**Decoding Spec Numbers**
- RT250 – Ram Tough 250
- DM (double membrane)
- C – Non-nailable uninsulated deck
- BS –nailable deck
- PMR – Protected membrane Roof
- PL - Plaza
- RS – Roofscape
- RR – Reroof recover
- SC – Ultra Coating
- MG - Shingle Granules

**GUIDE SPECIFICATIONS**

# SECTION 07 55 56.13
# HOT POLYMERIC FLUID-APPLIED WATERPROOFING
# RAM-TOUGH 250 DM WITH PROTECTION COURSE AND DRAIN MAT
# RT250DM•___•____

## PART 1 - GENERAL

1.00 GENERAL

The general conditions, special conditions, applicable portions of Division 1 and requirements for general construction and subtrades form part of this specification.

1.01 RELATED SECTIONS

| | |
|---|---|
| Section 02 41 19.13 | Demolition |
| Section 03 31 00 | Concrete |
| Section 04 00 00 | Masonry |
| Section 06 06 10.23 | Carpentry |
| Section 07 62 00 | Sheet Metal |
| Section 07 70 00 | Roofing Accessories |
| Section 07 92 13 | Caulking & Sealants |
| Section 07 21 13.3 | Foam Board Insulation |

Edit to project conditions.

1.02 SCOPE

The Work includes supplying all materials, labor and equipment to complete the installation of the Hot Polymeric Fluid-Applied Double Membrane Waterproofing System for the following areas:

Edit to project requirements.

## 1.03 QUALIFICATIONS

The waterproofing system shall be installed by an applicator approved and licensed by the manufacturer. To ensure single-source responsibility the same firm shall supply or approve of all components. An independent laboratory may test materials supplied for installation to guarantee compliance with published physical properties and specification requirements.

## 1.04 SUBMITTALS

A. Submit Manufacturer's written approval or license of Applicator for installation of the herein specified Waterproofing System.

B. Submit Manufacturer's sample Labor and Material System Warranty and Manufacturer's Intent to Warranty Certification for this project.

C. Submit most recent copy of Manufacturer's literature applicable to products and specifications to be used, as specified herein, including applicable flashing details.

D. Submit three sheet samples, approximately 8 inches x 10 inches, of waterproofing membrane reinforcement, flashing material, protection course and drainage mat.

E. Submit three samples of elastomeric bitumen.

F. The Manufacturer shall have documented experience with the system specified herein evidencing the materials will last at least as long as the warranty period. Documentation shall include job lists with project size, Architect of record, installing Applicator, telephone numbers and contact names

G. Submit certification from the Manufacturer, properly attested by a corporate officer, stating that all materials being supplied comply with the specifications and requirements of the contract documents, including conformance with all federal, state and local building codes including United States Code, Section 41:10, Subsections a-d, popularly known as the "Buy American Act".

## 1.05 QUALITY ASSURANCE

All the materials specified herein are cited as a minimum standard of quality and shall not preclude consideration of equal or superior materials. All suggested "equivalent materials" or other substitutions are to be submitted to the Architect for consideration a minimum of ten days prior to the bid date. Submittal shall include all evidence of compliance or superiority of material from the proposed substitute Manufacturer. If accepted by the Architect, an addendum will be issued to all bidders for their consideration of the proposed substitute Manufacturer. Determination of equivalency of all substitutions shall rest exclusively with the Architect and such decision shall be final.

1.06 DELIVERY, STORAGE AND HANDLING

A. Deliver and store materials under provisions of General Conditions Section.

B. Deliver materials to jobsite on pallets. Package labels shall indicate material name, production date and product code.

C. Store materials in dry, protected areas in an upright position. Control temperature of storage areas in accordance with Manufacturer's instructions. Protect moisture sensitive materials with breathable tarps on sides and top surfaces.

D. Do not overload roof deck with stored materials.

1.07 PROJECT CONDITIONS

A. Follow local, state and federal regulations, safety standards and codes. When a conflict exists use the stricter requirement.

B. Do not apply waterproofing materials unless proper bitumen application temperatures (approximately 350°F-400°F) can be maintained, or when moisture in any form (i.e. rain, dew, ice, frost, snow, etc.) is present on the deck. Do not heat bitumen above 400°F.

C. Sequencing and Scheduling: The Work shall be scheduled in the construction sequence so that designated complete contiguous areas can be installed and completed, including overburden wear courses, before other construction trades are allowed in the area. Prior to starting the Work, all drains shall be operative, all deck projections, sleeves, wood blocking and all other penetrations shall be installed, in place and operative.

D. Roofing Terminology: Definitions in ASTM D 1079 and the glossary of "The NRCA Roofing and Waterproofing Manual" apply to work of this Section.

1.08 PRE-INSTALLATION ROOFING CONFERENCE

A. Meet with Owner, Architect, General Contractor, testing and inspecting agency representative, roofing system manufacturer's representative, deck installer and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.

B. Review methods and procedures related to roofing installation, including manufacturer's written instructions.

C. Review and finalize construction schedule. Verify availability of materials, Installer's personal, equipment and facilities needed to make progress and avoid delays.

D. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.

E. Review structural loading limitations of roof deck during and after roofing.

F. Review base flashings and special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.

G. Review governing regulations and requirements for insurance and certificates if applicable.

H. Review temporary protection requirements for roofing system during and after installation.

I. Review roof observation and repair procedures after roofing installation.

1.09 WARRANTY

Supplier of the Waterproofing System shall furnish its standard [Edit] year Warranty for labor and materials, including the membrane, membrane flashings and drainage mat.

Edit to project conditions adding insulation, pedestals, concrete pavers, etc., as applicable.

## PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

The Barrett Company is set forth as the referenced standard of quality. Other manufacturers of equal of better quality may request approval in conformance with specifications requirements. Architect approved equals will be subject to all specification requirements.

2.02 MATERIALS

A. Waterproofing Membrane:

1. Hot Polymeric Waterproofing**: RamTough 250** SBS Kraton® modified bitumen shall have inert mineral stabilizer. Material shall comply with the following specifications:

| TEST | CGSB 37-GP-50M REQUIREMENTS | TYPICAL TEST RESULT |
|---|---|---|
| Flash Point, °F | Min. 260 | 580 |
| Penetration, 0.1 mm | Max. 110 @ 25°C<br>Max. 200 @ 50°C | 83<br>165 |
| Flow, mm | Max. 3 | 0.5 |
| Toughness, J | Min. 5.5 | 11.7 |

| | | |
|---|---|---|
| Ratio of Toughness, J/N to Peak Load | Min. 0.040 | 0.059 |
| Adhesion | Min. 1 | 1 |
| Water Vapor Permeance ng/Pa.s.m² | Max. 1.7 | 0.39 |
| Water Absorption, g | Loss 0.18<br>Gain 0.35 | 0.22+ |
| Crack Bridging @ -25°C | | No delamination<br>No loss adhesion<br>No cracking |
| Heat Stability @ 200°C<br>Penetration, 0.1 mm | Max. 110 @ 25°C<br>Max. 200 @ 50°C | 80<br>155 |
| Low Temp Flex @ -25°C | | No delamination<br>No loss adhesion<br>No cracking |
| Viscosity, @ 200°C | Min. 2<br>Max. 15 | 5 |

2. Uncured Neoprene Flashing Sheet: **RamFlash 327 HDR** shall comply with the following minimum specifications:

| TEST | METHOD | TYPICAL TEST RESULTS |
|---|---|---|
| Thickness Tolerance, % | ASTM D-412 | ±10 |
| Specific Gravity | ASTM D-297 | 1.48 ±.05 |
| Tensile Strength min, psi (Mpa) | ASTM D-412 | 1500 (10.3) |
| Elongation, Ultimate min, % | ASTM D-412 | 250 |
| Hardness, Curometer, A<br>Tear resistance min, | ASTM D-2240 | 60 ±10 |
| 1 bf/in (kN/m) | ASTM D-624 (Die C) | 120 (21.0) |
| Brittleness Temperature, max, F(deg C) | ASTM D-746 | -30 (-34) |
| Flame Resistance | ASTM C-542<br>Must not propagate flame | PASS |

| | | |
|---|---|---|
| Resistance to Heat Aging Properties after 70 h at 212°F Hardness increase max. | ASTM D-573 | + 10 |
| Resistance to Oil Aging Change in Volume, max after 70 h Immersion in ASTM Oil #3 at 212°F | ASTM D-471 | + 80% |
| Ozone Resistance Condition after Exposure to 100 pphm Ozone in Air for 100 h at 104 F (sample under 20% strain) | ASTM D-1149 | No cracks |
| Resistance to Water Change in Mass, max, after 7 days Immersion at 158°F | ASTM D-471 | + 10% |
| Water Vapor Permeance (perms) | ASTM E-96 | .07 |

3. Reinforcing Sheet: **Poly·Felt 125 VP** spunbonded polyester fabric, non-needle punched, heat set with resin binder, complying with the following minimum specifications:

| TEST | METHOD | TYPICAL TEST RESULTS |
|---|---|---|
| Basis Weight | ASTM D-3776 | 60 GR/$M^2$ |
| Grab Tensile/lb | ASTM D-4830 | 34/lb. MD<br>32/lb. CD |
| Elongation/% | ASTM D-4830 | 37 MD, 42 CD |
| Trapezoid Tear/lb. | ASTM D-4830 | 14 MD<br>12 CD |
| Ames Thickness | ASTM D-1777-64 | 9.5 mils |
| Fatigue Life | ASTM D-8B | ≥10,000 cycles |

4. Protection Course: **Ram 203**, shall comply with the following minimum specifications:

| TEST | METHOD | TYPICAL TEST RESULTS |
|---|---|---|
| Thickness | ASTM D-645m | 86 mils (2.2 mm) |
| Weight | ASTM D-461 | Min 50 lbs/100 sq ft |
| Asphalt Softening Point | ASTM D-36 | 220°F - 250°F |
| Asphalt Penetration | ASTM D-5 | 15 - 20 dmm |
| Surfacing & Surface Stabilizer Max. | ASTM D-4601-86 | 65% |

Ram 200-Heavy Duty are required.

5. Base Flashing Granular Cap Ply (Exposed Flashings): **RAM 306**, shall comply with the ASTM D-6164, Type I, Grade G minimum specifications. Unexposed flashings option is **RAM 200**, in compliance with ASTM D-6164, Type I, Grade S specifications.

| TEST | METHOD | TYPICAL TEST RESULTS |
|---|---|---|
| Thickness | ASTM D-1777 | 0.45 inches |
| Compressive Load Test | ASTM D-1671 | 15,000 lbs/Ft.$^2$ |
| Flow | ASTM D-44716 | 5 gal/min/ft wide |
| Fabric Flow | ASTM D-4491 | 75 gpm/SF |
| Grab Tensile | ASTM D4632 | 120 lbs. |
| U.V. Resistance | ASTM D-4355 | Stabilized – passed |
| Puncture Resistance | ASTM D-4833 | 35 lbs |
| Trapezoid Tear/lb. | ASTM D-4830 | 14 MD, 12 CD |

2.03 Related Materials:

A. Primer: Solvent based primer for preparing surface prior to hot rubberized asphalt.
   1. Ram Primer & Surface Conditioner

B. Cold-applied flashing system: Comprised of a two-component polymethyl methacrylate primer, reinforcing fleece and membrane system.
   1. Barrett Roofing, RamFlash PMMA System

C. Joint Sealant: single component silyl-terminated polyether elastomeric sealant that meets ASTM C920.
   1. KeeneSeal 100

D. Protection Course Series: Manufacture protection course materials recommended by application.
   1. Polyethylene Sheet: 20 mils
      a) Ram RB 20 (Root Barrier)

   2. Polyethylene Sheet: 30 mils
      a) Ram RB 30 (Root Barrier)

2.02 Drainage Panels

A. Drainage materials with a drainage core and filter fabric recommended by waterproofing manufacture.

   1. Polymeric 1/4" cuspate core with a non-woven spunbonded filter fabric with a high compressive strength. Flow rate 9 gpm per foot (112 lpm per m).

      - RamDrain DD 025 HS

   2. Polymeric 1/4" cuspate core with a nonwoven filter fabric. Flow rate 9 gpm per foot (112 lpm per m).

      - RamDrain DD 025

   3. Polymeric 7/16" cuspate core with a non-woven spunbonded filter fabric with a high flow rate. Flow rate 18 gpm per foot (224 lpm per m).

      - RamDrain DD 050

   4. Polymeric 1/2" water retaining perforated cuspate core with spunbonded fabric on bottom side needle punched root barrier fabric on topside. Designed to retain 0.06 gallons per square foot.

- RamDrain 1241

5. Polymeric 1" water retaining perforated cuspate core with spunbonded fabric on bottom side needle punched root barrier fabric on topside. Designed to retain 0.11 gallons per square foot.

- RamDrain 2451

6. Polymeric entangled net prefabricated composite drain 0.13-inches thick, "zig-zag" geometric patterned core, drainage mat with a layer of non-woven geotextile.

- RamDrain EN 36 013

7. Polymeric entangled net prefabricated composite drain 0.25-inches thick, "zig-zag" geometric patterned core, drainage mat with a layer of non-woven geotextile

- RamDrain EN 36 025

8. Polymeric entangled net prefabricated composite drain 0.45-inches thick, "zig-zag" geometric patterned core, drainage mat with a layer of non-woven geotextile

- RamDrain EN 36 045

## PART 3 - EXECUTION

3.01 PREPARATION

**Optional:**
Sandblasting and/or shot-blasting procedures may be required on certain renovation work or to remove unapproved curing agents to provide the best possible surface. If required, provide unit price per square foot in bid documents.

A. Condition of Surface: Any new concrete surfaces shall be wood float finish ACI 301-11.7.3 or better. All concrete shall have cured for minimums of 28 days and/or pass the ASTM D-4263 Plastic Film deck dryness test. All surfaces shall be dry, clean, firm and free from laitance, frost, dust, dirt, oil, unapproved curing compounds or other foreign matter detrimental to performance of the waterproofing membrane. The General Contractor shall certify no unapproved curing compounds have been used on existing concrete decks. All old existing membrane and flashings shall be completely removed to bare concrete on existing decks.

Follow ASTM D-5295 "Guide for Preparation of Concrete Surfaces" specifications. Use cleaning materials and methods necessary to render an acceptable, dust-free surface,

including oil free filtered compressed air or high-speed power blowers. Protect adjacent areas from damage with tarpaulin or other durable materials.

Before commencing work, examine all areas and report in writing to Architect and Manufacturer any conditions that will adversely affect successful installation. Do not begin work until the conditions have been corrected. Voids, cracks, holes and other damaged surfaces shall be repaired with materials compatible with **Ram-Tough 250**.

B. Expansion Joints: Expansion joints shall be sharply formed and free of broken edges or loose aggregate and completely free of preformed joint fillers, sealants or back-up materials to a depth that is at least twice the width of the joint. Curb expansion joints at each side of the joint, either by integrally forming with the slab or securely fastening sulfate treated wood strips to deck. Chamfered edges are required.

C. No protection from the weather is necessary for **ram-Tough 250**, but temporary protection to installed membrane is required to prevent damage by mechanical gouging, scraping, spilling of oil or solvents or excessive heat.

3.02 FLASHING

A. BASE FLASHING BASE PLY

Complete flashing including base ply work before doing flat field application as specified in 3.05. After the horizontal and vertical flashing substrates are clean and inspected, apply Ram Primer and Surface Conditioner to the areas to be flashed. Allow to dry tack-free. Install fluid **Ram-tough 250** and reinforcement up all junctions of horizontal deck and vertical surfaces, all changes of plane, all cold joints and cracks and as indicated on the drawings with **Ram Flash 327 HDR** 60 mil neoprene flashing set in hot fluid **Ram-Tough 250** as required or shown on the drawings. Minimum height of base flashings is 8 inches above highest expected waterline, maximum height is 24 inches. Follow wall flashing details above 24 inch height.

Apply the neoprene flashing tight to all substrates starting the installation on the flat and working the sheet into place in upward direction. Finished sheet shall be completely adhered to substrate with no unsupported "bridging" at the change of plane. Over-coat the neoprene sheet with another 125-mil coat of the **Ram-Tough 250** carefully sealing the top edge and all side laps the same day. Application width of neoprene flashing sheet shall be a minimum 3 inches in any single direction or more as required by field conditions.

B. BASE FLASHING CAP PLY

Do not install the base flashing cap ply until the flat field of the deck is completed as specified in 3.05. Precut **Ram 306** sheet across the roll to install in 36 inch wide sheets. Embed **Ram 306** SBS granular cap sheet membrane into hot **Ram-Tough 250** extending flashings out onto the field of the roof 3 inches minimum and up vertical surfaces 8 inches minimum and 24 inches maximum. Side overlaps shall be 3 inches minimum.

Mechanically fasten top of flashings to the substrate with 1/8 inch thick flat bar stock termination bar, mechanically fasten 8 inches on centers. Seal over bar with **Ram-Tough 250** or **Ram Mastic** the same day flashing is installed to ensure watertightness. Counter-flashing is required.

3.03 CRACK TREATMENT

At all cracks and construction joints, apply **ram-Tough 250**, 125 mils thick, then center a 6 inch wide strip of **ram Flash 327 HDR** neoprene flashing over the joint or crack and embed into the warm **ram-Tough 250**. Avoid air pockets. Allow assembly to cool. Reinforcement and flashing should be installed before the continuous, unbroken thick film of bitumen and reinforcement fabric is applied over the entire deck surface and flashing areas in accordance with specifications in Section 3.05.

3.04 EXPANSION JOINTS

Over raised or curbed expansion joints, up to 2 inches in width with a designed total movement of 50% or less, **ram Flash 327 HDR** neoprene flashing shall be placed over the joint as shown on the drawings and embedded into a 125 mil thick coating of **ram-Tough 250.** The sheet shall be covered and the loop filled solid and flush with **ram-Tough 250**. Install slightly oversized foam rod and second sheet of neoprene flashing looped over the foam rod sealing all end laps with generous coating of Ram Tough 250 or approved bonding adhesive. Extend second sheet 12 inches onto the deck on each side of the joint. Overcoat neoprene flange on each side with **ram-Tough 250**. Seal all end laps with bonding adhesive and lap sealant before installation. The sheet shall then be looped into the joint 1-1/2 times the joint width at maximum opening and extend 8 inches onto the deck on each side of the joint.

3.05 INSTALLATION

A. Surface Conditioner: Each day, prior to application of **ram-Tough 250**, apply surface conditioner, as a fine spray or by roller, at a rate of approximately 1 gallon per 300-600 square feet. Allow to dry completely tack free. Do not allow primed surface to be contaminated with construction debris or dust barrier. Re-prime and allow to dry as may be required by job and weather conditions.

B. Application: Units of **ram-Tough 250** shall be melted in an approved double-jacket oil bath melter under continuous agitation until the material can be drawn free-flowing and lump-free at a temperature of approximately 350ºF – 400ºF. The **ram-Tough 250** shall be applied at a rate to provide a continuous coating not less than 90 mils thick. Carry slab applications up and over all vertical flashings a minimum of 3 inches. Hot fluid- applied **ram-Tough 250** shall be applied in a width exceeding the reinforcement fabric roll width. The Foreman shall conduct adhesion and thickness every hour with pull tab and thickness gauge and notify manufacturer immediately if any problem is detected.

C. While **ram-Tough 250** is hot and tacky, install specified Poly·Felt 125 VP reinforcement, brooming in place from the side of the fabric. Side laps shall be a minimum of 2 inches with lap placement so that water flows over them and not against

them. All laps shall be sealed with hot **ram-Tough 250** under lap. In no place shall reinforcement touch reinforcement. End laps shall be 6 inches. Carry reinforcement up all vertical wall surfaces a minimum of 3 inches.

D. After reinforcement fabric has been placed and broomed in, install second layer of **ram-Tough 250**, a minimum of 125 mils thick, at all points of the deck. Do not leave any reinforcement fabric uncoated at end of day's work or in inclement weather.

E. Embed specified protection course into hot **Ram -Tough 250** simultaneous with the 125 mil application (item D above). End laps shall be minimum 6 inches. End laps and selvage laps shall be fully embedded in hot **Ram-Tough 250**. "Spot" touch-up work can be done with hot air guns. Bleed out of hot **Ram-tough 250** at all side laps shall be evident. Complete installation of all plies each day including protection course or cap sheet.

3.06 QUALITY CONTROL TESTS

A. Electric Field Vector Mapping (EFVM)

1. After installation of the waterproofing membrane and protection board and prior to the placement of the remaining system components or overburden. An Electric Field Vector Mapping Survey (EFVM) is required, conducted by a surveyor approved by the Architect and waterproofing manufacturer.

2. The EFVM wires shall remain in place with lead wires located in an area accessible after placement of the overburden and approved by the Owner and Architect.

3. A detailed CAD drawing and report of the EFVM survey shall be furnished to the Owner, Manufacturer, and Architect prior to proceeding with the placement of the remaining system components or overburden.

3.07 DRAINAGE MAT

After the EFVM survey is complete and any repair work approved, starting at the low points apply drainage board, fabric side up, lapping the side laps using the 2.5 inch fabric overlap. At regular 2-foot intervals, glue or tape fabric overlap over the previous installed material.

Install end laps by pulling back the fabric 6 inches, nesting the next roll of material into the exposed 6 inch lap, replacing the 6 inch fabric flap and proceeding with installation.

Temporary ballast may be used to keep drainage course in place before overburden is installed.

3.08 OVERBURDEN:

3.09 FIELD QUALITY CONTROL

A. Adhesion Tests and Thickness Tests shall be monitored by the Applicator Foreman every

hour throughout the application process.

B. Test Cuts shall be made at locations of Architect's or Manufacturer's request:

1. Remove one 14 inch x 14 inch unsurfaced cut per 100 squares of deck area.

2. Follow field audit criteria outlined by ASTM Standards D-2829 and D-3617.

3. Send roof cuts to: Structural Research, Inc., Madison, Wisconsin, or Manufacturer approved accredited laboratory for laboratory examinations. Applicator shall allow $500.00 for testing fees per 100 squares of roof area. The laboratory shall submit laboratory results directly to the Architect.

4. Repair sampled areas by filling in the cut-out area then use a "feathered in" patch consisting of **Poly•Felt 125 VP** and **ram-Tough 250** following the Manufacturer's and NRCA procedures.

C. Correct any deficiencies in the deck membrane, if any, as prescribed by material Manufacturer and approved by the Architect.

3.10 CLEANING

A. Remove equipment, trash, debris and any excess material from the jobsite.

B. Repair any damage and remove any stains caused by work of this Section.

3.11 PROTECTION

General Contractor shall protect finished waterproofed deck areas from damage during subsequent construction.

3.12 ROOFING INSTALLER'S WARRANTY

A. WHEREAS,_____, herein called the "Roofing Installer", has performed roofing and associated work ("work") on the following project:

1. Owner: [**Insert name of Owner**]
2. Owner Address: [**Insert address**]
3. Building Name/Type: [**Insert Information**]
4. Building Address: [**Insert address**]
5. Area of Work: [**Insert information**]
6. Acceptance Date: _____
7. Warranty Period: FIVE YEARS

8. Expiration Date: _____

B. AND WHEREAS, Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

C. NOW, THEREFORE, Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period he will, at his 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.

D. This Warranty is made subject to the following terms and conditions:

1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:

   a. Lightning;
   b. Peak gust wind speed exceeding [**Insert mph n/s**]
   c. Fire;
   d. Failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
   e. Faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
   f. Vapor condensation on bottom of roofing; and
   g. Activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.

2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.

3. Roofing Installer is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.

4. 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 the 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.

5. 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 the extent said change affects work covered by this Warranty.

6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration during normal working hours.

7. 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 according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this_____day of _____, 20____.

1. Authorized Signature:_____.
2. Name:_____.
3. Title:_____.

MAINTENANCE:

Semi-annual inspections and a systematic maintenance program are recommended to the Owner and Architect. Consult your Barrett Representative or Barrett Approved Applicator for further information.

E-mail: info@barrettroofs.com www.barrettroofs.com