

07 51 00 - Built-Up Bituminous Roofing

DIVISION 7 –Thermal and Moisture Protection



STATEMENT OF PURPOSE & BACKGROUND

- Scope:
 - All labor, material, equipment and incidental services necessary to install new vapor barrier, insulation and a 4-ply fiberglass felt, gravel surfaced built-up roof (BUR) with system approved roof insulation.

- Statement of goals:
 - Provide the most cost effective roof system in the market
 - Provide roof system that is capable of withstanding high foot traffic.
 - Provide roof system that is capable of withstanding 90 mph wind.
 - Roof system that is capable of tolerating more extreme hot & cold weather.
 - Easily and economically maintained.
 - Longest life roof system available in the market

- Revision history of section:
 - 04/22/2013
 - 02/22/2019
 - 01/13/2021
 - 05/01/2023 (*changed roof board/coverboard material*)

SELECTION AND APPLICATION CRITERIA

Application	Selection
Over new or existing metal deck	Mechanically attached red rosin paper/bay sheet, gypsum sheathing, 2-ply vapor barrier, Polyisocyanurate, tapered Polyisocyanurate, 5/8" glass-mat gypsum board, solidly mopped
Over existing cast concrete (precast & poured in place)	Prime deck, 2 ply vapor barrier, Polyisocyanurate, tapered Polyisocyanurate, 5/8" glass-mat gypsum board, solidly mopped
Over existing wood deck	Mechanically attached red rosin paper/bay sheet, 2 ply vapor barrier, Polyisocyanurate, tapered Polyisocyanurate, 5/8" glass-mat gypsum board, solidly mopped

OUTLINE SPECIFICATION

- Part 1 General
 - Product delivery & storage.
 - Transport, handle and store products in a manner which will keep materials dry and prevent damage. Use care not to overload building structure with stored or stockpiled material or use of equipment on deck.
 - Insulation is to be covered and stored to assure protection from moisture & breakage. Store in a covered trailer or on pallets with weather tight covers. Discard all materials exposed to moisture or damaged during storage or handling.
 - Roll goods are to be stored in a covered trailer or on pallets and protected to prevent damage to edge or ends.

- Gravel is to be protected from the intrusion of deleterious materials, loamy silt or sharp angular particles.
- Part 2 Products
 - Acceptable Manufacturer's systems are:
 - JohnsManville 4GIG.
 - GAF 1-0-4-G/P5.
 - Firestone C-I-N 4F and S I-N 4F-G.
 - Verify all manufacturer's product names and numbers listed above and below to confirm manufacturer's current information.
 - Equivalent manufacturers **approved, in writing, in advance, by the Architect**, may be substituted in accordance with the provisions of the Contract.
 - Membrane
 - JohnsManville GlasPly IV ASTM D2178-97, Type IV.
 - GAF FAFGLAS ply 4 ASTM D2178, Type IV.
 - Firestone Ply IV ASTM D2178-97, Type IV.
 - Flashing Material
 - JohnsManville Dynaflex Elastomeric Granule Surfaced Flashing.
 - GAF Ruberoid MB Granule Surfaced Flashing.
 - Firestone SBS Flashing.
 - Provide 2-ply Type IV felt below granule surfaced flashing.
 - Plastic Cement
 - JohnsManville Industrial Roof Cement ASTM D4586, Type I.
 - GAF Plastic Cement ASTM D4586, Type II.
 - Firestone MB Flashing Cement ASTM D4586-93.
 - Roof Board (Cover Board) ASTM C1117
 - Georgia-Pacific DensDeck Prime AD
 - USG Securock Glass-Mat
 - Asphalt
 - Interply moppings, type II and type III meeting roofing system manufacturer's published specifications.
 - Flood Coat
 - Type I meeting roofing systems manufacturer's published specifications.
 - Two part Pourable Sealer
 - JohnsManville Ultra Guard Pourable Sealer.
 - Firestone Pourable Sealer.
 - Ice & Water Shield:
 - Grace Ice and Water Shield as manufactured by Grace Construction products, Cambridge, MA
 - Slip Sheet:
 - Building paper, 3 lb./100 sq. ft. minimum, rosin sized (Red Rosin paper).
 - Barbed nails and discs for miscellaneous anchorage requirements. Coated nails & discs, nail length to assure minimum 1 ½" penetration, discs to be 28 gauge, 1 ½" diameter.
 - Gravel shall meet ASTM D1863, 100% to pass ¾" screen.
 - Lead flashing at roof drains: Fed. Spec. QQ-L-201F and Amendments 2, Grade B, 4.89 kg/sq.m (4lb/sq.ft), 910 by 910 mm (36 by 36 in) sheets.
- Part 3 Execution
 - Prior to start of roofing installation, a pre-installation conference shall be held on site with Architect, Owner, Construction Manager and roofing contractor to discuss procedures, installation methods, potential hazards, environmental concerns including odors and mitigation procedures, roofing schedule, and any other issues affecting roof installation.

- Roofing contractor is to provide roof inspections and warranty data to Architect for approval at least 15 days prior to intended start date of roofing operations.
 - Apply roofing in dry weather and do not apply roofing when ambient temperature is below 10 degree F, per Architect and / or manufacturer specification.
 - Protect roof drains, lawns, walks, paving and building surface adjacent to hoist and kettles prior to starting work. Lap protective material at least 8", leave in place for duration of work & secure against wind action.
 - Inspections of surfaces: Examine roof deck surfaces for inadequate anchorage, foreign material, moisture, voids and unevenness or projections which would prevent the execution and quality of application of the specified built-up roofing system.
 - Do not proceed with application of built-up roofing system until defects in surface including leveling are corrected.
 - Phased construction of felts will not be permitted.
 - Water tests shall be performed in the presence of Architect and Owner prior to applying gravel.
 - Roof test cuts not allowed. Roof inspector & manufacturer representative should be on site during all phases of installation to inspect condition of roof openings, curbs, roof jackets, pipe sleeves and other penetrations to verify proper installation.
 - Roofing shall not be applied until all vents, drains, curbs, cants blocking, nailing strips, and projects thru roof deck have been installed in area of work.
 - Start of work shall imply acceptance of the substrate conditions and any repair, correction or modifications required to install an acceptable roofing system will be responsibility of the roofing contractor.
 - Contractor shall furnish plywood walkways to prevent damage from traffic to new membranes.
 - For structural reasons gravel is not to be stacked in point load fashion on roof at any time. Similarly, heavy power equipment is not allowed on the roof.
- Part 4 Guarantee/Warranty
 - Provide manufacturer's no dollar limit (NDL) guarantee of roofing & flashings for a period of 20 years from date of Substantial Completion.
 - The roofing contractor shall provide a separate two (2) year 100% maintenance warranty.

End of Section