

ARCHITECTURAL GUIDE SPECIFICATION
NEW CONSTRUCTION AND REROOFING
2001 COMPANY EPDM SYSTEM 2001™
FOR MONOLITHIC DECKS

PART 1 – GENERAL

1.01 Work Included

1.01.1 Furnish and install a complete 2001 Company EPDM 2001 roofing system with all materials, labor and equipment necessary for and incidental to all roofing and related works as shown on the drawings and specified herein, and as approved in writing by 2001 Company. All work shall be done by an approved contractor in a good and workmanlike manner.

1.02 Related Work

1.02.1 Assemble roof drains as shown on the drawings and furnished under Section _____.

1.02.2 Install roof insulation and flashing at the roof drains as shown on the drawings and furnished under Section _____.

1.02.3 Furnish the trades concerned with the necessary items of 2001 Company Polymeric Laminated Metal to be installed by them.

1.02.4 The following items shall be furnished and installed under the indicated section:

Reglets as shown on the drawings (Section _____).

Sealant related to work other than roofing and sheet metal (Section _____).

Through-wall flashings (Section _____).

Curbs (Section _____).

Scuppers (Section _____).

Equipment pads (Section _____).

Gutters and downspouts (Section _____).

Expansion joints (Section _____).

Lightweight insulating fill (Section _____).

1.03 System Description

1.03.1 Roofing system shall consist of 2001 COMPANY premium or C-EPDM membrane as required for fire rating 45, 60 or 90 mil unreinforced black (ethylene propylene diene monomer) membrane fully adhered to approved (7/16" oriented stran board) mechanically fastened to the roof deck for 4 feet minimum around the roof perimeter and 2 feet minimum around all roof penetrations and loose laid over approved insulation or separation layer mechanically fastened, or overlaid with ½" gypsum board or fully adhered with hot asphalt to a monolithic deck. Membrane shall be sealed

- to the monolithic deck as shown on approved drawings at the roof perimeter and at all roof penetrations. Membrane lap joints shall be made using 2001 Company Zip Tape™ and Talc Eater™. Equalizer valves shall be installed as shown on approved drawings, two at each roof corner and intervals not exceeding 50' around the roof perimeter.
- 1.03.2 The roofing system shall have been tested at a nationally recognized testing laboratory to withstand the minimum wind loads set forth in (ANSI.1-1982, The Standard Building Code, The Uniform Building Code, The BOCA national Building Code).
 - 1.03.3 The roofing system shall provide a U-value of _____.
 - 1.03.4 The roofing system shall meet the requirements for a (Class A, Class B, Class C) roof.

1.04 Quality Assurance

- 1.04.1 All materials used shall be manufactured, supplied or approved by 2001 Company.
- 1.04.2 Roofing applicator shall be approved by 2001 Company to install the specified roofing system.
- 1.04.3 All materials shall be installed in accordance with 2001 Company's current written specifications and details.
- 1.04.4 A representative of 2001 Company shall inspect the completed roof to verify that the installation is in accordance with 2001 Company's current specifications and details.

1.05 Submittals

- 1.05.1 Shop drawings, approved by 2001 Company, shall detail and locate all air sealed penetrations on a roof plan showing air sealed perimeter details, equalizer valve locations and a bill of materials.
- 1.05.2 Evidence that the roofing applicator is approved by 2001 Company to install the specified roofing system.
- 1.05.3 Intent to Warranty form shall be completed by contractor (and distributor), signed by owner or his representative and submitted to 2001 Company prior to installation.

1.06 Delivery, Storage and Handling

- 1.06.1 All materials shall be delivered in manufacturer's original, unopened containers and rolls with labels intact and legible.
- 1.06.2 2001 Company membrane shall be stored flat on pallets or dunnage at least 4 inches above the ground, roof or deck, and shall be protected as necessary to remain dry. Membrane rolls shall be stacked no more than two pallets high.

- 1.06.3 Roof insulation and separation layers shall be stored flat on pallets or dunnage at least 4 inches above the ground, roof or deck, and shall be protected as necessary to remain dry.
- 1.06.4 2001 Company Laminated Metal shall be stored flat on pallets and shall be protected as necessary to remain dry.
- 1.06.5 2001 Company adhesives, sealants and primers, thinners and cleaners contain flammable solvents and shall be stored in a well-ventilated area protected from water, direct sunlight, temperatures below 40°F or in excess of 100°F, and sources of ignition.
- 1.06.6 All materials shall be handled so as to prevent damage to roofing system components.
- 1.06.7 Materials damaged in handling or storage shall be removed from the job site.

1.07 Project/Site Conditions

- 1.07.1 Installed areas of the roofing system shall be protected as necessary from damage both during and after installation.
- 1.07.2 Precautions shall be taken so as not to damage adjacent work or structures.
- 1.07.3 The roofing system shall not be installed when precipitation is probable or during periods of precipitation.
- 1.07.4 The roofing system shall not be installed when the air temperature is below 40°F unless 2001 Company's recommended precautions for cold weather application are followed.
- 1.07.5 EPDM membranes may not be installed in contact with oil base or plastic roof cement, where waste products such as petroleum, oil, grease, solvents, vegetable or mineral oil, animal fat, or direct steam venting that will come in direct contact with the membrane or where the membrane will be subject to a constant temperature in excess of 180°F.

1.08 Sequencing/Scheduling

- 1.08.1 Work of other trades which penetrates the roof deck or requires men and equipment to traverse the roof deck should be completed prior to the installation of the roofing system.

1.09 Warranty

- 1.09.1 Upon completion of the roof, final inspection by a representative of 2001 Company and payment of all outstanding invoices, furnish 2001 Company's standard written (5, 10, 15 or 20) year watertight warranty.

PART 2 – PRODUCTS

2.01 Acceptable Manufacturers

- 2.01.1 All material used in the 2001 Company, SYSTEM 2001 roofing system shall be manufactured, supplied or approved by 2001 Company.

2.02 Materials

- 2.01.1 Roofing membrane shall be (black,) 45, 60 or 90 mil EPDM, ethylene propylene diene monomer, of the type necessary to meet any required fire rating. The membrane shall meet the requirements for ASTM D4637, Type I, Grade 1, Class U membrane.
- 2.01.2 Uncured flashing membrane shall be (black,) 2001 Co. Uncured EPDM Flashing, nominal 0.060 inch uncured EPDM.
- 2.01.3 Solvent for cleaning of splice areas shall be hexane, heptane, unleaded or white gasoline.
- 2.01.4 Primer for priming membrane at splice areas shall be (black,) 2001 Co. Talc Eater™ and shall be required when using splicing tape and optional when using splice adhesive.
- 2.01.5 Splice adhesive for splicing uncured flashing membrane shall be (black,) 2001 Co. Rubber to Rubber Splicing Cement.
- 2.01.6 Splicing tape for splicing roofing membrane to roofing membrane or adhering roofing membrane or uncured flashing membrane to metal shall be 2001 Co. Zip Tape™, 4 inch wide butyl tape.
- 2.01.7 Seam sealant for sealing splice edges where required shall be (black,) 2001 Co. paste sealant.
- 2.01.8 Bonding adhesive for bonding roofing membrane to substrates such as smooth masonry, approved insulation, wood, plywood, oriented strand board or solvent resistant plastic shall be 2001 Co. Bonding Adhesive.
- 2.01.9 Color coating for roofing membrane shall be _____ 2001 Co. Hypalon Coating.
- 2.01.10 Pitch pocket filler shall be non-shrink grout topped with 2001 Co. Pourable Sealer.
- 2.01.11 Water cut-off mastic shall be 2001 Co. Water Cut-off Mastic.
- 2.01.12 Prefabricated pipe flashing shall be 2001 Prefabricated Pipe Boots.
- 2.01.13 Membrane for stripping in gravel stop or drip edge shall be (roofing membrane, cured 2001 Co. Zip Tape™ Flashing, uncured flashing membrane) as indicated on 2001 Co. approved drawings.
- 2.01.14 Caulking shall be one or two part polysulfide or one or two part polyurethane of the highest grade available.
- 2.01.15 Metal insulation plates shall be 4" diameter galvalume 2001 Co. Diaphragm Plates.
- 2.01.16 Insulation fasteners shall be corrosion resistant screws or anchors acceptable to 2001 Co. of type and length appropriate for fastening through approved insulation and existing roofing to the structural roof deck.

- 2.01.17 Termination bar shall be extruded aluminum 2001 Co. Termination Bar.
- 2.01.18 (Top layer of) roof (substrate) in the fully adhered perimeter area and around all roof penetrations shall be oriented strand board (minimum 7/16 inch) meeting APA PRP-108 or exterior grade plywood (minimum 15/32 inch) meeting APA PRP-108. (Over the remainder of the roof) shall be _____ inches of [gypsum wall board (minimum ½ inch) meeting ASTM C-208 Roof Insulating Board, isocyanurate roof insulation (minimum 1.5 inches) meeting ASTM C1013 with facers approved by the insulation manufacturer for use with fully adhered C-EPDM membranes], as manufactured by _____.
[Bottom layer of roof insulation shall be _____ inches of (isocyanurate roof insulation meeting ASTM C-1013, polystyrene roof insulation, meeting ASTM C578, Type 2, 3, 4 or 5, perlite roof insulation meeting ASTM C728, fiberglass roof insulation meeting ASTM C726, perlite/urethane composite roof insulation meeting ASTM C984). [Roof insulation over the remainder of the roof shall be _____ inches in (1 layer, 2 layers) (isocyanurate roof insulation meeting ASTM C1013, polystyrene roof insulation meeting ASTM C578, Type 2, 3, 4 or 5, perlite roof insulation meeting ASTM C728, fiberglass roof insulation meeting ASTM C726, perlite/urethane composite roof insulation meeting ASTM C984) as manufactured by _____].]
- 2.01.19 Air valves shall be spun aluminum 2001 Co. Equalizer Valves.
- 2.01.20 Wood nailers shall be No. 2 or better lumber, pressure treated for termite and rot resistance with a salt based preservative; creosote or asphaltic type preservatives shall not be used.
- 2.01.21 Roof walkway shall be _____.
- 2.01.22 Other materials shall be as hereafter specified or of the best grade for the proposed use as approved.

PART 3 – EXECUTION

3.01 Inspection

- 3.01.1 The applicator shall examine the existing built-up roof, roof deck and related surfaces and verify that there are no conditions such as inadequate anchorage, foreign materials, moisture, ridges or other unevenness which would prevent the satisfactory installation of the roofing system.
- 3.01.2 Any conditions requiring correction shall be corrected or completed prior to the installation of the roof system. Notify (architect, engineer, owner) in writing of unacceptable conditions.

3.02 Preparation

- 3.02.1 Surfaces on which the roofing system is to be applied shall be clean, smooth, free of fins, sharp edges, loose and foreign materials, oil and grease.
- 3.02.2 Surfaces to which flashing is to be applied shall be dry, clean, smooth, free of fins, sharp edges, loose and foreign materials, asphalt, coal tar pitch, oil and grease or similar materials. (Mechanically fasten minimum ¼ inch exterior plywood, or 7/16 inch oriented strand board meeting APA PRP-108 to surfaces, which cannot be adequately cleaned.)
- 3.02.3 Where installation is over an existing gravel surfaced roof, the gravel surface shall be swept or vacuumed clean of all loose gravel, dirt and debris. Blisters and other membrane defects shall be cut and repaired so as to be airtight.
- 3.02.4 Where installation is over an existing smooth surfaced roof, the surface shall be swept or vacuumed clean of all dirt and debris. Blisters, splits and other membrane defects shall be cut and repaired so as to be airtight.
- 3.02.5 Standing water, snow, ice or wet insulation shall be removed from the substrate prior to installation of the roofing system.
- 3.02.6 Where a portion of the existing roof system or deck must be replaced, the replacement work shall include sealing to the existing membrane prior to the installation of insulation and the roofing system.
- 3.02.7 Wood nailers at least 3-1/2 inches wide and matching the thickness of the insulation shall be installed at the perimeter of the roof and around penetrations as shown on the drawings. Wood nailers shall be fastened to the deck not more than 30 inches on center to resist a minimum force of 175 pounds per linear foot in any direction. A minimum of 2 anchors shall be used to fasten each length of nailer to the deck. Air seals shall be installed between wood nailers and the existing roof as shown on 2001 Co. approved drawings.

3.03 Installation

- 3.03.1 General – Installation should start at high point of roof and proceed to lowest point, if possible.
- 3.03.2 Air Seals – The monolithic deck shall be sealed airtight to all penetrations and at the roof perimeter as detailed on 2001 Company approved drawings.
- 3.03.3 Vapor Retarder – Vapor retarder shall be installed as required by the manufacturer in a full mopping of hot asphalt or coating of adhesive. Vapor tight seams shall be made as required by the vapor retarder manufacturer.
- 3.03.4 Insulation – Thermal insulation boards shall be laid on the substrate in parallel rows with end joints staggered. Where more than one layer is to be applied, joints in each layer shall be staggered. All joints shall be tight and at the roof perimeter and roof penetrations, insulation cut

neatly and fitted to reduce openings to a minimum. Insulation shall be tapered or feathered at drains and scuppers to provide proper drainage. Tapered insulation shall be placed in accordance with the drawings. Insulation at the 4 foot wide roof perimeter and 2 foot minimum around all roof penetrations shall be mechanically fastened with one fastener and plate every _____ square feet (varies with wind load expected, insulation type, fastener type and deck type) as indicated on 2001 Company approved drawings or as required by the insulation manufacturer if more stringent. Insulation in the remaining roof area shall be (mechanically fastened with one fastener and diaphragm plate every 8 square feet, adhered with hot asphalt or overlaid with ½” gypsum board to the monolithic deck as indicated on 2001 Company approved drawings or as required by the insulation manufacturer if more stringent. No more insulation shall be installed than can be covered by the completed roof system by the end of the day or the onset of inclement weather.

3.03.5 Flashing – Flashing at the roof perimeter and at all penetrations including drains, pipes, conduits, curbs, walls, expansion joints, and vents shall be installed as shown on 2001 Co. approved drawings. Flashing shall be fabricated from the roofing membrane and/or uncured flashing membrane as indicated on 2001 Co. approved drawings, using the largest pieces practical and shall be terminated a minimum of (6 inches, 8 inches) above roof level. Prefabricated pipe flashing shall be used where possible. An additional layer of uncured flashing membrane shall be installed at all inside and outside corners, at all flashing plane changes of 45 ° or greater extending a minimum of 4 inches in all directions. Flashing shall be fully adhered to vertical surfaces other than metal with bonding adhesives as described in 2001 Co. Data Sheet No. _____. Flashing shall be fully adhered to metal using splice adhesive. Flashing minimum of 4 inches wide shall be accomplished using splice adhesive as described in 2001 Co. Data Sheet No. _____. All flashing splice edges shall be sealed with seam sealant as described in 2001 Co. Data Sheet No. _____. All flashing shall be sealed to both the penetration and the monolithic deck as shown on 2001 Co. approved drawings. Flashing shall be installed as roof membrane installation progresses.

3.03.6 Roofing Membrane – Roofing membrane shall be unrolled, unfolded and positioned without stretching over the (insulations, ½” gypsum wall board or existing smooth surfaced roof). Sheets shall be overlapped a minimum of 5 inches and allowed to relax for at least ½ hour before adhering to OSB, fastening or splicing. Roofing membrane at the 4 foot wide roof perimeter and 2 foot minimum around all roof penetrations shall be folded back without wrinkling and bonding adhesive applied to the back of the membrane and the OSB board described in 2001 Co. Data Sheet No. _____. After the adhesive has dried properly, the coated membrane shall be rolled on the coated

OSB without stressing the membrane to avoid wrinkles. Pressure shall then be applied to the membrane surface with rollers or brooms to assure good adhesive contact and avoid trapped air. Roofing membrane over the remainder of the roof shall be loose-laid over the (insulation, existing smooth surfaced roof) without wrinkling. Bonding adhesive shall be kept away from the field splice areas. Field splices shall be shingled in, parallel to, the direction of water flow on the roof where possible. Field splices shall be accomplished using primer and splicing tape as described in 2001 Co. Data Sheet Nos. _____ and _____. Field splice width shall be a minimum of 4 inches. The roofing membrane shall be spliced to flashing membrane minimum 4 inches wide and splice adhesive as described in 2001 Co. Data Sheet No. _____ as shown on the drawings. Seam sealant shall be applied to the edge of field splices as described in 2001 Co. Data Sheet No. _____ in the areas required by 2001 Co. Data Sheet No. _____. Excess primer shall be kept away from the (insulation, existing roof). At all T-joints, a minimum 6-inch square patch shall be applied using uncured membrane, primer and rubber-to-rubber adhesive. Caulk edges of patch.

- 3.03.7 Air Valves – Air valves shall be installed at the rate of two per corner and one every fifty feet or less around the perimeter between corners. Location of air valves shall be as indicated on drawings provided by 2001 Co. prior to roof installation. In no case shall less than one air valve for every 1250 square feet be installed without prior 2001 Co. approval. Air valves shall be installed as membrane installation progresses to avoid wind displacement during installation.
- 3.03.8 Color Coating – Color coating shall be installed as described in 2001 Co. Data Sheet No. _____.
- 3.03.9 Temporary Seals – The roofing membrane shall be sealed to the existing roof deck at the end of each date, or at the onset of inclement weather to prevent water from flowing into the completed roofing system. Temporary seals shall be removed upon resumption of work.

3.04 Cleaning

- 3.04.1 Upon completion of the roofing system, equipment and excess material shall be removed from the site.

3.05 Protection

- 3.05.1 Roof walkways shall be installed as shown on the drawings and where frequent roof traffic can be expected.
- 3.05.2 Where equipment pads, wood sleepers, or walkway slabs are to be installed over the roofing membrane, an additional layer of the roofing membrane shall be installed between the roofing membrane and the

pad, sleeper or slab. Due caution shall be exercised to prevent roofing membrane damage during placement.

2001 Company reserves the right to modify this specification at any time.