

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 PROJECT INFORMATION

- A. Project Name: Brookfield Volunteer Fire Company Roof Project
- B. Project Location: 92 Pocono Road, Brookfield CT 06804
- C. Owner: Town of Brookfield
- D. Architect: Maura Newell Juan, seventy2architects, 248 Main Street, Danbury, (203) 791-8175
- E. The Work consists of installing a new TPO roof and roof insulation above an existing metal roof, vertical wall TPO flashing up sidewalls, gutter and downspouts, ladder and hatch replacement, and incidental EPDM patching.

1.2 WORK RESTRICTIONS

- A. Contractor's Use of Premises: During construction, Contractor will have limited use of site and building: this is an active fire house and all required functional areas must be left clear for fire department use. Contractor shall coordinate staging area, work access and other considerations with fire department team.
- B. Nonsmoking Building: Smoking is not permitted within the building or within 25 feet of entrances, operable windows, or outdoor-air intakes.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

DOCUMENT 004113 - BID FORM - STIPULATED SUM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Brookfield Volunteer Fire Company Roof Project
- C. Project Location: 92 Pocono Road, Brookfield CT 06804
- D. Owner: Town of Brookfield
- E. Architect: Maura Newell Juan, seventy2architects, 248 Main Street, Danbury, (203) 791-8175

1.2 CERTIFICATIONS AND BASE BID

- A. Base Bid Contract: The undersigned Bidder, having carefully examined the Procurement and Contracting Requirements, Conditions of the Contract, Drawings, Specifications, and all subsequent Addenda, as prepared by seventy2architects, having visited the site, and being familiar with all conditions and requirements of the Work, hereby agrees to furnish all material, labor, equipment and services, including all scheduled allowances, necessary to complete the construction of the above-named project, according to the requirements of the Procurement and Contracting Documents, for the stipulated sum of:
 - 1. _____ Dollars (\$_____).
 - 2. The above amount may be modified by amounts indicated by the Bidder on the attached Document 004323 "Alternates Form."

1.3 BID GUARANTEE

- A. The undersigned Bidder agrees to execute a contract for this Work in the above amount and to furnish (60) sixty days after receipt of bids, and on failure to do so agrees to forfeit to Owner the attached cash, cashier's check, certified check, U.S. money order, or bid bond, as liquidated damages for such failure, in the following amount constituting five percent (5%) of the Base Bid amount above:
 - 1. _____ Dollars (\$_____).
- B. In the event Owner does not offer Notice of Award within the time limits stated above, Owner will return to the undersigned the cash, cashier's check, certified check, U.S. money order, or bid bond.

1.4 SUBCONTRACTORS AND SUPPLIERS

A. The following companies shall execute subcontracts for the portions of the Work indicated:

1. Roof Work: _____

1.5 TIME OF COMPLETION

A. The undersigned Bidder proposes and agrees hereby to commence the Work of the Contract Documents on a date specified in a written Notice to Proceed to be issued by Architect, and shall fully complete the Work within ninety (90) calendar days.

1.6 ACKNOWLEDGEMENT OF ADDENDA

A. The undersigned Bidder acknowledges receipt of and use of the following Addenda in the preparation of this Bid:

1. Addendum No. 1, dated _____.
2. Addendum No. 2, dated _____.
3. Addendum No. 3, dated _____.
4. Addendum No. 4, dated _____.

1.7 BID SUPPLEMENTS

A. The following supplements are a part of this Bid Form and are attached hereto.

1. Town of Brookfield Appendix B Hold Harmless Agreement
2. Town of Brookfield Appendix C Bidder General Information Sheet

1.8 CONTRACTOR'S LICENSE

A. The undersigned further states that it is a duly licensed contractor, for the type of work proposed, and that all fees, permits, etc., pursuant to submitting this proposal have been paid in full.

DOCUMENT CONTINUES

1.9 SUBMISSION OF BID

Respectfully submitted this ____ day of _____, 2020.

Submitted By: _____
(Name of bidding firm or corporation)

Authorized
Signature: _____
(Handwritten signature)

Signed By: _____
(Type or print name)

Title: _____
(Owner/Partner/President/Vice President)

Witness By: _____
(Handwritten signature)

Attest: _____
(Handwritten signature)

By: _____
(Type or print name)

Title: _____
(Corporate Secretary or Assistant Secretary)

Street Address: _____

City, State, Zip _____

Phone: _____

License No.: _____

Federal ID No.: _____

(Affix Corporate Seal Here)

DOCUMENT 004323 - ALTERNATES FORM

1.1 BID INFORMATION

- A. Bidder: _____.
- B. Project Name: Brookfield Volunteer Fire Company Roof Project
- C. Project Location: 92 Pocono Road, Brookfield CT 06804
- D. Owner: Town of Brookfield
- E. Architect: Maura Newell Juan, seventy2architects, 248 Main Street, Danbury, (203) 791-8175

1.2 BID FORM SUPPLEMENT

- A. This form is required to be attached to the Bid Form.

1.3 DESCRIPTION

- A. The undersigned Bidder proposes the amount below be added to the Base Bid if particular alternates are accepted by Owner. Amounts listed for each alternate include costs of related coordination, modification, or adjustment.
- B. The Bidder shall be responsible for determining from the Contract Documents the affects of each alternate on the Contract Time and the Contract Sum.
- C. Owner reserves the right to accept or reject any alternate, in any order, and to award or amend the Contract accordingly within (60) sixty days of the Notice of Award unless otherwise indicated in the Contract Documents.

1.4 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Remove batt Insulation below existing roof (at purlins of truck bay area)

1. ADD ___ DEDUCT ___ NO CHANGE ___ NOT APPLICABLE ___.
2. _____ Dollars (\$_____).
3. ADD ___ DEDUCT ___ calendar days to adjust the Contract Time for this alternate.

1.5 SUBMISSION OF BID SUPPLEMENT

Respectfully submitted this ___ day of _____, 2020.

Submitted By: _____
(Name of bidding firm or corporation)

Authorized
Signature: _____
(Handwritten signature)

Signed By: _____
(Type or print name)

Title: _____
(Owner/Partner/President/Vice President)

END OF DOCUMENT 004323

SECTION 075423 – THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOFING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Induction welded TPO membrane roofing system.
- B. Roof insulation.

1.2 REFERENCES

- A. Roofing Terminology: Refer to the following publications for definitions of roofing work related terms in this Section:
 - 1. ASTM D 1079 “Standard Terminology Relating to Roofing and Waterproofing.”
 - 2. Glossary of NRCA’s “The NRCA Roofing and Waterproofing Manual.”
 - 3. Roof Consultants Institute “Glossary of Building Envelope Terms.”
- B. Sheet Metal Terminology and Techniques: SMACNA “Architectural Sheet Metal Manual.”

1.3 DESIGN CRITERIA

- A. General: Installed roofing membrane system shall remain watertight; and resist specified wind uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Roofing materials shall be compatible with one another under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.
- C. Installer shall comply with current code requirements based on authority having jurisdiction.
- D. Wind Uplift Performance: Roofing system shall be identical to systems that have been successfully tested by a qualified testing and inspecting agency to resist wind uplift pressure calculated in accordance with ASCE 7.
- E. Fire-Test-Response Characteristics: Provide roofing materials with the fire-test-response characteristics indicated as determined by testing identical products per test method below by UL, FMG, or another testing and inspecting agency acceptable to authorities having jurisdiction. Materials shall be identified with appropriate markings of applicable testing and inspecting agency.
 - 1. Exterior Fire-Test Exposure: Class A; ASTM E 108.

1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets for each product to be provided.
- B. Detail Drawings: Provide roofing system plans, elevations, sections, details, and details of attachment to other Work, including:
 - 1. Base flashings and membrane terminations.
 - 2. Tapered insulation, including slopes.
 - 3. Crickets, saddles, and tapered edge strips, including slopes.
 - 4. Insulation fastening and adhesive patterns.
- C. Verification Samples: Provide for each product specified.
- D. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- E. Maintenance Data: Refer to manufacturer's latest published documents.
- F. Guarantees: Provide minimum 20 year system warranty.
- G. Prior to beginning the work of this section, roofing sub-contractor shall provide a copy of the final System Assembly Letter issued by the manufacturer indicating that the products and system to be installed shall be eligible to receive the specified manufacturer's guarantee when installed by a manufacturer's certified contractor in accordance with manufacturer application requirements, inspected and approved by a manufacturer Technical Representative.
- H. Prior to roofing system installation, roofing sub-contractor shall provide a copy of the warranty document issued by roof system manufacturer indicating that the project has been reviewed for eligibility to receive the specified guarantee and registered.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive the specified manufacturer's guarantee.
- B. Manufacturer Qualifications: Qualified manufacturer that has UL listing for roofing system identical to that used for this Project.
- C. Testing Agency Qualifications: An independent testing agency with the experience and capability to conduct the testing indicated, as documented according to ASTM E 329.
- D. Test Reports:
 - 1. Roof deck fastener pullout test.

- E. Source Limitations: Obtain all components from the single source roofing manufacturer guaranteeing the roofing system. All products used in the system shall be labeled by the single source roofing manufacturer issuing the guarantee.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when current and forecasted weather conditions permit roofing system to be installed in accordance with manufacturer's written instructions and guarantee requirements.

1.8 GUARANTEE

- A. Provide manufacturer's system guarantee equal to Johns Manville's Peak Advantage No Dollar Limit Roofing System Guarantee.
 - 1. Single-Source special guarantee includes roofing membrane, base flashings, roofing membrane accessories, roof insulation, fasteners, cover board, substrate board, vapor retarder, walkway products, manufacturer's expansion joints, manufacturer's edge metal products, and other single-source components of roofing system marketed by the manufacturer.
 - 2. Guarantee Period: 20 years from date of Substantial Completion.
 - 3. Contractor is required to list "72 Architects" as the Specifier/Consultant of record in the appropriate fields ("Specifier Account") when applying for the manufacturer's warranty.
- B. Installer's Guarantee: Submit roofing Installer's guarantee, including all components of roofing system for the following guarantee period:
 - 1. Guarantee Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 THERMOPLASTIC POLYOLEFIN ROOFING MEMBRANE - TPO

- A. Fabric-Reinforced Thermoplastic Polyolefin Sheet: ASTM D 6878, uniform, flexible sheet formed from a thermoplastic polyolefin, internally fabric or scrim reinforced. Basis of Design: JM TPO.
 - 1. Membrane Thickness: 60 mils (1.52 mm), nominal
 - 2. Exposed Face Color: White

2.2 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
 - 1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
- B. Sheet Flashing (Self-Adhered): 60 mil (1.5 mm) thick, manufacturer's internally reinforced or scrim reinforced with weldable selvage edges on each side of roll, one encapsulated edge and self-adhering capabilities in a wide installation temperature range. Basis of Design: JM TPO SA – Flashing Membrane
 - 1. Serviceable Installation Substrate Temperature: 20°F (-7°C) and rising.
- C. Self-Adhered Primer: One-part penetrating primer solution to enhance the adhesion of self-adhering membranes. Basis of Design: JM SA Primer Low VOC
- D. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, with anchors. Basis of Design: JM Termination Systems
- E. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening membrane to substrate, and acceptable to membrane roofing system manufacturer. Basis of Design: JM RetroDriller Fastener
- F. Induction Welding Plate: A round specially coated Galvalume® plate with a recessed center and raised flat bonding surface specifically designed for induction welding application. Basis of Design: JM TPO RhinoPlates
- G. Miscellaneous Accessories: Provide pourable sealers, primers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, cover strips, and other accessories required for full installation. Basis of Design: JM TPO Pourable Sealer A & B, JM TPO Pipe Boots, JM TPO Universal Corners, JM TPO Edge Sealant, JM TPO T-Joint Patch, JM TPO Membrane Cleaner, JM TPO Membrane Primer, JM TPO Membrane Primer (Low VOC), JM TPO Sealing Mastic, JM TPO Cover Tape, JM TPO Detail Membrane, JM

TPO Peel & Stick 10" RPS, JM TPO Peel & Stick 6" RTS, JM TPO-Coated Metal, JM TPO Curb Flashing and JM Single Ply Caulk

2.3 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads sourced from membrane roofing system manufacturer. Basis of Design: JM TPO Walkpad JM TPO Safety Walkpad

2.4 ROOF INSULATION – FLUTE FILLER

- A. General: Preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2, Product: ENRGY 3
 - 1. Provide beveled metal roof flute filler insulation package with thickness to fill flutes the height of the standing seam.
 - 2. Verify dimensions of existing metal roof on site before preparing submittals for review.

2.5 ROOF INSULATION

- A. General: Preformed roof insulation boards that comply with requirements and referenced standards, selected from manufacturer's standard sizes and of thicknesses indicated.
- B. Polyisocyanurate Board Insulation: ASTM C 1289, Type II, Class 1, Grade 2 (20 psi), Basis of Design: ENRGY 3
 - 1. Provide insulation package with minimum R Value: R30, 5 inch thickness.
 - 2. Provide insulation package with minimum thickness: 2.6 inch.
 - 3. Provide insulation package in multiple layers.
 - 4. Minimum Long-Term Thermal Resistance (LTTR): 5.7 per inch.
 - a. Determined in accordance with CAN/ULC S770 at 75°F (24°C)

2.6 TAPERED INSULATION

- A. Tapered Insulation: ASTM C 1289, Type II, Class 1, Grade 2 (20 psi), provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches (1:48), unless otherwise indicated. Basis of Design: Tapered ENRGY 3

2.7 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatible with membrane roofing.
- B. Provide factory preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated. Basis of Design: Diamondback Pre-Cut Cricket Diamondback Pre-Cut Miter Tapered Fesco Edge Strip
- C. Fasteners: Factory-coated steel fasteners and metal or plastic plates meeting corrosion-resistance provisions in FMG 4470, designed for fastening roof insulation to substrate, and furnished by roofing system manufacturer. Basis of Design: UltraFast Fasteners and Plates
- D. Urethane Adhesive: Manufacturer's two component polyurethane adhesive formulated to adhere insulation to substrate. Basis of Design: JM Two-Part Urethane Insulation Adhesive (UIA)
- E. Wood Nailer Strips: Comply with requirements in Division 06 Section "Miscellaneous Rough Carpentry."

2.8 EDGE METAL COMPONENTS

- A. Metal Edge System: Manufacturer's factory fabricated metal edge system used to terminate the roof at the perimeter of the structure. Provide product from single-source roofing system supplier that is included in the No Dollar Limit guarantee. Basis of Design: Presto-Weld Drip Edge JM TPO-Coated Metal

2.9 ROOF ACCESSORIES

- A. Roof Hatch:
 - 1. Basis-of-Design Product: VersaMount S50TB Roof Hatch by Bilco or equal.
 - 2. Fabricate units to withstand 40-lbf/sq. ft. external and 20-lbf/sq. ft. internal load.
 - 3. Provide units with cant strips and base profile coordinated with roof insulation thickness and roof deck slope. Equip units for sloping decks with water diverter.
 - 4. Finish: mill finish aluminum.
 - 5. Roof tie-in: EPDM Patch and Flashing to existing EPDM roof.
- B. Gutters and Downspouts:
 - 1. Gutters: Manufactured in uniform section lengths, with matching corner units, ends, outlet tubes, and other accessories. Furnish expansion joints at 30'-0" oc max, and expansion-joint covers and end caps by gutter manufacturer.
 - a. Basis of Design: System by RDCAA.com or approved equal.
 - b. Gutter: 7 inch Smooth Box Gutter, 0.063 inch aluminum
 - c. Gutter Supports: Smooth Box Gutter Support with finish matching the gutters.

- d. Downspouts: Smooth Box Downspout with Offset and Elbows are required for continuous function and look.
 - e. Color: Slate Blue to match garage doors. Architect to select from Manufacturer's standard colors.
- C. Roof to Roof Access Ladder:
- 1. Steel Walk-Through Ladder with Handrails, 6 steps, Fixed, 5 feet to top step, WLFS0206 by Global Industrial or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with the requirements affecting performance of roofing system.
 - 1. General:
 - a. Verify that roof openings and penetrations are in place and set and braced.
 - b. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 - 2. Ensure general rigidity and proper slope for drainage.
 - 3. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units more than 1/16 inch (1.6 mm) out of plane relative to adjoining deck.

3.2 PREPARATION

- A. Clean and remove from substrate sharp projections, dust, debris, moisture, and other substances detrimental to roofing installation in accordance with roofing system manufacturer's written instructions.
- B. Prevent materials from entering and clogging rain water leaders and conductors and from spilling or migrating onto surfaces of other construction.
- C. If applicable, prime surface of deck with asphalt primer at a rate recommended by roofing manufacturer and allow primer to dry.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 RE-ROOF PREPARATION

- A. Raise equipment supported by curbs to conform with the following:

1. Modify curbs as required to provide a minimum 8" base flashing height measured from the surface of the new membrane to the top of the flashing membrane.
2. Secure of flashing and install new metal counterflashing prior to re-installation of unit.
3. Perimeter nailers shall be elevated to match elevation of new roof insulation.

B. Remove all debris from roof surface.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.4 FLUTE FILLER INSULATION INSTALLATION

A. Coordinate installation of roof system components so insulation is not exposed to precipitation or left exposed at the end of the workday.

B. Comply with roofing system manufacturer's written instructions for installing roof insulation.

C. Loose lay Polyisocyanurate flute filler insulation between the metal roof standing seams. Tightly butt insulation boards together.

D. Proceed with installation only after unsatisfactory conditions have been corrected.

3.5 INSULATION INSTALLATION

A. Coordinate installation of roof system components so insulation and cover board are not exposed to precipitation or left exposed at the end of the workday.

B. Comply with roofing system manufacturer's written instructions for installation of roof insulation and cover board.

C. Install insulation boards with long joints in a continuous straight line. Joints should be staggered between rows, abutting edges and ends per manufacturer's written instructions. Fill gaps exceeding 1/4 inch (6 mm) with like material.

D. Install 2 or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.

E. Install tapered edge strips at perimeter edges of roof that do not terminate at vertical surfaces.

F. Loose Laid Insulation with Top Insulation Layer Mechanically Fastened: Loose lay insulation with staggered joints and secure top layer of insulation to deck using mechanical fasteners designed and sized for fastening specified board-type to deck type.

1. Fasten top layer to resist uplift pressure at corners, perimeter, and field of roof.

3.6 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane in accordance with roofing system manufacturer's written instructions, applicable recommendations of the roofing manufacturer and requirements in this Section.
- B. Cooperate with testing and inspecting agencies engaged or required to perform services for installing roofing system.
- C. Coordinate installing roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is imminent.
 - 1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation.
 - 2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system.
 - 3. Remove and discard temporary seals before beginning work on adjoining roofing.
- D. Install roofing so there are no transverse seams: roll from top of roof to gutter.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.7 INDUCTION WELDED ROOFING MEMBRANE INSTALLATION

- A. Install roofing membrane over area to receive roofing according to roofing system manufacturer's written instructions. Unroll roofing membrane and allow to relax before installing.
- B. Accurately align roofing membranes and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- C. "Picture Frame" installation method is not permitted.
- D. Apply roofing membrane in line with slope (no transverse seams in direction of water flow).
- E. Seams: Clean seam areas, overlap roofing membrane, and hot-air weld side and end laps of roofing membrane according to manufacturer's written instructions to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roofing membrane.
 - 2. Verify field strength of seams a minimum of twice daily and repair seam sample areas.
 - a. Remove and repair any unsatisfactory sections before proceeding with Work.
 - 3. Repair tears, voids, and lapped seams in roofing membrane that do not meet requirements.

F. Induction Welding Installation:

1. Perform calibration and set-up as detailed by the Induction Welder Owner's Manual
2. Center the Induction Welder over the first plate in pattern and activate the weld.
 - a. Induction Welder shall be centered over the plate to create a 100% bond.
 - b. If an error occurs during activation, refer to the induction welder owner's manual for corrective action.
3. Prior to every use, clean face of Heat Sink Magnet.
4. Place Heat Sink Magnet over the welded plate.
 - a. Keep Heat Sink Magnet in place at least 45 seconds while the assembly cools.
5. Repeat process for each plate.

G. Proceed with installation only after unsatisfactory conditions have been corrected.

3.8 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates per membrane roofing system manufacturer's written instructions.
- B. Self-Adhere membrane to smooth approved substrates, when substrate temperatures are 40°F (4.5°C) and rising.
 1. The use of SA Primer or SA LVOC Primer is required for flashing applications on curbs and parapet walls for temperatures between 40°F (4.5°C) and 20°F (-7°C).
 2. The use of SA Primer or SA LVOC Primer is required for flashing applications over approved substrates with a porous or rough surface, including: Dens Deck Prime, Dens Deck, DEXcell, concrete and smooth faces CMU.
- C. Flash penetrations and field-formed inside and outside corners per manufacturer's installation instructions.
- D. Clean seam areas and overlap and firmly roll sheet flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.

3.9 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld and adhere walkway products to substrate according to roofing system manufacturer's written instructions.

- B. Roof-Paver Walkways: Install walkway roof pavers per manufacturer's written instructions in locations indicated, to form walkways. Leave 3 inches (75 mm) of space between adjacent roof pavers.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.10 ROOF HATCH INSTALLATION

- A. Patch and Flash into EPDM roof to ensure watertight assembly.

3.11 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified independent testing and inspecting agency to perform roof tests and inspections and to prepare test reports.
- B. Final Roof Inspection: Arrange for roofing system manufacturer's Registered Roof Observer (RRO) to inspect roofing installation on completion and submit report to Architect.
 - 1. Notify Architect or Owner 48 hours in advance of date and time of inspection.
- C. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.
- D. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.

3.12 PROTECTION AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 075423