

Addendum

No. TWO Date: 11.19.20

Project:

**Re-Roofing Various Buildings:
Knight Enloe Elementary and Handley High School for the
Roanoke City Board of Education
Roanoke, Alabama**

**MCKEE PROJECT NO. 2020.182
ALABAMA DIVISION OF CONSTRUCTION MANAGEMENT NO. 2020459**

The following changes and/or substitutions to the plans and specifications are hereby made a part of same and are incorporated in full force as part of the contract.

Bidders shall acknowledge receipt of this Addendum in writing on his Proposal Form.

A2.1 GENERAL MODIFICATIONS:

- A. **CONFIRMATION** of project bid date as issued in previous Addendum 1 as follows:
1. The sealed proposal as described above shall be received by Mr. Chuck Marcum, Superintendent, at Roanoke City Schools, 557 Main Street, Roanoke, AL 36274, Phone: 334-539-5170, until **2:00 PM, Tuesday, December 1, 2020**, then opened and read aloud.

A2.2 SPECIFICATION MODIFICATIONS:

- A. Refer to **Section 07500, Membrane Roof (Revised 11.17.20)**, herein.

A2.3 DRAWING MODIFICATIONS:

- A. Refer to the following drawings as follows:
1. Sheets **R1.1, R1.2 and R2.2 all Revised 11.19.20**, herein.

END OF ADDENDUM

SECTION 07500 - MEMBRANE ROOFING (Revised 11.17.20)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawing and general provisions of Contract including General and Supplementary Conditions and Division 1 Specification sections apply to work of this section.

1.2 DESCRIPTION OF WORK

- A. The roofing contractor shall be fully knowledgeable of all requirements of the contract documents and shall make themselves aware of all job site conditions prior to the bid that will affect their work.
- B. Provide all labor, material, tools, equipment, and supervision necessary to furnish and install a **60** mil white reinforced TPO (Thermoplastic Polyolefin) or a **60** mil **PVC** (polyvinyl chloride) membrane.

1.3 SUBMITTALS

- A. Prior to starting work, the roofing contractor must submit the following:
 - 1. Shop drawings showing layout of insulation, details of construction and identification of materials.
 - 2. Sample of the manufacturer's Membrane System Warranty.
 - 3. Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing system.
 - 4. Certification of the manufacturer's warranty reserve.
- B. Upon completion of the installed work, submit copies of the manufacturer's final inspection to the specifier prior to the issuance of the manufacturer's warranty.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption. Comply with the manufacturer's written instructions for proper material storage.
 - 1. Store the **TPO and PVC** membranes in the original undisturbed plastic wrap in a cool, shaded area and cover with light-colored, breathable, waterproof tarpaulins. Thermoplastic membrane that has been exposed to the elements for approximately seven (7) days must be prepared with appropriate cleaner prior to hot air welding.
 - 2. Store curable materials (adhesives and sealants) between 60°F and 80°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60°F minimum temperature before using.
 - 3. Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
 - 4. Insulation must be on pallets, off the ground and tightly covered with waterproof materials.
 - 5. Any materials, which are found to be damaged, shall be removed and replaced at the applicator's expense.

1.5 WORK SEQUENCE

- A. Schedule and execute work to prevent leaks and excessive traffic on completed roof sections. Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.
- B. Do not disrupt activities in occupied spaces.

1.6 JOB SITE PROTECTION

- A. The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide all materials as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application. During the roofing contractor's performance of the work, the building owner will continue to occupy the existing building. The contractor shall take precautions to prevent the spread of dust and debris, particularly where such material may sift into the building. The roofing contractor shall provide labor and materials to construct, maintain and remove necessary temporary enclosures to prevent dust or debris in the construction area(s) from entering the remainder of the building.
- B. Do not overload any portion of the building, by either use of or placement of equipment, storage of debris, or storage of materials.
- C. Protect against fire and flame spread. Maintain proper and adequate fire extinguishers.
- D. Take precautions to prevent drains from clogging during the roofing application.
- E. Remove debris at the completion of each day's work and clean drains, if required. At completion, test drains to ensure the system is free running and drains are watertight. Remove strainers and plug drains in areas where work is in progress. Install flags or other telltales on plugs. Remove plugs each night and screen drain.
- F. Store moisture susceptible materials above ground and protect with waterproof coverings.
- G. Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

1.7 SAFETY

- A. The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state, and federal requirements that are safety related. Safety shall be the responsibility of the roofing contractor. All related personnel shall be instructed daily to be mindful of the full time requirement to maintain a safe environment for the facility's occupants including staff, visitors, customers, and the occurrence of the public on or near the site.

1.8 WORKMANSHIP

- A. Applicators installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- B. All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.
- C. There shall be a supervisor on the job site at all times while work is in progress.

1.9 QUALITY ASSURANCE

A. ROOF CONSULTANT - The Contractor shall engage the services of a Professional Roof Consultant. The Consultant must hold a title of Registered Roof Observer (RRO) or higher through the International Institute of Building Enclosure Consultants (IIBEC) and provide a certificate of adequate error & omissions insurance. The Consultant must perform no less than three (3) inspections during the installation of the new roof system(s) (1 – Start up inspection; 2 – Interim inspection; 3 – Final inspection). The Consultant must document all site visits with photographs and written reports. All reports shall be forwarded to the Architect with documentation of the job progress and any deficiencies noted during the inspections. Upon completion of all punch list items, the Consultant shall provide a letter of roof completion advising the new roof system has been installed per the roofing manufacturer's requirements and the contract documents to receive the specified warranty(s).

1. Pre-approved Roof Consultants:

a. Roof Asset Management, Inc. | David Lee | 4950 Woodfield Drive, Millbrook, Alabama 36054 | (334) 590-7999

B. INFRARED MOISTURE SCAN - The Contractor shall engage the services of a Certified Infrared Thermographer to perform an infrared moisture scan survey throughout the required roof areas. The Thermographer shall provide evidence of certification as well as a certificate of adequate error & omissions insurance. The Thermographer must outline all wet roof areas with spray paint and document the survey with infrared photographs, digital photographs, and a written report. The Thermographer shall also provide a roof plan or roof image with all wet areas accurately identified on the document to ensure the proper replacement of any necessary roof areas. All survey documentation shall be forwarded to the Architect prior to the start of any roofing related work.

1. Pre-approved Infrared Thermographers:

a. Roof Asset Management, Inc. | David Lee | 4950 Woodfield Drive, Millbrook, Alabama 36054 | (334) 590-7999

C. The Contractor shall provide signed certification from the Roofing Manufacturer that the roof design provided for this project complies with the performance requirements as set forth by applicable applications in IBC Chapter 15, Section 1504.

1. The certification shall be attached to the Roof Warranty provided at the close out of the project.

2. Contractor shall submit a copy of his Manufacturer's Warranty Notification prior to purchase of materials and start of work.

D. Roof system will meet the requirements of all federal, state and local code bodies having jurisdiction.

E. The TPO or PVC membrane roofing system must achieve a UL Class A and the appropriate FM rating.

F. Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.

G. Impact Resistance: Roof coverings installed on low-slope roofs (roof slope <2:12) shall resist impact damage based on the results of tests conducted in accordance with ASTM D 3746, ASTM D 4272, CGSB 37-GP-52M or the "Resistance to Foot Traffic Test" FM 4470.

H. Drainage:

1. Provide a roof system with positive drainage where all standing water dissipates within 48 hours after precipitation ends.
2. Roof Drain Bowls:
 - a. The General Contractor shall remove all existing roof drain strainer caps and replace with new strainer caps. The Contractor shall furnish and install a new drain bowl insert into the existing bowls prior to installation of the strainer cap. The General Contractor shall verify the existing drain line is clear prior to the installation of the new roof bowl and cap assembly per roof drain inspection, testing and verification procedures.
3. Roof drain inspection, testing and verification:
 - a. Prior to work start, the contractor shall obtain the services of a licensed plumber. Verify that primary roof drains, overflow roof drains, and plumbing vents located within the project area are free of debris and properly functioning. The plumber shall perform a flood test of existing roof drains located in the project areas. The flood test shall include testing of existing roof drain bowls and connections to piping by temporarily plugging the drain pipe below the existing connection and flooding the drain bowl to its top edge. Notify the Architect immediately if defects are found in the roof drain bowl and/or roof drain assembly components, or if the roof drains and/or plumbing vents are found to be blocked, clogged, or otherwise not properly functioning. Plumbing work necessary to correct identified defects, and clear existing roof drains and vents shall be performed by a licensed plumber at the direction of the Architect. Prior to construction start, the contractor shall provide a letter to the Owner indicating this work has been completed, detailing the results of this roof drain inspection and testing, and identifying any corrective action needed.
 - b. After completion of roof replacement work, the contractor shall again obtain the services of a licensed plumber. Verify that primary roof drains, overflow roof drains and plumbing vents located within the project area are free of debris and properly functioning. The plumber shall perform a second flood test of existing roof drains located in the project areas. The flood test shall include testing of the new roof drain bowls and connections by temporarily plugging the drain pipe below the existing connection and flooding the drain bowl to its top edge. Note any defects in the roof drain bowl. Continue to flood the roof drain, up and over the installed roof drain flashing. Note any leakage at the roof drain flashing. Notify the architect immediately if defects are found in the roof drain flashing, roof drain bowl and/or roof drain assembly components, or if the roof drains and/or plumbing vents are found to be blocked, clogged, or otherwise not properly functioning. Plumbing work necessary to correct identified defects, and clear existing roof drains and vents shall be performed by a licensed plumber at the direction of the architect. After construction completion, the contractor shall provide a second letter to the architect indicating this work has been completed, detailing the results of this roof drain inspection and testing, and identifying any corrective action needed.
- I. All roof curbs and penetrations shall have a minimum height of 8" above the completed roof system.
- J. Roof curbs shall be installed in accordance with roofing system manufactures instructions.
- K. **The roofing system must be installed by an applicator authorized and trained by the manufacturer in compliance with shop drawings as approved by the Architect /owners representative.**
- L. Provide adequate number of experienced workers regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.

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- M. There shall be no deviations made from this specification or the approved shop drawings without the prior written approval of the Architect. Any deviation from the manufacturer's installation procedures must be supported by a written certification on the manufacturer's letterhead and presented for the Architects consideration.
- N. Upon completion of the installation, the applicator shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to determine whether corrective work will be required before the warranty will be issued. Notify the Architect and General Contractor seventy-two (72) hours prior to the manufacturer's final inspection.

1.10 JOB CONDITIONS, CAUTIONS, AND WARNINGS

- A. Material Safety Data Sheets (MSDS) must be on location at all times during the transportation, storage, and application of materials.
- B. When positioning membrane sheets, exercise care to locate all field splices away from low spots and out of drain sumps. All field splices should be shingled to prevent bucking of water.
- C. When loading materials onto the roof, the Authorized Roofing Applicator must comply with the requirements of the building owner to prevent overloading and possible disturbance to the building structure.
- D. Proceed with roofing work only when weather conditions comply with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- E. Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- F. Provide protection, such as 3/4 inch thick plywood, for all roof areas exposed to traffic during construction. Plywood must be smooth and free of fasteners and splinters.
- G. The surface on which the insulation or roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- H. New roofing shall be complete and weather tight at the end of the workday.
- I. Contaminants such as grease, fats, and oils shall not be allowed to come in direct contact with the roofing membrane.

1.11 WARRANTY

- A. **Compatibility:** Provide products which are recommended by manufacturers to be fully compatible with indicated substrates or provide separation materials as required to eliminate contact between incompatible materials.
- B. **Provide manufacturer's 20-year NDL total system warranty covering both labor and material with no dollar limitation and cover all penetrations.**
- C. **General Contractor shall provide the General Contractor's 5-year Roofing Guarantee included in this manual.**
- D. Pro-rated system warranties shall not be accepted.
- E. Evidence of the manufacturer's warranty reserve shall be included as part of the project submittals for the specifier's approval.

- F. All roof warranties shall be provided to the Owner, by the Contractor at the Final Inspection to obtain the Substantial Completion.
- G. The roof insulation shall be covered under the roof warranty as required by the manufacturer.
- H. Standard manufacturer's roofing guarantees which contain language regarding the governing of the guarantee by any state other than the State of Alabama, must be amended to exclude such language, and substituting the requirement that the Laws of the State of Alabama shall govern all such guarantees.
- I. The roofing manufacturer shall be required to provide documentation certifying that the roof design provided complies with the performance requirements as set forth in IBC Chapter 15, Section 1504. The documentation shall be attached to the roof warranty at the close out of the project.

PART 2 – PRODUCTS

2.1 GENERAL

A. All components of the specified roofing system shall be products of the manufacturer of the roofing system or accepted by the manufacturer as compatible. All products (including insulation, fasteners, fastening plates and edgings) must be manufactured and supplied by the roofing system manufacturer and covered by the warranty.

B. MANUFACTURERS

1. TPO 60 Mil Manufacturers: The following manufacturers' products have been used to establish minimum standards for materials, workmanship and function:
 - a. Versico Roofing - Versiweld with Octguard XT (Basis of Design)
 - b. GAF – Everguard
 - c. Firestone – Ultraply
 - d. Johns Manville, Inc.
 - e. Carlisle Syntec Systems
2. PVC 60 Mil Manufactures: The following manufacturers' products have been used to establish minimum standards for materials, workmanship and function:
 - a. Versico Roofing - VersiFlex Roofing (Basis of Design)
 - b. DuroLast Roofing
 - c. Johns Manville, Inc.
 - d. Sarnafil Roof Membrane Roofing
 - e. Fibertite Roofing
 - f. Carlisle Syntec Systems
3. Re-Roof Drains: The following manufacturers' products have been used to establish minimum standards for materials, workmanship and function:
 - a. Portals Plus, Inc., Re-Roof Drain as manufactured by Portals Plus, Inc., Bensenville, IL,
 - i. Drain shall consist of a molded ultraviolet stabilized polyethylene or cast aluminum dome strainer, a cast aluminum epoxy coated gravel guard and clamping ring, 15" or 18" O.D. spun Aluminum drain flange. The outlet pipe shall have a pre-compressed modified asphalt impregnated expanding foam, sealing tape, having a temperature range of -40 F to +185 F and 150% minimum elongation.

4. Walkway Pads: The following manufacturers' products have been used to establish minimum standards for materials, workmanship and function:
 - a. Roof Trak III Walkway Pads as manufactured by Durolast.
 - i. Non-skid, maintenance free walkway protection pad manufactured from recycled membrane and oriented-strand polyester reinforcement. Factory attached, 4 inch wide white membrane skirts for attachment to the field membrane by heat welding (hot-air).
 - ii. Size: 30" x 60".
 - iii. Color: White with Safety Yellow skirts.
 - iv. Install per manufacturers recommendations.
5. Equal products of other manufacturers may be used in the work, provided such products have been approved by the Architect, not less than Ten (10) days prior to scheduled bid opening.

2.2 ADHESIVES AND CLEANERS

- A. All products shall be furnished by the roofing manufacturer and specifically formulated for the intended purpose.
 1. Bonding Adhesive: **60 Mil**: Manufactures recommended Bonding Adhesive
 2. Edge Sealant: Cut Edge Sealant
 3. Sealer: Water Cut-Off Mastic
 4. Pocket Sealant: Manufactures recommended Molded Pocket Sealant
 5. Cleaner: Manufactures recommended Membrane Cleaner
- B. The Contractor shall be responsible for ensuring all existing curbs / flashings shall be raised as necessary to ensure proper flashing heights.

PART 3 - EXECUTION

3.1 PRE-ROOFING CONFERENCE

- A. A pre-roofing conference is required before any roofing materials are installed. This conference shall be conducted by a representative of the Architect. Required attendees include representatives of the Owner, Division of Construction Management Inspector, General Contractor, Roofing Contractor, Sheet Metal Contractor, Roof Deck Manufacturer (if applicable), Roofing Materials Manufacturer (if warranty is required of this manufacturer) and all installers whose work interfaces with or affects roofing including installers of roof accessories and roof-mounted equipment . ATTENDANCE OF THE CONTRACTOR'S FOREMAN IS MANDATORY. If equipment of substantial size is to be placed on the roof, the Mechanical Contractor must also attend this meeting. Provide at least 72 hours advance notice to participants prior to convening pre-roofing conference.
- B. The pre-roofing conference is intended to clarify demolition and application requirements for work to be completed before roofing operations can begin. This would include a detailed review of the specifications, roof plans, roof deck information, flashing details, and approved shop drawings, submittal data, and samples. If conflict exists between the specifications and the Manufacturer's requirements, this shall be resolved. If this pre-roofing conference cannot be satisfactorily concluded without further inspection and investigation by any of the parties present, it shall be reconvened at the earliest possible time to avoid delay of the work. In no case should the work proceed without inspection of all roof deck areas and substantial agreement on all points.

- C. The following are to be accomplished during the conference:
1. To review all Factory Mutual and Underwriters Laboratories requirements listed in the specifications and resolve any questions or conflicts that may arise.
 2. To establish trade-related job schedules, including the installation of roof mounted mechanical equipment.
 3. To establish roofing schedule and work methods that will prevent roof damage.
 4. Require that all roof penetrations and walls be in place prior to installing the roof.
 5. To establish those areas on the job site that will be designated as work and storage areas for roofing operations.
 6. To establish weather and working temperature conditions to which all parties must agree.
 7. To establish acceptable methods of protecting the finished roof if any trades must travel across or work on or above any areas of the finished roof.
 8. Tour representative areas of roofing substrates (decks); inspect and discuss condition of substrate, penetrations and other preparatory work performed by other trades.
 9. Review structural loading limitations of deck and inspect deck for proper installation and fastening as required. Inspect deck for required slope etc.
 10. Review roofing system requirements (drawings, specifications and other contract documents). Review required submittals / warranty issues. Verify that the manufacturer's label contains references to specified ASTM standards.
 11. Review and finalize construction schedule related to roofing work and verify availability of materials.
 12. Review roof application procedures, technique, details and roof specifics. Maintain one copy of manufacturer's application instructions on the project site.
 13. Review job specific safety requirements, safety barriers, street blocking, haul routes, building access, site contact, facilities, security, etc.
- D. The Architect shall prepare a written report indicating actions taken and decisions made at this pre-roofing conference. This report shall be made a part of the project record and copies furnished the General Contractor, the Owner, the Division of Construction Management, and the Division of Construction Management Inspector.

3.1 INSTALLATION - GENERAL

- A. Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations, and weather restrictions.
- B. Position sheets to accommodate contours of the roof deck and shingle splices to avoid bucking water.

3.2 EXECUTION – RECOVER ROOF SYSTEMS

A. KNIGHT ENLOE ELEMENTARY SCHOOL – MULTI-PURPOSE GYM:

1. The Contractor shall perform an infrared moisture scan throughout the existing low sloped roof area to obtain the necessary information regarding the required replacement of any wet insulation. The infrared moisture scan should only be performed by a certified infrared thermographer per this specification section.

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2. If directed by the Architect, the contractor shall remove existing wet insulation down to existing deck and provide and install new insulation at same area to bring elevation back to existing roof elevation, per the Unit Price on the proposal form.
3. All roof areas shall be cleaned prior to installation of new roofing materials.
4. The Contractor shall then mechanically attach, in accordance with the manufacturer's most current specifications and details, a flat layer of 1/2" 100 psi. ISO SecureShield HD board over the entire existing roofing material.
5. The Contractor shall then fully adhere a 60 mil white reinforced TPO or 60 mil PVC Membrane over the new cover board. The membrane shall be fully adhered in accordance with the manufacturer's most current specifications and details.
6. Contractor shall install 60 mil TPO or 60 mil PVC membrane flashings and associated metal components as required and detailed.
7. The Contractor shall provide and install all new perimeter edge metal flashings, gutters and downspout per drawings and specifications.
8. Provide the following Warranties:
 - a. Provide a **20**-year NDL manufacturer's warranty.
 - b. Provide a **5**-year General Contractor's Roofing Guarantee workmanship warranty found in Contract Forms section of this manual.

B. KNIGHT ENLOE ELEMENTARY SCHOOL – 1st GRADE WING (MIDDLE CLASSROOM BUILDING):

1. The Contractor shall perform an infrared moisture scan throughout the existing low sloped roof area to obtain the necessary information regarding the required replacement of any wet lightweight concrete / insulation. The infrared moisture scan should only be performed by a certified infrared thermographer per this specification section.
2. If directed by the Architect, the contractor shall remove and replace existing deteriorated lightweight concrete deck AND required insulation at same areas to bring elevation back to existing roof elevation, per the Unit Price on the proposal form.
3. All roof areas shall be cleaned prior to installation of new roofing materials.
4. Provide and install one (1) layer of 1/8" tapered polyisocyanurate insulation (sloped to the existing roof drains) as indicated on drawings.
5. The Contractor shall then mechanically attach **Fully Adhere**, in accordance with the manufacturer's most current specifications and details, a flat layer of 1/2" 100 psi. ISO SecureShield HD board over the entire existing roofing material.
6. The Contractor shall then fully adhere a 60 mil white reinforced TPO or 60 mil PVC Membrane over the new cover board. The membrane shall be fully adhered in accordance with the manufacturer's most current specifications and details.
7. Contractor shall install 60 mil TPO or 60 mil PVC membrane flashings and associated metal components as required and detailed.
8. The Contractor shall provide and install all new perimeter edge metal flashings per drawings and specifications.
9. Provide the following Warranties:

SEE CHANGE

- a. Provide a **20**-year NDL manufacturer's warranty.
- b. Provide a **5**-year General Contractor's Roofing Guarantee workmanship warranty found in Contract Forms section of this manual.

C. KNIGHT ENLOE ELEMENTARY SCHOOL – LOWER KINDERGARTEN (NORTH CLASSROOM BUILDING):

1. The Contractor shall perform an infrared moisture scan throughout the existing low sloped roof area to obtain the necessary information regarding the required replacement of any wet lightweight concrete / insulation. The infrared moisture scan should only be performed by a certified infrared thermographer per this specification section.
2. If directed by the Architect, the contractor shall remove and replace existing deteriorated lightweight concrete deck AND required insulation at same areas to bring elevation back to existing roof elevation, per the Unit Price on the proposal form.
3. Remove all abandoned roof curbs, penetrations, etc.
4. All roof areas shall be cleaned prior to installation of new roofing materials.
5. Provide and install one (1) layer of 1/8" tapered polyisocyanurate insulation (sloped to the existing roof drains) as indicated on drawings.
6. The Contractor shall then ~~mechanically attach~~ **Fully Adhere**, in accordance with the manufacturer's most current specifications and details, a flat layer of 1/2" 100 psi. ISO SecureShield HD board over the entire existing roofing material.
7. The Contractor shall then fully adhere a 60 mil white reinforced TPO or 60 mil PVC Membrane over the new cover board. The membrane shall be fully adhered in accordance with the manufacturer's most current specifications and details.
8. Contractor shall install 60 mil TPO or 60 mil PVC membrane flashings and associated metal components as required and detailed.
9. Provide the following Warranties:
 - a. Provide a **20**-year NDL manufacturer's warranty.
 - b. Provide a **5**-year General Contractor's Roofing Guarantee workmanship warranty found in Contract Forms section of this manual.

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D. HANDLEY HIGH SCHOOL – AUDITORIUM (MAIN UPPER ROOM AREAS):

1. The Contractor shall perform an infrared moisture scan throughout the existing low sloped roof area to obtain the necessary information regarding the required replacement of any wet insulation. The infrared moisture scan should only be performed by a certified infrared thermographer per this specification section.
2. If directed by the Architect, the contractor shall remove existing wet insulation down to existing deck and provide and install new insulation at same area to bring elevation back to existing roof elevation, per the Unit Price on the proposal form.
3. All roof areas shall be cleaned prior to installation of new roofing materials.
4. The Contractor shall then mechanically attach, in accordance with the manufacturer's most current specifications and details, a flat layer of 1/2" 100 psi. ISO SecureShield HD board over the entire existing roofing material.

5. The Contractor shall then fully adhere a 60 mil white reinforced TPO or 60 mil PVC Membrane over the new cover board. The membrane shall be fully adhered in accordance with the manufacturer's most current specifications and details.
6. Contractor shall install 60 mil TPO or 60 mil PVC membrane flashings and associated metal components as required and detailed.
7. Re-use existing metal parapet wall coverings, coping flashings, gutters, and downspouts with existing flashings re-secured and sealed to ensure a water-tight condition.
8. Provide the following Warranties:
 - a. Provide a **20**-year NDL manufacturer's warranty.
 - b. Provide a **5**-year General Contractor's Roofing Guarantee workmanship warranty found in Contract Forms section of this manual.
9. Remove and Replace the existing steep sloped shingle roof system as indicated on drawings and per Section 07310, Shingles (Architectural).

E. HANDLEY HIGH SCHOOL – MAINTENANCE SHOP (REAR OF AUDITORIUM):

- ~~1. The Contractor shall perform an infrared moisture scan throughout the existing low sloped roof area to obtain the necessary information regarding the required replacement of any wet insulation. The infrared moisture scan should only be performed by a certified infrared thermographer per this specification section.~~
- ~~2. If directed by the Architect, the contractor shall remove existing wet insulation down to existing deck and provide and install new insulation at same area to bring elevation back to existing roof elevation, per the Unit Price on the proposal form.~~
- ~~3. All roof areas shall be cleaned prior to installation of new roofing materials.~~
- ~~4. The Contractor shall then mechanically attach, in accordance with the manufacturer's most current specifications and details, a flat layer of 1/2" 100 psi. ISO SecureShield HD board over the entire existing roofing material.~~
- ~~5. The Contractor shall then fully adhere a 60 mil white reinforced TPO or 60 mil PVC Membrane over the new cover board. The membrane shall be fully adhered in accordance with the manufacturer's most current specifications and details.~~
- ~~6. Contractor shall install 60 mil TPO or 60 mil PVC membrane flashings and associated metal components as required and detailed.~~
- ~~7. Rework / lower the existing edge details to assist in eliminating existing ponding water conditions.~~
- ~~8. Re-use existing gutters and downspouts with existing flashings re-secured and sealed to ensure a water-tight condition.~~
- ~~9. Provide the following Warranties:

 - ~~a. Provide a **20**-year NDL manufacturer's warranty.~~
 - ~~b. Provide a **5**-year General Contractor's Roofing Guarantee workmanship warranty found in Contract Forms section of this manual.~~~~

DELETE SECTION "E" ENTIRELY

3.3 EXECUTION – TEAR-OFF/REPLACEMENT ROOF SYSTEMS

A. KNIGHT ENLOE ELEMENTARY SCHOOL – ADMINISTRATION BUILDING:

1. The Contractor shall remove entire existing roof system and flashing components down to existing decking.
2. Contractor is to notify the Architect of any damaged / deteriorated roof decking. If directed by the Architect, the contractor shall replace damaged portions of the decking per the Unit Price on the proposal form.
3. Raise and/or replace all necessary roof curbs, fans, penetrations, etc.
4. Remove all abandoned roof curbs, penetrations, etc.
5. Ensure the existing roof deck is clean, dry, and free of any voids.
6. Provide and install one (1) layer of **tapered** polyisocyanurate insulation as indicated on drawings. Slope as indicated on the drawings.
7. The Contractor shall then ~~mechanically attach~~ **Fully Adhere**, in accordance with the manufacturer's most current specifications and details, a flat layer of 1/2" layer of 100 psi. ISO SecureShield HD board over the new polyisocyanurate insulation.
8. Must maintain a Minimum total R value of 25 at any area.
9. The Contractor shall then fully adhere a 60 mil white reinforced TPO or 60 mil PVC Membrane over the new cover board. The membrane shall be fully adhered in accordance with the manufacturer's most current specifications and details.
10. Contractor shall install 60 mil TPO or 60 mil PVC membrane flashings and associated metal components as required and detailed.
11. The Contractor shall provide and install all new perimeter metal edge flashings, gutters and downspout per drawings and specifications.
12. Provide the following Warranties:
 - a. Provide a **20**-year NDL manufacturer's warranty.
 - b. Provide a **5**-year General Contractor's Roofing Guarantee workmanship warranty found in Contract Forms section of this manual.

SEE CHANGES

3.4 INSULATION PLACEMENT AND ATTACHMENT

- A. Install insulation or membrane underlayment over the substrate with boards butted tightly together with no joints or gaps greater than 1/4 inch. Stagger joints both horizontally and vertically if multiple layers are provided.
- B. Secure insulation to the substrate with the required fasteners and plates in accordance with manufacturers specifications.

3.5 60 Mil TPO or PVC MEMBRANE PLACEMENT AND ATTACHMENT

- A. Unroll and position membrane without stretching. Provide and secure both perimeter and field membrane sheets in accordance with the manufacturer's most current specifications and details.
- B. Secure the membrane with the required Fasteners and Plates spaced as required per the manufacturer's requirements to meet the appropriate up-lift.

- C. Install adjoining membrane sheets in the same manner in accordance with the manufacturer's specifications.
- D. Hot air weld the membrane using an Automatic Hot Air Welding Machine or Hot Air Hand Welder in accordance with the manufacturer's specifications. At all splice intersections, roll the seam with a silicone roller prior to membrane seam cooling. All splice intersections shall be overlaid with membrane non-reinforced flashing.
- E. Probe all seams once the hot air welds have thoroughly cooled (approximately 30 minutes).
- F. Repair all seam deficiencies the same day they are discovered.
- G. Apply Cut Edge Sealant on all cut edges of reinforced membrane (where the scrim reinforcement is exposed) after seam probing is complete.

3.6 FLASHING

- A. Flashing of parapets, curbs, expansion joints and other parts of the roof must be performed using TPO or PVC reinforced membrane. Non-reinforced membrane can be used for flashing pipe penetrations, Sealant Pockets, scuppers, as well as inside and outside corners when the use of pre-fabricated accessories is not feasible.
- B. Follow manufacturer's typical flashing procedures for all wall, curb, and penetration flashing including metal edging/coping and roof drain applications.

3.7 WALKWAYS

- A. Install walkways at all traffic concentration points (such as roof hatches, access doors, rooftop ladders, etc.) and all locations as identified on the drawings.
- B. Hot air weld walkway pads to the membrane in accordance with the manufacturer's specifications.

3.8 DAILY SEAL

- A. On phased roofing, when the completion of flashings and terminations is not achieved by the end of the workday, a daily seal must be performed to close temporarily the membrane to prevent water infiltration.
- B. Complete an acceptable membrane seal in accordance with the manufacturer's requirements.

3.9 CLEAN UP

- A. Perform daily clean up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner.
- B. Prior to the manufacturer's inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SECTION

2 GENERAL SINGLE PLY ROOFING NOTES:

- SEE SPECIFICATIONS FOR MATERIALS AND EXECUTION.
- SEE NOTES RELATED TO SPECIFIC ROOF AREAS ON PLANS.
- CONTRACTOR TO INSTALL NEW SINGLE PLY 'RECOVER' ROOFING SYSTEM. ALL LOOSE BALLAST ON EXISTING ROOF IS TO BE REMOVED and PREPPED AS REQUIRED FOR NEW RECOVER ROOFING SYSTEM. SEE SPECIFICATION SECTION 07500 FOR ROOF DESCRIPTION and EXECUTION OF INSTALLATION.
- REPLACE ALL EXISTING NAILERS AND WOOD CURBS (IF APPLICABLE) AS REQUIRED.
- TEMPORARILY DISCONNECT ALL EXISTING ELECTRICAL CONDUITS and GAS PIPING ON ROOF. AFTER THE INSTALLATION OF THE NEW ROOFING SYSTEM OVER ROOF AREA, RE-CONNECT ALL ELECTRICAL and GAS PIPING AS REQUIRED. PREP, PRIME and PAINT GAS PIPING AFTER INSTALLATION. CONTRACTOR'S OPTION IS TO REPLACE ALL PIPING WITH NEW IN LIEU OF PAINTING. PROVIDE NEW PIPE and CONDUIT SUPPORTS AS SPECIFIED.
- INSTALL NEW FLASHING SYSTEMS COMPLETE OR AS NOTED. FLASH ALL PENETRATIONS PASSING THROUGH THE SINGLE PLY MEMBRANE SYSTEM (WHERE INDICATED). THE FLASHING SEAL MUST BE MADE DIRECTLY TO THE PENETRATION. DO NOT CUT AND PATCH MOLDED FLASHING.
- PRECAUTIONS MUST BE TAKEN THAT THE EXISTING ROOF AREAS REMAIN AS DRY AS POSSIBLE BEFORE APPLICATION OF NEW ROOFING. ADEQUATE DRYING TIME MUST BE ALLOWED BEFORE RE-ROOFING.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR ASSESSING AND CALCULATING ALL COSTS FOR WORK TO BE DONE PRIOR TO BIDDING THIS PROJECT.
- THE DETAILS SHOULD SERVE AS A GUIDE FOR LAYING OUT THE WORK AND MUST BE MODIFIED AS NEEDED TO ADAPT THEM TO VARYING CONDITIONS THAT MAY BE ENCOUNTERED IN THE FIELD.
- ELEVATE ALL HVAC UNITS AND MOTORIZED PENETRATIONS AS REQUIRED TO HEIGHT FOR NEW ROOFING SYSTEM. ALL WIRING, GAS, CONDENSING AND REFRIGERANT LINES TO BE RE-CONNECTED AS REQUIRED.
- ROOF AREAS TO RECEIVE NEW 'RECOVER' SYSTEMS SHALL HAVE AN INFRARED MOISTURE SCAN PERFORMED BY A CERTIFIED THERMOGRAPHER TO DETERMINE ANY WET ROOFING COMPONENTS TO BE REPLACED PRIOR TO THE BEGINNING OF WORK AT THOSE LOCATIONS. INFRARED SCANS SHALL INCLUDE WRITTEN REPORTS, PHOTOGRAPHS, DOCUMENTATION OF WET AREAS ON ROOF PLAN AND WET ROOF AREAS MARKED ON ROOFS WITH SPRAY PAINT. THE CONTRACTOR SHALL INCLUDE THE COST OF THIS WORK IN THEIR BID.
- AT EXISTING ROOF DRAIN AND PIPING, CONTRACTOR IS TO ENSURE THAT THE EXISTING DRAIN AND PIPING SYSTEM IS CLEAR OF DEBRIS IN ITS ENTIRETY TO ALLOW POSITIVE DISCHARGE AS REQUIRED FOR DRAINAGE.
- PROVIDE NEW PVC CONDENSATE LINES WITH SUPPORTS (AS SPECIFIED) FROM EXISTING HVAC UNITS TO NEAREST ROOF DRAIN LOCATION
- THE CONTRACTOR SHALL INSTALL $\frac{3}{8}$ " TAPERED INSULATION (AS SPECIFIED) OR GREATER TO PROVIDE A TOTAL (EXISTING and NEW) MINIMUM SLOPE OF $\frac{1}{4}$ " PER FOOT TO THE ROOF DRAINS WITH TAPERED SADDLES/CRICKETS SLOPED AT $\frac{1}{2}$ " PER FOOT BETWEEN THE DRAINS AS SHOWN ON DRAWING IN ACCORDANCE WITH THE MANUFACTURER'S MOST CURRENT SPECIFICATIONS AND DETAILS. NEW TAPERED INSULATION SHALL CONSIST OF A $\frac{1}{2}$ " START THICKNESS AT DRAINS WITH BASE LAYERS MECHANICALLY ATTACHED AND SUBSEQUENT LAYERS ADHERED WITH LOW-RISE FOAM ADHESIVE PER THE ROOFING MANUFACTURER'S REQUIREMENTS.
- THE CONTRACTOR SHALL INSTALL A FLAT LAYER OF $\frac{1}{2}$ " 100 PSI ISO HD BOARD OVER THE NEW TAPERED INSULATION FULLY ADHERED WITH LOW-RISE FOAM ADHESIVE PER THE ROOFING MANUFACTURER'S REQUIREMENTS.

ROOF AREA 'GYMNASIUM' NOTES:

- THE EXISTING ROOF CONSTRUCTION IS:
-VENTED STEEL DECK SUBSTRATE
-FIBERGLASS INSULATION LOOSE LAID
-3 $\frac{1}{2}$ " EPS INSULATION
-1/2" GYPSUM COVERBOARD
-MULTIPLE FELT PLIES
-MODIFIED BITUMEN CAP SHEET
- CONTRACTOR IS TO REMOVE THE EXISTING ROOFING SYSTEM IN ITS ENTIRETY and INSTALL A NEW SINGLE PLY ROOFING SYSTEM. SEE SPECIFICATION SECTION 07500 FOR ROOF DESCRIPTION and EXECUTION OF INSTALLATION.
- SEE GENERAL ROOFING NOTES THIS SHEET FOR ADDITIONAL INFORMATION.

ROOF AREA 'ADMINISTRATION BUILDING' NOTES:

- THE EXISTING ROOF CONSTRUCTION IS:
-STEEL DECK SUBSTRATE
-FIBERGLASS INSULATION LOOSE LAID
-4" EPS INSULATION
-1/2" GYPSUM COVERBOARD
-MULTIPLE FELT PLIES
-1" INSULATION COVERBOARD
-SPRAYED POLYURETHANE FOAM SYSTEM W/ ELASTOMERIC COATING/TOPPING
- CONTRACTOR IS TO REMOVE THE EXISTING ROOFING SYSTEM IN ITS ENTIRETY and INSTALL A NEW SINGLE PLY ROOFING SYSTEM. SEE SPECIFICATION SECTION 07500 FOR ROOF DESCRIPTION and EXECUTION OF INSTALLATION.
- SEE GENERAL ROOFING NOTES THIS SHEET FOR ADDITIONAL INFORMATION.

Examination of the Site of the Work

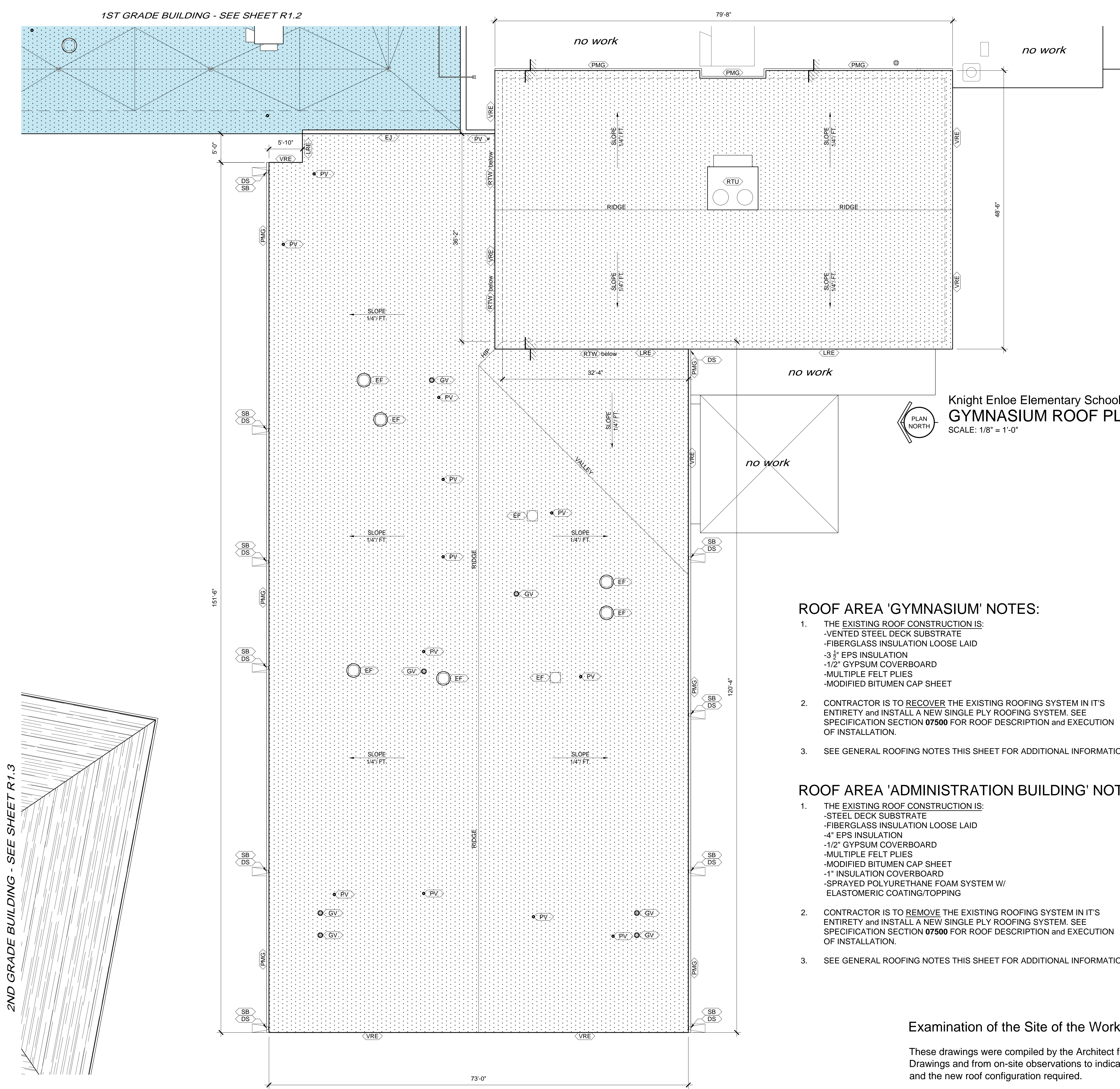
These drawings were compiled by the Architect from the Owner's Record Drawings and from on-site observations to indicate the building arrangement and the new roof configuration required.

All Contractors submitting proposals for this work shall first examine the premises and all conditions therein. All proposals shall take into consideration all such conditions as may affect the work under this Contract.

Drawings are dimensioned and roof penetrations shown for bidding purpose only. Contractors shall measure all existing work at the premises and verify all dimensions needed to properly interface improvements with all existing elements which are to remain.

ROOF PLAN LEGEND	
SYMBOL	DESCRIPTION
[SPR]	NEW SINGLE PLY ROOFING SYSTEM - SEE SPECS.
[ELEV]	EXISTING ROOF ELEVATION CHANGE - FIELD VERIFY
[CR]	POSITIVE ROOF SLOPE CRICKET LOCATION- 1/4" PER FOOT SLOPE MINIMUM
[CU]	CONDENSING UNIT LOCATION
[CER]	CONCEALED EQUIPMENT RAIL DETAIL
[DS]	PRE-FINISHED METAL DOWNSPOUT LOCATION- COORDINATE WITH EXISTING OPENINGS (WINDOW, LOUVER, ETC.) IN WALL EXHAUST/ DISCHARGE FAN SUPPORT CURB DETAIL
[EJ]	EXPANSION JOINT
[GV]	GAS VENT
[LRE]	LOW ROOF EDGE
[PP]	PITCH POCKET FLASHING
[PV]	PLUMBING VENT FLASHING THRU ROOF
[PMG]	PRE-FINISHED METAL GUTTER
[RTU]	ROOF TOP HVAC UNIT SUPPORT CURB
[RTW]	ROOF TO WALL FLASHING
[SB]	CONCRETE SPLASHBLOCK
[SP]	METAL SPLASHPAN
[TGR]	TEMPORARY GUARDRAIL SYSTEM - SEE SPECS
[VF]	VENT BASE FLASHING
[VRE]	VARYING/RAKE ROOF EDGE

NOTE: SEE SHEET R2.1 and R2.2 FOR DETAILS

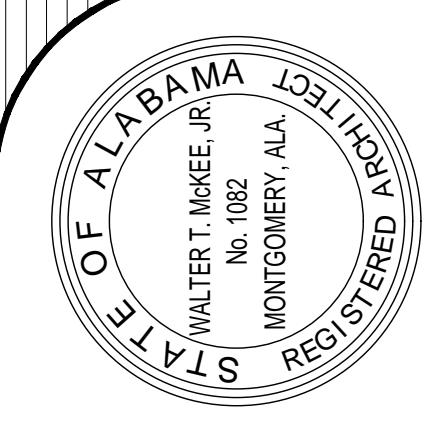


Knight Enloe Elementary School GYMNASIUM ROOF PLAN
SCALE: 1/8" = 1'-0"

Knight Enloe Elementary School ADMINISTRATIVE BUILDING ROOF PLAN
SCALE: 1/8" = 1'-0"

NOTE:
Contractor is to provide positive drainage as required for all re-roofing work. "Positive drainage" means no standing water on the roof 48 hours after a rain.

RE-ROOFING VARIOUS BUILDINGS: KNIGHT ENLOE ELEMENTARY and HANDLEY HIGH SCHOOL
 FOR THE
ROANOKE CITY BOARD OF EDUCATION
 ROANOKE, ALABAMA



MCKEE and ASSOCIATES
 ARCHITECTURE and INTERIOR DESIGN
 631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 (334) 834-9933

SHEET TITLE : ROOF PLANS: ADMINISTRATIVE BLDG. and GYMNASIUM SINGLE PLY
 MCKEE JOB # : 2020-182
 DRAWN BY : ks
 DATE : 11-3-2020
 REVISED DATE : 2 11-19-2020
 REVISED DATE :
 REVISED DATE :
 SHEET NO. : **R1.1**

ROOF AREA 'KINDERGARTEN BUILDING' NOTES:

- THE EXISTING ROOF CONSTRUCTION IS:
-STEEL DECK SUBSTRATE
-LIGHTWEIGHT CONCRETE POURED OVER TAPERED EPS INSULATION
-MULTIPLE FELT PLIES
-MODIFIED BITUMEN CAP SHEET
- CONTRACTOR IS TO RECOVER THE EXISTING ROOFING SYSTEM IN ITS ENTIRETY and INSTALL A NEW SINGLE PLY ROOFING SYSTEM. SEE SPECIFICATION SECTION 07500 FOR ROOF DESCRIPTION and EXECUTION OF INSTALLATION.
- SEE GENERAL ROOFING NOTES THIS SHEET FOR ADDITIONAL INFORMATION.

ROOF AREA '1st GRADE BUILDING' NOTES:

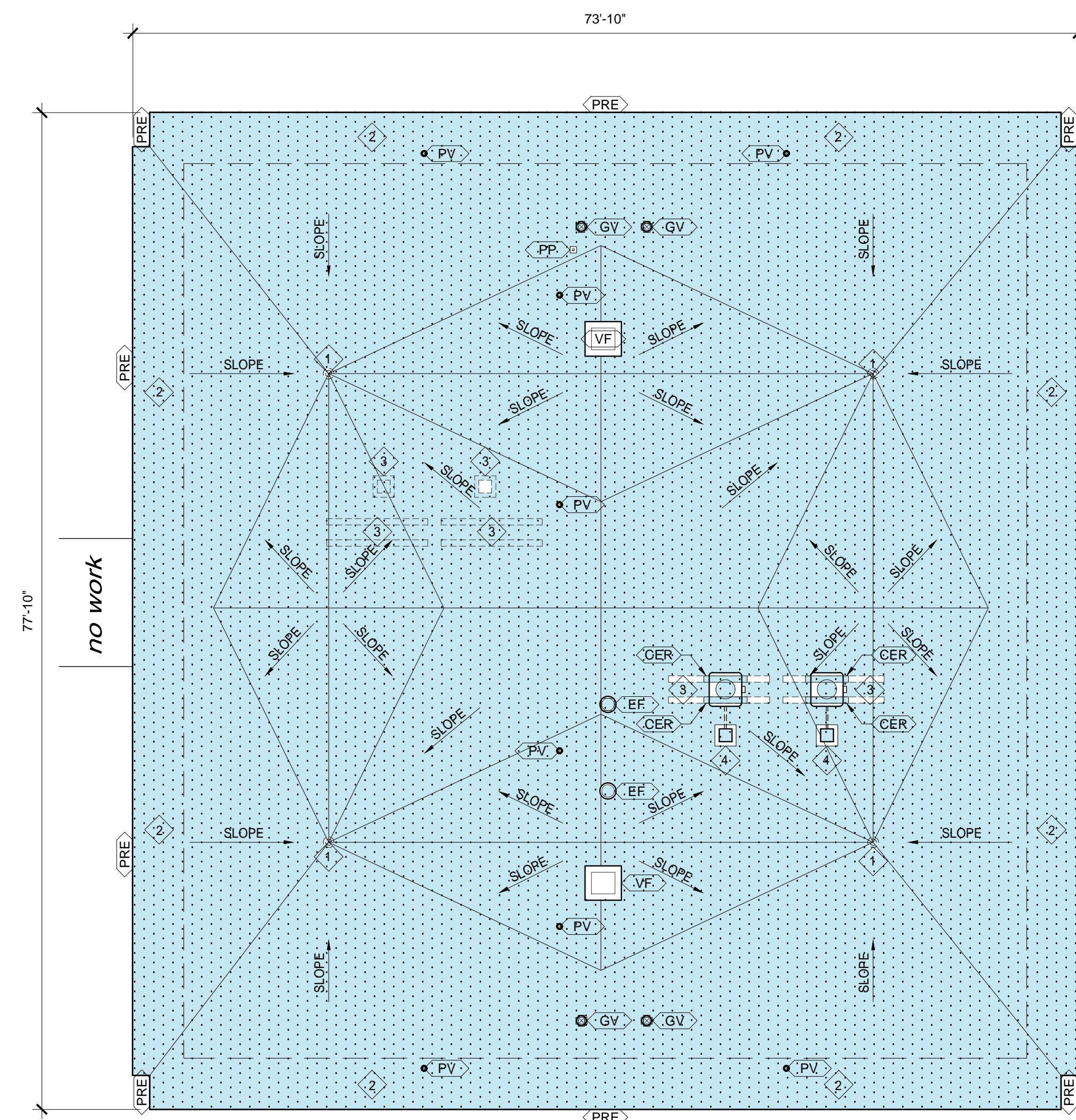
- THE EXISTING ROOF CONSTRUCTION IS:
-STEEL DECK SUBSTRATE
-LIGHTWEIGHT CONCRETE POURED OVER TAPERED EPS INSULATION
-MULTIPLE FELT PLIES
-MODIFIED BITUMEN CAP SHEET
- CONTRACTOR IS TO RECOVER THE EXISTING ROOFING SYSTEM IN ITS ENTIRETY and INSTALL A NEW SINGLE PLY ROOFING SYSTEM. SEE SPECIFICATION SECTION 07500 FOR ROOF DESCRIPTION and EXECUTION OF INSTALLATION.
- SEE GENERAL ROOFING NOTES THIS SHEET FOR ADDITIONAL INFORMATION.

GENERAL SINGLE PLY ROOFING NOTES:

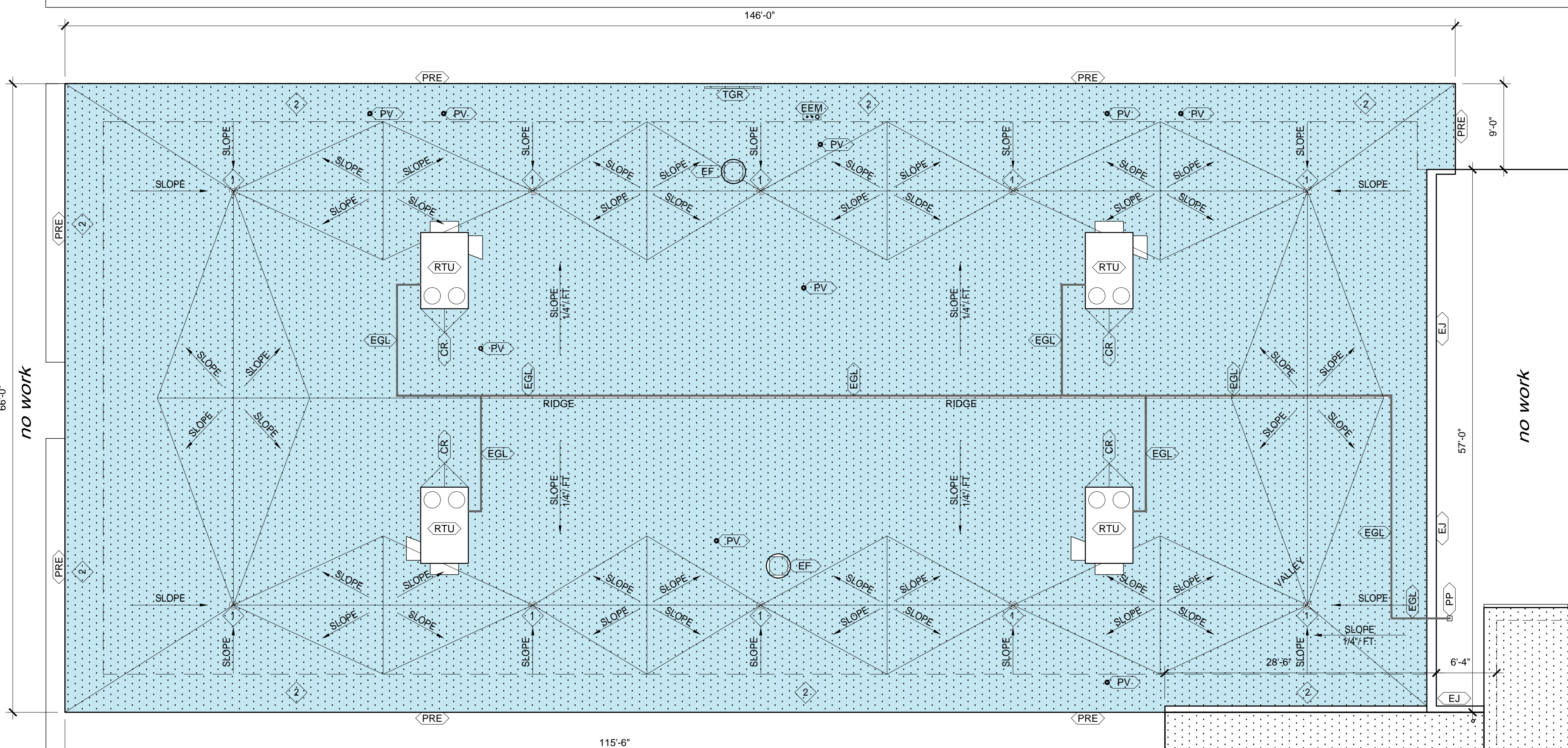
- SEE SPECIFICATIONS FOR MATERIALS AND EXECUTION.
- SEE NOTES RELATED TO SPECIFIC ROOF AREAS ON PLANS.
- CONTRACTOR TO INSTALL NEW SINGLE PLY 'RECOVER' ROOFING SYSTEM. ALL LOOSE BALLAST ON EXISTING ROOF IS TO BE REMOVED and PREPPED AS REQUIRED FOR NEW RECOVER ROOFING SYSTEM. SEE SPECIFICATION SECTION 07500 FOR ROOF DESCRIPTION and EXECUTION OF INSTALLATION.
- REPLACE ALL EXISTING NAILERS AND WOOD CURBS (IF APPLICABLE) AS REQUIRED.
- TEMPORARILY DISCONNECT ALL EXISTING ELECTRICAL CONDUITS and GAS PIPING ON ROOF. AFTER THE INSTALLATION OF THE NEW ROOFING SYSTEM OVER ROOF AREA, RE-CONNECT ALL ELECTRICAL and GAS PIPING AS REQUIRED. PREP, PRIME and PAINT GAS PIPING AFTER INSTALLATION. CONTRACTOR'S OPTION IS TO REPLACE ALL PIPING WITH NEW IN LIEU OF PAINTING. PROVIDE NEW PIPE and CONDUIT SUPPORTS AS SPECIFIED.
- INSTALL NEW FLASHING SYSTEMS COMPLETE OR AS NOTED. FLASH ALL PENETRATIONS PASSING THROUGH THE SINGLE PLY MEMBRANE SYSTEM (WHERE INDICATED). THE FLASHING SEAL MUST BE MADE DIRECTLY TO THE PENETRATION. DO NOT CUT AND PATCH MOLDED FLASHING.
- PRECAUTIONS MUST BE TAKEN THAT THE EXISTING ROOF AREAS REMAIN AS DRY AS POSSIBLE BEFORE APPLICATION OF NEW ROOFING. ADEQUATE DRYING TIME MUST BE ALLOWED BEFORE RE-ROOFING.
- GENERAL CONTRACTOR IS RESPONSIBLE FOR ASSESSING AND CALCULATING ALL COSTS FOR WORK TO BE DONE PRIOR TO BIDDING THIS PROJECT.
- THE DETAILS SHOULD SERVE AS A GUIDE FOR LAYING OUT THE WORK and MUST BE MODIFIED AS NEEDED TO ADAPT THEM TO VARYING CONDITIONS THAT MAY BE ENCOUNTERED IN THE FIELD.
- ELEVATE ALL HVAC UNITS and MOTORIZED PENETRATIONS AS REQUIRED TO HEIGHT FOR NEW ROOFING SYSTEM. ALL WIRING, GAS, CONDENSING and REFRIGERANT LINES TO BE RE-CONNECTED AS REQUIRED.
- ROOF AREAS TO RECEIVE NEW 'RECOVER' SYSTEMS SHALL HAVE AN INFRARED MOISTURE SCAN PERFORMED BY A CERTIFIED THERMOGRAPHER TO DETERMINE ANY WET ROOFING COMPONENTS TO BE REPLACED PRIOR TO THE BEGINNING OF WORK AT THOSE LOCATIONS. INFRARED SCANS SHALL INCLUDE WRITTEN REPORTS, PHOTOGRAPHS, DOCUMENTATION OF WET AREAS ON ROOF PLAN and WET ROOF AREAS MARKED ON ROOFS WITH SPRAY PAINT. THE CONTRACTOR SHALL INCLUDE THE COST OF THIS WORK IN THEIR BID.
- AT EXISTING ROOF DRAIN and PIPING, CONTRACTOR IS TO ENSURE THAT THE EXISTING DRAIN and PIPING SYSTEM IS CLEAR OF DEBRIS IN ITS ENTIRETY TO ALLOW POSITIVE DISCHARGE AS REQUIRED FOR DRAINAGE.
- PROVIDE NEW PVC CONDENSATE LINES WITH SUPPORTS (AS SPECIFIED) FROM EXISTING HVAC UNITS TO NEAREST ROOF DRAIN LOCATION.
- THE CONTRACTOR SHALL INSTALL 3/4" TAPERED INSULATION (AS SPECIFIED) OR GREATER TO PROVIDE A TOTAL (EXISTING and NEW) MINIMUM SLOPE OF 1/4" PER FOOT TO THE ROOF DRAINS WITH TAPERED SADDLES/CRICKETS SLOPED AT 1/2" PER FOOT BETWEEN THE DRAINS AS SHOWN ON DRAWING IN ACCORDANCE WITH THE MANUFACTURER'S MOST CURRENT SPECIFICATIONS AND DETAILS. NEW TAPERED INSULATION SHALL CONSIST OF A 3/4" START THICKNESS AT DRAINS WITH BASE LAYERS MECHANICALLY ATTACHED and SUBSEQUENT LAYERS ADHERED WITH LOW-RISE FOAM ADHESIVE PER THE ROOFING MANUFACTURER'S REQUIREMENTS.
- THE CONTRACTOR SHALL INSTALL A FLAT LAYER OF 3/4" 100 PSI ISO HD BOARD OVER THE NEW TAPERED INSULATION FULLY ADHERED WITH LOW-RISE FOAM ADHESIVE PER THE ROOFING MANUFACTURER'S REQUIREMENTS.

SYMBOL	DESCRIPTION
(SPR)	NEW SINGLE PLY ROOFING SYSTEM - SEE SPECS.
(ELEV)	EXISTING ROOF ELEVATION CHANGE - FIELD VERIFY
(CR)	POSITIVE ROOF SLOPE CRICKET LOCATION- 1/4" PER FOOT SLOPE MINIMUM
(CU)	CONDENSING UNIT LOCATION
(CER)	CONCEALED EQUIPMENT RAIL DETAIL
(EF)	EXHAUST/ DISCHARGE FAN SUPPORT CURB DETAIL
(EJ)	EXPANSION JOINT
(GV)	GAS VENT
(LRE)	LOW ROOF EDGE
(PP)	PITCH POCKET FLASHING
(PV)	PLUMBING VENT FLASHING THRU ROOF
(PMG)	PRE-FINISHED METAL GUTTER
(PRE)	PERIMETER ROOF EDGE
(RTU)	ROOF TOP HVAC UNIT SUPPORT CURB
(RTW)	ROOF TO WALL FLASHING
(TGR)	TEMPORARY GUARDRAIL SYSTEM - SEE SPECS
(VRE)	VARYING/RAKE ROOF EDGE
(EEM)	EXISTING ELECTRICAL MAST - PROVIDE NEW FLASHING AS REQUIRED
(EGL)	EXISTING GAS LINE

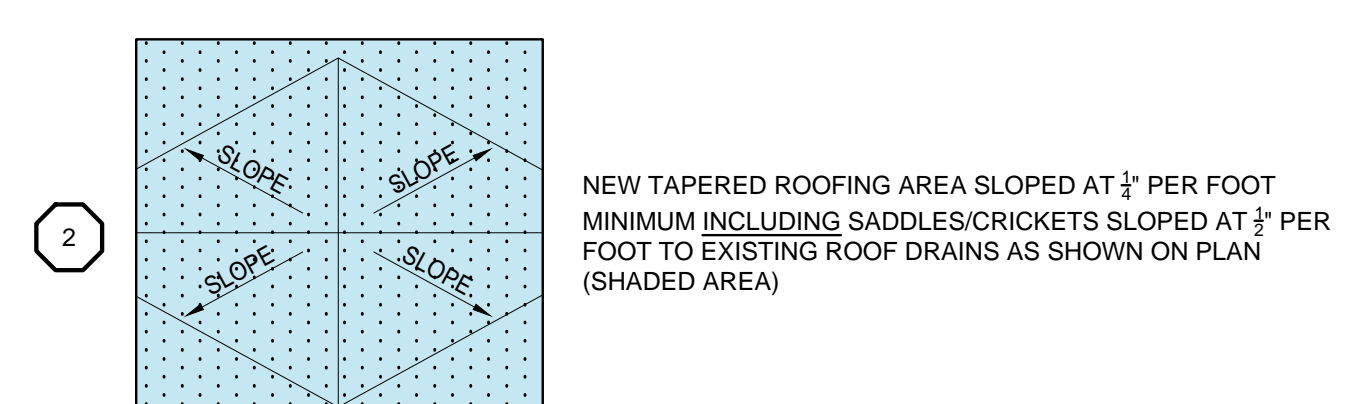
NOTE: SEE SHEET R2.1 and R2.2 FOR DETAILS



**Knight Enloe Elementary School
KINDERGARTEN BUILDING ROOF PLAN**
SCALE: 1/8" = 1'-0" 2



**Knight Enloe Elementary School
1st GRADE BUILDING ROOF PLAN**
SCALE: 1/8" = 1'-0" 2



SYMBOL	DESCRIPTION
1	THE GENERAL CONTRACTOR SHALL REMOVE ALL EXISTING ROOF DRAIN STRAINER CAPS and REPLACE WITH NEW STRAINER CAPS TO MATCH THE EXISTING MATERIAL TYPE and SIZES. THE CONTRACTOR SHALL FURNISH and INSTALL NEW DRAIN BOWL INSERT INTO THE EXISTING BOWLS PRIOR TO INSTALLATION OF THE NEW STRAINER CAP. THE GENERAL CONTRACTOR SHALL VERIFY THE EXISTING DRAIN LINE IS CLEAR PRIOR TO INSTALLATION OF THE NEW DRAIN BOWL AND CAP ASSEMBLY. IF DRAIN LINE IS NOT CLEAR, THE CONTRACTOR IS TO CLEAR DRAIN SYSTEM FOR POSITIVE DRAINAGE AS REQUIRED.
2	ADAPT EXISTING ROOFING AT EDGE PRIOR TO INSTALLATION OF NEW ROOFING SYSTEM. THE ROOFER'S SHOP DRAWINGS SHALL PROVIDE A DETAIL THAT CAN BE WARRANTED.
3	REMOVE EXISTING RAIL CURBS and ASSOCIATED CURBING IN ITS ENTIRETY. PROVIDE RECOVERY LAYERS AS REQUIRED TO ACHIEVE A UNIFORM SLOPE.
4	PROVIDE NEW PRE-FORMED METAL SHROUD/ CAP and FLASHING TO NEW ROOFING SYSTEM. THE CONDENSING UNIT PIPING MUST SLOPE UP FROM THE ROOF INTO THE CURB SO WATER DOES NOT RUN THE PIPING.

ADMINISTRATIVE BUILDING - SEE SHEET R1.1

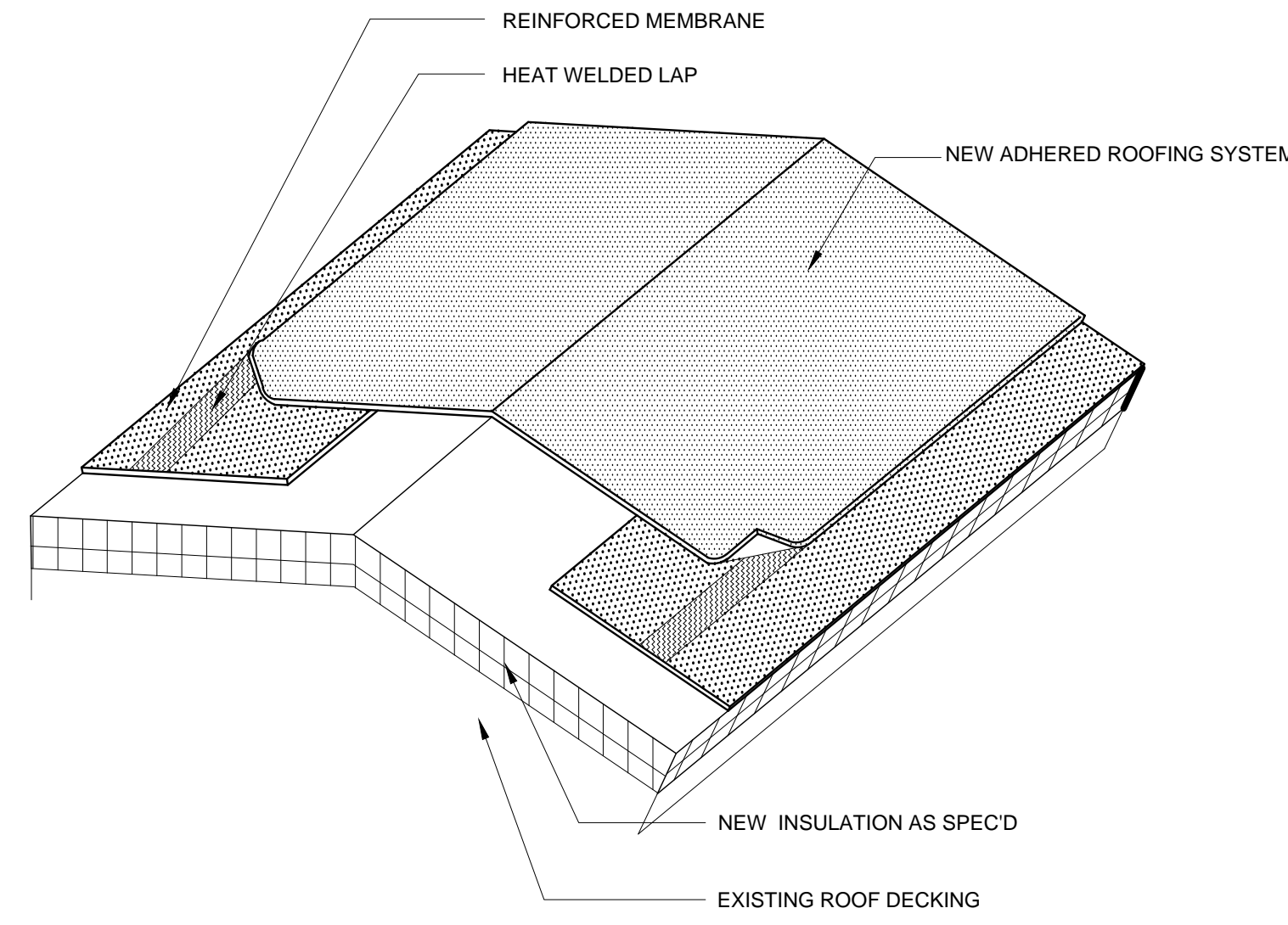
NOTE:
Contractor is to provide positive drainage as required for all re-roofing work. "Positive drainage" means no standing water on the roof 48 hours after a rain.

**RE-ROOFING VARIOUS BUILDINGS: KNIGHT ENLOE
ELEMENTARY and HANDLEY HIGH SCHOOL**
 FOR THE
ROANOKE CITY BOARD OF EDUCATION
 ROANOKE, ALABAMA
MCKEE and ASSOCIATES
 ARCHITECTURE and INTERIOR DESIGN
 631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 (334) 634-9933



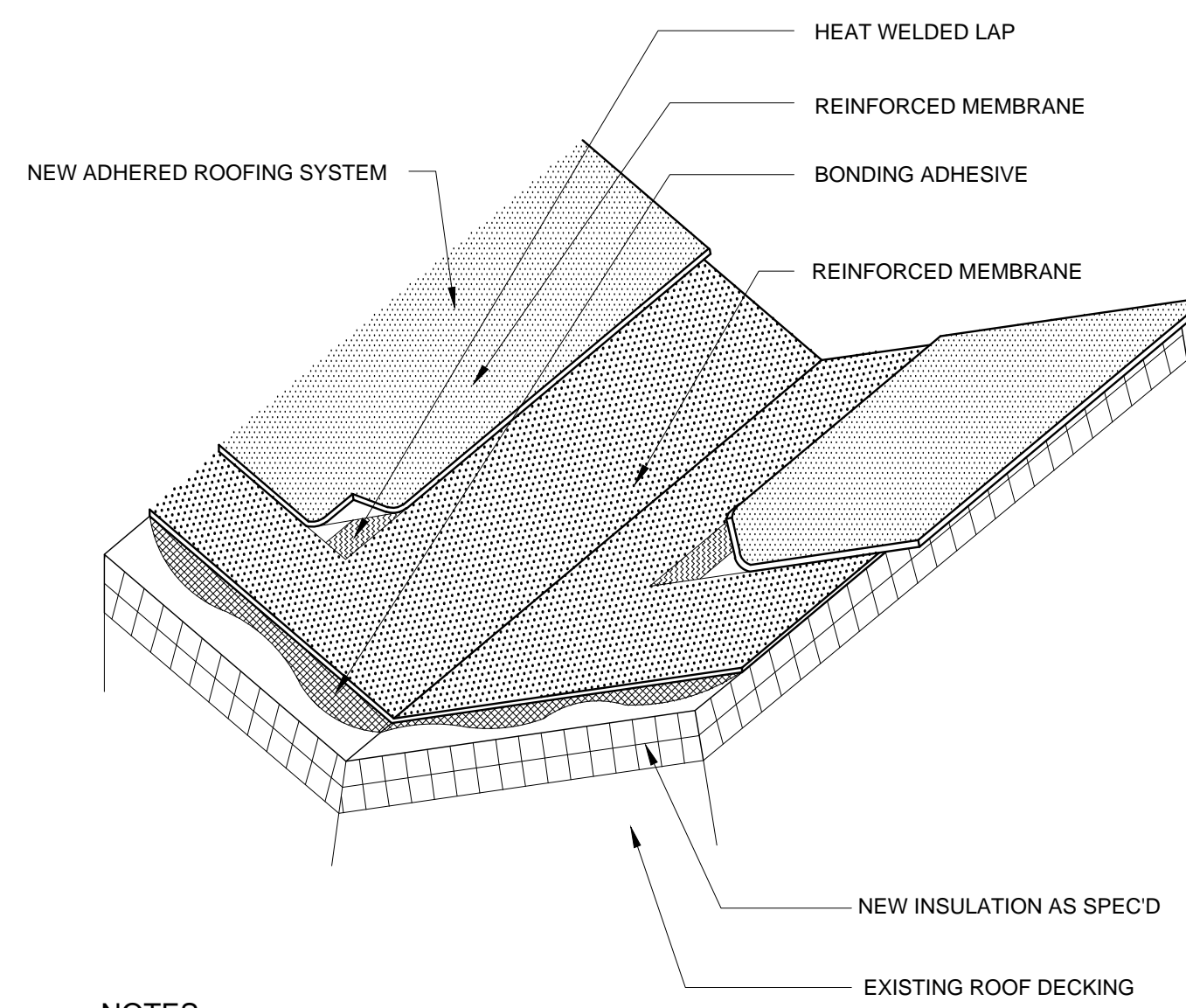
SHEET TITLE : ROOF PLANS:
 1ST GRADE BLDG.
 and KINDERGARTEN BLDG.
 SINGLE PLY
 MCKEE JOB # : 2020-182
 DRAWN BY : ks
 DATE : 11-3-2020
 REVISED DATE : 2 11-19-2020
 REVISED DATE :
 REVISED DATE :
 SHEET NO. : **R1.2**

-Z:\2020\2020-182-Reroof Knight Enloe Handley Roanoke BOE\CAD Drawings\Architectural\R2.1 Roof Details_Typical_Single Ply.dwg
- Thursday, November 19, 2020 11:50:19 AM



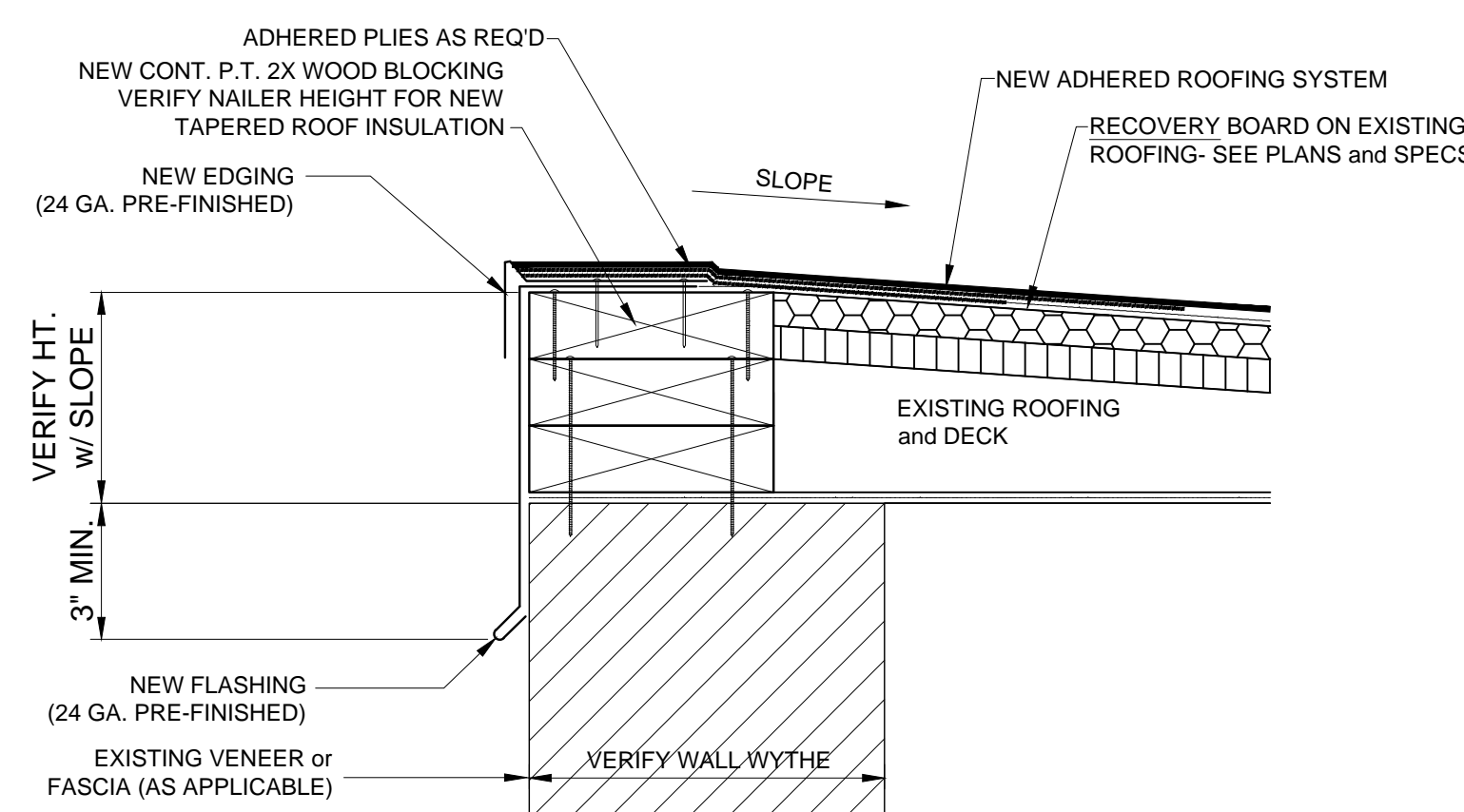
NOTES:
1. PROVIDE ROOFING INSTALLATION AS PER MANUFACTURER'S RECOMMENDATIONS
2. VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION

A Roof Ridge/Hip Detail- Typical
Scale: NTS

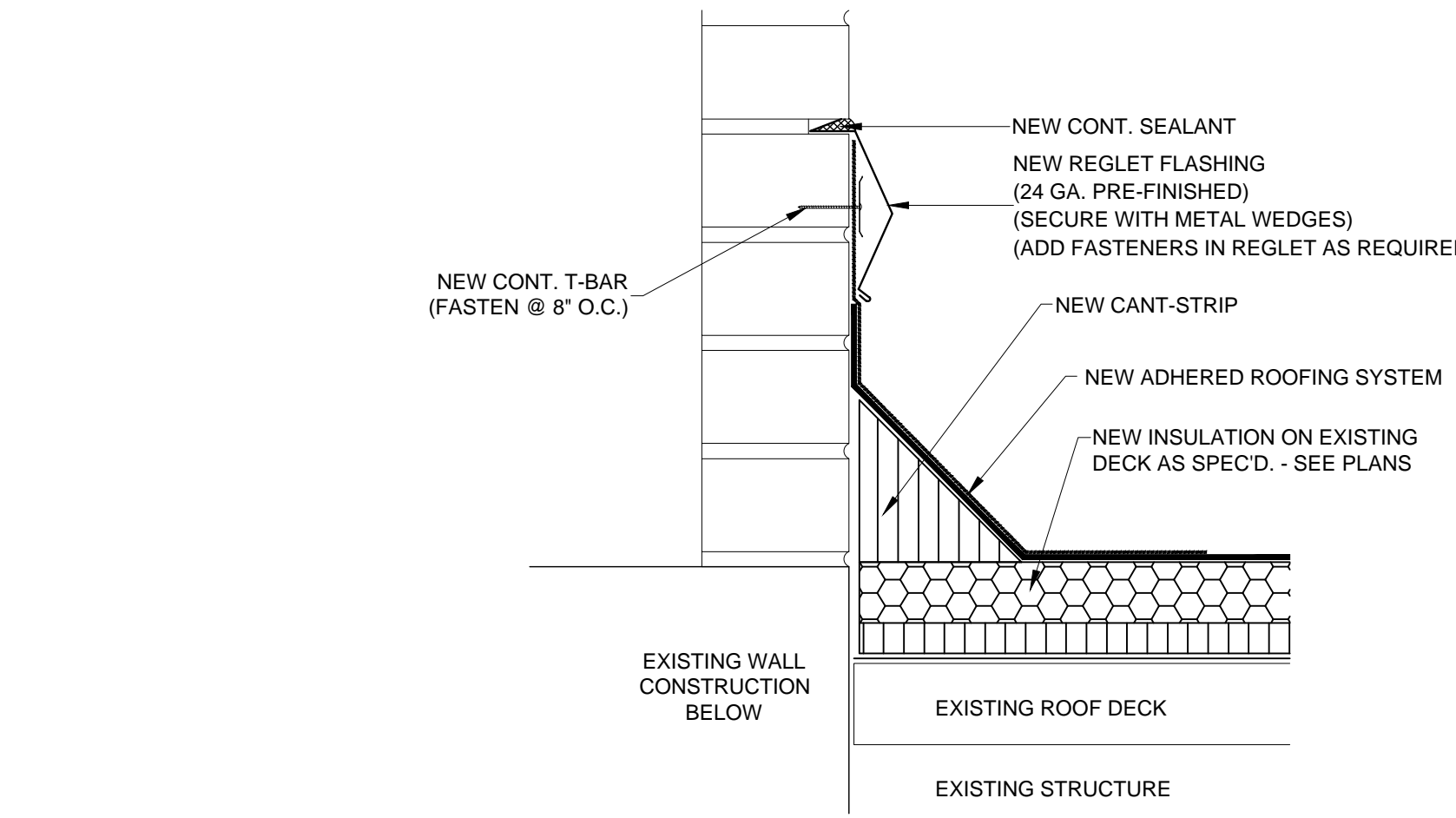


NOTES:
1. PROVIDE ROOFING INSTALLATION AS PER MANUFACTURER'S RECOMMENDATIONS
2. VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION

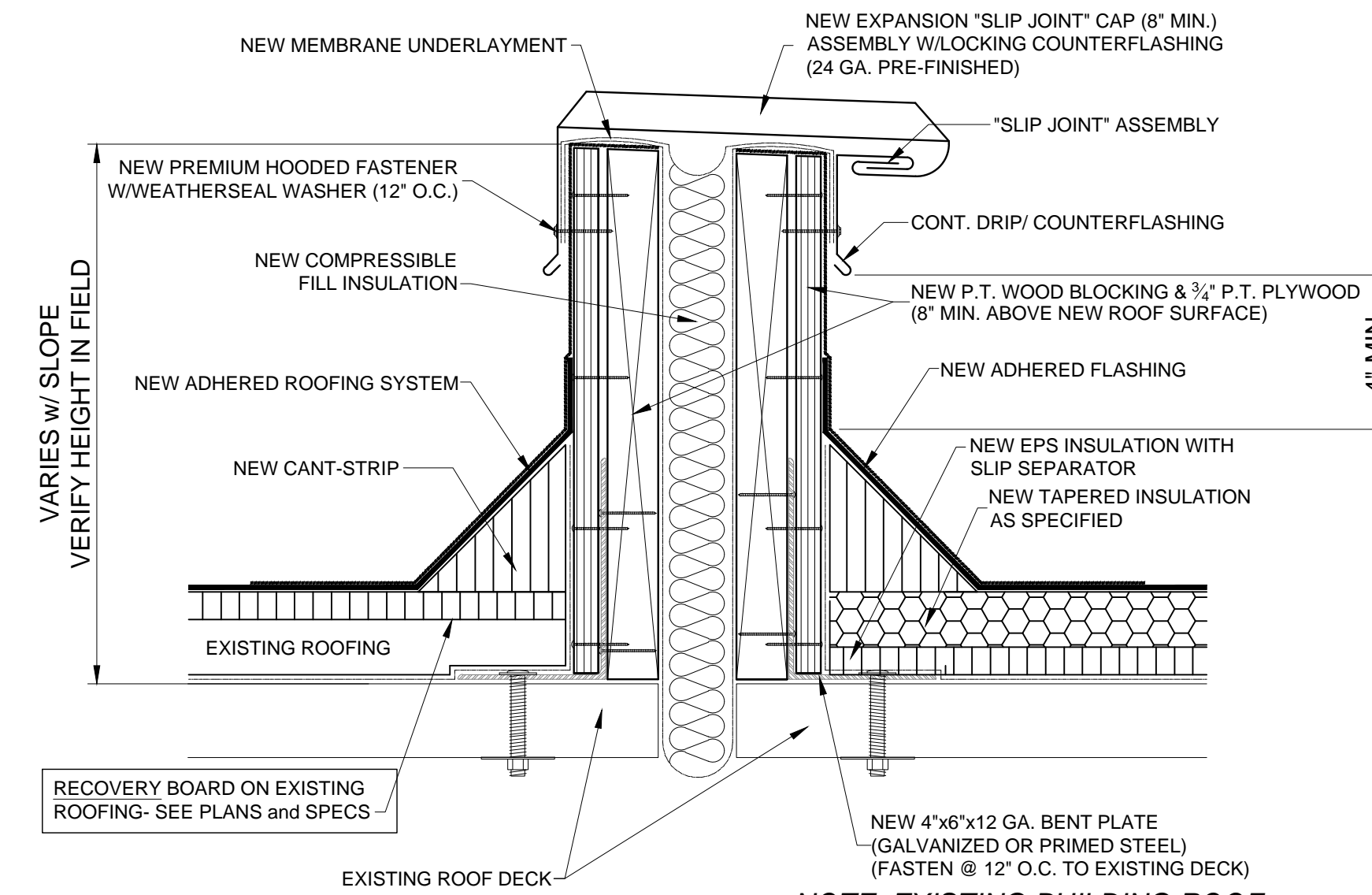
B Roof Valley Detail- Typical
Scale: NTS



6 Perimeter Roof Edge (PRE- Recover)
Scale: 3" = 1'-0"

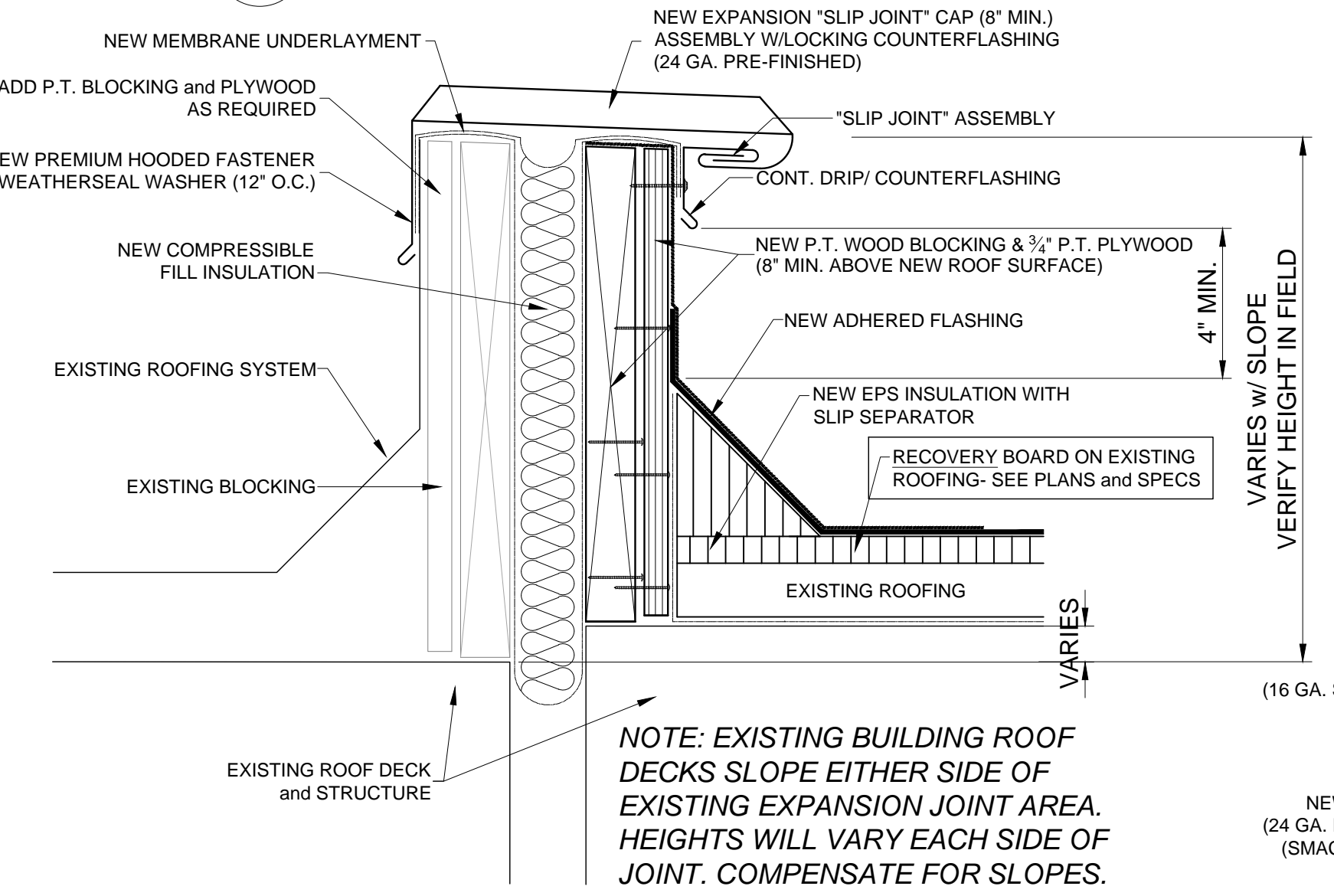


4 Roof to Wall Base Flashing (RTW)
Scale: 3" = 1'-0"



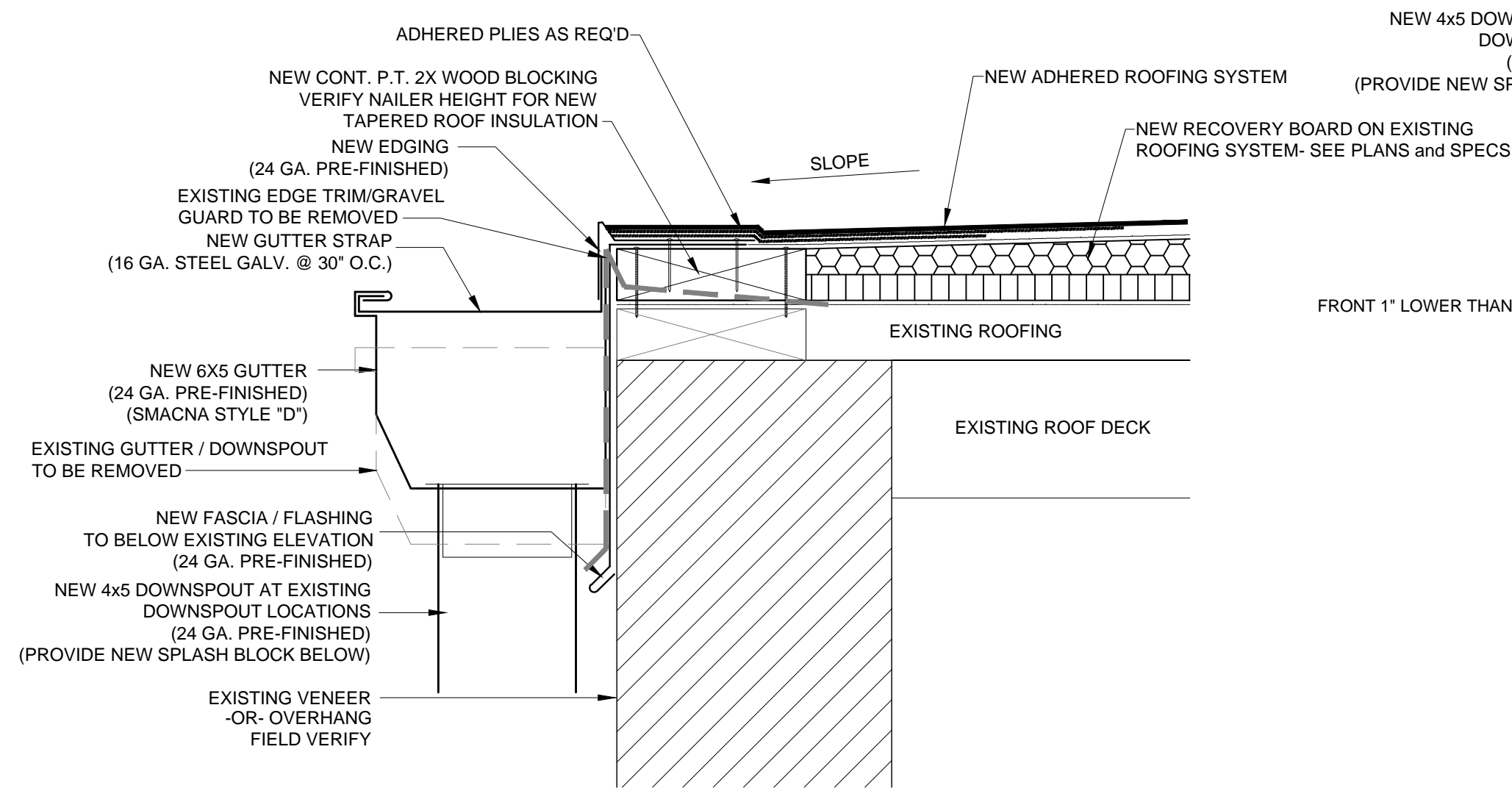
NOTE: EXISTING BUILDING ROOF DECKS SLOPE EITHER SIDE OF EXISTING EXPANSION JOINT AREA. HEIGHTS WILL VARY EACH SIDE OF JOINT. COMPENSATE FOR SLOPES.

5 Expansion "Slip Joint" Cap Assembly (EJ)
Scale: 3" = 1'-0"

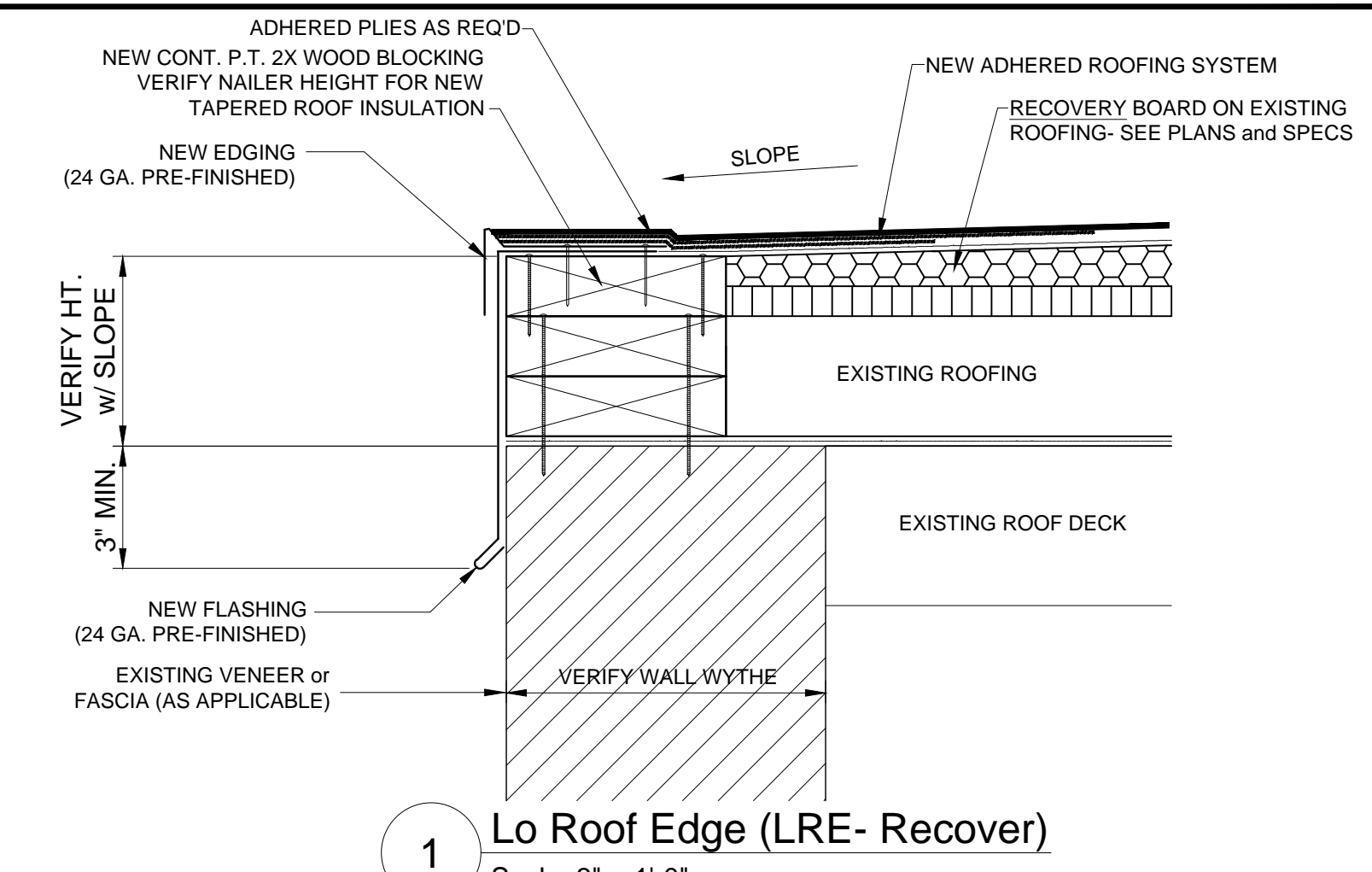


NOTE: EXISTING BUILDING ROOF DECKS SLOPE EITHER SIDE OF EXISTING EXPANSION JOINT AREA. HEIGHTS WILL VARY EACH SIDE OF JOINT. COMPENSATE FOR SLOPES.

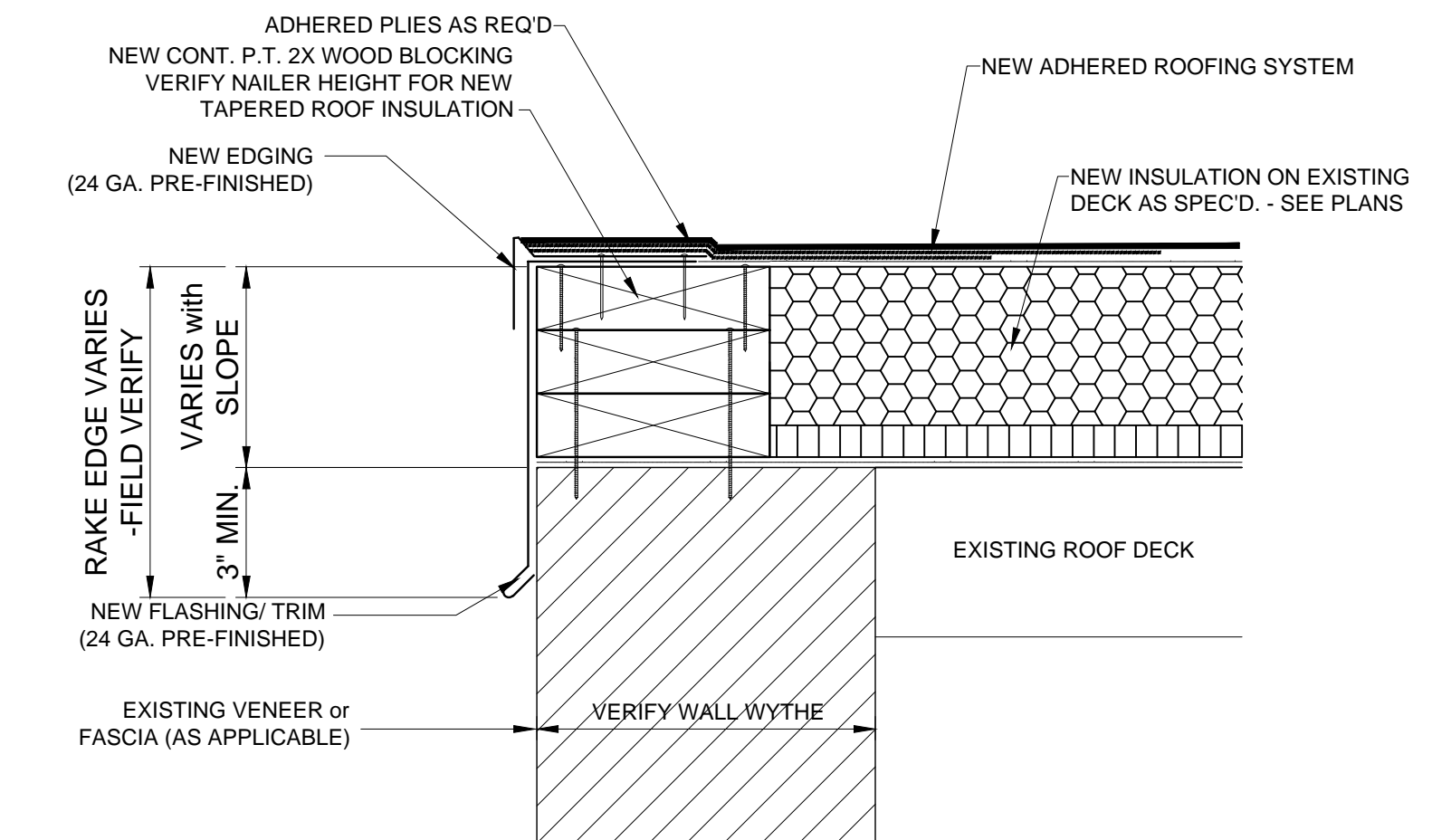
5a Expansion "Slip Joint" Cap Assembly (EJ)
Scale: 3" = 1'-0"



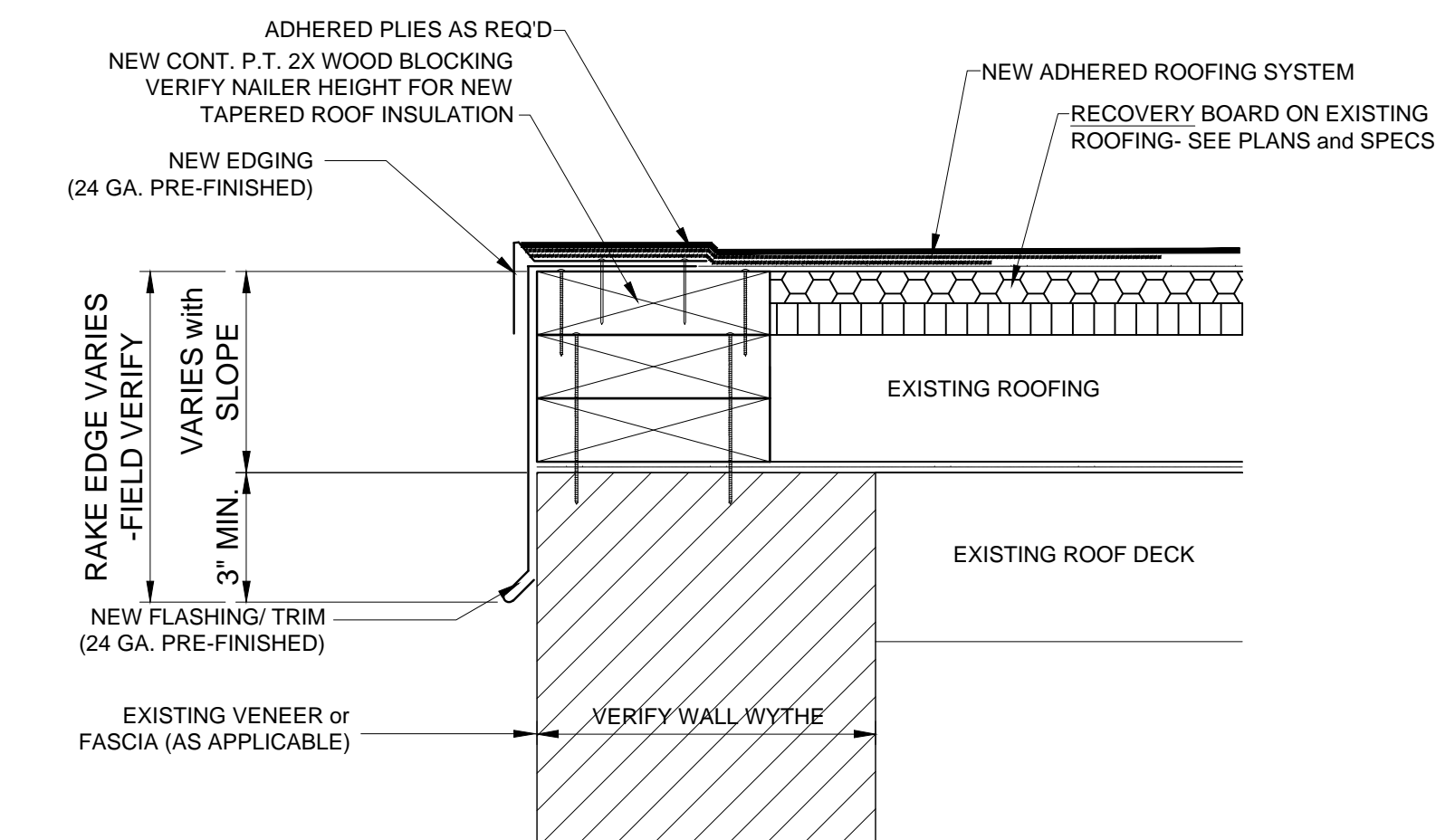
3a Roof Recover / Overlay Metal Gutter/ Low Roof Edge Detail (PMG- Recover)
Scale: 3" = 1'-0"



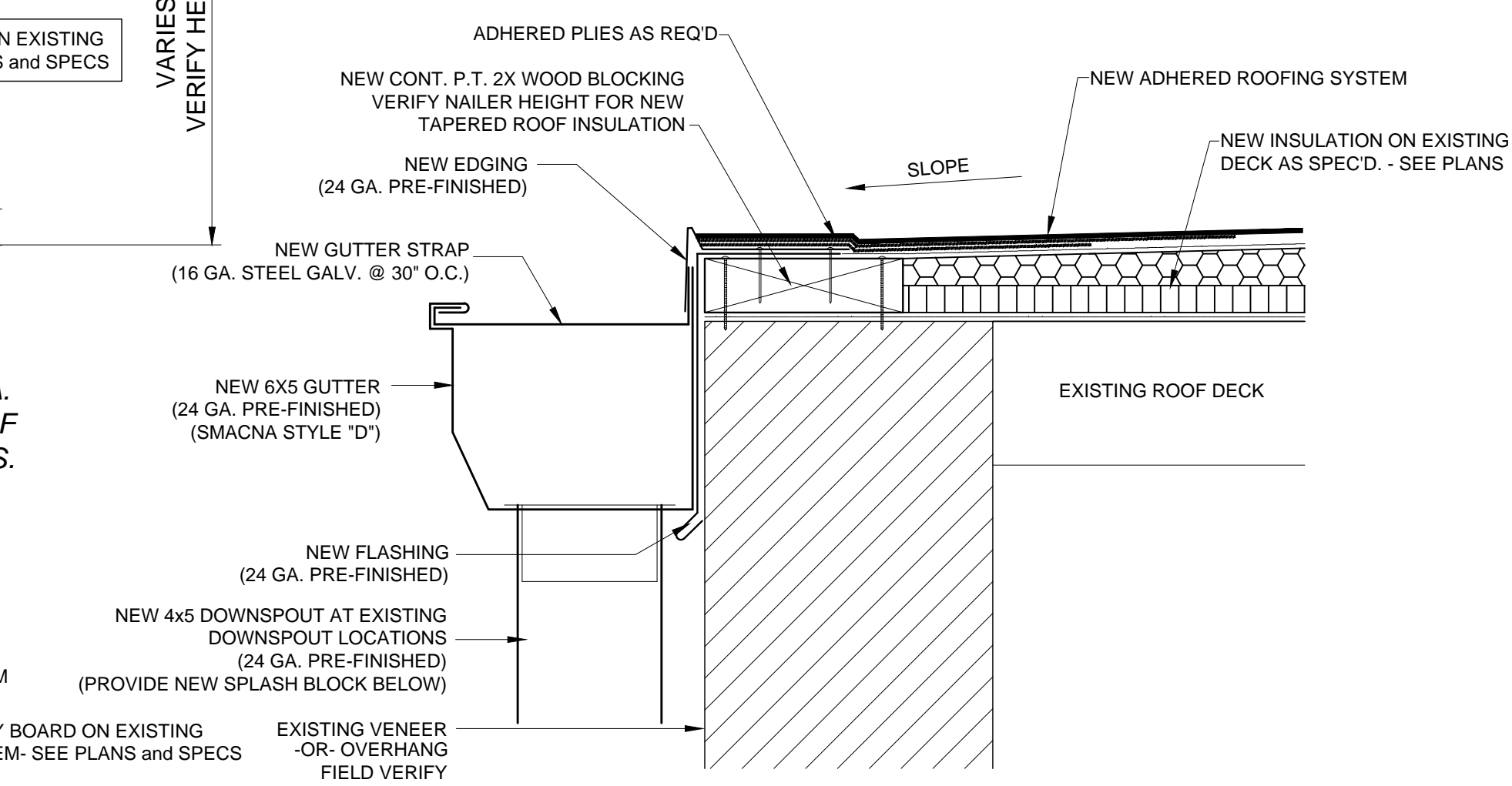
1 Low Roof Edge (LRE- Recover)
Scale: 3" = 1'-0"



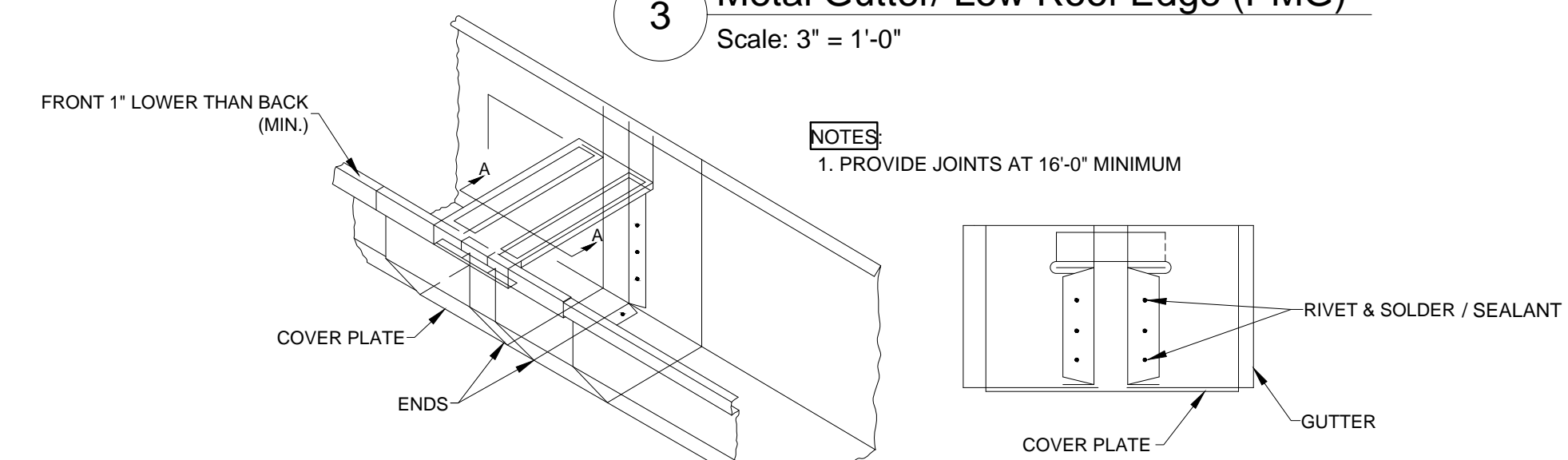
2 Varying Roof Edge (VRE)
Scale: 3" = 1'-0"



2a Varying Roof Edge (VRE- Recover)
Scale: 3" = 1'-0"



3 Metal Gutter/ Low Roof Edge (PMG)
Scale: 3" = 1'-0"



3b Gutter Expansion Joint
Scale: Not To Scale

NOTE:
ROOF DETAILS ARE INTENDED TO SERVE AS A GUIDE FOR PROPERLY INTERFACING THE REROOF WITH EXISTING CONSTRUCTION. THEY MUST BE MODIFIED AS NEEDED TO ADAPT THEM TO VARYING CONDITIONS THAT MAY BE ENCOUNTERED IN THE FIELD.

**RE-ROOFING VARIOUS BUILDINGS: KNIGHT ENLOE
ELEMENTARY and HANDLEY HIGH SCHOOL**

FOR THE
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MCKEE and ASSOCIATES
ARCHITECTURE and INTERIOR DESIGN
631 SOUTH HULL STREET MONTGOMERY, ALABAMA 36104 (334) 834-9933



SHEET TITLE : **ROOF DETAILS: SINGLE PLY**
MCKEE JOB # : 2020-182
DRAWN BY : ks
DATE : 11-3-2020
REVISED DATE : 11-19-2020
REVISED DATE :

SHEET NO. : **R2.2**