

## SECTION 07540 - ELASTOMERIC (FLUID APPLIED) ROOFING

### City of San Diego, CWP Guidelines

#### PART 1 - GENERAL

##### 1.1 WORK OF THIS SECTION

- A. The WORK of this Section includes providing elastomeric (fluid applied) roofing system and all appurtenant work, including roof accessories as necessary to provide a complete, waterproof, product.

##### 1.2 RELATED SECTIONS

- A. The WORK of the following Sections applies to the WORK of this Section. Other Sections of the Specifications, not referenced below, shall also apply to the extent required for proper performance of this WORK.

- 1. Section 07600 Flashing and Sheet Metal
- 2. Section 07720 Roof Accessories
- 3. Section 07800 Skylights

##### 1.3 CODES

- A. The WORK of this Section shall comply with the current editions of the following codes as adopted by the City of San Diego Municipal Code:

- 1. Uniform Building Code

##### 1.4 SPECIFICATIONS AND STANDARDS

- A. Except as otherwise indicated, the current editions of the following apply to the WORK of this Section:

- 1. Federal Specifications:

SS-C-153                      Cement, Bituminous, Plastic

- 2. Commercial Standards:

ASTM D 41                      Specification for Asphalt Primer Used in Roofing and Waterproofing

ASTM D 312                      Specification for Asphalt Used In Roofing

- 3. Trade Standards:

National Roofing Contractors Association (NRCA), "Commercial, Industrial, and Institutional Roofing Materials Guide"

Underwriters' Laboratories Inc. (UL): the "Building Materials Directory," Fire Listings, and "Construction Fire Hazard Class" of roofing system.

Factory Mutual Research Corporation (FM): "Approval Guide, Equipment, Materials, Service, for Conservation of Property," and "Construction of Factory Mutual System Class" as described in Factory Mutual System Loss Prevention Data Sheets.

## 1.5 SHOP DRAWINGS AND SAMPLES

- A. The following shall be submitted in compliance with Section 01300:
1. Manufacturer's catalogue data including specifications, literature, and published installation instructions for each major roofing element, product, or system.
  2. Roofing shall be applied by a roofing contractor who is a "Licensed Applicator" approved by the roofing manufacturer with at least 5 years' experience with the application of this type of roofing system. A copy of the "Licensed Applicator Certificate" issued by manufacturer of coating materials shall be submitted. The applicator shall provide evidence that it has experience and training with the product and system.
  3. Samples of at least five manufacturer's standard colors of exposed materials.

## 1.6 OWNER'S MANUAL

- A. The following shall be included in the OWNER'S MANUAL in compliance with Section 01300:
1. A certificate that the installed roof complies with the requirements of these Specifications and the manufacturer's recommendations for the class and type of roof specified.
  2. A letter of completion from the manufacturer's representative, indicating that the roof has been installed properly.
  3. A written 5-year guarantee shall be furnished on all roofing provided under this Section. The CONTRACTOR and manufacturer shall repair or replace at no additional cost to the OWNER any and all materials or workmanship which are faulty or deficient. The CONTRACTOR shall also be responsible for the repair or replacement of other damage which results from a failure of its work or materials.
  4. Manufacturer's recommendations for periodic inspections, care and maintenance, and identification of common causes of damage with instruction for temporary patching until permanent repairs can be made.

## 1.7 SERVICES OF MANUFACTURER

- A. The CONTRACTOR shall, at no additional cost to the OWNER, furnish services of the manufacturer's representative to oversee preparation of surfaces and installation of each system type.

## PART 2 - PRODUCTS

### 2.1 MATERIALS REQUIREMENTS

- A. **Manufacturer's Standards:** Roofing products shall be in accordance with the manufacturer's literature and published specifications for the indicated products.
- B. **UL Approval:** Materials and roofing system to be provided shall have been tested, listed, and labeled by UL for the indicated class or rating of roofing. Products to be used in the roofing system shall be the products of the same manufacturer, and all other materials used within the system shall be acceptable to the approved manufacturer.

### 2.2 ELASTOMERIC ROOFING SYSTEM

- A. The elastomeric roofing system shall be a polyurethane elastomer based system capable of producing a seamless, waterproof roofing [with a non-skid walking surface].
- B. The elastomeric roofing system shall have a Class "A" UL rating.
- C. Caulking, sealants, and flashing materials; primers; protection board, and coating materials shall be the product of, or certified as compatible by, the system manufacturer.
- D. Roofing granules shall be of hardness and type as approved by the roofing system manufacturer. Color of roof granules shall be [white], [tan], [gray], [black] as selected from manufacturer's standard colors by the CONSTRUCTION MANAGER.
- E. Flashings shall be not less than 60 mils thick elastomeric sheet material shall be uncured, non-staining neoprene.

### 2.3 MANUFACTURERS

- A. The elastomeric roofing system shall be of the following manufacture and type (or equal):
  - 1. Gaco Western, Specification "GW-15-U"
  - 2. Neogard Corporation, "Peda-Gard II"

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Installation shall be in strict accordance with the manufacturer's published directions, installation instructions, and specifications.
- B. The WORK shall include providing all caulking, sealants, primers, thinners, reinforcing materials, roofing materials, and protection board as necessary to produce a complete, watertight system.

- C. **Pre-Roofing Conference:** Prior to installation of roofing and associated WORK, the deck surface to which the elastomeric roofing system is to be applied shall be inspected by the CONTRACTOR, manufacturer's representative, CONSTRUCTION MANAGER, applicator, and all subcontractors requested by the CONTRACTOR to be present because of their association with the roof. Other entities concerned with roofing performance shall be in attendance if desired, including test agencies, governing authorities, and the OWNER. Questions regarding the acceptability of the deck, roofing system and materials, flashing details, roof-mounted mechanical equipment, roof penetrations, and the roofing application shall be discussed. CONTRACTOR shall record discussions and agreements and furnish a copy of this record to each attendee.
1. Before commencement of the roofing WORK, all corrective work and related preparation determined to be done at the pre-roofing conference shall be accomplished. All items to be imbedded into the roofing shall be either in place or on the site, ready for placement. The WORK shall be coordinated with all other related operations.
- D. Concrete deck surfaces shall be tested for proper dryness prior to application of the roofing. Concrete deck shall have cured a minimum of 28 days. Curing compounds used shall be of non-resin type.

### 3.2 PREPARATION

- A. The deck and all related surfaces to receive the roofing system shall be thoroughly cleaned in strict accordance with the manufacturer's written instructions and recommendations. Oil and greases shall be removed with a commercial grade cleaner recommended by the roofing manufacturer.
- B. Concrete surfaces shall be given a fine broom or "sidewalk" finish. After 28 days provide acid etching with a 10 to 15 percent solution of muriatic acid if approved by the roofing manufacturer. Acid solutions shall be flushed off the surfaces with clean water.

### 3.3 INSTALLATION

- A. All surfaces to receive the roofing system shall be graded to drains and shall be smooth, even, dry, and clean.
- B. No materials shall be applied during damp or wet weather or onto any surface not sufficiently dry to receive the roofing. Application temperatures shall not be below those recommended by product manufacturer.
- C. All joints and cracks shall be sealed and flashed. All metal fittings shall be in place.
- D. All expansion, control, and construction joints to be overcoated by the roofing system shall be filled with an approved sealant. All cracks exceeding 1/16-inch width shall be routed or saw cut and filled with the sealant.
- E. The CONTRACTOR shall protect adjacent surfaces and other equipment with drop cloths or masking as necessary.
- F. All cants and flashing shall be installed.

- G. A fluid applied elastomeric flashing system shall be provided where the horizontal surface abuts a vertical surface and at all deck penetrations.
- H. All projections through the roofing system such as supports, vents, pipes, and similar locations where slight movement or thermal expansion may occur, shall be provided with a sealant bead joint. The sealant shall be given a cove shape to allow for better water rejection.
- I. Control joints, cracks, and expansion joints shall be taped, reinforced, and coated per manufacturer's written instructions and details.
- J. The elastomeric roofing system shall be applied after all preparation and pre-coating work is completed.

### 3.4 PRODUCT APPLICATION RATES

- A. Application rates and components shall be as follows:

- 1. Gaco Western, Specification "GW-15-U"

Primer (1st step) #5679 Concrete Sealer, 1/3 gallon per 100 sq. ft.

Primer (2nd step) #E-5320 Primer Sealer, 1/2 gallon per 100 sq. ft.

Base coat (1st step) #UB 64, 1-1/2 gallons per 100 sq. ft.

Base coat (2nd step) #UB 64, 1 gallon per 100 sq. ft. with organic granular aggregate broadcast at 8-10 lbs per 100 sq. ft. (let dry and sweep off excess)

Top Coat #U66, 1 gallon per 100 sq. ft.

Total thickness: 42 mils, dry basis, exclusive of aggregate

- 2. Neogard Corporation, "Autogard II"

Primer: Neogard II primer, 1/3 to 1/2 gallon per 100 sq. ft.

Base coat: Autogard II, 1-2/3 gallons per 100 sq. ft., applied in 2 coats to a thickness of 20 mils

Wearing coat: Autogard II, 2/3 gallon per 100 sq. ft., with 15 lbs #7992 aggregate broadcast per 100 sq. ft. (let dry and sweep off excess)

Top coat: Autogard II, 1 gallon per 100 sq. ft.

Total thickness: 40 mils, dry basis, exclusive of aggregate.

### 3.5 CLEANING AND PROTECTION

- A. All excess materials shall be removed from adjacent surfaces and any stains removed by cleaning methods recommended by the roofing system manufacturer.
- B. The elastomeric roofing system shall be protected from other operations until time of acceptance of the project using methods and materials recommended by the roofing manufacturer.

\*\* END OF SECTION \*\*