anchor Pins and Washers

1. Copper-coated steel pin for capacitor-discharge welding and galvanized speed washer. Pin length sufficient for insulation thickness indicated.

a. Welded Pin Holding Capacity: 100 lb. (45 kg) for direct pull perpendicular to the attached surface.

E. Adhesive-Attached Anchor Pins and Speed Washers

1. Galvanized steel plate, pin, and washer manufactured for attachment to duct and plenum with adhesive. Pin length sufficient for insulation thickness indicated.

a. Adhesive: Recommended by the anchor pin manufacturer as appropriate for surface temperature of ducts, plenums, and breechings; and to achieve a holding capacity of 100 lb. (45 kg) for direct pull perpendicular to the adhered surface.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install Insulation for each system as designated in the Insulation Material Schedules on the following pages.

B. When more than one type of insulation system is specified, contractor may choose which type is installed.

C. Reference Products, Part 2 of this Section for specifications and manufacturers of insulation materials designated to be installed in Insulation Material Schedules.

3.1 EXECUTION (Continued)

SYSTEM INSULATION SCHEDULE 1:
HEATING WATER PIPE

1 Install insulation materials as designated in this schedule for system(s) listed.

2	LOCATION	INSIDE			OUTSIDE		
3	INSULATION						
3.1	Pipe	Fiberglass-Preformed with Jacket			Fiberglass-Preformed with Jacket		
3.2	Fitting	Fiberglass Blanket			Fiberglass Blanket		
4	INSULATION THICKNESS						
4.1	Pipe Size	≤2"	2 ½ ", 3"	≥4"	≤2"	2 ½", 3"	≥4"
4.2	Insulation Thickness	1"	1 ½"	2 ½"	1"	1 ½"	2 ½"
5	JACKETS						
5.1	Pipe	ASJ Integral to Insulation			Stainless Steel		
5.2	Fittings	Preformed PVC (See Note 6.3)			Preformed Stainless Steel		
5.3	Vapor-Retardant	No					
6	NOTES						

6.1 On VAV Boxes with heating coils, wrap ends of coils, exposed to space adjacent to coils with blanket type insulation. Secure with tape for vapor retarder surface.

3.1 EXECUTION (Continued)

SYSTEM INSULATION SCHEDULE 2:
CHILLED WATER PIPE

1 Install insulation materials as designated in this schedule for system listed.

2	LOCATION	INSIDE	OUTSIDE
3	INSULATION		
3.1	Pipe	Fiberglass-Preformed with Jacket	Fiberglass-Pre-formed with Jacket
3.2	Fitting	Fiberglass Blanket	Preformed Fitting
4	INSULATION THICKNESS		
4.1	Pipe Size	All	
4.2	Thickness	1"	
5	JACKETS		
5.1	Pipe	ASJ Integral to Insulation	Aluminum Jacket
5.2	Fittings	Preformed PVC	Stainless Steel Jacket
5.3	Vapor-Retardant	Yes	

6 NOTES

6.1 All chilled water pump bodies, air separators, miscellaneous chilled water equipment, and terminal unit coil specialties (valves, strainers, coil packs, etc.) to be insulated.

3.0 EXECUTION (Continued)

SYSTEM INSULATION SCHEDULE 3:
COIL CONDENSATE PIPE

1 Install insulation materials as designated in this schedule for system(s) listed.

2	LOCATION	INSIDE	OUTSIDE
3	INSULATION		
3.1	Pipe	Fiberglass-Preformed with Jacket	
3.2	Fitting	Fiberglass Blanket	
4	INSULATION THICKNESS		
4.1	Pipe Size	All	
4.2	Thickness	1"	
5	JACKETS		
5.1	Pipe	ASJ Integral to Insulation	
5.2	Fittings	Preformed PVC	
5.3	Vapor-Retardant	Yes	

6 NOTES

6.1 Application of insulation on sanitary waste pipe shall be as follows:

6.1.1 Piping installed above ground floor.

6.1.2 Serving discharge from cooling coils or electric water coolers.

6.1.3 Piping installed in return air plenum.

6.1.4 Where insulation is required, install along pipe lengths connecting fixture to waste stack/main building drain only.

6.2 All PVC piping in return air plenums shall be insulated per this schedule.

3.1 EXECUTION (Continued)

SYSTEM INSULATION SCHEDULE 9:
HEATING AND AIR CONDITIONING:
SUPPLY AIR DUCTWORK

1 Install insulation materials as designated in this schedule for system.

2	LOCATION	INSIDE	INSIDE	INSIDE	EXTERIOR
3	INSULATION MATERIAL	Flexible Fiber-glass	Rigid Fi-berglass	Flexible Elastomeric	Flexible EPDM Rub-ber
4	INSULATION THICKNESS	1 1/2"	1 1/2"	3/4"	2”
5	JACKETS	FSK	FSK	FSK	Multi-Layer Weather-proof
5.1	Vapor-Retardant	Yes	Yes	Yes	Yes

6 NOTES

6.1 Use rigid or flexible elastomeric insulation in mechanical rooms. All other areas may be flexible fiberglass.

6.2 Where smaller diameter round ductwork is to be insulated and then painted, utilize pre-formed pipe insulation of required thickness with paintable all-service jacket (ASJ).

6.3 Where ductwork is to be painted, install 3 lb/ft³ rigid insulation with paintable all-service jacket (ASJ).

6.4 Insulate ends of reheat coils including VAV box reheat coils in all applications where heating coils are in air conditioning supply ductwork. Install vapor barrier over insulation and seal watertight to adjacent insulation vapor barrier.

6.5 Externally insulate supply air slot diffuser plenums with flexible fiberglass.

6.6 External insulation to have a 1” crown on top to shed water.

6.7 **Where supply and return air branch ducts containing volume dampers are covered using duct wrap, expose volume damper actuator through duct wrap and “spot” paint the duct wrap around the actuator a bright and contrasting color for ease in visually locating the actuator while standing on the floor below the duct.**

3.1 EXECUTION (Continued)

SYSTEM INSULATION SCHEDULE 9A:
OUTSIDE AIR INTAKE DUCTWORK
RELIEF/EXHAUST AIR DUCTWORK

1 Install insulation materials as designated in this schedule for system.

2	LOCATION	INSIDE	INSIDE
3	INSULATION MATERIAL	Flexible Fiberglass	Rigid Fiberglass
4	INSULATION THICKNESS	2"	2"
5	JACKETS	FSK	FSK
5.1	Vapor-Retardant	Yes	Yes

6 NOTES

6.1 Insulate all outside air intake ductwork including but not limited to ductwork that serves air handling units and boilers within building envelope. No need to insulate when installed on outside of insulation barrier.

6.2 Use rigid or flexible elastomeric insulation in mechanical rooms. All other areas may be flexible fiberglass.

6.3 Where ductwork is to be painted, install 3 lb/ft³ rigid insulation with paintable all-service jacket (ASJ).

6.4 Boiler and water heater combustion air ductwork shall be insulated from combustion air intake to boiler or water heater intake.

6.5 Insulate relief/exhaust air plenums, ductwork, etc., from insulated damper to a point where duct or plenum penetrates building thermal envelope.

3.2 EXAMINATION

A. Examine substrates and conditions for compliance with requirements for installation and other conditions affecting performance of insulation application.

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

3.3 PREPARATION

A. Surface Preparation: Clean and dry surfaces to receive insulation. Remove materials that will adversely affect insulation application.

3.4 GENERAL APPLICATION REQUIREMENTS

A. All insulation that is to be painted shall have all-service jacket (ASJ) unless noted otherwise.

B. Apply insulation only after pipes, ducts and equipment have been tested and cleaned.

C. Protect furniture, equipment, ducts, pipes, etc. with tarpaulins. Keep premises clean.

D. Apply insulation materials, accessories, and finishes according to the manufacturer's written instructions; with smooth, straight, and even surfaces; and free of voids throughout the entire length.

E. Refer to schedules at the beginning of this Section for insulation materials and thickness, jackets, and fittings required for each system. Unless otherwise indicated, insulation shall be the same type throughout the same service.

F. Use accessories compatible with insulation materials and suitable for the service. Use accessories that do not corrode, soften, or otherwise attack insulation or jacket in either wet or dry state.

G. Where insulation is applied on ducts, pipes and equipment which are against columns, walls or other equipment without adequate space for insulation, finish off insulation in workmanlike manner to meet approval of Engineer.

H. Apply multiple layers of insulation with longitudinal and end seams staggered.

I. Seal joints, seams and ends of insulation with vapor-retardant mastic on insulation with a compound recommended by the insulation material manufacturer on systems indicated to receive a vapor retardant.

J. Keep insulation materials dry during application and finishing.

K. Insulation shall be applied by craftsmen who are qualified to install insulation.

L. Apply insulation with tight longitudinal seams and end joints. Bond seams and joints with adhesive recommended by the insulation material manufacturer.

M. Apply insulation with the least number of joints practical.

N. Apply insulation over fittings and specialties, with continuous thermal and vapor-retardant integrity, on systems noted to have vapor-retardant jacket.

O. Provide removable sections of insulation or insulation boxes at all points where access is required for servicing of equipment on systems not requiring vapor-retardant jacket.

P. Exposed is defined to mean visible from working zones of finished building. Concealed signifies opposite. Pipes and ducts above ceilings and in crawl tunnels are considered to be concealed. Finished rooms are defined as office, workrooms, instruction, storeroom areas, equipment rooms, walking tunnels, etc.

Q. Aluminum jackets shall be installed in high traffic areas subject to damage.

R. On systems not requiring vapor-retardant, neatly bevel insulation at all flanges, access cover plates, etc. so that bolts may be removed without disturbing insulation.

S. All hangers used on lines requiring insulation and vapor barrier shall have hangers oversized and insulation cradles to allow insulation to pass thru hanger.

T. Cut insulation according to manufacturer’s written instructions to prevent compressing insulation to less than 75 percent of its nominal thickness.

U. Whenever Insulation Jacket is noted as Vapor Retardant: Overlap insulation facing at seams a minimum of one inch and secure with pressure-sensitive tape or adhesive as recommended by Manufacturer.

V. Roof Penetrations: Apply insulation for interior applications to a point even with top of roof flashing.

W. Seal penetrations with vapor-retardant mastic.

X. Apply insulation for exterior applications tightly joined to interior insulation ends.

Y. Seal insulation to roof flashing with vapor-retardant mastic.

Z. Interior Wall and Partition Penetrations: Apply insulation continuously through walls and partitions.

AA. Insulation Terminations: For insulation application where vapor retardants are indicated, taper insulation ends. Seal tapered ends with a compound recommended by the insulation material manufacturer to maintain vapor retardant.

BB. Do not insulate over equipment name plate data.

CC. Seal all punctures in vapor retardant jacket with vapor-barrier adhesive on cooling piping and air conditioning ducts.

DD. Apply adhesives and mastics at the manufacturer’s recommended coverage rate.

EE. Do not weld brackets, clips, or other attachment devices to item being insulated unless specifically noted to do so.

3.5 DUCTWORK AND EQUIPMENT INSULATION

A. Blanket Insulation Application

1. Apply insulation with integral jackets as follows:

   a. Pull jacket tight and smooth.
   b. Install anchor pins and speed washers to keep insulation from sagging when duct width exceeds 22”.
   c. Joints and Seams: Cover with tape and vapor retardant as recommended by insulation material manufacturer to maintain vapor seal.
   d. Vapor-Retardant Mastics: Where vapor retardants are indicated, apply mastic on seams and joints and at ends adjacent to duct flanges and fittings.

2. Fire-Rated Wall and Partition Penetrations: Terminate insulation at fire-rated wall and partition penetrations. Maintain vapor-retardant barrier.
3. Floor Penetrations: Terminate insulation at underside of floor assembly and at floor support at top of floor. Provide vapor-retardant mastic on insulation indicated to receive vapor-retardant.

B. Board and Block Insulation Application

1. Blankets, Board, and Block Applications: Secure insulation with adhesive and anchor pins with speed washers.

   a. Apply adhesives according to manufacturer’s recommended coverage rates per square foot, for 100 percent coverage of surfaces to be insulated.
   b. Groove and score insulation materials to fit as closely as possible to the surfaces, including contours. Bevel insulation edges for cylindrical surfaces for tight joint. Stagger end joints.
   c. Protect exposed corners with secured corner angles.
   d. Install adhesive-attached or self-adhesive anchor pins and speed washers on sides and bottoms of surfaces to be insulated as follows:

      1) Do not weld anchor pins to ASME-labeled pressure vessels.
      2) 3 inches (75 mm) maximum from insulation end joints, and 16 inches (400 mm) o.c. in both directions.
      3) Do not over-compress insulation during installation.
      4) Cut and miter insulation segments to fit curved sided and dome heads of tanks and vessels.

2. Impale insulation over anchor pins and attach speed washers.
3. Cut excess portion of pins extending beyond speed washers or bend parallel with insulation surface. Cover exposed pins and washers with tape matching insulation facing.
4. Secure each layer of insulation with stainless-steel bands.
5. Stagger joints between insulation layers at least 3 inches (75 mm).
6. Apply insulation in removable segments on access doors and other elements that require removal for service.
7. Bevel and seal insulation ends around access panels, manholes, hand holes, ASME stamps, and nameplates.
8. Apply vapor-retardant mastic to open joints, breaks, and punctures for insulation indicated to receive vapor retardant.

C. Flexible Elastomeric Thermal Insulation Applications:

1. Apply insulation over entire surface to be insulated according to the manufacturer's written instructions.
2. Apply 100 percent coverage of adhesive to surface with manufacturer's recommended adhesive.
3. Seal longitudinal seams and end joints for Vapor Retardant installation.

3.6 FIELD-APPLIED JACKET APPLICATION

A. Apply glass-cloth jacket, where indicated, directly over bare insulation or insulation with factory-applied jackets.

1. Apply jacket smooth and tight to surface with 2-inch (50-mm) overlap at seams and joints.
2. Embed glass cloth between two 0.062-inch- (1.6-mm-) thick coats of jacket manufacturer's recommended adhesive.
3. Completely encapsulate insulation with jacket, leaving no exposed raw insulation.

3.7 PIPING APPLICATION REQUIREMENTS

A. Apply insulation with integral jackets as follows:

1. Pull jacket tight and smooth.
2. Circumferential Joints: Cover with 3-inch- (75-mm-) wide strips, of same material as insulation jacket. Secure strips with adhesive and outward clinching staples along both edges of strip and spaced 4 inches (100mm) o.c.
3. Longitudinal Seams: Overlap jacket seams at least 1-1/2 inches (40 mm). Apply insulation with longitudinal seams at bottom pipe. Clean and dry surface to receive self-sealing lap. Staple laps with outward clinching staples along edge at 4 inches (100 mm) o.c.

    a. Exception: Do not staple longitudinal laps on insulation having a vapor retardant.

4. Vapor-Retardant Mastics: Where vapor retardants are indicated, apply mastic on seams and joints and at ends adjacent to flanges, unions, valves, and fittings.
5. At penetrations in jackets for thermometers and pressure gages, fill and seal voids with vapor-retardant mastic.

B. Apply insulation to fittings and elbows as follows:

1. Apply pre-molded insulation sections of the same material as straight segments of pipe insulation where scheduled. Secure according to manufacturer's written instructions.
2. Apply mitered sections of pipe insulation, or glass-fiber blanket insulation, to a thickness equal to adjoining pipe insulation. Secure insulation materials with wire, tape, or bands.
3. Apply jacket material overlapping seams at least 1 inch (25 mm) at each end. Secure with manufacturer's recommended adhesive, attachments and accessories. Seal seams with tape. Use vapor-retardant mastic on insulation indicated to receive vapor-retardant.

C. Apply insulation to valves and specialties as follows:

1. Apply pre-molded insulation sections of the same material as straight segments of pipe insulation when available. Secure according to manufacturer's written instructions.
2. When pre-molded insulation sections are not available, apply glass-fiber blanket insulation to valve body. Arrange insulation to permit access to packing and to allow valve operation without disturbing insulation. For strainers, arrange insulation for access to strainer basket without disturbing insulation.

3. Use preformed standard PVC fitting covers for valve sizes where available. Secure fitting covers with manufacturer's attachments and accessories. Seal seams with tape. Also, seal seams with vapor-retardant mastic on insulation indicated to receive vapor-retardant.
4. On piping 3" and smaller, not requiring vapor-retardant, fittings may be insulated with insulating cement equal in thickness to adjoining pipe insulation and troweled to smooth even finish. Do not insulate heating water pipe valves or unions.
5. For larger sizes where PVC fitting covers are not available, seal insulation with canvas jacket and sealing compound recommended by the insulation material manufacturer.

D. Floor Penetrations: Apply insulation continuously through floor assembly. Seal insulation with vapor-retardant mastic where floor supports penetrate vapor-retardant.

E. Exterior Wall Penetrations: For penetrations of below-grade exterior walls, terminate insulation flush with mechanical sleeve seal. Seal terminations with vapor-retardant mastic.

F. Hangers and Anchors: All hangers used on lines requiring insulation shall have hangers oversized and insulation support shield to allow insulation to pass continuously thru hanger.

1. Install insert materials on all piping 1 1/2" and larger. Apply insulation to tightly joint the insert. Seal insulation to insulation inserts with adhesive or sealing compound recommended by the insulation material manufacturer.
2. Fabricate inserts of heavy density insulating material suitable for temperature. Insulation inserts shall not be less than the following lengths:

1 1/2" to 2 1/2" pipe size	10" long
3" to 6" pipe size	12" long
8" to 10" pipe size	16" long
12" and over	22" long

3. Cover inserts with jacket material matching adjacent pipe insulation. Install shields over jacket, arranged to protect the jacket from tear or puncture by the hanger, support, and shield.

G. Apply insulation to flanges as follows:

1. Apply preformed pipe insulation to outer diameter of pipe flange.
2. Make width of insulation segment the same as overall width of the flange and bolts, plus twice the thickness of the pipe insulation.
3. Fill voids between inner circumference of flange insulation and outer circumference of adjacent straight pipe segments with mineral-fiber blanket insulation.
4. Apply jacket material with manufacturer's recommended adhesive, overlapping seams at least 2 inch (50 mm), and seal joints with vapor-retardant mastic.

END OF SECTION

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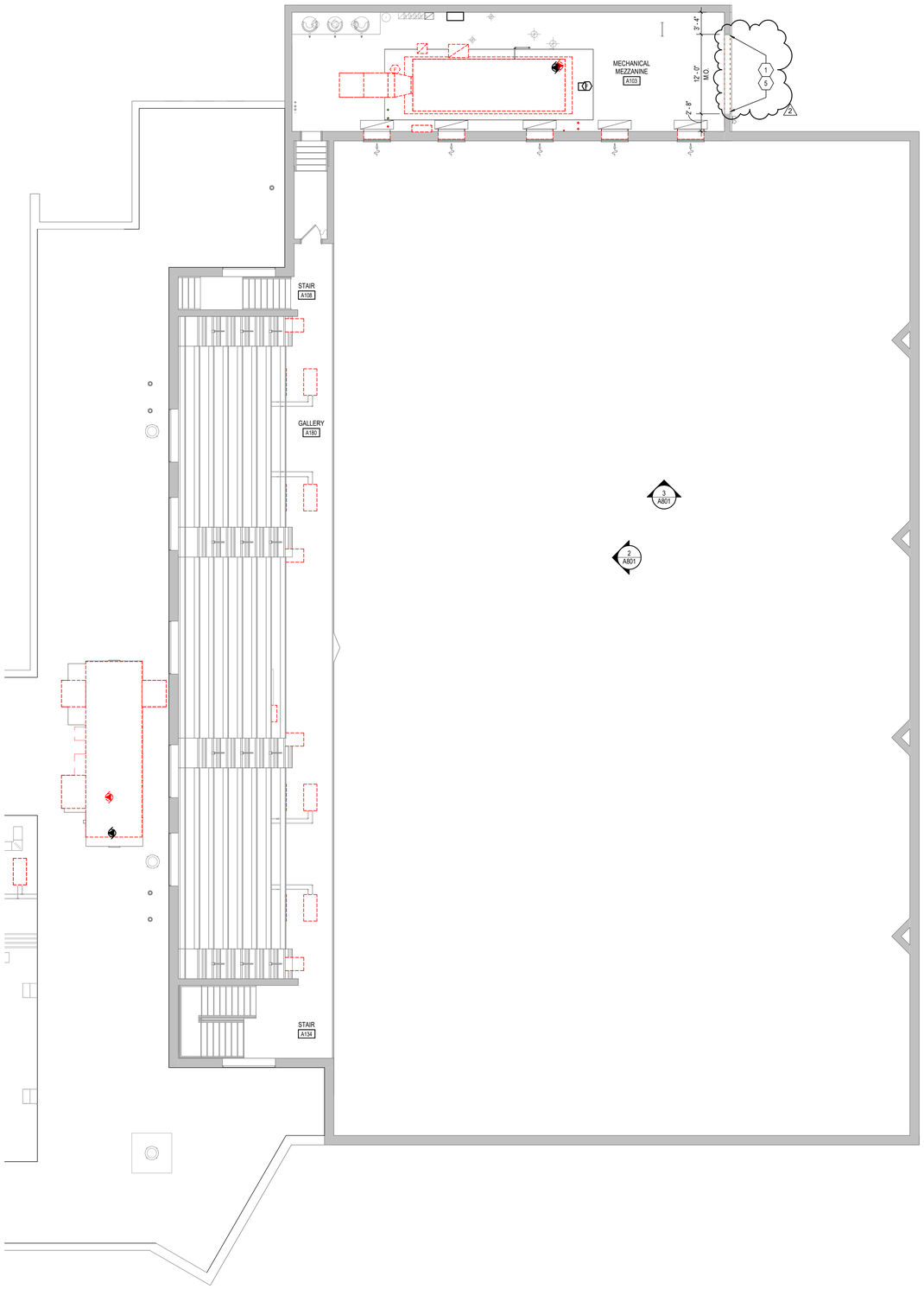


1 AD202 SECOND FLOOR - DEMOLITION - Dependent 1
SCALE: 1/8" = 1'-0"

GENERAL DEMOLITION NOTES

A. HEAVY DASHED LINES INDICATE STRUCTURE, WALLS AND ITEMS TO BE DEMOLISHED UNLESS NOTED OTHERWISE.
B. SOLID LINES INDICATE STRUCTURE, WALLS, & ITEMS TO REMAIN, UNLESS NOTED OTHERWISE.
C. PROTECT ALL FINISHES, EQUIPMENT & OTHER ITEMS TO REMAIN. WHERE DAMAGE OCCURS, PATCH AND REPAIR OR OTHERWISE RESTORE TO ITS ORIGINAL CONDITION OR REPLACE.
D. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONSTRUCTION AND RELATED CONDITIONS PRIOR TO STARTUP OF DEMOLITION OR NEW CONSTRUCTION.
E. COORDINATE EXTENTS AND EXACT DIMENSIONS WITH EXTENTS AND EXACT DIMENSIONS OF NEW WORK.
F. ANY AND ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ARCHITECT AND OWNER.
G. REMOVE ALL MISCELLANEOUS EQUIPMENT ATTACHED TO WALLS, FLOORS AND CEILINGS TO BE DEMOLISHED. COORDINATE WITH THE OWNER FOR ITEMS TO BE SALVAGED OR RE-INSTALLED.
H. REMOVE ANY ITEMS NOT SPECIFICALLY IDENTIFIED TO BE REMOVED WHICH MUST OBVIOUSLY BE DEMOLISHED TO ACCOMMODATE NEW WORK. VERIFY WITH ARCHITECT.
I. ALL OPENINGS, VOIDS, OR DAMAGED SURFACES LEFT BY THE REMOVAL OF EXISTING CONSTRUCTION, EQUIPMENT, PIPING, DUCTS, WINDOWS, ETC., SHALL BE PATCHED & REPAIRED TO MATCH SURROUNDING WORK. PREPARE TO RECEIVE NEW FINISHES AS REQUIRED.
J. REMOVE ALL MASTIC, ADHESIVES, FASTENERS AND OTHER MATERIALS WHERE FINISHES (SUCH AS FLOORING, BASE) AND EQUIPMENT (SUCH AS CASEWORK, TACKBOARDS, MARKERBOARDS, MECHANICAL ITEMS, ETC.) HAVE BEEN REMOVED AT EXISTING SURFACES TO REMAIN.
K. CONSTRUCT DUST AND SOUND CONTROL BARRIERS PRIOR TO THE START OF WORK.
L. SEE SPECIFICATIONS FOR ASSIGNMENT OF RESPONSIBILITIES PERTAINING TO PATCHING AND REPAIR WORK REQUIRED OF EACH TRADE.
M. DEMOLITION WORK TO BE COMPLETED BY MECHANICAL/PLUMBING, ELECTRICAL TRADES IS SHOWN ON OTHER SHEETS IN THIS SET OF CONTRACT DOCUMENTS. THIS CONTRACTOR SHALL REVIEW THE DEMOLITION WORK OF OTHER TRADES TO DETERMINE WHERE SUCH WORK COULD AFFECT HIS WORK AND SHALL COORDINATE HIS WORK WITH THE WORK OF ALL OTHER TRADES.
N. AT NEW OPENINGS IN EXISTING BRICK MASONRY WALLS, TOOTH IN BRICK TO MATCH EXISTING.
O. AT NEW OPENINGS IN EXISTING CONCRETE MASONRY WALLS, TOOTH IN NEW CMU TO MATCH EXISTING.
P. WHERE EXISTING SURFACE MOUNTED VISUAL DISPLAY BOARDS (MARKER, CHALK, TACK BOARDS) ARE BEING REMOVED FROM WALLS, WALL SURFACE BEHIND BOARD IS TO BE PREPARED TO MATCH TEXTURE OF SURROUNDING SURFACES. PROVIDE BLOCK FILLER AS REQUIRED AND PATCH MOUNTING HOLES COMPLETE. REMOVE PAINT BUILD UP AT BOARD EDGES.
Q. CONTRACTOR IS RESPONSIBLE FOR PREP WORK REQUIRED FOR FLOOR SLAB TO RECEIVE NEW FINISHES. PREP WORK TO INCLUDE: PATCH FLOOR SLAB AT AREAS THAT WILL BE CUT TO ACCOMMODATE NEW PLUMBING LINES OR WHERE CAPPING OF EXISTING LINES BELOW THE SLAB IS REQUIRED AND FILLING IN HOLES IN SLAB WHERE EXISTING MEP HAS BEEN ABANDONED.

DEMOLITION NOTES

1 DEMOLISH EXTERIOR WALL, INCLUDING METAL PANEL, INSULATION, CMU, ETC. AS REQUIRED FOR INSALLATION OF NEW MECH. EQUIPMENT. EXTENT OF DEMOLITION TO BE 12'W x 12'H.
2 ALTERNATE BID: REMOVE CEILING AS REQUIRED TO PERFORM MECHANICAL WORK.
3 DEMOLISH EXISTING TILE AND SLAB, PREP TO RECEIVE NEW VAPOR BARRIER AND CONCRETE SLAB ON GRADE.
4 ALTERNATE BID: MOVEABLE BULKHEAD. REMOVE OR RELOCATE AS NEEDED TO REGROUT POOL TANK TILE. REINSTALL IN LIKE-NEW CONDITION.
5 INSTALL NEW BOND BEAM AND SHORE WALL OVER DEMO WORK AS REQUIRED. COORDINATE WITH STRUCTURAL DRAWINGS. 2

CSO
8831 Keystone Crossing, Indianapolis, IN 46240
317.848.7800 | csoinc.net

PROJECT:
NEW PALESTINE HIGH SCHOOL
POOL RENOVATION
4485 S. VICTORY DR. NEW PALESTINE, IN 46163

SCOPE DRAWINGS:
These drawings indicate the general scope of the project in terms of architectural design concept, the dimensions of the building, the major architectural elements and the type of construction and materials required for the project.
The drawings do not necessarily indicate or describe all work required for full performance and completion of the requirements of the Contract.
On the basis of the general scope indicated or described, the Contractor shall furnish all labor and materials required for the proper execution and completion of the work.

REVISIONS:
2 ADDENDUM #2 12/19/25

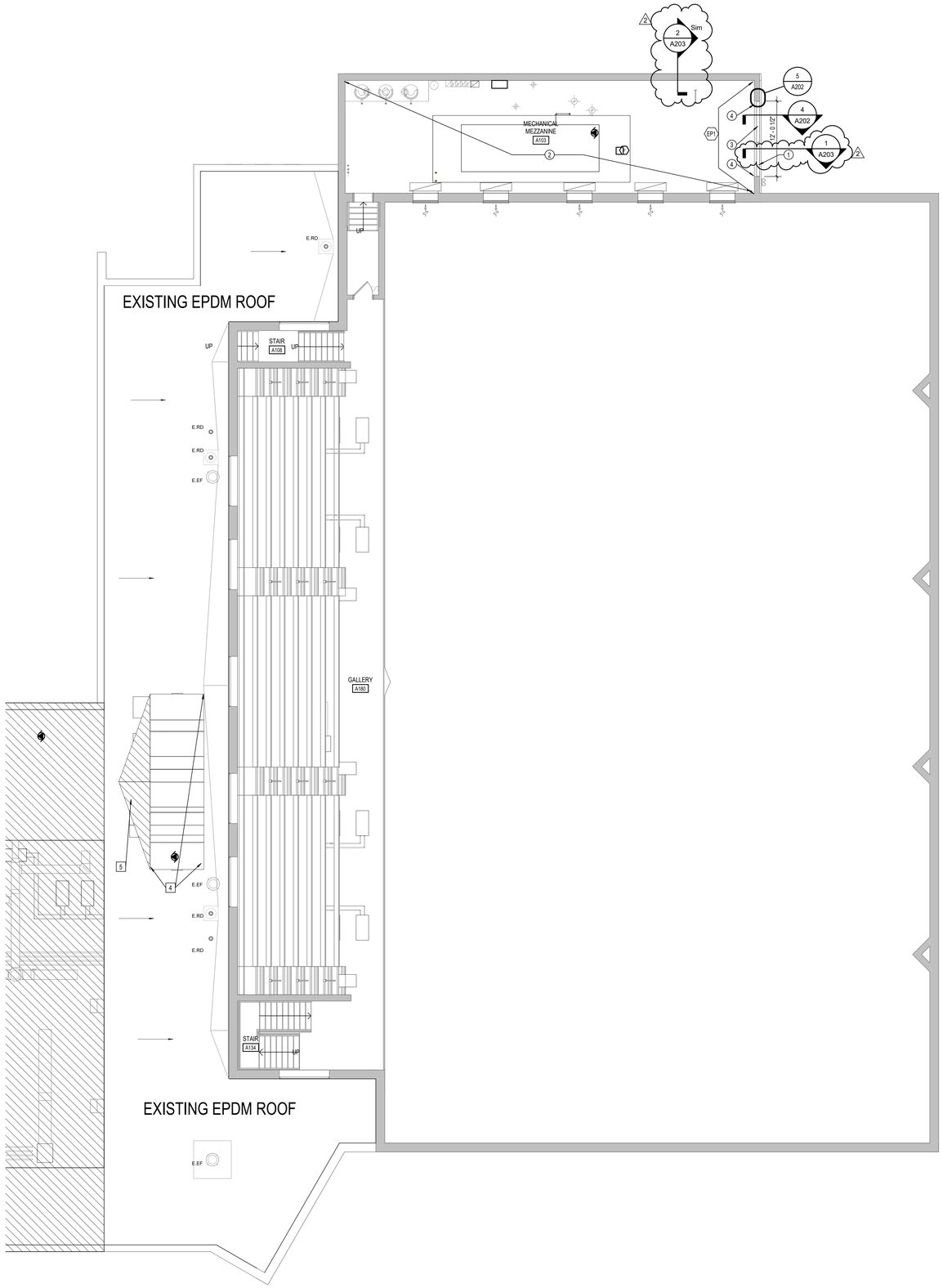
ISSUE DATE	DRAWN BY	CHECKED BY
11/25/2025	Author	Checker

DRAWING TITLE:
SECOND FLOOR DEMOLITION PLAN

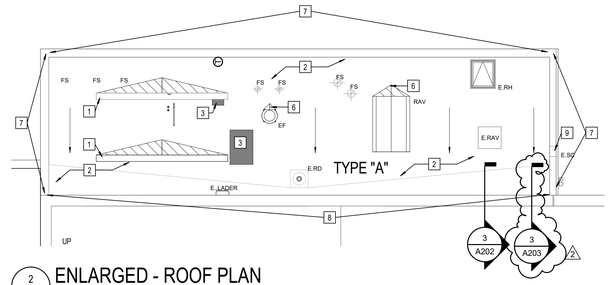
CERTIFIED BY:
JAMES ROBERT FUNK
REGISTERED
No.
AR00900003
STATE OF
INDIANA
ARCHITECT

DRAWING NUMBER
AD202

PROJECT NUMBER
2024106



1 A202 ENLARGED SECOND FLOOR PLAN
SCALE: 1/8" = 1'-0"



2 A202 ENLARGED - ROOF PLAN
SCALE: 1/8" = 1'-0"

ROOF PLAN NOTES

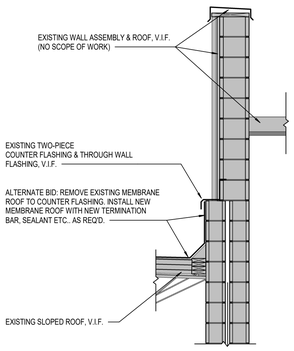
1 NEW CURBS AND CHANNELS, DEMO EXISTING ROOF MEMBRANE AND INSULATION AS REQUIRED, THEN PATCH BACK WITH NEW EPDM TO MATCH EXISTING, PROVIDE TAPER TO EXISTING ROOF DRAIN.
2 ALTERNATE BID: REMOVE ALL EXISTING EPDM ROOFING MEMBRANE, COPINGS, FLASHINGS, TERMINATIONS, ETC., AND PROVIDE NEW MEMBRANE, COPINGS, FLASHINGS, AND TERMINATIONS PER ALTERNATE BID. BASE BID TO PATCH AND REPAIR EXISTING EPDM ROOF MEMBRANE. COORDINATE PATCHING OF ROOF DECK WITH MEP DEMO.
3 AREA WHERE MECH. EQUIPMENT WAS DEMO'D - BASE BID, PATCH AND REPAIR WITH LIKE MATERIALS. COORDINATE DEMO.W/ MEP DRAWINGS.
4 ALTERNATE BID: DEMO EXISTING RTU AND CURB, INSTALL NEW RTU ON NEW CURBS, PATCH BACK EXISTING ROOF MEMBRANE TO MATCH EXISTING CONDITION.
5 ALTERNATE BID: WITH NEW RTU CURB, PROVIDE ROOF CRICKET AS REQUIRED FOR EXISTING ROOF DRAINAGE.
6 AT NEW MECHANICAL ITEM, PROVIDE TAPERED INSULATION FOR POSITIVE DRAINAGE.
7 ALTERNATE BID: REMOVE EXISTING COPING, REPLACE WITH NEW PREFORMED METAL COPING, COLOR TO MATCH EXISTING.
8 ALTERNATE BID: NEW ROOF MEMBRANE TIED BACK INTO EXISTING FLASHINGS, SEE WALL SECTION FOR DETAILS.
9 ALTERNATE BID: INSTALL NEW ROOF MEMBRANE INTO EXISTING THROUGH WALL SCUPPER. REFLASH AND SEAL AS REQ'D.

ROOF ABBREVIATIONS

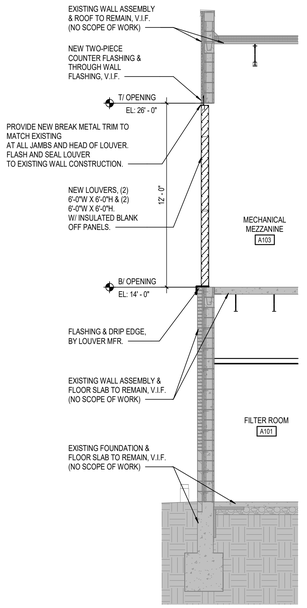
DR	DUCT THRU ROOF
DS	METAL DOWNSPOUT
EF	EXHAUST FAN; SEE MECHANICAL
EJ	EXPANSION JOINT
FS	FLUE STACK; SEE MECHANICAL
GU	METAL GUTTER
PV	PLUMBING VENT
RAV	RELIEF AIR VENT; SEE MECHANICAL
RH	ROOF HATCH
RD	ROOF DRAIN
SC	SCUPPER

GENERAL ROOF NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE BEST QUALITY STANDARDS OF THE TRADE, AND SHALL CONFORM WITH THE LATEST EDITION OF ALL FEDERAL, STATE, AND LOCAL CODES AND STANDARDS. THE SAME ARE MADE A PART OF THESE CONTRACT DOCUMENTS, AS IF REPEATED HEREIN.
2. CONTRACT DOCUMENTS CONSIST OF BOTH THE PROJECT MANUAL AND DRAWINGS, AND BOTH ARE INTENDED TO BE COMPLEMENTARY. ANYTHING APPEARING ON EITHER MUST BE EXECUTED THE SAME AS IF SHOWN ON BOTH.
3. CONSTRUCTION DOCUMENTS SHALL BE FOLLOWED AS CLOSELY AS POSSIBLE, HOWEVER, SYSTEMS HAVE BEEN SHOWN DIAGRAMMATICALLY AND IN SOME CASES, ENLARGED FOR CLARITY. PROVIDE ADDITIONAL ITEMS AS REQUIRED TO PROVIDE A COMPLETE AND COORDINATED SYSTEM.
4. CONTRACTOR SHALL PROVIDE ANY AND ALL TEMPORARY UTILITY SERVICE REQUIRED TO CONSTRUCT THE WORK. CONTRACTOR MAY EXTEND SERVICES FROM EXISTING LOCATIONS TO WHERE THEY ARE REQUIRED. REMOVE TEMPORARY UTILITIES AND RELATED EXTENSIONS AS SOON AS PRACTICABLE. RESTORE ALL AFFECTED AREAS TO ORIGINAL CONDITION.
5. CONTRACTOR SHALL REMOVE CONSTRUCTION DEBRIS FROM THE BUILDING AND ROOF DAILY.
6. STORE VOLATILE OR FLAMMABLE LIQUIDS IN UL LISTED FIRE CABINETS.
7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SECURITY OF ALL STORED MATERIALS AND EQUIPMENT INSIDE OR OUTSIDE THE BUILDING.
8. CONTRACTOR SHALL FURNISH NECESSARY TEMPORARY PROTECTION FROM WEATHER TO PROTECT INTERIOR OF BUILDING FROM ELEMENTS OF WEATHER AT ALL TIMES.
9. CONTRACTOR RESPONSIBLE FOR TRAFFIC PROTECTION DURING CONSTRUCTION. AREAS OF WORK SUBJECTED TO TRAFFIC BY VARIOUS TRADES SHALL BE PROTECTED BY TEMPORARY WALK PADS.
10. PROVIDE TREATED WOOD BLOCKING EQUAL IN THICKNESS TO INSULATION SYSTEM AT ROOF PERIMETER AND AROUND ALL ROOF PENETRATIONS. ANCHOR PER SECTION I-49 OF THE FM GLOBAL LOSS PREVENTION GUIDE.
11. EXTEND ALL PLUMBING VENTS TO PROVIDE A MIN. OF 12" OF HEIGHT FROM TOP OF INSULATION. ALL FITTINGS TO BE AIR AND WATER TIGHT. SEE PLUMBING PLANS FOR LOCATIONS.
12. ROOF INSULATION SADDLES AND CRICKETS ARE DIAGRAMMATIC. ROOF INSULATION MANUFACTURER SHALL DESIGN AND SIZE THESE PER THE ROOF MEMBRANE MANUFACTURERS RECOMMENDATIONS. CRICKETS AND SADDLES SHOULD HAVE A MINIMUM OF TWO TIMES THE SLOPE OF THE PRIMARY TAPERED SYSTEM OR STRUCTURAL SLOPE. THE RATIO OF A CRICKET'S WIDTH TO LENGTH SHOULD BE NO LESS THAN 1 TO 3.
13. PROVIDE SADDLES/CRICKETS AROUND ALL NEW ROOF TOP EQUIPMENT. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR LOCATIONS OF ALL ROOF PENETRATIONS.
14. PROVIDE TAPERED INSULATION WHERE REQUIRED TO TRANSITION FROM ONE INSULATION HEIGHT TO ANOTHER.
15. NOTCH ALL INSULATION AS REQUIRED TO ACCOMMODATE SURFACE MOUNTED CONDUIT, FASTENERS, OFFSETS AND OTHER PROJECTIONS EXTENDING ABOVE THE SURFACE OF THE DECK.
16. PERIMETER EDGE METAL TO COMPLY WITH ANSI/SPRI ES-1 FM GLOBAL 1-49.
17. SEE MECHANICAL, ELECTRICAL AND PLUMBING (MEP) SHEETS FOR ROOF TOP EQUIPMENT.
18. INSPECT ALL WOOD BLOCKING SCHEDULED TO REMAIN. NOTIFY ARCHITECT OF ANY DETERIORATED BLOCKING NEEDING REPLACEMENT. CONTRACTOR TO REPLACE AND DAMAGED BLOCKING ON A TIME AND MATERIAL BASIS, SEE SPECIFICATIONS.
19. ALL ROOF DETAIL DRAWINGS CONTAINED IN THIS SET ARE DIAGRAMMATIC. ADJUST ROOF DETAILS BASED ON SPECIFIC ROOFING SYSTEM SELECTED ACCORDING TO MANUFACTURER'S WRITTEN SPECIFICATIONS AND APPROVED DETAIL DRAWINGS. ALL ASSEMBLY COMPLICATIONS SHOULD BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
20. THE ROOF CONTRACTOR SHALL PROTECT ALL ROOF DRAINS, GUTTERS AND DOWNSPOUTS FROM DEBRIS CREATED DURING CONSTRUCTION. THE ROOF CONTRACTOR SHALL CLEAR ALL DRAINS, GUTTERS AND DOWNSPOUTS PRIOR TO COMPLETION OF WORK AND TO ENSURE THAT THEY ARE FREE OF DEBRIS AND FUNCTIONING PROPERLY.
21. MECHANICAL, ELECTRICAL AND PLUMBING INFORMATION SHOWN ON THIS PLAN IS GENERAL IN NATURE. REFER TO P, M AND E DRAWINGS FOR FURTHER INFORMATION AND COORDINATE ALL REQUIRED ROOF OPENINGS OR ROOF MOUNTED EQUIPMENT.



3 A202 HIGH WALL DETAIL
SCALE: 1/2" = 1'-0"

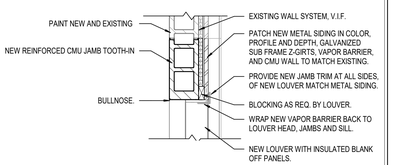


4 A202 WALL SECTION
SCALE: 1/4" = 1'-0"

ROOFING TYPES SCHEDULE

TYPE	LEGEND	DESCRIPTION
TYPE "A"		ALTERNATE BID: SINGLE PLY ROOFING MEMBRANE OVER 1/2" COVERBOARD ON 4" POLYISO ROOFING INSULATION BOARD (MIN R24) AND VAPOR BARRIER OVER 5/8" SUBSTRATE BOARD. INSTALL ONTO THE EXISTING ROOF DECK.
CRICKET/ SADDLE		ROOF SADDLE CREATED WITH TAPERED INSULATION. SLOPE 1/2" PER FOOT. CRICKETS AND SADDLES TO BE A MINIMUM WIDTH OF 1/2 THE SADDLE LENGTH.

2



5 A202 LOUVER JAMB DETAIL
SCALE: 3/4" = 1'-0"

GENERAL NOTES

A. COORDINATE THE WORK OF EACH TRADE WITH THE WORK OF OTHER TRADES.
B. ALL WORK IS TO BE COMPLETED IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, RULES, REGULATIONS AND STANDARDS INCLUDING, BUT NOT LIMITED TO THOSE LISTED ON THE COVER SHEET. ALL APPLICABLE RULES & REGULATIONS ARE TO BE THE MOST CURRENT ADOPTED EDITIONS.
C. FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO THE COMMENCEMENT OF WORK. DISCREPANCIES BETWEEN THE DOCUMENTS AND THE ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE COMMENCEMENT OF WORK.
D. ALL DIMENSIONS ARE FROM CENTERLINE OF STRUCTURE, FINISH FACE OF WALL, FACE OF MASONRY, OR FACE OF EXISTING.
E. ANY DIMENSIONS NOT SHOWN OR DEEMED QUESTIONABLE ARE TO BE VERIFIED BY ARCHITECT. DO NOT SCALE DRAWINGS.
F. REFER TO WALL TYPE SCHEDULE, SHEET A201, TO DETERMINE WHICH WALLS EXTEND TO DECK. SEE STRUCTURAL FOR TOP SUPPORT DETAIL. WHERE METAL STUDS EXTEND TO DECK, PROVIDE SLIP CONNECTIONS FOR ROOF/ FLOOR DEFLECTION.
G. ALL STEEL STUDS ARE TO BE BRACED ACCORDING TO MANUFACTURER LIMIT HEIGHT (L/240).
H. WHERE INSULATED OR SOUND WALLS EXTEND TO DECK, FILL DECK FLUTES WITH INSULATION/ SOUND ATTENUATION.
I. REFER TO PLUMBING PLANS FOR LOCATION OF FLOOR DRAINS.
J. WHERE ACCESS PANELS ARE SHOWN IN TOILET ROOM CHASES, FINAL LOCATION SHALL BE COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION.
K. ALL CONCRETE MASONRY UNITS (CMU) SHALL BE LAID RUNNING BOND U.N.O. CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
L. ALL INTERIOR MASONRY WALLS THAT RUN TO UNDERSIDE OF DECK ABOVE SHALL HAVE A 2" JOINT (U.N.O.) AT THE DECK TO BE FILLED WITH FIRE STOPPING AT RATED WALLS PER PROJECT MANUAL, AND MINERAL WOOL AT THE NON-RATED WALLS TO ALLOW FOR DEFLECTION.
M. THERE SHALL BE PERIMETER INSULATION CONTINUOUS AROUND THE ENTIRE PERIMETER OF THE BUILDING EXTENDING 2'-0" MINIMUM (R-15 MIN.) HORIZONTAL.
N. PROVIDE MISCELLANEOUS SUPPORT FOR ALL CEILING SUSPENDED ITEMS.
O. DOOR AND FRAME NUMBERS CORRESPOND TO ROOM NUMBERS. WHERE MORE THAN ONE DOOR OCCURS IN A ROOM, A SUFFIX HAS BEEN ADDED (E.G. A100-1). SEE A500 SERIES DRAWINGS FOR DOOR SCHEDULE AND DETAILS.
P. ALL DOOR FRAMES SHALL BE LOCATED 4" OFF FINISH WALLS OR 4" OFF MASONRY WALLS UNLESS NOTED OTHERWISE.
Q. ALL GLASS AT INTERIOR DOOR FRAMES, DOOR LITES AND WINDOW FRAMES IS TO BE 1/4" CLEAR TEMPERED GLASS UNLESS NOTED OTHERWISE.
R. AT BUILDING EXPANSION JOINTS, ALL PARTITIONS, CEILINGS, FLOORS AND ALL WALL, FLOOR OR CEILING MOUNTED ITEMS SHALL BE ANCHORED TO THE BUILDING STRUCTURE ON ONLY ONE SIDE OF THE EXPANSIONS JOINTS. CONTRACTOR SHALL COORDINATE CONSTRUCTION OR INSTALLATION OF ALL ITEMS NOTED TO ASSURE THAT NO SUCH ITEMS BRIDGE ACROSS THE EXPANSION JOINT.
S. ALL SLAB-ON-GRADE CONTROL JOINTS TO BE CLEANED AND CAULKED PRIOR TO PLACEMENT OF FLOOR FINISH.
T. SEE REFLECTED CEILING PLANS FOR BULKHEAD LOCATIONS AND DETAILS.
U. REFER TO MECHANICAL DRAWINGS FOR WALL LOUVER LOCATIONS, SIZES AND QUANTITIES.
V. SEE A800 SERIES DRAWINGS FOR FINISH SCHEDULE AND PLANS.
W. SEE A900 SERIES DRAWINGS FOR EQUIPMENT SCHEDULE AND PLANS. PROVIDE BLOCKING IN STUD WALLS AND/OR GROUTED MASONRY CORES AS REQUIRED TO SUPPORT EQUIPMENT.
X. PROVIDE FIRE RESISTANT TREATED WOOD BLOCKING SUPPORTS AS REQUIRED FOR ALL SURFACE MOUNTED ITEMS.
Y. WHERE DISSIMILAR FLOOR MATERIALS MEET, THEY SHALL DO SO UNDER THE CENTERLINE OF THE DOOR UNLESS NOTED OTHERWISE.
Z. APPLY SEALANT AT ALL JUNCTURES BETWEEN DIFFERENT MATERIALS (E.G. MASONRY TO GYPSUM WALL BOARD) UTILIZING THE APPROPRIATE TYPE PER SPECIFICATIONS. COLOR TO BE SELECTED BY ARCHITECT.
AA. APPLY SEALANT AT ALL COUNTERTOPS AND BACKSLASHES AT JUNCTURE WITH WALL.
BB. ALL DOORS MUST BE INSTALLED WITH AT LEAST THE MINIMUM MANEUVERING CLEARANCE AT THE DOOR APPROACH PER THE MOST CURRENT AMERICANS WITH DISABILITIES ACT.
CC. BASE FLOOR ELEVATION INDICATED FOR THIS PROJECT IS 100'-0". REFER TO SITE PLAN FOR CORRELATION TO USGS DATUM.

PLAN NOTES

1 INSTALL NEW 12'x12' INSULATED BLANKED OFF LOUVER IN WALL OPENING.
2 ALL NEW PENETRATIONS OR OPENINGS, IN FLOORS OR WALLS OF THE ENTIRE ROOM OR AREA, AS PART OF THE WORK SHALL BE FIRE STOPPED / SEALED TO A MIN. OF 2-HOUR RATING.
3 INSTALL NEW BOND BEAM LINTEL ABOVE OPENING
4 TOOTH-IN NEW MASONRY AT JAMBS, AND SILL TO PROVIDE NEW BULL NOSED BLOCK, PREP FOR PAINT.
5 NEW SLAB ON GRADE, SEE DETAIL 2/A201 FOR ADDITIONAL INFORMATION, PREP FOR NEW FLOOR TILE AND CONTROL JOINTS.
6 ALTERNATE BID: WHERE CEILING MOUNTED MECHANICAL EQUIPMENT WAS REMOVED AND REINSTALLED, PATCH, PAINT AND REPLACE CEILING AS REQUIRED TO MATCH LIKE NEW CONDITION.
7 ALTERNATE BID: WHERE WALL MOUNTED MECHANICAL EQUIPMENT WAS REMOVED, PATCH, PAINT AND REPAIR WALL SURFACE TO MATCH LIKE NEW CONDITION.
8 ALTERNATE BID: WHERE RTU WAS REPLACED, PATCH, REPAIR, PAINT AND REPLACE CEILING AS REQUIRED TO COMPLETE WORK.
9 MOVEABLE BULKHEAD, AS PART OF ALTERNATE BID, RELOCATE OR REMOVE AS REQUIED TO PERFROM WORK, REINSTALL IN LIKE NEW CONDITION.
10 EXISTING DECK TILE TO REMAIN, PROTECT FROM DAMAGE DURING SLAB DEMO AND REINSTALLATION. PROIRVIDE CONTROL JOINTS ON ALL OUTSIDE EDGES OF NEW TO EXISTING TILE INSTALLATION.

NEW PALESTINE COMMUNITY SCHOOLS

CSO
8831 Keystone Crossing, Indianapolis, IN 46240
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PROJECT:
NEW PALESTINE HIGH SCHOOL
POOL RENOVATION
4485 S. VICTORY DR. NEW PALESTINE, IN 46163

SCOPE DRAWINGS:
These drawings indicate the general scope of the project in terms of architectural design concept, the dimensions of the building, the major architectural elements and the type of structural, mechanical and electrical systems.
The drawings do not necessarily indicate or describe all work necessary for the complete and completion of the requirements of the Contract.
On the basis of the general scope indicated or described, the trade contractors shall furnish all items required for the proper execution and completion of the work.

REVISIONS:
2 ADDENDUM #2 12/19/25

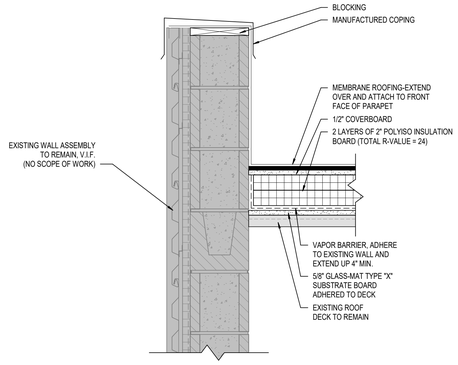
ISSUE DATE	DRAWN BY	CHECKED BY
11/25/2025	EHMH	EHMH

DRAWING TITLE:
ENLARGED SECOND FLOOR PL.AN, ROOF PLAN, & SECTIONS

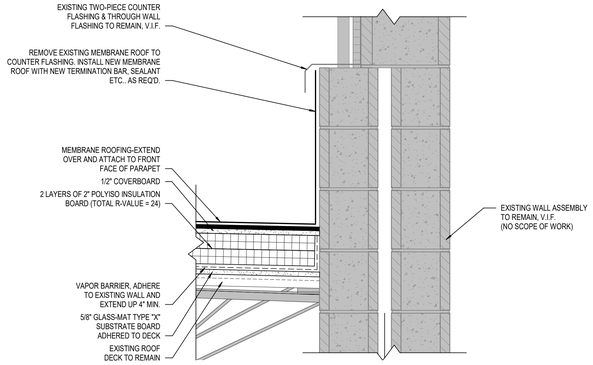
CERTIFIED BY:
JAMES ROBERT FINK
REGISTERED
No.
AR00900003
STATE OF
INDIANA
ARCHITECT

DRAWING NUMBER
A202

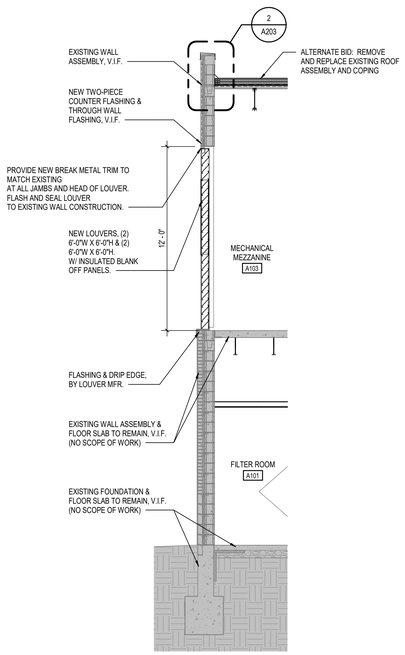
PROJECT NUMBER
2024106



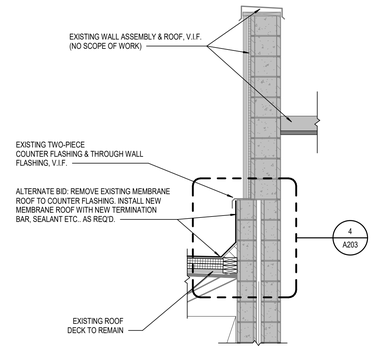
2 A203 ENLARGED WALL SECTION (ALTERNATE)
SCALE: 1 1/2" = 1'-0"



4 A203 ENLARGED DETAIL (ALTERNATE)
SCALE: 1 1/2" = 1'-0"



1 A203 WALL SECTION (ALTERNATE)
SCALE: 1/4" = 1'-0"



3 A203 HIGH WALL DETAIL (ALTERNATE)
SCALE: 1/2" = 1'-0"

GENERAL NOTES

A. COORDINATE THE WORK OF EACH TRADE WITH THE WORK OF OTHER TRADES.
B. ALL WORK IS TO BE COMPLETED IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, ORDINANCES, RULES, REGULATIONS AND STANDARDS INCLUDING, BUT NOT LIMITED TO THOSE LISTED ON THE COVER SHEET. ALL APPLICABLE RULES & REGULATIONS ARE TO BE THE MOST CURRENT ADOPTED EDITIONS.
C. FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO THE COMMENCEMENT OF WORK. DISCREPANCIES BETWEEN THE DOCUMENTS AND THE ACTUAL CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT PRIOR TO THE COMMENCEMENT OF WORK.
D. ALL DIMENSIONS ARE FROM CENTERLINE OF STRUCTURE, FINISH FACE OF WALL, FACE OF MASONRY, OR FACE OF EXISTING.
E. ANY DIMENSIONS NOT SHOWN OR DEEMED QUESTIONABLE ARE TO BE VERIFIED BY ARCHITECT. DO NOT SCALE DRAWINGS.
F. REFER TO WALL TYPE SCHEDULE, SHEET A200, TO DETERMINE WHICH WALLS EXTEND TO DECK. SEE STRUCTURAL FOR TOP SUPPORT DETAIL. WHERE METAL STUDS EXTEND TO DECK, PROVIDE SLIP CONNECTIONS FOR ROOF/ FLOOR DEFLECTION.
G. ALL STEEL STUDS ARE TO BE BRACED ACCORDING TO MANUFACTURER LIMIT HEIGHT (L/240).
H. WHERE INSULATED OR SOUND WALLS EXTEND TO DECK, FILL DECK FLUTES WITH INSULATION/ SOUND ATTENUATION.
I. REFER TO PLUMBING PLANS FOR LOCATION OF FLOOR DRAINS.
J. WHERE ACCESS PANELS ARE SHOWN IN TOILET ROOM CHASES, FINAL LOCATION SHALL BE COORDINATED WITH OTHER TRADES PRIOR TO INSTALLATION.
K. ALL CONCRETE MASONRY UNITS (CMU) SHALL BE LAID RUNNING BOND U.N.O. CMU WALLS THAT DO NOT LAY OUT IN FULL OR HALF LENGTHS SHOULD BE BALANCED SO AS NOT TO HAVE ANY PIECES LESS THAN 4" IN SIZE EXPOSED TO VIEW.
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NEW PALESTINE COMMUNITY SCHOOLS

CSO
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317.848.7800 | csoinc.net

PROJECT:
NEW PALESTINE HIGH SCHOOL
POOL RENOVATION
4485 S. VICTORY DR. NEW PALESTINE, IN 46163

SCOPE DRAWINGS:
These drawings indicate the general scope of the project in terms of architectural design concept, the dimensions of the building, and the general requirements for each of the type of structural, mechanical and electrical systems.
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On the basis of the general scope indicated or described, the trade contractors shall furnish all items required for the proper execution and completion of the work.

REVISIONS:
2 ADDENDUM #2 12/19/25

ISSUE DATE	DRAWN BY	CHECKED BY
11/25/2025	EHMH	EHMH

DRAWING TITLE:
ROOF SECTIONS (ALTERNATE)

CERTIFIED BY:
JAMES ROBERT FUNK
REGISTERED No. AR00900003 STATE OF INDIANA
ARCHITECT

DRAWING NUMBER
A203
2

PROJECT NUMBER
2024106

RENOVATION LEGEND:

WORK TO BE INSTALLED

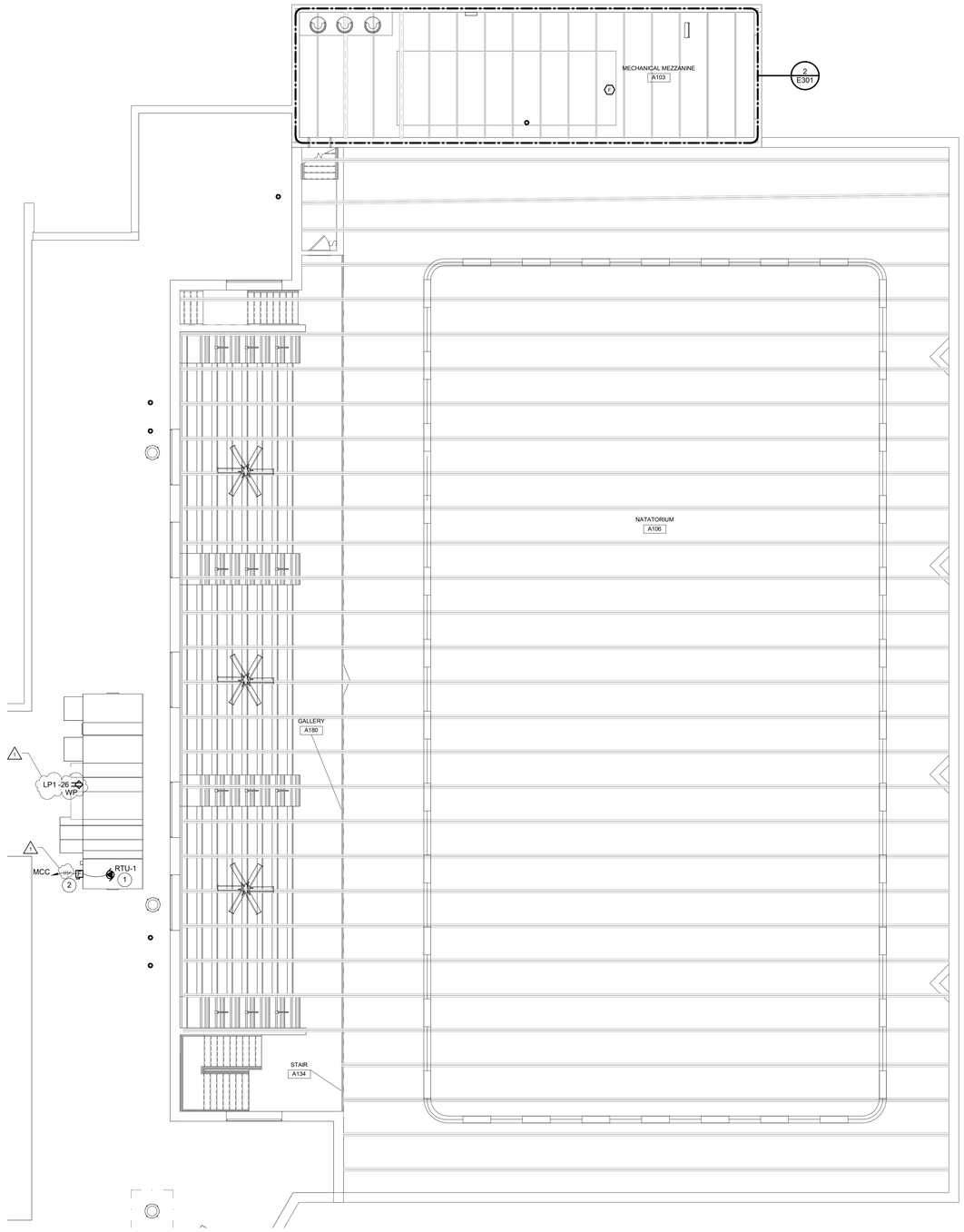
WORK TO REMAIN

GENERAL NOTES:

1. SEE E001 FOR GENERAL NOTES.

(#) PLAN NOTES:

1. CONNECT RTU-1 TO SAME CIRCUIT THAT PROVIDED POWER TO PREVIOUS RTU FROM 'MCC'. PROVIDE CONDUIT AND CONDUCTORS AS NECESSARY TO EXTEND CIRCUIT.
2. PROVIDE 480V, 60A-3PH FUSIBLE DISCONNECT. FUSE AT 50A.



SECOND FLOOR - ELECTRICAL

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

NORTH

0 2 4 6 8 16 24 32

1 2 3 4

NEW PALESTINE COMMUNITY SCHOOLS

CSO

8831 Keystone Crossing, Indianapolis, IN 46240
317.848.7800 | csoinc.net

D&A #25087

R.E. Dimond and Associates, Inc.
Consulting Engineers

732 North Capitol Avenue
Indianapolis, IN 46204
Phone: (317) 634-4672
Fax: (317) 638-8725

PROJECT:

NEW PALESTINE HIGH SCHOOL
POOL RENOVATION
CONSTRUCTION DOCUMENTS
4485 S. VICTORY DR. NEW PALESTINE, IN 46163

SCOPE DRAWINGS:

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REVISIONS:

1 ADDENDUM #001 12/15/2025

ISSUE DATE	DRAWN BY	CHECKED BY
11/25/2025	MSD	TEH

DRAWING TITLE:

SECOND FLOOR PLAN - ELECTRICAL

CERTIFIED BY:

TIMOTHY E. HILL
REGISTERED
No. PE19800083
STATE OF INDIANA
PROFESSIONAL ENGINEER

11/25/2025

DRAWING NUMBER

E202

PROJECT NUMBER

2024106