TIPTON
ASSOCIATES

ADDENDUM NUMBER TWO (2)

Issuance Date: August 7, 2025
Project Name: Gouaux Hall Exterior Facade Repair
Nicholls State University
Thibodaux, LA
Architect's Job No.: 1593.00-24
State Project No: 01-107-24-05, F.01004612 State ID: S04312 Site Code: 3-29-003

Bid No. SB01912

Acknowledge receipt of this Addendum in the space provided in the Bid Form. Failure to do so may subject the bidder to disqualification.

General Contractors are reminded that Bids are due at **3:00 pm**, Central Time, **Tuesday, August 12, 2025.** This is not a revision.

The following changes are issued for clarification purposes and shall be incorporated into the contract documents.

GENERAL:

1. **RECENT MOISTURE SURVEY:**
    a. The 15 November 2024 Moisture Survey listed in Addendum One is attached for reference here as it was inadvertently omitted in Addendum No. 1.
2. **HOT MOPPED CLARIFICATION:**
    a. The State of Louisiana Office of Facility Planning and Control recently adopted (29 January 2025) a two-ply cold applied SBS roofing assembly (with heat welded laps) as their selected membrane roof type. Delete reference to hot mopped application in Addendum No. 1 and provide a cold applied solution complying with State requirements. See attached specifications listed below.
3. **ALUMINUM ACCENT TRIM:**

ARCHITECTURE PLANNING INTERIOR DESIGN TIPTON-ASSOCIATES.COM
449 Westmoreland Drive Baton Rouge LA 70806 225.387.0101 office 225.387.0104 fax

APAC Kenneth Tipton, Jr. Bryon Hume J. Shane Higdon Erin Morgan Fabie Bennett Derbigny

a. **Sheet A101, Detail 1. Is there a product specification for the new extruded aluminum accent trim.**
    i. **RESPONSE:** No. Depending upon the manufacturer of the metal siding, this trim can be fabricated by the manufacturer or shop fabricated to comply with details indicated on Drawing A101, Detail 1.

4. PROJECT START DATE:
    a. **The brick for this project is an approximately 180-day lead time. Given this information, please advise me of a projected start date.**
        i. **RESPONSE:** The duration of construction will remain as published and may be adjusted once confirmation of material delivery date has been established by the contractor under contract.
5. EXISTING FLASHING:
    a. **Please confirm the required flashing for the conditions above. It appears the existing flashing (part of the existing metal panel scheme) is intended to be reused as the flashing over the new brick. Is this the case?**
        i. **RESPONSE:** The scope of this work is to keep the existing windows in place along with the sill and jamb flashing. The intent is to reuse these flashings and integrate them into the new work. Protect the flashings and hems at all times. Refer to Detail 1/A101.
6. JAMBS:
    a. **How will the jambs of the existing windows be flashed to the new brick. Please provide detail.**
        i. **RESPONSE:** Existing original documents indicate metal flashing behind the existing window jambs. This flashing is to remain. Protect as required and provide new backer rod and exterior grade sealant between flashing and brick. Maintain flashing hemmed edge shape and straight profile. Provide flexible membrane flashing as shown on attached Detail 11/A200.
7. ROOFING:
    a. **Is it possible for the architect to approve one of the following manufacturers (GAF or MuleHide) for the roof system?**
        i. **RESPONSE: No.** These manufactures are not prior approved for cold-applications as required by the State of Louisiana, Facility Planning & Control.

PRIOR APPROVALS:

The following manufacturers and/or products are approved for the items listed, subject to compliance with the drawings and specifications.

1. **Architectural**
    a. None.
2. **Mechanical / Plumbing**
    a. None
3. **Electrical:**
    a. None

SPECIFICATIONS:

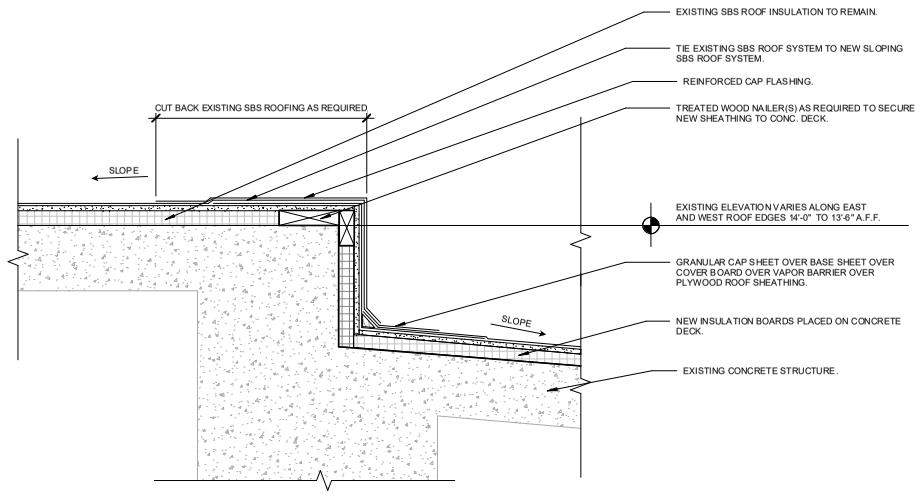
1. **Roofing:**
    a. Delete Specification Section 07 52 16.12 Hot-Mopped Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing and replace it with attached Specification Section 07 52 16.14 Cold Applied Styrene-Butadiene-Styrene Modified Bituminous Membrane Roofing.

DRAWINGS:

1. **Drawings**
    a. None.

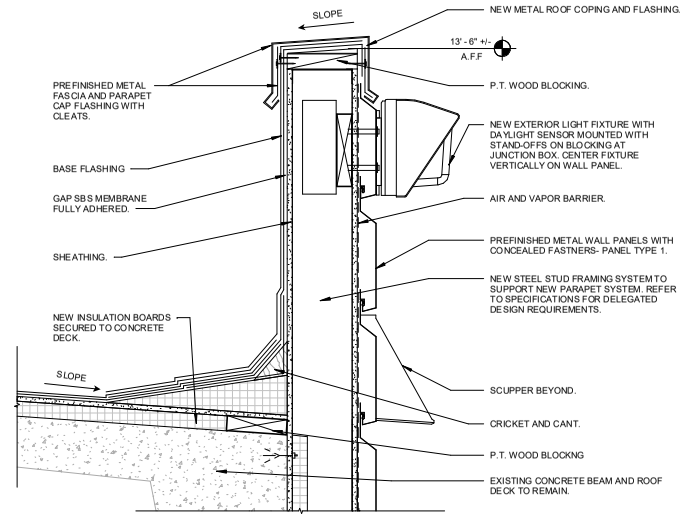
End of Addendum No. Two (2)

Attachments: As indicated above, Sheet A200



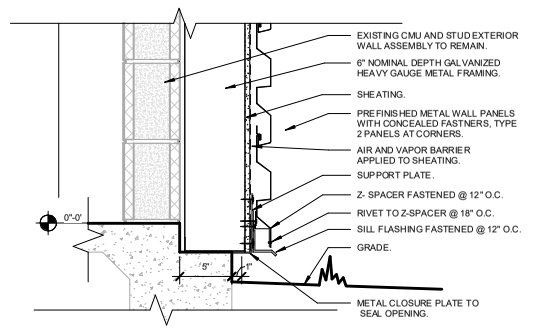
8 NEW ROOF DETAIL AT CONCRETE KNEE WALL TRANSITION

1 1/2" = 1'-0" RE:1/A100



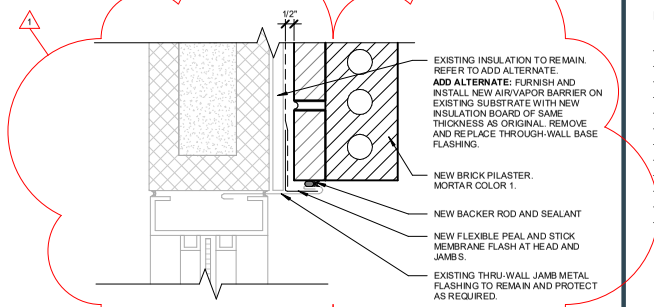
9 PARAPET WALL SECTION

1 1/2" = 1'-0" RE:1/A102



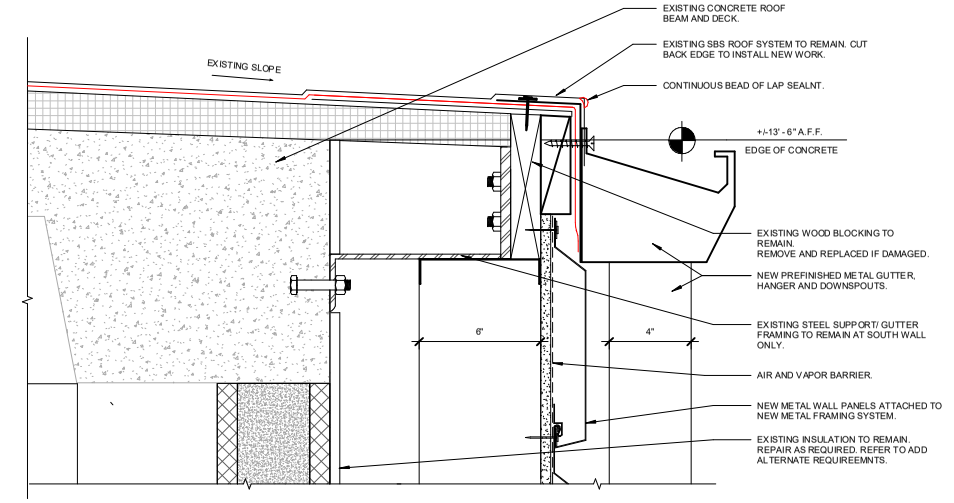
10 CORNER BASE DETAIL

1 1/2" = 1'-0" RE:2/A101



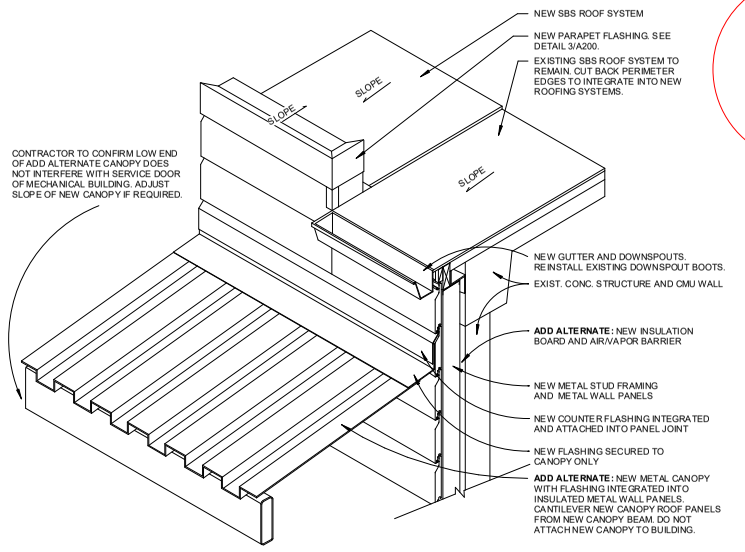
11 WINDOW JAMB DETAIL

3" = 1'-0" | RE:1/A101



5 ROOF EDGE DETAIL AT SOUTH WALL EDGE

3" = 1'-0" | RE:4/A102

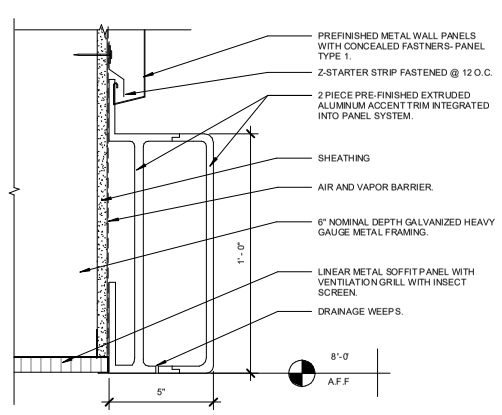


6 AXON VIEW OF SBS ROOF EDGE AT METAL CANOPY

1/2" = 1'-0" | RE:5/A102

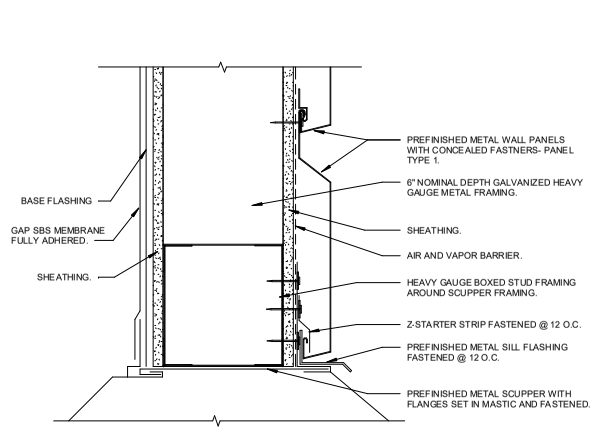
7 VERTICAL JOINT REVEAL

3" = 1'-0" | RE:1/A102



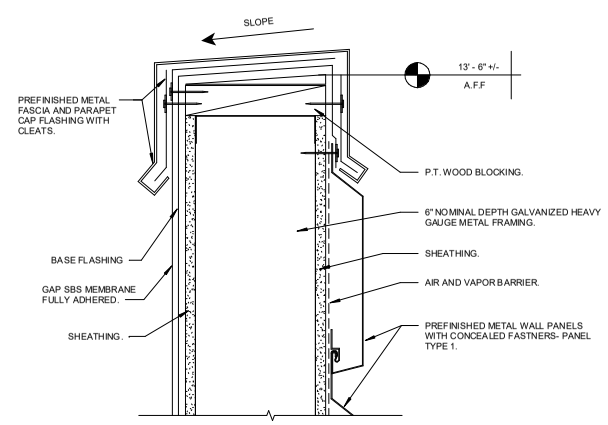
1 ENLARGED DETAIL OF EXTRUDED ACCENT

3" = 1'-0" | RE:1/A101



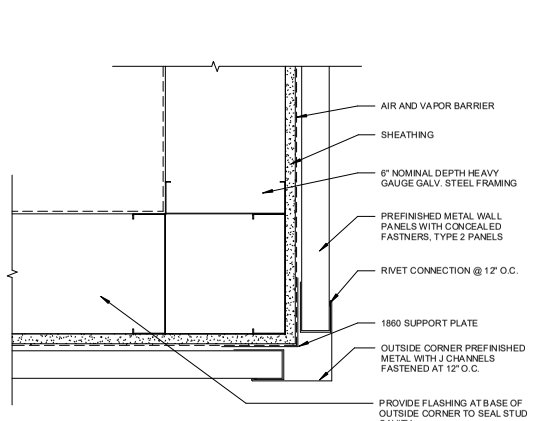
2 DETAIL AT TOP OF SCUPPER/METAL PANEL

3" = 1'-0" | RE:1/A101



3 ENLARGED DETAIL OF PARAPET ROOF EDGE

3" = 1'-0" | RE:1/A101



4 TYPICAL OUTSIDE CORNER DETAIL

3" = 1'-0" | RE:1/A102

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ARCHITECTURE PLANNING INTERIORS TIPTON-ASSOCIATES.COM

REVISIONS

No.	Description	Date
1	ADDENDUM 2	7 AUG 2025

KEYPLAN

GOUAUX HALL EXTERIOR FACADE REPAIR

100 Afton Dr, Thibodaux, LA 70301

PROJECT NO. 1593- 24
PROJECT DATE 09 JUNE 2025

ENLARGED DETAILS

DWG NO. A200

SECTION 07 52 16.14
COLD APPLIED STYRENE-BUTADIENE-STYRENE MODIFIED BITUMINOUS MEMBRANE ROOFING

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes

1. Two-ply cold applied SBS modified bitumen membrane roofing with protective granular covering, cover board, insulation, granular surfaced flashing materials, base flashings, air barrier, roof sheathing, roofing membrane expansion joints, cant strips, traffic pads and counterflashings.

2. Install new SBS system over areas where existing standing seam metal panels are being demolished. This work is associated with the Base Bid.

3. Perform repair work to the existing SBS system over portions of existing concrete roof decking. This work is associated with Add Alternate work. Refer to Specification Section Alternates 01 23 00 and drawings.

4. All related materials and labor required to complete specified roofing assembly necessary to receive specified manufacturer’s warranties and contractors's guarantees.

B. Related Requirements:

1. Section 06 10 00 - Rough Carpentry: Wood nailers and blocking associated with roofing and roof insulation.

2. Section 07 62 00 - Sheet Metal Flashing and Trim : Weather protection for base flashings, formed metal flashing and trim items associated with roofing.

1.2 REFERENCE STANDARDS

A. Definitions

1. ASTM D1079 - Definitions of Term Relating to Roofing and Waterproofing.

2. The National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual, current edition Glossary.

B. Reference Standards

1. American Society of Civil Engineers

a. ASCE 7-16 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures, 2016

2. ASTM International:

a. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus.

b. ASTM C728 - Standard Specification for Perlite Thermal Insulation Board.

c. ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

d. ASTM C1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers.

e. ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer.

f. ASTM D41 - Standard Specification for Asphalt Primer Used in Roofing, Dampproofing, and Waterproofing.

g. ASTM D5957, Standard Guide for Flood Testing Horizontal Waterproofing Installations

h. ASTM D6162 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using a Combination of Polyester and Glass Fiber Reinforcements.

i. ASTM D6163 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Glass Fiber Reinforcements.

j. ASTM D6164 - Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements.

k. ASTM E1918 - Standard Test Method for Measuring Solar Reflectance of Horizontal and Low-Sloped Surfaces in the Field.

l. ASTM E1980 - Standard Practice for Calculating Solar Reflectance Index of Horizontal and Low-Sloped Opaque Surfaces.

m. ASTM G152 - Standard Practice for Operating Open Flame Carbon Arc Light Apparatus for Exposure of Nonmetallic Materials, 2023

n. ASTM G154 - Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials, 2023

o. ASTM G155 - Standard Practice for Operating Xenon Arc Lamp Apparatus for Exposure of Materials, 2021

3. Cool Roof Rating Council

a. CRRC-1 - Roof Product Rating Program Manual

4. Factory Mutual System (FM):

a. FM (AG) - FM Approval Guide, Current Edition.

b. FM DS 1-28 - Wind Design, 2015, with Editorial Revision (2024)

c. FM DS 1-29 - Roof Deck Securement and Above-Deck Roof, 2016, with Editorial Revision (2022)

d. FM 4470 - Examination Standard for Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for Use in Class 1 and Noncombustible Roof Deck Construction, 2022

e. FM 4474 - American National Standard for Evaluating the Simulated Wind Uplift Resistance of Roof Assemblies Using Static Positive and/or Negative Differential Pressures

5. Intertek Testing Services (Warnock Hersey Listed):

a. WH - Certification Listings.

6. The National Roofing Contractors Association (NRCA):

a. The NRCA Roofing and Waterproofing Manual, current edition.

b. Roofing Materials Guide, for applicable low or steep slope roofs current edition.

c. Quality Control in the Application of Built-up Roofing, current edition.

d. Guidelines for Roof Mounted Outdoor Air Conditioner Installations, current edition.

e. "Energy Manual", current edition.

7. Single Ply Roofing Institute:

a. ANSI/SPRI/FM 4435/ES-1 - Test Standard for Edge Systems Used with Low Slope Roofing Systems, 2022

8. The Sheet Metal and Air Conditions Contractors National Association, Inc. (SMACNA)

a. Architectural Sheet Metal Manual, current edition.

9. Underwriters Laboratories, Inc. (UL)

a. Fire Resistance - Vol. 1 Directory, current edition.

b. Fire Resistance - Vol. 2 Directory, current edition.

c. Roofing Materials and Systems Directory, current edition.

d. Building Materials Directory", current edition.

e. UL 790 - Tests for Fire Resistance of Roof Covering Materials.

f. UL 1256 - Fire Test of Roof Deck Construction.

g. UL 1897 - Uplift Tests for Roof Covering Systems.

1.3 ADMINISTRATIVE REQUIREMENTS

A. Roofing Conferences

1. Pre-Roofing/Preliminary Conference

a. General Contractor to make arrangements for meeting, prepare agendas with copies for participants, preside at meetings.

b. Conference to be held a minimum (6) six weeks prior to the anticipated start of roofing Work.

c. General Contractor shall furnish to the Architect and Owner:

1) a letter from the manufacturer stating the roofer is an approved applicator

2) sample warranties

3) all items required in the Agenda

d. Attendance Required:

1) Contractor.

2) Owner.

3) User Agency.

4) Architect.

5) Contractor's Superintendent.

6) Roofing Subcontractor.

7) Roofing Manufacturer's Representative.

e. Meeting Minutes: Architect to prepare and distribute minutes within 7 business days.

f. Agenda:

1) See Recommended Agenda for Roofing Conferences and Agenda for Preliminary Roofing Conference, latest edition, published by State of Louisiana, Division of Administration, Facility, Planning And Control following this document and bound in the Project Manual.

2. Pre-Application Conference

a. General Contractor to make arrangements for meeting, prepare agendas with copies for participants, preside at meetings.

b. Conference to be held within (1) one week prior to the anticipated start of roofing Work.

c. General Contractor shall furnish for the Conference:

1) Copies of approved submittals.

2) Meeting Minutes from Pre-Roofing/Preliminary Conference for review.

3) Roofing Application Schedule.

4) Phase Construction Guidelines.

d. Attendance Required:

1) Contractor.

2) Owner.

3) Project Roofing Inspector.

4) User Agency.

5) Architect.

6) Contractor's Superintendent and/or Roofing Foreman.

7) Roofing Subcontractor.

8) Roofing Manufacturer's Representative.

e. Meeting Minutes: Architect to prepare and distribute minutes within 7 business days.

f. Agenda:

1) See Recommended Agenda for Roofing Conferences and Agenda for Roofing Pre-Application Conference, latest edition, published by State of Louisiana, Division of Administration, Facility, Planning And Control following this document and bound in the Project Manual.

3. Final Inspection and Wrap-Up Conference

a. General Contractor to make arrangements for meeting, prepare agendas with copies for participants, preside at meetings.

b. Conference to be held just prior to the anticipated completion of roofing Work.

c. Final Punch List to be established.

d. Attendance Required:

1) All in attendance at the Pre-Application Conference.

e. Meeting Minutes: Architect to prepare and distribute minutes within 7 business days.

f. Agenda:

1) See Recommended Agenda for Roofing Conferences and Agenda for Roofing Final Inspection and Wrap-Up, latest edition, published by State of Louisiana, Division of Administration, Facility, Planning And Control following this document and bound in the Project Manual.

1.4 SUBMITTALS

A. Section 01 30 00 - Administrative Requirements: Submittal procedures.

B. Product Data:

1. Provide membrane manufacturer's printed data showing roofing assembly components, including insulation and fasteners; comply with specified requirements and with membrane manufacturer's requirements and recommendations for system type specified; include data itemizing classified or approved system components.

C. Safety Data Sheets: Submit manufacturer’s Safety Data Sheets (SDS) for each component.

D. Classifications: Provide documentation showing roofing assembly is UL classified or FM approved where UL or FM requirements are specified as applicable; include data itemizing classified or approved system components.

E. Shop Drawings:

1. Provide roofing assembly plans, elevations, sections, details, and detailed attachment to other Work, including but not limited to:

a. Base flashings, cants, and membrane terminations.

b. Tapered insulation including slopes, layout of seams, and direction of laps.

c. Crickets, saddles,and tapered edge strips including slopes.

d. Insulation fastening patterns and details indicating thickness of insulation high points

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

G. Roofing System Manufacturer's Installation and Maintenance Instructions: Submit special precautions required for seaming membrane.

H. Roofing System Manufacturer's Proposed Assembly Letter, reviewed and approved by the Designers and the Owner prior to scheduling Preliminary Roofing Conference.

I. Roofing System Manufacturer's Field Reports: Indicate procedures followed, ambient temperatures and wind velocity during application.

J. Installer's (Roofing Contractor) Certificate of Certification.

K. Roofing System Product Supplier shall furnish the Roofing Contractor with Material Safety Data Sheets (MSDS), incorporating OSHA approved forms in current editions. All MSDS sheets shall be available at the site at all times until project completion.

L. As-Built documents to be provided to the Architect and shall include plans with details, specifications, all change orders, RFI, shop drawings, product data, SDS data, and all specified certification approvals in a 3-ring binder which the Architect shall furnish to the User Agency prior to Final Acceptance being issued for Work completed in this Section.

M. Roof Completion Information Form

1. To be completed and submitted as part of the Close-Out procedures prior to acceptance.

2. See Roof Completion Information form published July 2021 by State of Louisiana, Division of Administration, Facility, Planning And Control following this document and bound in the Project Manual.

N. Warranty: Provide draft(s) of all required warranties and guarantees for Owner review.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with NRCA Roofing and Waterproofing Manual.

B. Phased Construction: Each SBS modified bitumen sheet shall be manufactured as an independent waterproofing layer. The independent waterproofing layer design will allow for phased construction between layers.

C. Qualifications

1. Roof System Manufacturer:

a. Must be a current roof manufacturer of Modified Bituminous Membrane Roofing System approved for use by the State of Louisiana.

2. Installer's (Roofing Contractor) Certification:

a. The Roofing Contractor shall provide a current letter or Certificate of Certification issued by the Roof System Manufacturer that indicates he has attained the highest level of certification as an installer of the roof system specified.

b. Roofing Contractor shall provide full time, on-site superintendent or foreman experienced with the specified roofing from beginning through satisfactory project completion.

c. Applicators shall have completed projects of similar scope using same or similar materials specified.

d. Applicators shall be skilled in the application methods for all materials.

D. Source Limitations:

1. Obtain all field plies, cap sheets, inter-plies, base plies, mopped granular flashing plies, stripping plies, flexible flashings, liquid membrane flashings, and traffic pad membranes from a single source Roofing System Manufacturer guaranteeing the complete roofing assembly. All provided products used in the system shall be labeled by the undivided, single source Roofing System Manufacturer issuing the guarantee.

2. All materials and components for a complete Roofing System shall be provided by the Roofing Contractor guaranteeing the complete roofing assembly as a single source responsibility.

3. All Work for a complete Roofing System shall be performed by the Roofing Contractor guaranteeing the complete roofing assembly as a single source responsibility.

E. Owner Testing and Inspections:

1. The Owner has the right to sample any/all roofing assembly products on site for testing by an accredited 3rd party laboratory if deemed essential to do so and without advance notice.

2. The Owner has the right to retain a Roofing Systems Consultant to review the Construction Documents and/or perform surveillance during any installation of substrate sheathing, roofing, flashing, and any other part of the total roofing assembly.

3. The Owner has the right to retain an independent 3rd party roofing inspection service specializing in performing Non-Destructive Evaluation (NDE), for moisture detection purposes, before the final acceptance of the total roofing assembly or before the end of the Guarantee Period.

4. The Owner has the right to conduct Non-Destructive Evaluation (NDE), for moisture detection purposes, before the final acceptance of the total roofing assembly or before the end of the Guarantee Period using their own provided personnel.

5. The Owner has the right to provide a full-time representative on-site during the roofing assembly installation.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Section 01 60 00 - Product Requirements: Product storage and handling requirements.

B. Delivery:

1. Deliver materials in the manufacturer's original sealed and labeled containers bearing the manufacturer's identifying marks and approved testing agency labels, and in quantities required to allow continuity of application.

2. Bulk shipments of materials shall be accompanied with the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

C. Storage: Store materials out of direct exposure to the elements. Store roll goods on a clean, flat and dry surface. All material stored on the roof overnight shall be stored on pallets. Rolls of roofing must be stored on ends. Store materials on the roof in a manner so as to preclude overloading of deck and building structure. Store materials such as solvents, adhesives and asphalt cutback products away from open flames, sparks or excessive heat. Cover all material using a breathable cover such as a canvas. Polyethylene or other non-breathable plastic coverings are not acceptable.

D. Keep combustible materials away from ignition sources.

E. Ensure storage and staging of materials does not exceed static and dynamic loadbearing capacities of roof decking.

F. Handling: Handle all materials in such a manner as to preclude damage and contamination with moisture or foreign matter. Handle rolled goods to prevent damage to edges or ends.

G. Protect foam insulation from direct exposure to sunlight.

H. Damaged Material: Any materials that are found to be damaged or stored in any manner other than stated above will be automatically rejected, removed and replaced at the Contractor's expense.

1.7 FIELD CONDITIONS

A. Safety:

1. The contractor shall be responsible for complying with all project-related safety and environmental requirements.

2. Refer to NRCA CERTA recommendations, local codes and building owner’s requirements for hot work operations.

3. The contractor shall review project conditions and determine when and where conditions are appropriate to utilize the specified hot asphalt-applied materials. When conditions are determined by the contractor to be unsafe or undesirable to proceed, measures shall be taken to prevent or eliminate the unsafe or undesirable exposures and conditions. Contact the Owner and Architect regarding equivalent approved materials and methods to be utilized to accommodate requirements and conditions in such instances where unsafe or undesirable conditions cannot be prevented or eliminated.

4. The contractor shall refer to product Safety Data Sheets (SDS) for health, safety, and environment related hazards, and take all necessary measures and precautions to comply with exposure requirements.

B. Environmental Conditions

1. Proceed with installation only when current and foretasted weather conditions permit roofing assembly to be installed in accordance with manufacturer's written instructions and guarantee requirements.

2. Monitor substrate temperature and material temperature, as well as all environmental conditions such as ambient temperature, moisture, sun, cloud cover, wind, humidity, and shade. Ensure conditions are satisfactory to begin work and ensure conditions remain satisfactory during the installation of specified materials. Materials and methods shall be adjusted as necessary to accommodate varying project conditions. Materials shall not be installed when conditions are unacceptable to achieve the specified results.

3. Precipitation and dew point: Monitor weather to ensure the project environment is dry before, and will remain dry, during the application of roofing materials. Ensure all roofing materials and substrates remain above the dew point temperature as required to prevent condensation and maintain dry conditions.

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

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

1.8 COORDINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Coordinate Work with installation of associated metal flashings as Work of this section proceeds.

1.9 WARRANTY

A. Section01 70 00 - Execution and Closeout Requirements: Product warranties and product bonds.

B. General:

1. Comply with warranty procedures required by manufacturer, including notifications, scheduling, and inspections.

2. The roofing assembly and associated Work shall be guaranteed against leaks from faulty or defective materials and workmanship for an applicable period shown in guarantee, starting at the date of Owner's Final Acceptance of the project.

3. The Roofing Guarantee shall be executed in duplicate, signed by the appropriate parties, and submitted to the Owner processed through the Architect.

4. Electronic signatures or copies shall be acceptable for Roofing Contractor guarantee forms listed.

5. Warranty must not contain any statements that would void the warranty in the event that all invoices for materials, installation and services have not been paid in full.

6. The Roofing Contractor or Roofing Systems Manufacturer, as applicable, shall make approved repairs and/or replacements covered by the Guarantee(s).

C. Roofing Sytem Manufacturer's Warranty: Upon successful completion of the project, and after all post installation procedures have been completed, the Contractor shall furnish the Owner with the State Approved twenty (20) year NDL labor and materials membrane warranty. The guarantee shall not exclude random areas of ponding from coverage defined as “no standing water after 48-hours from the last rain”, and shall not require Owner’s signature to become valid. Each of the approved manufacturer's listed below have developed a specific warranty format that is acceptable to the State of Louisiana. No changes to the approved manufacturer's warranty are allowed without the consent of the State of Louisiana.

1. See Manufacturer’s NDL Watertightness Membrane Roofing System Warranty published June 2020 By State Of Louisiana, Division Of Administration, Facility, Planning And Control following this document and bound in the Project Manual.

D. Two-Year State Required Guarantees: Provide Roofing Contractor's Guarantee-R2 specifically for this Project.

1. Published July 2022 By State Of Louisiana, Division Of Administration, Facility, Planning And Control following this document and bound in the Project Manual.

PART 2 PRODUCTS

2.1 MEMBRANE ROOFING ASSEMBLY

A. Description:

1. Modified Bituminous Roofing Low Slope Two-ply cold applied SBS assembly: Two ply membrane system, insulation, coverboard, roof sheathing, air barrier, and granular surface finish.

2. Provide system prior approved by State of Louisiana Facility Planning and Control.

B. Performance / Design Criteria:

1. General:

a. Provide a complete assembly with sloped surfaces to roof drains and overflow conditions.

1) Min. roof slope 1/4" per foot (2 percent) minimum for roof drainage. If min. roof slope cannot be achieved, alert the architect prior to issuing shop drawings for review. Comply with manufacturer's min. recommendations.

b. Installed roofing membrane system shall remain watertight and resist specified wind uplift pressures, thermally induced movement, and exposure to weather without failure.

c. Roofing materials shall be compatible with one another under conditions of service and application required, as demonstrated by roofing assembly manufacturer based on testing data and field experience.

2. Roof Assembly Classifications:

a. Roofing membrane, base flashings, and component materials shall comply with requirements in FM 4450 and FM 4470 and be listed in FM's "RoofNav" for Class 1 or noncombustible construction, as a roofing assembly.

b. Fire/Windstorm Class: Class A/1-90, calculated in accordance with FM DS 1-28 and UL 790 without the necessity for maintenance oriented coatings or surfaces.

3. Wind Uplift Performance: Roofing system shall be identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist wind uplift pressure calculated in accordance with ASCE 7-16 wind speeds as specified by Structural Engineer;

a. Risk Category III as specified by Structural Engineer; See structural drawings for calculations and requirements.

b. Exposure B as specified by Structural Engineer; See structural drawings for calculations and requirements.

c. Increase calculations at roof pressure zones for location on roof: interior field, exterior field, perimeter, and corner, with wind uplift capacities as required by ASCE 7-16 , FM 1-90, and Manufacturer's Warranty Requirements. The most stringent requirements will apply.

d. Comply with prescriptive enhancements required by FM DS 1-29.

e. Roof Edge Securement: Conform to ANSI/SPRI/FM 4435/ES-1 for wind speeds determined above.

f. Roofing system shall be tested and conform to requirements of FM 4474.

4. Physical Properties: Meets requirements of physical integrity, exposure, and weathering for the working life of the roof system when tested in accordance with ASTM G152, ASTM G154, or ASTM G155. Roof system shall not demonstrate any significant loss of tensile strength for unreinforced membranes or breaking strength for reinforced membranes when tested as required.

5. Impact Resistance: Meets requirements for FM-SH (Severe Hail) when tested in accordance with FM 4450 and FM 4470.

6. Granule Surfacing: The finished membrane system including lap bleed-out shall have a factory applied granule surfacing to allow for ease of inspection, maintenance and repair.

7. Detail Treatments: The SBS modified bitumen membrane terminations and associated roof penetrations shall be water proofed using conservative detail configurations according to the following basic criteria.

a. All flashing systems are to be (2) two ply systems minimum.

b. Flanged metal flashings shall be primed both sides and set in mastic over the first SBS modified bitumen membrane layer and waterproofed using a minimum of two (2) two additional layers of the SBS modified bitumen membrane.

c. Walls, curbed penetrations, etc. shall be waterproofed using a minimum total of four (4) layers of the SBS modified bitumen membranes at junctures of the roof deck to the penetrations. The four (4) layered construction consists of: SBS base ply layer; SBS reinforcing ply layer; SBS Cap sheet layer; and SBS flashing sheet layer.

C. Manufacturers:

1. Certainteed Commercial Roofing.:

a. Field Plies:

1) Cap Sheet: Flintlastic FR-P Cap Sheet (168 mils; weight 100 lbs. per one square roll; with a polyester mat)

2) Interply: Flintlastic Ultra Poly SMS Base Sheet (148 mils; weight 89 lbs. per one square roll; with a polyester mat)

b. Mopped Granular Flashing Plies:

1) Cap Ply: Flintlastic FR-P Cap Sheet (168 mils; 100 lbs. per one square roll; with a polyester mat)

2) Stripping Ply: Flintlastic Ultra Poly SMS Base Sheet (148 mils; weight 89 lbs. per one square roll; with a polyester mat)

c. Cold Adhesive: Flintbond SBS Modified Bitumen Adhesive, Brush Grade

2. Johns Manville Corporation:

a. Field Plies:

1) Cap Sheet: DynaGlas FR (3.8 mm thick, weight 95 lbs per square; with Fiberglas Mat).

2) Interply: DynaLastic 180 S (3.0 mm thick; weight 90 lbs per square; with Polyester reinforcement).

b. Mopped Granular Flashing Plies:

1) Cap Ply: DynaGlas FR (3.8 mm thick, weight 95 lbs per square; with Fiberglas Mat).

2) Stripping Ply: DynaLastic 180 S (3.0 mm thick; weight 90 lbs per square; with Polyester reinforcement).

c. Cold Adhesive: MBR

3. Polyglass U.S.A. Inc.

a. Field Plies:

1) Cap Sheet: Elastoflex S6G FR (157 mils/4.0 mm thick; weight 102 lbs. per roll, with reinforced polyester reinforcement).

2) Interply: Elastoflex V (120 mils/3.0 mm thick; weight 84 lbs. per roll, with glass fiber reinforcement).

b. Mopped Granular Flashing Plies:

1) Cap Ply: Elastoflex S6G FR (157 mils/4.0 mm thick; weight 102 lbs. per roll, with reinforced polyester reinforcement).

2) Interply: Elastoflex V (120 mils/3.0 mm thick; weight 84 lbs. per roll, with glass fiber reinforcement).

c. Cold adhesive: PG 350 or PolyPlus 35 Modified Bitumen Adhesive

4. Siplast Inc.:

a. Field Plies:

1) Cap Ply: Paradiene 30 FR (98 mils/2.5mm thick; weight 90 lbs. per square; with fiberglass mat).

2) Interply: Paradiene 20 EG (3.0 mm thick; weight 84 lbs. per square; with fiberglass scrim/fiberglass mat).

b. Mopped Granular Flashing Plies:

1) Cap Ply: Parafor 50LT (157 mils/ 4.0 mm thick; weight 129 lbs per square, with polyester/fiberglass mat reinforcement).

2) Stripping Ply: Paradiene 20 EG (3.0 mm thick; weight 84 lbs. per square; with fiberglass scrim/fiberglass mat).

c. Cold adhesive: PA-311

5. Soprema, Inc.:

a. Field Plies:

1) Cap Sheet: Sopralene 180 Granules FR; (160 mils / 4.0mm thick, weight 108 lbs per square; polyester reinforced)

2) Interply: Sopralene 180 sanded 2.2, polyester reinforced (90 mils/ 2.2 mm thick, 58 lbs per square)

b. Mopped Granular Flashing Plies:

1) Cap Sheet: Sopralene 180 Granules FR; (160 mils / 4.0mm thick, weight 108 lbs per square; polyester reinforced)

2) Stripping Ply: Sopralene 180 sanded, polyester reinforced (90 mils/ 2.2 mm thick, 58 lbs per square).

c. Cold Adhesive: Colply

6. U.S.Ply, Inc.

a. Field Plies:

1) Cap Sheet: Duraflex 190FR SBS (170 mils/ 4.3 mm thick; weight 105 lbs per square; with a non-woven polyester mat)

2) Interply: Duraflex 190S SBS (120 mils/ 3.0 mm thick; weight 88 lbs per square; with a non-woven polyester mat)

b. Mopped Granular Flashing Plies:

1) Cap Ply: Duraflex 190FR SBS (170 mils/ 4.3 mm thick; weight 105 lbs per square; with a non-woven polyester mat)

2) Stripping Ply: Duraflex 190S SBS (120 mils/ 3.0 mm thick; weight 88 lbs per square; with a non-woven polyester mat)

c. Cold Adhesive: 901 Premium Modified Adhesive

7. Listed manufacturers and products comply with the State of Louisiana approved manufacturer's and products requirements based upon "Low Slope 20-Year Warranty SBS Products Acceptable for Use" document provided by the State.

8. Substitutions: Products must be approved via the State of Louisiana's "Criteria for selection of roofing materials for the 20 year list". Substitutions will not be allowed.

D. Components

1. Galvanized metal, and specialized or proprietary coatings not allowed in any component of roofing assembly assembly without written approval from the Owner and Architect in accordance with Section 00 43 25 .

2. Modified Bitumen Materials: Must comply with requirements of ASTM D6162/D6162M, ASTM D6163/D6163M, or ASTM D6164/D6164M.

a. Finish Membrane: ASTM D5147/D5147M; Type III, styrene-butadiene-styrene (SBS) modified bituminous sheet, reinforced with polyester fabric, glass fiber, or a combination of both; granule surfaced.

b. Base Membrane: ASTM D5147/D5147M; Type III, styrene-butadiene-styrene (SBS) modified bituminous sheet, reinforced with polyester fabric, glass fiber, or a combination of both; smooth surfaced.

3. Sheet Materials:

a. Glass Fiber Felts: ASTM D2178/D2178M , Type IV, asphalt saturated.

4. Roof Surface:

a. The cap sheet shall be granule-surfaced. Cap sheet shall be listed by the Cool Roof Rating Council (CRRC) with the following minimum published values, including CRRC 3-Year Rapid Ratings:

b. Solar Reflectance: Initial: 0.7 3-year: 0.62

1) When tested in accordance with ASTM E903, ASTM E1918 , or ASTM C1549.

c. Thermal Emittance: Initial: 0.9 3-year: 0.9

1) When tested in accordance with ASTM C1371 Slide Method.

d. Solar Reflectance Index (SRI): Initial: 86 3-year: 75

1) When tested in accordance with ASTM E1980.

2.2 COVERBOARD:

A. Fiberglass Mat Faced Gypsum, with the following characteristics:

1. Thickness: 1/2 inch.
2. Width: 4 feet.
3. Length: 8 feet.
4. Weight: 2.0 lb/sq. ft.
5. Surfacing: Primed Fiberglass Mat
6. Board Edges: Square
7. Flexural Strength, Parallel ASTM C473: 80 lbf, minimum.
8. Water Absorption ASTM C473: Less than 5 percent of weight.
9. Surface Water Absorption ASTM C473: Nominal 1.0 grams.
10. Compressive Strength (Applicable Sections of ASTM C472): Nominal 900 pounds per square inch.
11. Flame Spread/ Smoke Development (ASTM E84): Not more than 0 Flame Spread, 0 Smoke Development.
12. Combustibility (ASTM E136): Noncombustible
13. Fire resistance rating (UL 790 and ASTM E108): Class A
14. Mold Resistance (ASTM D3273): Scored a 10

2.3 INSULATION:

A. ASTM C1289, Type II, Class 1, faced rigid cellular polyisocyanurate roof insulation, with the following characteristics:

1. Must meet NFPA 276 or UL 1256 when tested as an assembly.
2. Board Density: 2.0 lb/cu ft.
3. Board Size: 48 x 48 inch.

4. Board Thickness: minimum 1-1/2 inch thickness per layer for a total thickness of 1-1/2 inch (to match demolished insulation) as indicated on drawings.

5. Board Edges: square.

6. Thermal Conductivity: K factor of 0.36 as determined by ASTM C177.

7. Compressive Strength: Minimum 20 psi.

2.4 AIR-BARRIER / VAPOR RETARDER:

A. Self-Adhering Membrane: SBS-modified bitumen adhesive, factory-laminated to tri-laminate woven, high-density polyethylene top surface with release liner.

1. Thickness: 30 mil, 0.03 inch, minimum.

2. Low-Temperature Flexibility: Unaffected when tested in accordance with ASTM D5147/D5147M at minus 30 degrees F.

3. Air Permeance: 0.004 cfm/sq ft, maximum, when tested in accordance with ASTM E2178.

4. Water Vapor Permeance: 1 perm, maximum, when tested in accordance with ASTM E96/E96M using Procedure B - Water Method.

a. Water Penetration Resistance around Nails: Pass, when tested in accordance with ASTM D1970/D1970M.

2.5 GYPSUM-BASED DECK SHEATHING:

A. Noncombustible, water-resistant gypsum core with embedded glass mat facers, complying with ASTM C1177/C1177M, with the following additional characteristics:

1. Water Absorption: 10 percent maximum, when tested in accordance with ASTM C473.

2. Surface Burning Characteristics: Flame spread index of 0, smoke developed index of 0, when tested in accordance with ASTM E84.

3. Combustibility: Noncombustible, when tested in accordance with ASTM E136.

4. Factory Mutual approved plates and fasteners for use with FM 1-90 rated roofing assemblies.

5. Mold Growth Resistance: Zero growth, when tested in accordance with ASTM D3273 for minimum of four weeks.

6. Flexible Flashings: Same material as membrane, white color.

7. Rigid Flashings and Counterflashings: Stainless steel as specified in Section 07 62 00 07 62 00.

8. Liquid Membrane Flashings: Provide liquid flashing materials that are a part of the approved roofing assembly from the same manufacturer.

9. Products:

a. Georgia-Pacific; DensDeck: www.buildgp.com/densdeck/.

b. National Gypsum; DEXcell Glass Mat Roof Board : www.goldbondbuilding.com/

c. USG; Securock UltraLight Glass-Mat Roof Board: www.usg.com/.

2.6 ACCESSORIES

A. Wood Nailers: PS 20 dimension lumber, Structural Grade No.2 or better Southern Pine, Douglas Fir, or PS 1 APA Exterior Grade plywood; pressure preservative treated.Do not use asphaltic or creosote-treated lumber.Do not use lumber treated with wood preservatives, such as pentachlorophenol, copper naphthenate, or copper 8-quinolinolate.Width: 3-1/2 inches, nominal minimum, or as wide as nailing flange of roof accessory attached.Thickness: Same as thickness of roof insulation.

1. Do not use asphaltic or creosote-treated lumber.

2. Do not use lumber treated with wood preservatives, such as pentachlorophenol, copper naphthenate, or copper 8-quinolinolate.

3. Width: 3-1/2 inches, nominal minimum, or as wide as nailing flange of roof accessory attached.

4. Thickness: Same as thickness of roof insulation.

B. Cant Strips and Tapered Edge Strips: 45-degree face slope and minimum 5-inch face dimension; provide at angle changes between vertical and horizontal planes exceeding 45 degrees.

1. Type: Nonflammable perlite, complying with ASTM C728.

2. Type: Wood fiber, complying with ASTM C208.

3. Install using Type IV hot asphalt, roofing mastic, or mechanically fastened using fasteners and plates approved by roofing manufacturer.

4. Insulation Joint Tape: Asphalt treated glass fiber reinforced; 6 inches wide; self adhering as recommended by insulation manufacturer.Insulation Fasteners: Appropriate for purpose intended and approved by Factory Mutual and system manufacturer; length required for thickness of material with metal washers.Sealants: As recommended by membrane manufacturer.Strip Reglet Devices: Stainless steel, recess mounted, binder bars, maximum possible length per location, with attachment flanges.Traffic Pads: Bituminous composition type, granulated finish, 36 x 36 inch size min., or as indicated in drawings and as recommended by membrane manufacturer.

C. Insulation Fasteners: Appropriate for purpose intended and approved by Factory Mutual and system manufacturer; length required for thickness of material with metal washers.

D. Sealants: As recommended by membrane manufacturer.

E. Strip Reglet Devices: Stainless steel, recess mounted, binder bars, maximum possible length per location, with attachment flanges.

F. Traffic Pads: Bituminous composition type, granulated finish, 36 x 36 inch size min., or as indicated in drawings and as recommended by membrane manufacturer.

1. Provide traffic pads where servicable roof top equipment is being reinstalled at new roof locations. Provide pads on all sides of equipment.

2. Refer to Installation locations listed below.

PART 3 EXECUTION

3.1 GENERAL

A. Install roofing, insulation, flashings, and accessories in accordance with roofing manufacturer's published instructions and recommendations for specified roofing assembly. Where manufacturer provides no instructions or recommendations, follow NRCA (RM) written requirements and industry standards. Comply with federal, state, and local regulations.

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

C. Do not start work until preinstallation notice is submitted to roofing assembly manufacturer.

3.2 EXAMINATION

A. Section 01 30 00 - Administrative Requirements: Coordination and project conditions.

B. Verify existing roof system has been removed down to roof deck, including existing composition base flashings, and materials have been properly disposed of.

C. Verify surfaces and site conditions are ready to receive work. Correct defects in substrate before commencing with roofing work.

D. Examine roof deck to determine deck is sufficiently rigid to support installers and mechanical equipment so deflection will not strain or rupture roof components or deform deck.

E. Examine roof substrate to verify adequate slope to drains.

F. Verify wood nailers are installed according to manufacturer's instructions.

G. Verify roof openings, curbs, pipes, conduit, sleeves, ducts, and vents through roof are solidly set, and cant strips, nailing strips and reglets are in place.

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

I. At areas where damaged roofing is to be removed and replaced, examine current conditions and perform moisture testing to confirm if substrates below areas of roof damage are dry and free of moisture.

3.3 PREPARATION

A. Install roofing in strict accordance with manufacturer’s current recommendations, reference standards, as specified, as required for FM Class 1 Roof System; Wind Rating, I-90 minimum. ASCE wind load calculation and Code may require more stringent requirements. Contractor to verify.

B. Take appropriate measures to ensure fumes from adhesive solvents are not drawn into building through air intakes.

C. Before proceeding, ensure roof surface is clean, dry, and smooth and free of sharp edges, fins, roughened surfaces, loose or foreign materials, oil, grease, and other materials that may damage membrane.

D. Fill surface voids in immediate substrate greater than 1/4-inch wide with fill material approved by membrane manufacturer.

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

F. Wood Nailers: Provide wood nailers at perimeters and other locations where indicated on drawings.

1. Install with 1/8-inch gap between each length and at each direction change.

G. If moisture levels exceed the manufacturers and owner's requirements in the substrate materials at locations where damaged roofing is to be removed and replaced, make preparations to remove and replace all materials that exceed maximum moisture levels.

3.4 PREPARATION - CONCRETE DECK

A. Verify deck surfaces are flat. Fill surface honeycomb with latex filler.

B. Confirm deck does not exceed 12 percent moisture maximum when tested in accordance with ASTM D4263.

C. Materials Adhered to Deck with Asphalt: Prime with ASTM D41/D41M primer. Allow to dry completely before applying hot asphalt.

3.5 APPLICATION

A. Installation - Air-Barrier/Vapor-Retarder:

1. Before installing insulation, install self-adhered membrane directly over roof deck sheathing in accordance with manufacturer's written instructions..

2. Ensure penetrations and edge conditions are sealed and continuous with wall air-barrier membrane system to prevent moisture and air drive into roofing assembly and building.

B. Installation - Insulation:

1. Install insulation in accordance with manufacturer's written instructions.

2. Install only as much insulation as can be covered with completed roofing assembly at end of day work or before onset of inclement weather.

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

4. Locate all end joints.

5. Stagger all end joints a minimum of 12 inches.

6. Neatly and tightly fit insulation to penetrations, projections, and nailers, with gaps not greater than 1/4 inch. Fill gaps greater than 1/4 inch with acceptable insulation. Do not leave roofing membrane unsupported over space greater than 1/4 inch.

7. Apply additional layers of insulation in solid mopping of steep asphalt applied at a ratio of 33 lbs. per square staggered both directions and as recommended by roofing manufacturer.

C. Installation - Cover Board:

1. Install in accordance with manufacturer's written instructions.

    a. Mechanically Fastened Cover Boards: Comply with specified Factory Mutual for FM Class requirements for mechanical fastening requirements.

D. Installation - Membrane and Flashing:

1. General: Application shall be in accordance with roofing assemblys manufacturer’s instructions and the following requirements. Application of roofing shall immediately follow application on insulation (where applicable) as a continuous operation.

    a. Mechanical and plumbing penetrations through roof system, equipment curbs and area separations (where applicable) shall be flashed utilizing liquid applied reinforced flashing membranes as recommended by roofing manufacturer.

2. Prime metal flanges and concrete, and masonry surfaces (where applicable) with a uniform coating of asphalt primer acceptable to roofing manufacturer. Prime all surfaces of wood nailers which will directly receive roofing flashing with ASTM-41 asphalt primer, latest edition.

3. All flanges shall be set in a smooth, even, continuous coating of plastic cement acceptable to roofing manufacturer.

4. During installation of membrane, keep mop full with adhesive do not scrub with mop when applying adhesive.

5. All layers of roofing shall be laid free of wrinkles, creases or fishmouth and shall be laid perpendicular to the slope of the deck. Modified Base sheet shall be fully bonded by means of mopping to the prepared surfaces.

6. Flashings shall be installed in accordance with manufacturer's written instructions.

7. Flashing shall be accomplished using base sheet reinforcing membrane and metal clad cap sheet flashing membrane. The reinforcing sheet shall extend a minimum of four (4) inches onto the base sheet surface and three (3) inches up the parapet wall. The flashing sheet shall be lapped a minimum of three (3) inches to itself and shall extend a minimum of six (6) inches onto the cap sheet surface and eight (8) inches up to the parapet wall. Lap seams in the reinforcing layer shall never coincide with the laps of the cap sheet layer. The reinforcing sheet shall be torched in place and mechanically attached to the wall at the leading edge. The cap sheet shall be torched in place and mechanically attached to the wall at the leading edge. All flashing sheets shall be cut off the end of the roll and be applied vertically, always working to a sleeve edge. Provide loose granules of same color of cap sheet granules to cover edge run-out.

8. Keep rooftop traffic to minimum on newly applied membrane and for period after in order to minimize damage and bitumen displacement. Set rolls from cold side of roof.

9. At end of day’s work, or when precipitation is imminent, a water cut off shall be built as all open edges. Cut-offs can be built using asphalt or plastic cement and roofing felts, constructed to withstand protracted period of service. Cut-offs must be completely removed prior to the resumption of roofing.

E. Installation - Flashings And Accessories:

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

2. Apply flexible sheet base flashings to seal membrane to vertical elements.

3. Secure to nailing strips at 4 inches

4. Install prefabricated roofing control and expansion joints to isolate roof into areas as indicated on Drawings.

5. Coordinate installation of roof drains, sumps and scuppers, curbs, and related flashings.

6. Seal flashings and flanges of items penetrating or protruding through membrane.

7. Cold pipe penetrations, including roof drains, shall receive roofing manufacturers liquid membrane flashing system with penetrations covered in warranties.

F. Installation - Roof Drains:

1. Existing Drains: Remove existing flashings, drain leads, roofing materials and cement from drain; remove clamping ring.

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

3. Position membrane, then cut hole for roof drain to allow 1/2 to 3/4 inch of membrane to extend inside clamping ring past drain bolts.

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

5. Roof drain assemblies must be connected to storm drain piping prior to flashing flanges of the roof drain units on the roofing.

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

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

G. Installation - Finishing and Walkway

1. Install walkways at access points to roof, around rooftop equipment requiring maintenance, and where indicated on drawings.

   a. Do not install walkway pads within 10 feet of roof edge or perimeter.

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

   a. If walkway pad installation over field-fabricated splices or within 6 inches of splice edge cannot be avoided, adhere another layer of flashing over splice, extending 6 inches, minimum, beyond walkway pad on either side.

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

c. Provide traffic pads where servicable roof top equipment is being reinstalled at new roof locations. Provide pads on all sides of equipment.

3.6 FIELD QUALITY CONTROL

A. Section 01 40 00 - Quality Requirements,

B. Section 01 70 00 - Execution and Closeout Requirements: Field inspecting, testing, adjusting, and balancing.

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

D. Perform corrections necessary for issuance of warranty.

E. Require site attendance of roofing and insulation materials manufacturers during installation of the Work.

F. Roofing Manufacturer’s Field Representation

1. Conference Attendance: A technical representative of the roof system manufacturer (not a sales person) will attend the Pre-Application Conference and shall be present at the project site a minimum of two (2) visits during the first week of roofing installation work (within first two or three work days if possible)

2. Periodic Site Visit(s): After work has satisfactorily begun, periodic project site visits by a roof system manufacturer’s representative shall be made at the minimum rate of one per month. More visits may be required for clarification should problems arise and a special request is made by the designer or user agency. The manufacture’s Field Representative is expected to visit on-site storage areas and to report on acceptance or non-acceptance of storage facilities and storage techniques.

3. Final Inspection: Provide final inspection of roofing assembly by technical representative employed by roofing assembly manufacturer to inspect installation for warranty purposes.

4. Annual Inspection(s):

a. One Year inspection: Within 30 days prior of the (1) one year anniversary date of the final acceptance date, a technical representative of the roof system manufacturer, General Contractor and roofing contractor will make an on-site inspection of the roof.

b. Two Year inspection: Within 30 days prior of the (2) two year anniversary date of the final acceptance date, a technical representative of the roof system manufacturer, General Contractor and roofing contractor will make an on-site inspection of the roof two year inspection.

c. Representatives of the Architect, Owner, and User Agency will accompany those listed above in making observations of the roofing assembly toward the end of the one (1) year warranty period and toward the end of the two (2) year guarantee period.

d. The Roofing System Manufacturer's authorized technical representative shall inspect the roofing assembly near the close of the Manufacturer's Guarantee.

5. Other Inspections: During the 20-year Roof manufacturer’s Guarantee period, roof inspections by roof system technical personnel shall be made as required to maintain warranty conditions.

6. Inspection Reports: Within seven (7) days of each site visit, the roofing assembly manufacturer's representative shall send an original written report to The Owner and a copy of their written report to the User Agency and Architect.

3.7 CLEANING

A. Section 01 70 00 - Execution and Closeout Requirements: Final cleaning.

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

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

2. Repair or replace defaced or disfigured finishes caused by work of this section.

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

3.8 PROTECTION OF PROPERTY

A. Protect adjacent construction, property, vehicles, and persons from damage related to roofing work.

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

2. Protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within range of windborne overspray.

3. Protect finished areas of roofing assembly from roofing related work traffic and traffic by other trades.

4. Protective Coverings:

a. Install protective coverings at paving and building walls adjacent to hoist and kettles prior to starting work.

b. Lap protective coverings at least six (6) inches, secure against wind, and vent to prevent collection of moisture on covered surfaces.

c. Keep protective coverings in place for duration of roofing work.

5. Special Protection:

a. Provide approved special protection and avoid heavy traffic on completed work.

6. Dripping of Bitumen:

a. Seal joints in and at edges of deck as necessary to prevent dripping of bitumen into building or down exterior walls.

B. Damaged Work and Materials:

1. Replace all work and materials damaged during handling of bitumen and installation of roofing materials to original condition or replace with new materials.

3.9 PROTECTION OF INSTALLED CONSTRUCTION

A. Section 01 70 00 - Execution and Closeout Requirements: Protecting installed construction.

B. Protect building surfaces against damage from roofing work.

C. Where construction traffic continues over finished roof panels, provide durable protection and replace or repair damaged roofing to original condition.

END OF SECTION

Roof Moisture Survey

Gouaux Hall – Nicholls State University

Prepared for: Lyle Savant – FP&C Senior Project Manager
Prepared by: Mark Cook – Mark Cook Roofing Consultant LLC
Date of Field Work: 11-15-2024

NOTES, OBSERVATIONS AND OPINIONS

On November 15, 2024, a site visit was conducted to perform a roof moisture survey on the modified bitumen roof system on Gouaux Hall at Nicholls State University.

I performed a non-destructive evaluation (nde) of the subsurface roof moisture content using the capacitance method. The equipment used was the Tramex "Dec Scanner" obtaining readings from 0 to 100 on the instrument. Positive moisture readings were detected at eight (8) areas and have been located on the roof using marking paint. Test cuts will need to be performed to determine if the moisture is between the inter-ply membrane and cap sheet or if the insulation is wet. All wet insulation must be removed and replaced.

Damaged roofing items that need to be addressed:

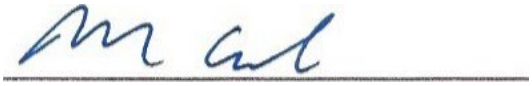
- There were approximately seven (7) punctures observed in the modified bitumen roof system and numerous areas where the cap sheet membrane has been damaged from flying debris. These areas have been located on the roof using marking.
- There were approximately thirteen (13) damaged lead roof jacks.
- There were five (5) blisters observed in the cap sheet membrane. These areas have been located on the roof using marking.
- The pitch pans for the mechanical equipment tie down straps have been damaged.

The roofing manufacturer must be notified and involved in the repair process to bring the roof back to a warrantable system.

Recommendations:

1. Remove and replace all wet areas to match the existing roof system.

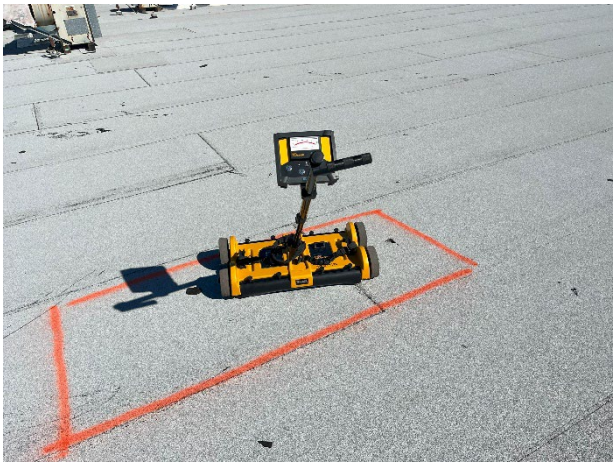
2. Remove all lead roof jacks and install the manufacturer's liquid flashing system at all pipe penetrations.
3. Remove all pitch pans for the mechanical equipment tie down straps and install roof curbs or round steel pipes secured to the deck.
4. Cut out all blisters and install new cap sheet membrane.
5. Install the manufacturer's roof coating system over the entire modified bitumen roof.

 11/19/2024

Mark J. Cook, Consultant, RRO

Photo Attachments

Positive moisture readings were detected using a Tramex Dec Scanner



Positive moisture readings

Positive moisture readings


Positive moisture readings


Positive moisture readings


Punctures: no moisture detected


Damaged cap sheet membrane observed at numerous locations


Damaged pitch pans for the mechanical equipment tie down straps


Damaged lead roof jacks

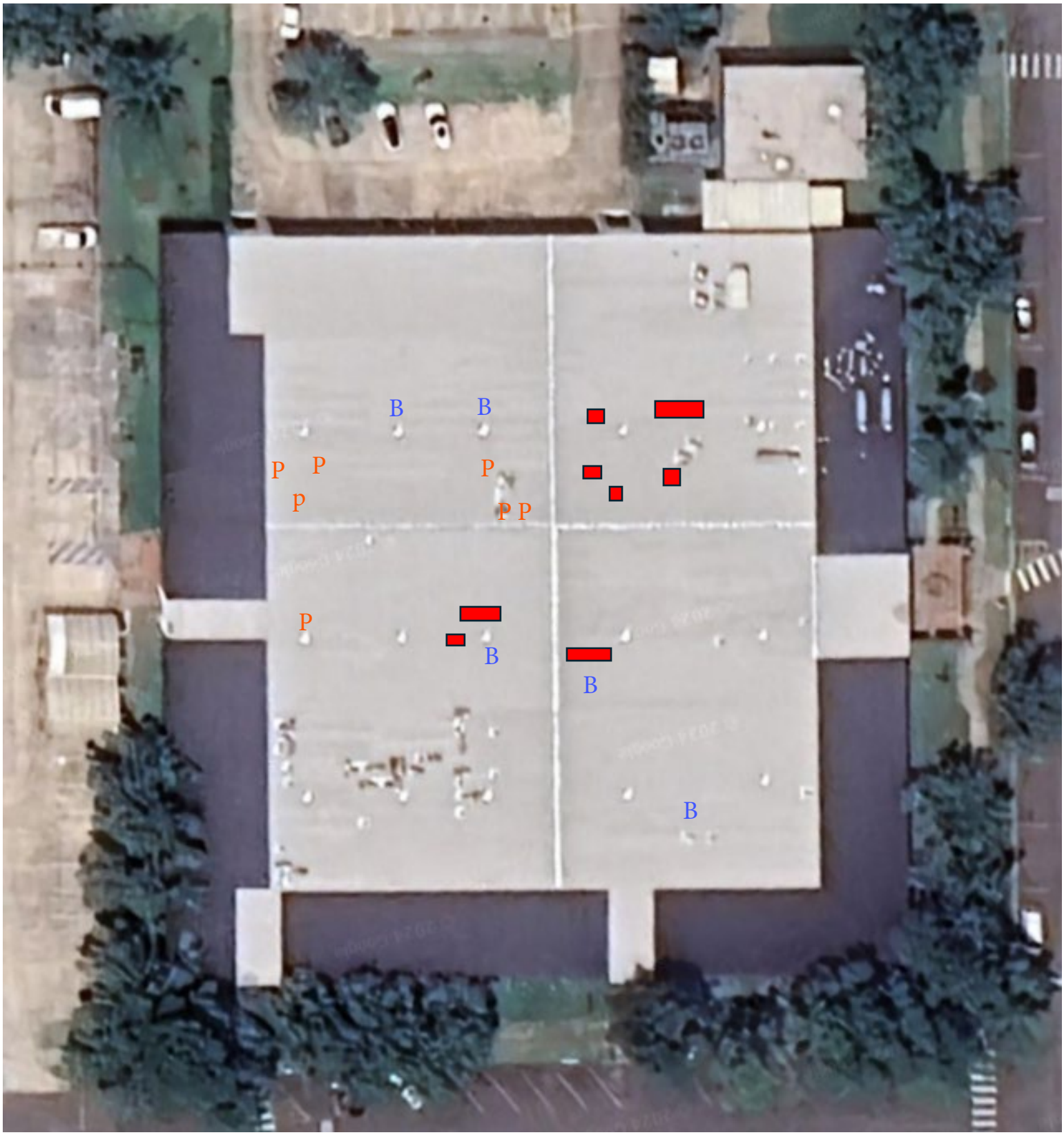
Blisters in the cap sheet membrane

Blisters in the cap sheet membrane

Overview

Overview

Overview



Gouaux Hall

- Moisture Detected

P - Puncture

B - Blister