

ROOFINGPROJECTS-COM

ROOF REPLACEMENT SPECIFICATION

ACME #806 – 100 Suburban Drive, Newark-DE - Roof Sections: A, B, C & D

SECTION 075419 - POLYVINYL CHLORIDE (PVC) ROOFING - MECHANICALLY ATTACHED

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Existing roof assembly remains in place and is prepared as required by roofing manufacturer to receive a 1 inch cover board as specified herein and a mechanically attached 60 mil Sikaplan Polyvinyl Chloride (PVC) roofing membrane.
2. Contractor is required to contact Lisa Andrukonis andrukonis.lisa@us.sika.com of Sika Sarnafil SSI for material quotes. No other contact at Sika Sarnafil can be used to obtain material quotes.
3. The existing roof system is as follows: Gravel Surfaced BUR Membrane followed by 1 inch wood fiber board followed by 1 inch Isocyanurate Insulation followed by a Steel Deck.
4. Tear off designated wet/damaged insulation roof areas identified during the course of the work. Fill in removed insulation areas to match the height of the existing adjacent roof area. A unit price line item on the bid form will address wet or damaged insulation removal and infill. Wet area removals will be treated as a change order based on the cost per square foot unit price provided on the bid form by the contractor. All removal areas are to be documented by the contractor through markup drawing and photos confirming the conditions. Property management and Roofingprojects.com to be notified and made aware of the conditions as they are encountered.
5. Remove gravel surfacing by power broom or industrial vacuum. All gravel surfacing removals to be conducted during regular business hours and in compliance with any local work hour or noise ordinances.
6. Sweep the roof surface of all debris and dirt. Prepare existing roof surface: cut, set down and/or remove any blisters or ridges, walkway pads, etc. that would prevent a level and uniform application of the new roof system. Cut existing membrane every 10 feet on center.
7. In all areas, mechanically attach a layer of 1 inch Sarnatherm Isocyanurate insulation board. Install 60 mil thick Polyvinyl Chloride roof membrane (Sikaplan Fastened 60) (mechanically attached). The building is not FM insured, however, as a design standard, attach membrane to meet FM-1-90 guidelines including requirements for 6" maximum fastener spacing in the membrane seam areas, half sheets and increased fastener rates in the perimeter and corner zones. Confirm the maximum allowable field sheet width to meet this design standard with Sarnafil. Note that the membrane sheets must be installed perpendicular to the steel deck flutes and that "picture framing" half sheets in the perimeter and corner zones is not an acceptable method to achieve the increased fastener rates required in these zones on mechanically attached installation.
8. Install Sarnafil G459 Grease resistant membrane around all sides of grease machines and kitchen exhaust fan units with the tan side up, fully welded at all sides as a sacrificial layer over base membrane (3'-0" wide in all directions).
9. Remove all existing flashings and adhere 60 mil thick Polyvinyl Chloride (PVC) Flashing membrane.
10. Install specified sheet metal flashings and accessories – include all clips, sealants, fasteners, and connections to make watertight. Fascia edge metal to be "Anchor-Tite Fascia" by Sarnafil.
11. Coordinate all necessary disconnects and reconnection of roof top equipment required to install new roof system with Owner provided electrician and HVAC contractor.
12. The perimeter edge conditions are to be addressed as noted on the roof plan drawing and as detailed on the detail drawings. Curbs and any parapet walls are to be completely flashed with new 60 mil PVC membrane.
13. Install tapered insulation crickets to the up-slope side of all Roof Top Units as specified and as may be noted on the roof plan drawing.

14. Remove all existing drain strainers and clamping collars and replace with new cast iron. Roof drain body and piping to remain. A line item on the bid form will address drain bowl replacement and drain insert installation if required.
15. Replace existing drip edge, gutters and downspouts associated with the roof replacement referenced above. Contractor's choice of 24 g. steel or .040 aluminum, Kynar coated metal. Contractor to include any blocking required to bring the drip-edge substrate up to match the height of the new roof system, including tapered edge strip to promote drainage into the gutter and to prevent ponding water along roof edge. Size and profile of the gutter and downspout system including downspout location and discharge points to match existing conditions – or as noted on the roof plan drawing.
16. Remove abandoned items as noted on the roof plan drawing. Close opening in deck, infill opening w/ isocyanurate insulation to match existing roof thickness and roof over area. All obsolete satellite dishes are to be removed during the course of work (include in the bid price). Coordinate with on site contact to confirm that the dish is obsolete prior to removal.
17. Remove and replace the existing roof hatch (size to match existing) Type S Roof Hatch by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Web: www.BILCO.com. Where alarm system is existing, include re-connection of alarm system components on new hatch.
18. Install new hatch rail System at the roof hatch included in the base bid price. "Bilco" 2.0 roof hatch safety railing system – sized to coordinate with hatch size.
19. Install manufacturers walk pads at roof access points and at all sides of serviceable RTU Units and all sides of air cooled condensers. A lineal foot price is available on the bid form for additional walk pads to be determined later.
20. Re-use of existing pre-manufactured pipe supports is allowed – all wood blocking must be replaced with new pre-manufactured pipe supports and secured to pipe with clamp or strapping. All supports must have slip sheets installed beneath them.
21. Wood equipment support sleepers or dunnage: Replace with same size pressure treated lumber and fully wrap with membrane flashing screwed in place.
22. **Contractor to include in their lump sum pricing a Contingency Allowance of \$5,000.** All contingency allowance expenditures must be authorized in writing by Owner's representative and Roofingprojects.com prior to being performed. Payment will not be made on any unauthorized contingency expenditures. Any allowance value not approved during the course of the project will be credited back to the Owner.
23. Provide a manufacturer's 20 Year Labor and Material, NO Dollar Limit (NDL) watertightness warranty a contractor's 5 year workmanship warranty. Contractor to provide at Pre-Construction meeting the Warranty Reference Number assigned when the contractor registers the project with the Material Manufacturer providing the Long-term Warranty.
24. All required municipal permits, project fees and taxes are to be included in the contractors base bid price.
25. All contractor payment applications are required to be submitted to the owner for payment processing. The awarded contractor will be given specific instructions regarding payment applications.
26. Unless otherwise specified, the roof and flashing membrane color is to be Energy Smart White.
27. A Twenty (20) year Manufacturer's Systems Warranty shall be provided to the Owner upon completion as described in Section 1.0 in this bid document.
28. A Five (5) year Installer's workmanship and material warranty shall be provided to the Owner upon completion. Note: A leak response provision is included as part of the installer's obligation.

B. Related Work:

1. Substrate Preparation
2. Roof Drains
3. Wood Blocking
4. Insulation & Cover board
5. Roof Membrane
6. Fasteners
7. Adhesives
8. Membrane Flashing
9. Walkways
10. Metal Flashing
11. Sealants

1.2 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and is member of manufacturer's experienced extended warranty group as listed.
 - 1. Sika Sarnafil: Alliance Contractor or Elite Contractor.
- B. NOTICE OF AWARD / APPROVED NOTICE OF AWARD
The roofing applicator shall at the request of the Owner or Roofing Consultant, submit a copy of their submitted Notice of Award (NOA) and the Manufacturers Technical Departments Approved Notice of Award (ANOA).
- C. Field Reports: Manufacturer's technical representative shall document site conditions in field reports and provided to the Roofing Contractor. These documents shall be provided to the Owner by the Roofing Contractor upon request. Roofing Consultants may request copies of the documents from the Owner directly.
- D. There shall be no deviation made from the Project Specification or approved shop drawings without prior written approval by the Owner, the Owner's Representative and the Roofing Manufacturer.
- E. Applicable code/insurance requirements shall be identified by the Owner or Owner's representative.
- F. Manufacturer's warranty shall be 'No Dollar Limit' for the repair or replacement of defective materials and labor and shall not contain any exclusion's for ponding water.

1.3 SUBMITTALS

- A. Copies of Roofing Specification.
- B. Copy of submitted Notice of Award (NOA) and Approved Notice of Award (ANOA).
- C. Colors and product data sheet of accessories not included under the roofing manufacturers warranty not limited to but including: Pipe supports, Sheet Metal finishes, Grease retention accessories, etc.
- D. Sample copy of Manufacturers roofing system warranty
- E. Sample copy of Applicators warranty including roofing system, sheet metal and other installations.

1.4 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. All products delivered to the jobsite shall be in original unopened containers or wrappings bearing all seals and approvals.
- B. Handle all materials to prevent damage. Place all materials on pallets and fully protect from moisture.
- C. Membrane rolls shall be stored lying down on pallets and fully protected from the weather with clean canvas tarpaulins. Unvented polyethylene tarpaulins are not accepted due to the accumulation of moisture of moisture beneath the tarpaulin in certain weather conditions that may affect the ease of membrane weldability.
- D. Adhesives shall be stored at temperatures between 40 and 80 degrees F.
- E. All flammable materials shall be stored in a cool, dry area away from sparks and open flames. Follow precautions outlined on containers or supplied by material manufacturer/supplier.
- F. Any materials the Owner's representative or PVC Membrane Manufacturer determine to be damaged shall be removed from jobsite and replaced at no cost to Owner.
- G. Material Safety Data Sheets (MSDS) shall be available at jobsite at all times.

1.5 JOB CONDITIONS

- A. Materials may be installed under certain adverse weather conditions but only after consultation with Membrane Manufacturer, as the installation time and system integrity may be affected.
- B. Only as much as the new roofing that can be made weathertight during the same work period, including all flashing and detail work, shall be installed. All seams shall be heat welded before leaving the jobsite that same work period.

- C. All work shall be scheduled and executed without exposing the interior building areas to the effects of inclement weather. The existing building and its contents shall be protected against all risk.
- D. Surfaces to receive new insulation, cover boards, membrane and flashing shall be dry. Should surface moisture occur, the Applicator shall provide the necessary equipment to dry the surface prior to application of the roof system.
- E. New and temporary construction including equipment and accessories, shall be secured in such manner as to preclude wind blow-off and subsequent damage or injury.
- F. Water-stops shall be installed at the end of each work period and shall be removed before proceeding with next work period. Contaminated membrane shall be removed and replaced at no cost to Owner.
- G. Certain membranes are incompatible with asphalt, coal tar, heavy oils, roof cements, creosote and some preservative materials. Such materials will not come in contact with the roof and flashing membrane. The applicator shall consult with the roofing manufacturer to ensure compatibility and follow pre-cautions and recommendations.
- H. Arrange work sequence to avoid use of newly applied roofing as a walking surface or for equipment movement and storage. Where access is absolutely required, the applicator shall provide all necessary roof protection and barriers to segregate the work area and to prevent damage to adjacent areas. A substantial layer consisting of plywood over a 10 oz polyester felt or plywood over insulation board shall be provided for all new and existing roof areas that receive rooftop traffic during construction.
- I. Prior to (and during) roofing all dirt, debris and dust shall be removed from surfaces by vacuuming, sweeping, blowing with compressed air or similar methods to keep surfaces clean.
- J. All Federal, State and Local Health and Safety regulations (Including OSHA) shall be followed.
- K. All new roofing waste materials (i.e. scrap roof membrane, release paper, empty cans, etc) shall be immediately removed for the site and properly transported to a legal dumping area authorized to receive and contain such material.
- L. Applicator shall take precautions that storage and application of materials and equipment does not overload the roof deck or building structure.
- M. Flammable adhesives and primers shall not be stored or used in the vicinity of open flames, sparks and excessive heat.
- N. Rooftop contamination that is anticipated or occurring shall be reported to the Roofing Manufacturer to recommend corrective steps to be taken.
- O. The Applicator shall verify that all roof drain lines are functioning correctly (No clogs or blockage) before starting work. Applicator shall report any such conditions to the Owner's representative for corrective action prior to the installation of the roofing system.
- P. Applicator shall immediately stop work if any unusual or concealed condition is discovered and shall notify Owner or Owner's Representative of condition. A record in writing shall accompany this report.
- Q. Site cleanup, including both interior and exterior building areas that have been affected by construction, shall be completed to the Owner's satisfaction.
- R. Landscaped areas damaged by construction activities shall be repaired at no cost to Owner.
- S. The applicator shall conduct fastener pull out test in accordance with the latest version of SPRI/ANSI Fastener Pullout Standard to verify condition of the deck/substrate and confirm expected pullout values.
- T. Precautions shall be taken when using adhesives at or near rooftop vents or air intakes. Odors could enter the building. Coordinate installation and operation of vents and intakes in such a manner as to avoid the intake of odors while ventilating the building. Keep lids on unused cans at all times.
- U. Protective wear shall be worn when using solvents or adhesives or as required by job conditions.

- V. Roof membranes are slippery when wet or covered with snow, frost, or ice. Working on surfaces under these conditions can be hazardous. Appropriate safety measures must be implemented prior to working on roof surfaces in these conditions. Always follow OSHA and other protection standards.

1.6 WARRANTY

- A. System Warranty: Manufacturer's standard no dollar limit, single source responsibility, total system guarantee in which manufacturer agrees to repair or replace components of roofing system that fail within 20 years from date of Substantial Completion, to include the cost of material and labor.
 - 1. Special warranty includes roofing, base flashings, roof insulation, fasteners, roofing accessories, and other components of roofing system provided by and warranted by the Roofing Manufacturer.
 - 2. Manufacturer to provide wind speed warranty coverage where required based on NOAA data.
 - 3. Special Manufacturer's wind speed warranty is required for this project. Warranty shall include wind speeds up to [60] [74] [99] miles per hour (mph).
- B. Roofing Installer's Warranty: Installer to sign and submit warranty form at end of this Section, covering all work related to the roofing system for 5 years from date of Substantial Completion. Installer's Warranty shall include labor, components, and material of the complete roof system.
- C. Maintenance: Along with the issuance of the warranty, a set of instructions shall be included detailing preventative maintenance and noting a list of harmful substances which may damage the thermoplastic roofing membrane.

PART 2 - PRODUCTS

2.1 NATIONAL VENDOR

- A. National Vendor material listed in this Article shall be received and installed by the Roofing Contractor. Roofing Contractor shall be responsible for repair of damages and replacement of missing material upon his signed receipt of material. Related materials not listed in this Article shall be furnished by the Roofing Contractor and provided with a manufacturer warranty.
- B. The following is a list of the material provided by Owner's National Vendor, Sika Sarnafil. Materials to be purchased as noted on the project Responsibility Matrix and confirmed with the Owner's Representative. Contact: Sika Sarnafil: Lisa Andrukonis andrukonis.lisa@us.sika.com
 - 1. PVC Roofing Membrane:
 - a. Standard: "Sikaplan Fastened 60": 60 mil PVC, non-hail with 60, 74 and 99 mph wind speed coverage.
 - b. Chemical Resistive: "G-459": 60 mil PVC, with 74 to 99 mph wind speed coverage.
 - 2. PVC Flashing Membrane: 60 mil PVC:
 - a. Standard: "Sikaplan 60."
 - b. Self-Adhered: "G-410 SA."
 - c. Chemical Resistive: "G-459."
 - 3. Sika-Sarnafil Cover Board:
 - a. "Sarnatherm" Isocyanurate Insulation 1 inch thickness.
 - 4. Flexible Walkways: "Sarnatread V."
 - 5. Coated Metal Flashing: "Sarnaclad."
 - 6. Attachment Hardware:
 - a. Attachment Plates: "Sikaplan Discs" securement plates or Rhinobond Disc.
 - b. Metal Deck: "Sikaplan #15 Fasteners."
 - 7. Premanufactured Fascia:
 - a. "Anchor-Tite Fascia"
 - 8. Metal Gutter and Leader Roof Drainage Systems:
 - a. Gutter system: shall be shop fabricated 24 G Kynar coated steel or .040 Kynar coated Aluminum (Contractor's choice). Expansion Joints shall be spaced a maximum of 50 feet on center and shall be comprised of two end caps with a slip splice over the joint. The gutter sections are to be 20 feet long, minimizing the number of joints between ends and expansion joints. Hidden top hanger straps

are to be installed at 24 inches on center. All new gutters and leaders are to match the existing size, profile and routing as the existing system.

- b. Provide 5-year Contractor's Watertightness and Workmanship Warranty on the gutter and leader system
9. Material by other Manufacturers MUST BE purchased through Sika Sarnafil.
- C. Source Limitations: Obtain all components and accessories for Roof System from National Vendor unless Project requires a solution not described in this Specification. Use of any additional material requires approval from Sika Sarnafil and Owner's Representative.

2.2 PERFORMANCE REQUIREMENTS

- A. Accelerated Weathering: Roofing system shall withstand 5000 hours of exposure when tested per ASTM G 152, ASTM G 154, or ASTM G 155.
- B. Impact Resistance: Roofing system shall resist impact damage when tested per ASTM D 3746 or ASTM D 4434 or ASTM D 6878.
- C. Roofing Assembly Wind Uplift: Tested by a qualified testing agency to design indicated on drawings for corner, perimeter, and field of roof following ANSI 4474 to resist uplift pressures calculated per the American Society of Civil Engineers (ASCE) 7-10 and after multiplying the results with a safety factor (Refer to the scope of work).
- D. Exterior Fire-Test Exposure: ASTM E 108 or UL 790, Class A; for application and roof slopes indicated; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

2.3 PVC MEMBRANES

- A. Reinforced PVC Sheet: ASTM D4434, internally fabric- or scrim-reinforced, uniform, flexible sheet.
 1. Membrane thickness as described in Part 2.1.B of this Specification.
 2. Exposed Face Color: White meeting Cool Roof Standards.

2.4 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing.
 1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: Manufacturer's standard unreinforced PVC sheet flashing, 60 mils thick, nominal, of same color as PVC sheet unless otherwise specified by Owner or Owner's representative.
- C. Bonding Adhesive: Manufacturer's standard latex or solvent based in compliance with local VOC regulations and project requirements.
- D. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roofing to substrate, and acceptable to roofing system manufacturer.
- E. Miscellaneous Accessories: Provide metal termination bars, metal battens, coated metal flashing, pourable sealers, preformed cone, and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.
- F. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads, approximately 3/16 inch thick, and acceptable to membrane roofing system manufacturer.

2.5 ROOF INSULATION BOARD

- A. Tapered Insulation: Provide factory-tapered insulation boards fabricated to slope of 1/4 inch per 12 inches unless otherwise indicated.

- B. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain. Fabricate to slopes indicated.

2.6 INSULATION ACCESSORIES

- A. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Global 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer. Includes Rhinobond plates with PVC coating for induction welded installations.
- B. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer.

2.7 RE-ROOFING SYSTEMS – OVERLAYS

- A. All re-roofing system details and project scope shall be approved per project by the National Vendor and the Owner's Representative.
- B. Roofing Overlays: Described by existing membrane type. Material thickness and wind speed coverage noted in Part 2.1.B of this Specification. Detailing of overlay systems available from National Vendor.
 - 1. Existing Gravel Surface Built-Up Roofing: "Sikaplan Fastened 60": 60 mil PVC, non-hail with 74 to 99 mph wind speed coverage.
 - a. Cover Board :
 - 1) "Sarnatherm" Isocyanurate Insulation 1 inch thickness.

PART 3 - EXECUTION

3.1 EXISTING ROOFING PREPARATION

- A. Replace loose, deteriorated, and damaged materials prior to installation of the new roofing system.
- B. Projects with existing insulation may require a thermal scan to identify hidden or trapped moisture within the existing installation. Material with moisture damage shall be removed and replaced with rigid insulation to match the type and level of the surrounding board insulation.
- C. Hidden structural deficiencies, contaminates and non-compatible material shall be reported to Owner and remediated prior to continuing roofing installation.
- D. If the existing roofing system must be removed, dispose of all roofing membrane, flashings, and related accessories in accordance with Health and Safety regulations of the Authority having Jurisdiction.

3.2 ROOFING INSTALLATION, GENERAL

- A. Install roofing system per roofing system manufacturer's written instructions.
- B. Clean substrate of dust, debris, and other substances detrimental to roofing system installation according to National Vendor's most current requirements. Remove all sharp projections.
- C. Prevent materials from entering and clogging roof drains or flashing and from spilling or migrating onto surfaces of other construction. Remove roof drain plugs when no work is taking place or when rain is in forecast.
- D. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- E. Coordinate installation so insulation and protection boards are not exposed to precipitation or other sources of moisture during the project.

3.3 NATIONAL VENDOR SITE VISITS

- A. National Vendor shall provide a minimum of two (2) site visits during the roofing system installation (additional may be required based on the complexity). One visit shall occur early in the installation process and another to

close out the project and verify compliance with National Vendor Warranty requirements. Owner or Owner's Roofing Consultant may require additional site visits based on project conditions.

3.4 INSULATION BOARD

- A. Coordinate installing roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Install tapered insulation under area of roofing to conform to slopes indicated.
- C. Install crickets on the up-slope side at all curbs that are 24 inches wide or greater.
- D. Mechanically Fastened Insulation: Install each layer of insulation and secure to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.
 - 1. Inseam Mechanically Fastened Membrane: Use (6) fasteners 4 foot by 8 foot board throughout the entire field of roof.
 - 2. Rhinobond Mechanically Fastened: Use the fastener quantity noted based on project wind speed coverage requirements. All fastener quantities are per 4 foot by 8 foot board:
 - a. 60 to 74 mph wind speed coverage:
 - 1) Field of Roof: (6) fasteners.
 - 2) Perimeter: (10) fasteners.
 - 3) Corner: (16) fasteners.
 - b. 75 to 84 mph wind speed coverage:
 - 1) Field of Roof: (8) fasteners.
 - 2) Perimeter: (14) fasteners.
 - 3) Corner: (20) fasteners.
 - c. 85 to 99 mph wind speed coverage:
 - 1) Field of Roof: (10) fasteners.
 - 2) Perimeter: (16) fasteners.
 - 3) Corner: (24) fasteners.
 - d. 100 to 120 mph wind speed coverage:
 - 1) Field of Roof: (12) fasteners.
 - 2) Perimeter: (21) fasteners.
 - 3) Corner: (30) fasteners.

3.5 COVER BOARD

- A. Install cover board with long joints in continuous straight lines, perpendicular to roof slopes with joints staggered twelve (12) inches from the underlying insulation board joints. Tightly butt joints together, with no board joint exceeding 1/4 inch.

3.6 MECHANICALLY FASTENED MEMBRANE

- A. Mechanically fasten roofing over area to receive roofing per roofing system manufacturer's written instructions. Unroll roofing and allow to relax before retaining.
- B. Accurately align roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- C. Mechanically fasten or adhere roofing securely at terminations, penetrations, and perimeter of roofing.
- D. Apply roofing with side laps shingled with slope of roof deck where possible.
- E. Membrane Attachment:
 - 1. In-Seam Attachment: Secure one edge of PVC sheet using fastening plates or metal battens centered within seam, and mechanically fasten PVC membrane to roof deck. Membrane fasteners shall be spaced to satisfy specified wind speed coverage warranty and local codes.

2. Rhinobond Attachment: Secure membrane and underlayment using Rhinobond plates spaced to accommodate project wind uplift conditions as required by National Vendor. Weld membrane to Rhinobond plates using induction welding equipment and best practices.
- F. Seams: Clean seam areas, overlap roofing, and hot-air weld side and end laps of roofing and sheet flashings per manufacturer's written instructions to ensure a watertight seam installation.
1. Test lap edges with probe to verify seam weld continuity.
 2. Verify field strength of seams and Rhinobond welds a minimum of twice daily, and repair seam sample areas.
 3. Repair tears, voids, and lapped seams in roofing that do not comply with requirements.
- G. Spread sealant bed over deck-drain flange at roof drains, and securely seal roofing in place with clamping ring.
- H. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive per roofing system manufacturer's written instructions.
1. Leave a minimum of 1 inch and maximum of 6 inches between pads.
 2. Keep pads a minimum of 10 feet from roof edges. Do not install pads over membrane seams.

3.7 FLASHINGS

- A. Install Sheet Flashings and preformed flashing accessories and adhere to substrates per roofing system manufacturer's written instructions.
1. Flash penetrations and field-formed inside and outside corners with reinforced or unreinforced sheet flashing.
 2. Terminate and seal top of sheet flashings.
 3. All parapet walls shall be fully flashed with flashing membrane wrapped over the top of the wall and secured before new coping is installed.
- B. Self-Adhered Curb Flashing: Trim flashing membrane to conform over substrate and remove release film. Set flashing onto substrate and apply pressure to set adhesive backing and secure membrane in place.
- C. Bonding Adhesive Curb Flashing:
1. Installations which require adhesive applied adhered flashing:
 - a. Prime substrate surface such as cement block with adhesive prior to application of primary adhesive coat to ensure proper bond strength.
 - b. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- D. Roof and Flashing terminations, such as drip edge's and parapets shall be high wind edge detail utilizing a mechanically fastened 22 gauge galvanized hold down cleat and a sealant air dam or added fasteners and coated metal fabrication. Perimeter flashing termination shall be as required by Owner's Representative:
1. Fascia/Drip Edge: "Anchor-Tite Fascia" by Sarnafil
 - a. Membrane Manufacturers 24 gauge membrane covered galvanized steel fabricated to comply with existing conditions and as designed by Owner's Representative.
 - b. Membrane Manufacturer's prefabricated 24 gauge prefinished galvanized steel.
- E. Liquid Flashing – Unique flashing conditions with prior approval from National Vendor.
1. All surface should be clean, dry, free of dirt, dust, debris, loose particles, loose coatings, and other contaminants.
 2. Clear and prime substrate and membrane surface as required by Membrane Manufacturer.
 3. Apply a minimum of two coats of liquid flashing. Coating applications shall be reinforced with a flashing fabric.
 4. Complex and irregular shapes, such as nuts, bolts etc. may require additional applications of liquid flashing per manufacturer recommendation.

3.8 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive per roofing system manufacturer's written instructions.
 - 1. Leave a minimum of 1 inch and maximum of 6 inches between pads.
 - 2. Keep pads a minimum of 10 feet from roof edges. Do not install pads over membrane seams.

3.9 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- 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 per warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.
- D. Clean all work areas. Clean interior exterior surfaces exposed to view; remove stains and foreign substances. Clean equipment supplied and installed by others as required.
- E. Clean all drains and drainage systems. Test all drains to ensure unrestricted flow into drains and drainage systems
- F. Contractor to provide (Vinyl or Metal) and install "Warranty Notification Sign" on roof as described at end of this Section. Install inside roof at roof access point.



ROOFING INSTALLER'S WARRANTY

WHEREAS _____ of _____, herein called "Roofing Installer," has performed roofing and associated Work including roofing membrane, base flashing, flashing of penetrations and curbs, roof insulation, fasteners, and walkway products ("Work") on the following Project:

Owner: _____

Address: _____

Building Name/Type: _____

Address: _____

Intersection: _____

Grand Opening Date: _____

Five Year Warranty Expiration Date: _____

AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a Subcontractor) to warrant said Work weather-tight against leaks and faulty or defective materials and workmanship for designated Warranty Period,

NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period of 5 years after Grand Opening, Roofing Installer shall, at Installer's own cost and expense, make or cause to be made such repairs to or replacements of said Work as are necessary to correct faulty and defective Work and as are necessary to maintain said Work in a watertight condition.

ADDITIONALLY Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer shall, upon notification by written or verbal to Installer's person, staff, or owned recording device by Owner's Store Manager or Assistant Manager of a failure of weather-tightness of roofing system, shall within 24 hours respond with staff and materials as required to seal and correct such failures to roofing system. Failure to respond within identified time conditions will allow Owner to contract with another roof installer to make such repairs as necessary to protect Owner's interest and limit damages to building and contents. Roof Installer under this warranty shall compensate Owner for costs of the other roofing installer's Work and what additional damages result due to delay of required repairs. This warranty shall remain in full effect for time duration stated, including repairs made for Roofing Installers failure to respond within 24 hour period.

This Warranty is made subject to the following terms and conditions. Specifically excluded from this Warranty are damages to Work and other parts of building, and to building contents caused by:

- A. Lightning.
- B. Hail.
- C. Fire.
- D. Wind speed exceeding project specific membrane selection with documentation that roofing system wind speed was approved by Owner, Roofing Consultant and National Vendor.
- E. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition.
- F. Faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of Work.
- G. Activity on roofing by others, including Contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner (except as noted for failure to respond to loss of weather-tight conditions as noted above).



When Work has been damaged by foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until Roofing Installer has been paid for repairs. Payment will be based on standard time and material basis.

Roofing Installer is responsible for damage to Work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of Work.

During Warranty Period, if Owner allows alteration of Work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other Work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to extent said alterations affect Work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said Work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate Work, thereby reasonably justifying a limitation or termination of this Warranty.

During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to extent said change affects work covered by this Warranty.

This Warranty is recognized to be the only warranty of Roofing Installer on said Work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original Work per requirements of Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

IN WITNESS THEREOF, this instrument has been duly executed this _____ day of _____, _____.

Company: _____

Authorized Signature: _____

Name: _____

Title: _____

WARRANTY NOTIFICATION SIGN

CAUTION: ROOF & WALKWAYS MAY BE SLIPPERY	
<hr/>	
THIS ROOF WAS INSTALLED BY:	
<hr/>	<hr/>
STORE NUMBER:	ROOF COMPLETION DATE:
<hr/>	<hr/>
MANUFACTURER SYSTEM WARRANTY EXPIRATION	INSTALLER'S WARRANTY EXPIRATION
<hr/>	
<i>PLACE REQUESTS FOR ROOF REPAIRS USING STANDARD OPERATING PROCEDURE AND THE WARRANTY VENDOR WILL BE DISPATCHED</i>	
ALBERTSONS COMPANIES WARRANTY NOTIFICATION	

Contractor to provide a 24 inch wide by 18 inch tall sign including all information shown on the above graphic. The sign graphic shall be adhered to a solid substrate and mechanically fastened to a wall. Locate sign in direct line-of-sight from the bottom of the roof access ladder (inside the building).

END OF SECTION 075423