

## **DIVISION 7**

### **THERMAL AND MOISTURE PROTECTION**

#### **07530 SINGLE-PLY MEMBRANE ROOFING**

##### **PART 1 – GENERAL**

###### **1.1 WORK**

- A. Provide everything required to complete the work as listed on the **Scope** and specified herein.
- B. Where additional instruction is required, work shall be as directed by the **Inspector**.
- C. Work includes installation of membrane roofing, insulation board, sub flooring, flashing, scuppers, vents, connectors, and related materials.

###### **1.2 QUALITY STANDARDS**

- A. Provide skilled, trained, experienced and competent workers to complete the work as specified.
  - Sufficient in number for the work and time schedule.
- B. All work shall be completed in accordance with state and local building codes and manufacturer's instructions.
- C. Install waterproof roofing membrane per manufacturer's instructions on low pitched roof less than 4" rise in 12' of run.

###### **1.3 SUBMITTALS**

- A. Submit manufacturer's data required proving compliance with these **Specifications**.
  - Submit manufacturer's installation instructions.
  - Submit to the owner, a copy of the manufacturer's roofing warranty.

###### **1.4 MATERIALS HANDLING AND STORAGE**

- A. Provide all materials required to complete the work.
  - Materials and products delivered will be certified by the manufacturer to be as specified.
  - Do not install any used, damaged, defective or unsatisfactory materials.
- B. Handling:
  - Deliver and transport materials to avoid damage to the product or to any other work.
  - Keep all materials to be installed dry.
- C. Storage:
  - Store materials off the ground, protected from dirt, ground moisture, contaminants, and weather.
  - Neatly stacked to prevent damage.
  - Protected from occupant and construction traffic.

###### **1.5 PRECONSTRUCTION AND PREPARATION**

- A. Examine and verify that job conditions are satisfactory for speedy and acceptable work.
  - Check that weather conditions will be acceptable for work.
  - Provide framing, bracing and shoring as necessary to safely complete the work.
  - Provide lifts, cranes, ladders or scaffolding to assist high-level roofing work.
  - Verify that materials are stored so as to not overload or interfere with construction in terms of quantities and weights, locations, or traffic.
  - Have on hand and ready for installation in coordination with roofing, all flashing, roof vents, drip edging, sheet metal, roof cement, underlayment and fasteners.
- B. Protection of exposed roof:
  - Have on hand adequately sized waterproof tarps or covers to protect exposed roof in the event of inclement weather.
  - Securely attach tarps or covers to prevent wind, rain, snow or other weather related condition from dislodging coverings.

- **Contractor** shall be responsible for repairing at **Contractor's** expense, any damage caused by **Contractor's** failure to install, secure and adequately maintain roof protection during construction period.

## PART 2 – MATERIALS

### 2.1 MEMBRANE ROOFING, ACCESSORIES, AND RELATED MATERIALS

- A. Membrane roofing shall be sixty (60) mil, black, Ethylene Propylene Diene Terpolymer (EPDM), fully adhered to the approved substrate.
- B. Underlayment:
  - Furnish and install underlayment as listed on the **Scope** and as specified by the membrane manufacturer.
  - Wood underlayment shall be an exterior grade plywood, waferboard, or OSB with a minimum thickness of 3/4 inch.
  - Type and installation of insulation boards shall be as recommended by roofing membrane manufacturer.
- C. Fasteners shall be as recommended by membrane manufacturer.
  - Follow all nail size requirements and nail spacings required by the building code.
- D. Seams shall be adequately overlapped and sealed per manufacturer instructions.
- E. Flashing membrane shall be black EPDM flashing, nominal thickness 60 mils.
  - Plumbing vent and stacks shall be flashed with code approved methods consistent with manufacturer's instructions.
- F. Scuppers shall be installed as listed in the **Scope**, per manufacturer's recommendations, and as specified herein.
  - Scuppers shall be properly flashed to prevent water infiltration.
  - Roof shall be pitched toward scupper(s) to allow for proper drainage.
  - Scuppers shall be installed in sufficient quantity and sized to adequately drain water from roof.

## PART 3 – INSTALLATION

### 3.1 TEAR-OFF OF EXISTING ROOFING MATERIALS

- A. Examine and verify that job and weather conditions are satisfactory for speedy and acceptable work.
- B. Tear-off preparation:
  - Install safety barricades, fencing, or other warning devices to prevent the building occupants or unauthorized individuals from entering the work area.
  - Install plastic or tarps around exterior of building to collect falling debris from roof.
  - Install plastic or tarps in attic or other interior areas to completely collect falling debris from roof.
  - The contractor shall take all necessary precautions to protect the building, its components, i.e. windows, doors, gutters, siding, etc. and any neighboring buildings, structures, vehicles, etc. from falling debris.
  - All plantings and shrubbery shall be protected from damage by falling debris.
  - **Contractor** will be responsible for any damage caused as a result of contractor's work.
  - **Contractor** is responsible for completely removing from the property all debris generated from removal of roofing materials at **Contractor's** expense.
  - All sidewalks, driveways, patios, etc. shall be broom swept daily.
- C. Tear-off:
  - Remove all of the existing roofing materials down to the roof deck.
  - Verify that deck is dry, sound, clean, and smooth, free of protruding nails, staples, or other projections.
  - Repair all holes over 1 inch in diameter, all cracks over ½ inch in width, loose knots, depressions, rotten wood or defective roof boards.
  - Replace defective decking as necessary to provide a structurally sound deck surface.

### 3.2 UNDERLAYMENT INSTALLATION

- A. Install underlayments in accordance with manufacturer's instructions, building code, and [Section 06010 Lumber and Rough Carpentry](#).
- B. If listed in the **Scope**, wood roof deck underlayment shall be:
  - Installed directly over entire existing deck material.

- Construct deck slopes so there will be no level areas or pockets that allow ponding.
- Secured in place with fasteners of sufficient size and length per the building code and as specified herein.
- Underlayment shall be placed to allow a 1/8 inch gap around all edges for expansion.
- Edge joints in successive rows shall be staggered.
- Edges of sheets shall break on rafters.
- Install deck or sheathing with firm complete supports.
- Keep deck surface smooth and free of irregularities.
- Broom clean deck surface.
- Install rigid insulation boards per manufacturer's instructions.
- Stagger rigid insulation joints.
- Secure rigid insulation boards to prevent uplift from air infiltration or high winds.

### 3.3 FLASHING

- Install flashing as listed in the **Scope** and per manufacturer's instructions and as specified herein.
  - Provide compatible flashing materials.
  - Complete flashings as necessary to prevent water infiltration.
  - Do not nail through metal or membrane flashing; secure by nailing at 18 inches on center just beyond edge of flashing so that nail heads hold down edge.
  - Install counterflashing around chimney, skylights, roof hatchways, etc.
- Install scuppers, gutters and gutter flashing as listed on the **Scope**.
  - Sealed per membrane manufacturer's instructions.
  - Flashing and gutters shall be tight against the fascia board and roof deck.
  - Use full-length pieces; do not piece together scraps.
  - Secure with approved fasteners as specified herein.

### 3.4 MEMBRANE INSTALLATION

- Install roofing membrane in accordance with manufacturer's instructions, the building code, and as specified herein.
  - Secure membrane with manufacturer's approved adhesive.
  - Installation should start at the high point of the roof, and proceed to the lowest point if possible.
- Use all necessary precautions to prevent damaging membrane during or after installation.
  - Avoid damage from dropping or placing tools, materials, etc. on membrane.
  - Do not allow nails to penetrate membrane.
  - Assure proper pitch for drainage of water.
  - Do not place ladders, saw horses, etc. on top of membrane.
- Seams shall be sealed per membrane manufacturer's instructions.
  - Never allow laps to be less than manufacturer's recommended width.
  - Use adhesives and sealant per manufacturer's recommendations.

### 3.5 INSPECTION AND CLEAN-UP

- Contractor** is responsible for thoroughly cleaning up the work area.
  - At completion of work, **Contractor** is responsible for completely removing from the property, at **Contractor's** expense, all debris generated from removal and installation of roofing materials.
  - At the end of each workday, all debris including roofing materials, nails, scrap lumber, flashing, etc. shall either be removed from site or neatly stored.
  - Leave drains, gutters, and downspouts clear and clean of debris.
  - All sidewalks, driveways, patios, etc. shall be broom swept daily.
  - Repair or replace defective work as directed by the **Inspector**.

END OF SECTION – 07530 SINGLY-PLY MEMBRANE ROOFING