



# SPECIFICATIONS - ISSUE FOR BID

**WVC Information Systems Building**

**Saratoga, CA**

**26 May 2026**

**SGH Project 257225.00**



Date Signed: 05/26/2026

**PREPARED FOR**

**West Valley College**

14000 Fruitvale Avenue

Saratoga, CA 95070

**PREPARED BY**

**Simpson Gumpertz & Heger Inc.**

1999 Harrison Street, Suite 2400

Oakland, CA 94612

o: 415.495.3700

SPECIFICATIONS – ISSUE FOR BID

West Valley College  
14000 Fruitvale Avenue  
Saratoga, CA 95070

---

SIMPSON GUMPERTZ & HEGER INC.  
1999 Harrison Street, Suite 2400  
Oakland, CA 94612

Tel.: 415.495.3700

Contact: Xiu T. Li

26 May 2026

SGH Project 257225.00

---

pages

SPECIFICATIONS

079200	EXTERIOR JOINT SEALANTS	1 – 12
092410	CEMENT PLASTER REPAIR	1 – 11
099600	SILICONE ELASTOMERIC COATING	1 – 9
099601	HIGH-PERFORMANCE COATINGS	1 - 9

SECTION 079200

EXTERIOR JOINT SEALANTS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and provisions of the Contract, including the General and Supplementary Conditions, and Division 1 of these Specifications, apply to the work in this Section.

1.02 WORK INCLUDED

- A. The work of this Section includes providing the necessary labor, materials, equipment, and supervision to perform the following, as shown on the Drawings, and those specified by reference to this Section:

- 1. Install new silicone wet seal at all storefront windows and curtain wall as indicated in the drawings.
  - a. Wet seal shall include bond breaker taper where sealing over existing gaskets unless approved by sealant manufacturer and has satisfactory adhesion test.
  - b. Gaskets shall be cleaned and reinserted if loose where wet sealing will be installed over existing gaskets.
  - c. Provide silicone tape embedded into silicone sealant for bridge seal applications and as indicated on the drawings.
- 2. Replace all existing exterior sealant joints with a new silicone wet seal around cement plaster wall penetrations, in cement plaster control joints, and at all other joints to provide a watertight installation as shown in the drawings.

- B. Related Sections include the following:

- 1. Division 9 Section "Cement Plaster Repair".
- 2. Division 9 Section "Silicone Elastomeric Coatings".

1.03 REFERENCE STANDARDS

- A. ASTM C 1087 - Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems.

- B. ASTM C 1193 - Guide for Use of Joint Sealants.
- C. ASTM C 1248 - Test Method for Staining of Porous Substrate by Joint Sealants.
- D. ASTM C 1311 - Specification for Solvent Release Sealants.
- E. ASTM C 1330 - Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
- F. ASTM E 783 - Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors.
- G. ASTM E 1105 - Test Method for Field Measurement of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference.

#### 1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data, guarantees, application recommendations and installation instructions, including cleaning and priming instructions and sealant limitations for each type of material required.
- B. Safety data sheets (SDS) for each product used.
- C. Manufacturer's published data, letter of certification, or certified test laboratory report indicating that each material selected complies or is suitable for the temperatures, movement, and weather conditions that will be encountered during the sealant's service life.
  - 1. Written explanation to decipher code numbers used on material containers to record manufacturing dates.
  - 2. Test reports should be dated within three years of submittal date showing compliance with ASTM C 1564 and the standards C 1564 references.
- D. Samples: Submit the following samples:
  - 1. Initial Sealant Selection: For each product exposed to view, manufacturer's standard bead consists of strips of actual products showing full range of colors available.
  - 2. Extruded Silicone Tape Selection: For each product exposed to view, manufacturer's standard extrusion in color and that matches existing window frames and minimum size as indicated in the drawings.

- E. Evidence of contractor's experience, including project identification for at least three similar projects in the past five years. Contractor shall demonstrate a minimum of ten years of similar experience.

#### 1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company regularly engaged in manufacturing and marketing of products specified in this Section.
- B. Installer Qualifications: An experienced installer who has specialized in installing joint sealants similar in material, design, and extent to those indicated for this Project and whose work has resulted in joint sealant installations with a record of successful in-service performance, and with a minimum of five years of experience.
- C. Verify that joint backing and release tapes are compatible with sealants specified for each location.
- D. Preconstruction Field Adhesion Testing: Before installing sealants at the in-place mockup, field-test their adhesion to joint substrates as follows:
  - 1. Perform adhesion pull-tests after sealant has fully cured, twenty-one days at a minimum temperature of 50°F. Test joints shall be performed in a location not visible to the public or as approved by the Owner.
  - 2. Conduct field tests for each type of sealant, silicone tape and joint substrate shown in the Drawings.
  - 3. Notify Owner seven days in advance of dates and times when test joints will be erected.
  - 4. Perform sealant adhesion field test per manufacturer's recommendations (e.g., with manufacturer representative present conducting adhesion test(s)).
  - 5. Acceptable application is indicated by 1) cohesive failure without adhesive failure and 2) adequate measurable sealant joint or fillet profile.

#### 1.06 IN-PLACE MOCKUP AND MOCKUP WATER TESTING

- A. Coordinate in place mockup installation and testing with Owner.
- B. Perform mockup(s) for each type of sealant and joint at locations indicated in the drawings for Ownership and SGH to review.
- C. Install mockups at least twenty-one days before examination and approval by the Owner.

- D. Mockup water testing:
  - 1. Test repaired storefront in compliance with ASTM E1105 Procedure A at a differential pressure of 6.9 psf. No water leakage shall be observed by the Engineer on the interior to be deemed a pass test.
  - 2. Test repaired curtain wall in by nozzle test in accordance with AAMA 501.2. No water leakage shall be observed by the Engineer on the interior to be deemed a pass test.
  - 3. Test repaired cement plaster in compliance with ASTM E1105 Procedure A at 0 differential pressure for 45 minutes. No water leakage shall be observed by the Engineer on the interior to be deemed a pass test.
  - 4. Test repaired sealant joints by nozzle test in accordance with AAMA 501.2. No water leakage shall be observed by the Engineer on the interior to be deemed a pass test.
- E. Repair mockups until a result acceptable to the Owner is achieved at no additional cost to the Owner.
- F. Completed mockups shall be protected during the work as standards for the remainder of the installation.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to project site in original unopened containers or bundles with labels indicating manufacturer, product name and designation, color, expiration date, pot life, curing time, and mixing instructions for multi-component materials.
- B. Store and handle materials in compliance with manufacturer's written instructions to prevent their deterioration or damage due to moisture, high or low temperatures, contaminants, or other causes.

#### 1.08 PROJECT CONDITIONS

- A. Environmental Limitations: Do not proceed with installation of joint sealants when ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer.
- B. Joint Substrate Conditions: Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.
- C. Protect the sealant from rain while curing. Do not install sealants if rain is imminent.

1.09 GUARANTEE / WARRANTY

- A. Provide two-year installer warranty; twenty-year manufacturer warranty.
- B. Include coverage of installed sealants and accessories that fail to achieve airtight and watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 – PRODUCTS

2.01 SILICONE JOINT SEALANTS

A. Type I Silicone Sealant

- 1. Provide silicone sealants that comply with ASTM C-920, of type that are high-performance, single component (Type S), non-sag (Grade NS), neutral-cured, Class 50, non-traffic (Use NT), and non-staining.
- 2. Product(s):
  - a. Dowsil Corning 795 or 791, as manufactured by Dow Corning Corporation, or equal.
  - b. Primer(s) as recommended by the manufacturer for each application.
- 3. Application:
  - a. Sealant for setting silicone tape.
  - b. Sealant for wet seals.
  - c. Sealant for fillet seals.
  - d. Sealant for seals over backer rods.
- 4. Color: As selected by Owner from standard colors.

2.02 JOINT SEALANT BACKING

- A. General: Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Backer Rod: ASTM C 1330 of type indicated below and of size and density to control sealant depth and otherwise contribute to producing optimum sealant performance.

1. SOF Rod Bi-cellular backer rod as manufactured by Nomaco; round, open/closed-cell, bi-cellular polyethylene foam rod, non-gassing, oversized 30% to 50% larger than joint width, or approved equal.
  - C. Bond-Breaker Tape: Polyethylene pressure-sensitive tape recommended by sealant manufacturer to suit application.
  - D. Wet Glazing Backing – Tremco Headless Wedge or Arrow-Shim Gasket
- 2.03 EXTRUDED SILICONE
- A. Extruded silicone and silicone sealant must be from the same manufacturer.
  - B. Silicone Tape: Preformed low modulus silicone extrusion.
    1. Product: Dow Dowsil 123 Silicone Seal or equal.
    2. Color: Match glazing.
- 2.04 ACCESSORIES
- A. Compatibility: Provide related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
  - B. Primer: Material recommended by joint sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.
  - C. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials, free of oily residues or other substances capable of staining or harming joint substrates and adjacent nonporous surfaces in any way and formulated to promote optimum adhesion of sealants with joint substrates.
  - D. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Inspect areas involved in the Work to establish extent of Work, access, and need for protection of surrounding construction.

- B. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- C. Provide additional joint preparation, beyond that outlined in the Specifications, as required by sealant manufacturer and Owner's recommendations based on mockups and field adhesion tests.
- D. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.02 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint sealant manufacturer's written instructions and the following requirements:
  - 1. Remove all existing sealant and mortar as close to the joint edges as possible from joints scheduled to be completely resealed.
  - 2. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant, including dust, paints, old joint sealants, old glazing, oil, grease, waterproofing, water repellents, water, surface dirt, and frost.
  - 3. Clean porous joint substrate surfaces by brushing, grinding, mechanical abrading, or a combination of these methods to produce a clean, sound substrate capable of developing optimum bond with joint sealants. Remove loose particles remaining after cleaning operations above by vacuuming or blowing out joints with oil-free compressed air.
  - 4. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
  - 5. Clean joint substrates using the two-cloth cleaning method with isopropanol alcohol (IPA). The two-rag wipe method consists of a solvent wipe followed by a dry cloth wipe. Multiple cleanings may be required to properly clean a substrate in accordance with the joint sealant manufacturer's written instructions.
- B. Joint Priming: Prime joint substrates where recommended in writing by sealant manufacturer, based on preconstruction joint-sealant-substrate tests, or prior experience. Apply primer to comply with joint sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.

- C. Masking Tape: Use masking tape where required to prevent contact of sealant with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

### 3.03 INSTALLATION OF PREFORMED SILICONE

- A. General: Comply with preformed silicone manufacturer's written installation instructions for products and applications indicated including surface preparation, unless specifically noted otherwise in this Specification.
- B. Solvent wipe nonporous substrates.
- C. Sealant: Apply bead of silicone sealant at perimeter of boot 3/8 in. wide by 1/4 in. thick min. inside masking tape.
- D. Install silicone boot within 5 min. of sealant application, press silicone boot into wet sealant. Apply consistent pressure to provide uniform adhesion.
- E. Remove any masking tape along joint within 10 min. of tooling liquid sealant. Avoid contaminating adjacent surfaces with excess sealant. Remove all traces of smears and droppings on metal or glass surfaces promptly, using a solvent recommended by the sealant manufacturer that will not damage or discolor the building surfaces. Remove smears and droppings on porous surfaces by mechanical means after the initial cure of the sealant.
- F. Coordinate work to prevent contamination of fresh sealant by dust or other debris.

### 3.04 GENERAL SEALANT INSTALLATION

- A. Perform preparation, installation, and testing in accordance with the referenced standards, manufacturer's published product data, and approved written recommendations by the sealant manufacturer's field representative, except as otherwise stated in this Section.
  - 1. Use materials best suited to installation as recommended by sealant manufacturers. Provide sealants essential in maintaining continued integrity of a watertight, weathertight barrier.
  - 2. Apply sealant within recommended temperature ranges. Consult manufacturer when sealant cannot be applied within recommended temperature ranges.
- B. Form joints as detailed on Drawings, concave, unless shown otherwise, and free of air pockets, embedded matter, ridges, and sags.

- C. Use appropriate masking tape to protect adjacent surfaces.

### 3.05 SEALANT JOINT CONSTRUCTION

- A. Sealant joints shall contain bond-breaker tape, backer rod, or other approved means to allow the sealant to stretch freely while the joint moves, unless specifically detailed. Avoid three-sided adhesion in joints. Follow manufacturers' current written guidelines for installation unless specifically noted in this Section.
- B. Inspect joints for proper width and report immediately noncompliance with the Specifications in writing to the Owner prior to application of sealant so that adjustments can be made to provide proper joint sizes before joint is sealed.

### 3.06 INSTALLATION OF JOINT SEALANTS

- A. General: Comply with joint sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.
- B. Sealant Installation Standard: Comply with recommendations of ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- C. At fillet (triangular) joints, extend the sealant at least 3/8 in. onto the substrate beyond and parallel to the bond breaker tape or backer rod and at least 3/8 in. onto the substrate perpendicular to the tape or rod, unless detailed otherwise. The minimum thickness between the edge of the tape or rod and the surface of the sealant joint shall be 1/4 in.
- D. At butt joints, the centerline depth of joint shall be one-half of joint width, with minimum depth of 1/4 in. and maximum depth of 1/2 in.
- E. Install sealant backings of type indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
  - 1. Do not install backer rod until primers have completely dried. Install clean, dry backer rod into joint openings against dry substrates.
  - 2. Do not touch with fingers or otherwise contaminate the substrate surfaces while inserting the backer rod.
  - 3. Do not leave gaps between ends of sealant backings. Butt ends tightly. Do not twist rods together.
  - 4. Do not stretch, twist, puncture, or tear sealant backings. Remove any rod containing punctures or tears, and solvent-clean the surfaces again.

5. Change rod sizes as frequently as is required by the variation in the joint width. Provide a full range of rod sizes at the site of sealant work. Rods shall be at least 2 ft long.
  6. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials. Replace any backer rod not sealed over by the end of each day, and solvent-clean surfaces again.
- F. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and back of joints.
- G. Install sealants by proven techniques to comply with the following and at the same time backings are installed:
1. Inspect each cartridge or container of sealant before use and verify that the production date is within six months of the date of application. Remove sealant more than six months old from the site.
  2. Mask exposed surfaces along joint before applying sealant.
  3. Recheck correct backer rod positioning before applying sealant.
  4. Place sealants so they directly contact and fully wet joint substrates.
  5. Completely fill the recesses provided for each joint configuration.
  6. Produce uniform cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
  7. Avoid contaminating adjacent surfaces with excess sealant.
  8. Coordinate Work to prevent contamination of fresh sealant by dust or other debris.
- H. Tooling of Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified below to form smooth, uniform beads of configuration indicated to eliminate air pockets and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealants from surfaces adjacent to joint.
  2. Do not use any liquid for tooling.
  3. Provide a smooth, uniform finished surface.
  4. Remove masking tape within 10 min. of tooling sealant.

3.07 FIELD QUALITY CONTROL

- A. Field Adhesion Testing: Field-test joint-sealant adhesion to joint substrates as follows.
1. Perform adhesion pull tests after sealant has fully cured, twenty-one days at a minimum temperature of 50°F.
  2. Cut sealant across joint and cut a 3 in. long tab along the sides of the joint. Mark a 1 in. segment at the base of the sealant tab. Grasp the remaining 2 in. of the tab and pull the sealant at 90° to the surface.
  3. Acceptable application: cohesive failure (tearing within itself) with no adhesive (debonding) failure, and adequate sealant joint or fillet profile.
  4. If sample debonds, the sealant manufacturer shall make written recommendations regarding changes in surface preparations or primers. Submit recommendations to the Owner for approval.
  5. Repeat sealant adhesion trials as required to produce an acceptable application.
  6. Inspect tested joints and report on the following:
    - a. Whether sealants in joints connected to pulled out portion failed to adhere to joint substrates or tore cohesively. Include data on pull distance used to test each type of product and joint substrate. Compare these results to determine if adhesion passes sealant manufacturer's field adhesion hand-pull test criteria.
    - b. Whether sealants filled joint cavities and are free from voids.
    - c. Whether sealant dimensions and configurations comply with specified requirements.
  7. Record test results in a field adhesion test log. Include dates when sealants were installed, names of persons who installed sealants, test dates, test locations, whether joints were primed, adhesion results and percent elongations, sealant fill, sealant configuration, and sealant dimensions.
  8. Repair sealants pulled from test area by applying new sealants following same procedures used to originally seal joints. Ensure that original sealant surfaces are clean and new sealant contacts original sealant.

9. Test Frequency
  - a. Perform five tests at first 1000 lf (or less) of applied sealant at each substrate type and one test for each 1000 lf of applied silicone seal thereafter or a maximum of 10 total tests spread throughout the extents of the building.
    - (1) For seals applied between dissimilar materials, test both sides of joint.
- B. Field Water Testing
  1. Storefront – Two locations, test per ASTM E1105.
  2. Curtain wall – 100 lf of joints, tested in accordance with AAMA 501.2
  3. Cement plaster – Two locations, each location for 45 minutes at 0 psf differential pressure.
- C. Protection
  1. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion.
  2. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

END OF SECTION 079200

SECTION 092410

CEMENT PLASTER REPAIR

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 WORK INCLUDED

- A. The work of this Section includes providing the necessary labor, materials, equipment, and supervision to perform the following, as shown on the Drawings, and those specified by reference to this Section:

1. Repair exterior gypsum sheathing at localized areas as necessary.
2. Repair cement plaster cracks.
3. Repair cement plaster accessories (i.e., reveals and control joints).
4. Repair cement plaster at investigation openings.

- B. Related Sections include the following:

1. Division 7 Section "Joint Sealants".
2. Division 9 Section "Silicone Elastomeric Coatings".

1.03 REFERENCE STANDARDS

- A. California Building Code Section 25 – Gypsum Panel Products and Plaster.
- B. ASTM C 150/ C 150M – Standard Specification for Portland Cement.
- C. ASTM A 653/A 653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by Hot-Dip Process.
- D. ASTM C 847 – Standard Specification for Metal Lath.
- E. ASTM C 897 – Standard Specification for Aggregate for Job-Mixed Portland Cement-Based Plasters.

- F. ASTM C 926 – Standard Specification for Application of Portland Cement-Based Plaster.
- G. ASTM C 932 – Standard Specification for Surface-Applied Bonding Compounds for Exterior Plaster.
- H. ASTM C 933 – Standard Specification for Welded Wire Lath.
- I. ASTM C 1063 – Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster.

1.04 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Safety data sheets (SDS) for each product used.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Installer that has a minimum five years of documented experience installing work similar in size and scope to work of this Project and employs workers trained and approved by the manufacturer to apply the manufacturer's products.
- B. Pre-installation Conference: Conduct a conference at the Project site to comply with requirements in Division 01 Section "Project Management and Coordination."
- C. In-place Mockup:
  - 1. Coordinate in-place mockup installation with Owner.
  - 2. Perform mockup(s) at locations indicated in the drawings for Ownership and SGH to review.
  - 3. Before commencing the Work, perform mockups to demonstrate aesthetic effects and set quality standards for materials and execution for the following:
    - a. Crack repair at least 5 feet in length.
    - b. Installation of sealant at cement plaster control joint at least 5 feet in length.
    - c. Installation of extruded silicone tape at the intersection of the cement plaster reveal at least 5 ft in length vertically and horizontally.
    - d. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original and unopened containers, labeled with type and name of products and manufacturers, and the following information:
  - 1. Product name or title of material.
  - 2. Manufacturer's stock number and date of manufacturer.
  - 3. Contents by volume, for pigment and vehicle constituents.
  - 4. Thinning instructions (if permitted).
  - 5. Application instructions.
  - 6. Color name and number.
  - 7. Handling instructions and precautions.
  - 8. VOC content.
- B. Comply with manufacturer's written instructions for minimum and maximum temperature requirements and other conditions for storage.
- C. Store cementitious materials off the ground, under cover, and in a dry location.
- D. Protect materials from freezing.
- E. Take necessary measures to ensure workers and work areas are protected from fire and health hazards resulting from handling, mixing, and applying materials.
- F. Store rolls on end.

1.07 PROJECT CONDITIONS

- A. Comply with ASTM C926 and ASTM C1063 requirements.
- B. Environmental Limitations: Apply plaster and allow for 24-hour dry time when ambient temperature is greater than 40°F.
- C. No plaster shall be installed on the last two days of the scheduled work week to allow for moist curing to occur during the normal work week.

## PART 2 – PRODUCTS

### 2.01 CEMENT PLASTER SYSTEM

A. Cement plaster system includes components listed.

1. System thickness: 7/8 in.

### 2.02 MATERIALS

A. Portland Cement Plaster Material

1. Portland Cement: ASTM C 150.
2. Sand: ASTM C 897, natural or manufactured sand.
3. Hydrated Lime: ASTM C206, Type S.
4. Finish Coat: Match existing finish.

B. Water: Potable and free from impurities.

C. Plaster Materials

1. Pre-blended portland cement plaster (fibered): Factory proportioned, pre-sanded, fiber-reinforced portland cement plaster for trowel application, field mixed with water.
  - a. Subject to compliance with requirements, provide StoPowerwall: Sto Corporation for scratch and brown coat for three-coat plasterwork.
2. Ready-Mixed Finish-Coat Plaster: Mill-mixed portland cement, aggregates and proprietary ingredients.
  - a. Subject to compliance with requirement, provide Sto Primer and Finish: Sto Corporation for finish coat for three-coat plasterwork. Texture to match existing adjacent cement plaster surface texture.

D. Portland Cement Plaster Metal Accessories

1. General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.
2. Expanded Metal Lath: Meets ASTM C 847 G90 hot-dipped galvanized, self-furring, dimpled diamond metal lath, 3.4 lbs per square yard.

3. Casing Beads: Fabricated from zinc-coated (galvanized) steel G90; square-edged style; with 1-3/8 in. solid flanges.
  4. Long-Leg Casing Bead: Fabricated from zinc-coated (galvanized) steel G90; square-edged style; with 3-1/2 in. solid flanges.
  5. Reinforced Corner Bead: Fabricated from zinc-coated (galvanized) steel G90, 3-1/4 in. flanges and a reinforced steel rib.
  6. Reveals: Extruded aluminum reveals, size to match existing.
  7. Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C1063.
- E. Accessories
1. Weather-Resistive Barrier (WRB): FS UU-B-790a, Type I Grade D, Style 2 vapor-permeable paper.
  2. Exterior Sheathing
    - a. ASTM C1177 and ASTM E119, UL Rated, Type DGG; 5/8 in. to match existing.
      - (1) DensGlass Gold.
    - b. Fasteners: Steel drill screws; corrosion resistant rated, ASTM C1002. Screw length shall be long enough to protrude through metal stud three full threads.
  3. Bonding Agent: Weld-Crete Concrete Bonding Agent by Larsen Products Corp.
  4. Fasteners for attaching weather-resistant barrier to substrates: Provide stainless steel staples.
  5. Wire: ASTM A641/A641M, Class 1 zinc coating, soft temper, not less than 0.0475-inch diameter, unless otherwise indicated.
- F. Sealant:
1. Material: Division 7 Section 079200 "Joint Sealants".
- G. Extruded Silicone Tape at Reveal:
1. Material: Division 7 Section 079200 "Joint Sealants".

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. General Installation: Install in accordance with manufacturer's written instructions and recommendations.
- B. Examine substrates and conditions, with the Installer present, under which texture finish system will be applied for compliance with application requirements.
- C. Surfaces to receive finish system must be thoroughly dry before materials are applied.
- D. Notify Project Engineer in writing of anticipated problems using products specified over existing substrates.
- E. Notify Project Engineer in writing of organic growth encountered during project. Proceed with work only after conditions have been remediated per the industrial hygienist's work plan.
- F. Begin application only after unsatisfactory conditions have been corrected and surfaces to receive materials are thoroughly dry.
- G. Start of application within a particular area will be construed as the Installer's acceptance of surface conditions.
- H. Verify that areas and conditions under which Work is to be performed permit proper and timely completion of the Work.

### 3.02 PREPARATION

- A. Protect adjacent surfaces from damage by sealing, masking, or boarding up as required.
- B. Surface Preparation: Clean and prepare surfaces to receive materials according to the manufacture's written instructions for the particular substrate conditions and as specified.
  - 1. Remove efflorescence, chalk, dust, dirt, release agents, grease, oils, and similar conditions.
  - 2. Remove mildew and neutralize surfaces according to the manufacturer's written recommendations before patching materials are applied.
  - 3. Do not apply materials over surfaces where the moisture content exceeds that permitted in the manufacturer's written instructions.

### 3.03 CEMENT PLASTER PATCHING

#### A. GENERAL INSTALLATION

1. Protect adjacent Work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.
2. Do not apply new materials until the surfaces to receive plaster are clean, dry, and smooth. Do not work in rain or the presence of water, temperatures below 40°F or above 80°F, or in wind gusts over 30 mph.
3. Hot weather (above 75°F): Protect plaster from direct sunlight and exposure to wind. Avoid rapid evaporation of water in plaster mix before, during, and after application.
4. Do not use tools, buckets, or other implements that are rusty or contain other foreign matter to mix or apply plaster.
5. Do not allow wrappers, packaging materials, or other debris or impurities to be included in or behind the plaster.
6. Remove tools, buckets, and materials from work areas and store neatly at a central location daily at the end of Work.
7. Clean adjacent surfaces of excess plaster and debris from the Work daily.
8. Comply with plaster application and lathing installation procedures in ASTM C 926, Section 2512 Exterior Plaster of the 2025 California Building Code, and "The Plaster and Drywall Systems Manual," except where they conflict with these Specifications.

#### B. WATER-RESISTIVE BARRIER (WRB) SYSTEM INSTALLATION

1. Verify continuous panel sheathing installation at exterior surfaces receiving cement plaster.
2. Coordinate the installation of cement plaster finish with other components related to the exterior wall system.
3. Attach barrier tight to substrate, free of voids, wrinkles, buckles and fishmouths.
4. Overlap corners a minimum of 6 in.
5. Install two layers of WRB over continuous panel sheathing, under exterior surfaces receiving cement plaster.

- a. Horizontal laps: 6 in. minimum.
  - b. Vertical laps: 6 in. minimum.
6. Installed WRB to be watertight at the field and tie-in to the existing WRB.
  7. Cover barrier within thirty days of installation. Material must be removed and reinstalled beyond thirty days at no cost to the Owner.
  8. Inspect weather resistive barrier prior to the application of lath and plaster. Install additional barrier at tears, perforations, water-damaged and/or other similar damage for a water-shedding assembly.
- C. CEMENT PLASTER ACCESSORIES INSTALLATION
1. Install according to ASTM C 1063 and at locations indicated on Plans, Drawings, and Specifications.
  2. Install sheet metal backing plate as required to complete the installation.
  3. Install casing beads as indicated on Plans, Drawings, and Specifications. Butt and align ends; set level; secure rigidly in place.
  4. Install long leg casing beads as indicated on Plans, Drawings, and Specifications. Lap 4 in. and align ends; set level; secure rigidly in place; weather-lap trim pieces. Apply sealant at accessory joints.
  5. Install corner reinforcement at all corners.
  6. Install reveal to match the existing sheet metal backing plate at 8 in. on center maximum.
  7. Metal Lath Installation:
    - a. Fastener locations: Install fasteners at self-furring dimples, into framing members or sheet metal backing plate.
    - b. Fasteners shall project through metal stud of sheet metal backing plate not less than 3/8 in. or three full threads, whichever is greater, unless more stringent requirements are indicated in ASTM C1063.
    - c. Fasteners shall engage not less than three strands of lath.
    - d. Lap ends of lath minimum 2 in. Secure end laps with tie wire to existing lath where they occur between supports.
    - e. Lap sides of lath minimum 1-1/2 in., and secure with tie wire.

D. CEMENT PLASTER APPLICATION AND CURING

1. Install according to ASTM C 1063 and at locations indicated on Plans, Drawings, and Specifications.
2. Apply bonding agent at edges of the existing cement plaster. Comply with manufacturer's written instructions and recommendations for application of products, including surface preparation.
3. Apply scratch coat to a nominal thickness of 3/8 in.
  - a. Apply plaster with sufficient pressure to key into and embed the metal lath, cover the lath, and to permit scoring the surface.
  - b. Score the plaster upon completion of each patched area in preparation for a second coat.
  - c. Score horizontally.
4. Brown Coat: Moist cure first coat up to 48 hours and dampen the scratched surface with water immediately before applying the second coat.
  - a. Apply second coat with sufficient pressure to ensure intimate contact with the first coat and as needed to bring the stucco to a uniform thickness that matches the grounds of the accessories. Use a rod or straight edge to bring the surface to a true, even plane. Fill depressions in plane with plaster. Final thickness of cement plaster shall be 3/4 in.
  - b. After the plaster has become slightly firm, float the surface lightly with a darby or wood float to densify the surface and to provide a smooth, even surface.
  - c. Moisture cure after the plaster has set by lightly fogging for at least 48 hours. Fog as frequently as required during the 48 hour period to prevent loss of moisture from the plaster. Avoid eroding the stucco surface with excess moisture.
  - d. Moist cure brown coat for a minimum of seven days.
5. Apply scratch coat to a nominal thickness of 3/8 in., brown coat to a nominal thickness of 3/8 in., and a finish coat to a nominal thickness of 1/8 in.
6. Keep cement plaster system damp for at least 48 hours after application.

7. Protector work from uneven and excessive evaporation during hot, dry weather and from strong blasts of wind.
8. Finish application
  - a. Primer installation: Apply primer evenly with brush, roller or spray equipment over the clean, dry cement plaster and allow drying thoroughly before applying finish.
  - b. Apply finish directly over the prepared brown coat in accordance with the manufacturer's written recommendations.
  - c. Do not begin application of finish coat material when a chance of rain is forecast during, and for 24 hours after, application.

### 3.04 CEMENT PLASTER REPAIRS

- A. At cracks of width greater than or equal to 1/64 in.:
  1. Rout out crack at approximately 45° to equal width and depth.
  2. Thoroughly clean crack of loose concrete, dust, and debris.
  3. Install sealant in crack per Division 7 Section "Joint Sealants."
  4. Stipple sealant to match cement plaster texture.
- B. At control joints:
  1. Thoroughly clean control joint of dust and debris. Verify substrate is dry prior repair.
  2. Install sealant at control joint per Division 7 Section "Joint Sealants."
- C. At reveals:
  1. Install custom silicone extrusions per Division 7 Section "Joint Sealant."
- D. At penetrations:
  1. Thoroughly clean control joint of dust, debris and foreign materials. Verify substrate is dry prior repair.
  2. Install sealant joint and bonder break around perimeter of penetration crack per Division 7 Section "Joint Sealants."

3.05 CLEANING AND PROTECTION

- A. Cleanup: At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
  - 1. After completing coating work, clean spattered surfaces. Remove spattered cement plaster by washing, scraping, or other methods, being careful not to damage adjacent finished surfaces.
  - 2. Remove temporary coverings and protection.
- B. Protection
  - 1. Protect work of other trades from damage. Correct damage by cleaning, repairing, replacing, and recoating as approved by Project Engineer. Remove masking tape and other protection media and its residue after painting.

3.06 REPAIRS

- A. Repair or replace Work to eliminate cracks, dents, blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed at no additional cost to the Owner.

END OF SECTION 092410

SECTION 099600

SILICONE ELASTOMERIC COATING

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 WORK INCLUDED

- A. This Section includes the following:
  - 1. Surface preparation.
  - 2. Field application of silicone elastomeric coatings to exterior cement plaster walls.
- B. Related Sections include the following:
  - 1. Division 7 Section "Joint Sealants".
  - 2. Division 9 Section "Cement Plaster Repair".

1.03 REFERENCE STANDARDS

- A. ASTM D16 – Standard Terminology for Paint, Related Coatings, Materials, and Applications.
- B. PDCA (Painting and Decorating Contractors of America) – Painting – Architectural Specifications Manual.
- C. CARB (California Air Resources Board).
- D. BAAQMD (Bay Area Air Quality Management District).

1.04 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Safety data sheets (SDS) for each product used.
- C. Manufacturer's standard color chart for color selection.

- D. Samples: Submit the following samples:
  - 1. Submit three painted samples, illustrating selected colors and textures for each color and system selected with specified coats cascaded. Submit on cement plaster surface, 6 in x 6 in. in size for Owner's approval.
- E. Certification: By the manufacturer that all paints and coatings comply with the VOC limits specified.
- F. Manufacturer's Instructions: Indicate special surface preparation procedures.

#### 1.05 QUALITY ASSURANCE

- A. Perform adhesion test on the coatings after coating application at in-place mockup to ensure proper bond of coating to substrate. If proper adhesion or specified dry film thickness has not been achieved, Contractor shall perform corrective work to the satisfaction of the Project Engineer and at no extra cost to the Owner.
- B. Applicator Qualifications: A firm with a minimum of five (5) years of documented experience in applying silicone elastomeric coating systems similar in material and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- C. Pre-installation Conference: Contractor, installer, manufacturer's representative, and representatives of other affected trades shall meet at the Project site to review coating procedures, acceptance of substrate surfaces, and coordination with other trades.

#### 1.06 REGULATORY REQUIREMENTS

- A. California Air Resources Board (CARB)

#### 1.07 IN-PLACE MOCKUP AND MOCKUP WATER TESTING

- A. Coordinate in-place mockup installation and testing with Owner.
- B. Perform mockup(s) at locations indicated in the drawings for Ownership and SGH to review.
- C. Color, texture and finish:
  - 1. Provide a sample of the coating system minimum of 6 ft by 6 ft, illustrating coating color, texture, and finish.

- D. Coating Adhesion:
  - 1. Embed reinforcing fabric in-between coats for adhesion test.
  - 2. Manufacturer to perform mockup in the presence of the Project Engineer.
  - 3. Not acceptable: Adhesive failure between coats.
- E. Coating and cement plaster repairs water resistance:
  - 1. Perform water testing conforming to ASTM E2128 on the following:
    - a. Repaired cement plaster panel including at least one reveal, one reveal intersection, at least one control joint, at least one crack repair, and application of silicone elastomeric coating.
    - b. Not acceptable: Moisture infiltration.
- F. Make additional samples until a result acceptable to the Project Engineer is achieved at no additional cost to the Owner.
- G. Do not proceed with the work until the mockups are approved by the Engineer. Continue mockups until approved by Engineer.
- H. Approved mockup will be the standard of the quality of the work and may remain as part of the work.
- I. Final approval of colors will be from Mockups.

#### 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 32°F and a maximum ambient temperature of 90°F, in a well-ventilated area, and as required by the manufacturer's instructions.

#### 1.09 PROJECT CONDITIONS

- A. Apply coatings only when the temperature of surfaces to be coated and the surrounding air temperatures are between 40°F and 90°F, unless otherwise permitted by the manufacturer's written instructions.
- B. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85%; or at temperatures less than 5°F above the dewpoint; or to damp or wet surfaces.

1. Allow wet surfaces to dry thoroughly and attain the temperature and conditions specified before starting or continuing the coating operation.
- C. Do not apply products when inclement weather is expected within 24 hours, unless substrates are completely protected.
- D. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- E. Do not apply materials until sealants have been allowed to cure a minimum of seven days.

#### 1.10 FIELD TESTING

- A. Perform water testing conforming to ASTM E1105 on the cement plaster mockup areas as described in Mockup section above and indicated on the Drawings.
- B. Locations to be selected by Project Engineer.
- C. Owner reserves the right to perform water testing of any area that has been repaired.

#### 1.11 GUARANTEE / WARRANTY

- A. Elastomeric Coating Warranty: Manufacturer's standard form in which the manufacturer agrees to repair or replace elastomeric coatings that fail within specified warranty period. Failures include, but are not limited to, chalk, peel, fade, blister, or water penetration through the coating.
  1. Paint manufacture: Ten (10) years on labor and materials, with an option for a 5-year extended warranty.
  2. Installer: Five (5) years on labor and materials.

#### 1.12 EXTRA MATERIALS

- A. Furnish extra elastomeric coating materials from same production run as materials applied and in quantities described below. Package materials in unopened, factory-sealed containers for storage and identify with labels describing contents, including color, type, and surface texture. Deliver extra materials to Owner.
  1. Quantity: Furnish Owner with 2 gallons of each color and finish of silicone elastomeric coating materials applied.

## PART 2 – PRODUCTS

### 2.01 COLORS

- A. Colors: As indicated in the drawings, provide DOWSIL ALLGUARD Silicone Elastomeric Coating willow gray (main) color and slate (accent) color and as approved by the Owner.

### 2.02 MATERIALS

- A. Silicone Elastomeric Coating:
  - 1. Dow Corning Corporation; AllGuard Silicone Elastomeric Coating.

### 2.03 ACCESSORY MATERIALS

- A. Accessory Materials: Provide all primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials required to achieve the finishes specified whether specifically indicated or not; commercial quality.

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. Verify that substrate conditions are ready to receive work as instructed by the product manufacturer, where applicable.
- B. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Proceed with coating application only after unsatisfactory conditions have been corrected and surfaces are thoroughly dry.
- D. Do not proceed with coating application without verification that cement plaster repairs are fully cured.
- E. Beginning coating application will be construed as the Installer's acceptance of surface conditions.

### 3.02 PREPARATION

- A. Remove hardware and hardware accessories, plates, machined surfaces, light fixtures, and similar items already installed that are not to be coated.

1. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and product application.
  2. After completing operations in each area, reinstall items removed, using workers skilled in trades involved.
- B. Protection: Provide surface-applied temporary protection before surface preparation and coating. Protect adjacent surfaces not designated to receive silicone elastomeric coating. Provide protection for pedestrians, vehicles, landscaping, and surrounding areas to prevent contact with silicone elastomeric coating materials.
- C. Surface Preparation: Clean and prepare surfaces to be coated according to manufacturer's written instructions for particular substrate conditions and as specified.
1. Cementitious Surfaces: Prepare cement plaster surfaces to receive silicone elastomeric coatings. Remove efflorescence, chalk, dust, dirt, release agents, grease, oils, and similar impediments to good adhesion by water blasting followed by a clear water rinse after completing Work in Division 9 "Cement Plaster Repair".
  2. Silicone Surfaces: Prepare silicone tape and silicone sealant joints to receive silicone elastomeric coatings. Wipe silicone surfaces with denatured alcohol.
- D. Material Preparation: Mix and prepare materials according to coating manufacturer's written instructions.
1. Maintain containers used in mixing and applying elastomeric coatings in a clean condition, free of foreign materials and residue.
  2. Stir materials before application to produce a mixture of uniform density. Stir as required during application. If surface film forms, do not stir film into material. If necessary, remove film and strain coating material before using.
- E. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match color of finish coat, but provide sufficient differences in shade of undercoats to distinguish each separate coat.

### 3.03 APPLICATION

- A. General: Apply elastomeric coatings according to the manufacturer's written instructions.

1. Do not coat over conditions detrimental to formation of a durable coating film, such as dirt, rust, scale, grease, moisture, and scuffed surfaces.
  2. Do not apply finishes to surfaces that are not dry.
- B. Apply two coats in uniform finish using roller, airless spray or nylon brush. Allow minimum 2 hours drying time between coats—allow more time as required based on manufacturer’s requirements or climatic conditions.
  - C. Fill all surface irregularities and rough areas per the manufacturer’s guidelines to provide a level surface.
  - D. Apply each coat to uniform finish. Minimize brush strokes or roller marks.
  - E. Make edges of coating adjoining other materials or colors clean and sharp with no overlapping.
  - F. Maintain a set edge to avoid lap marks.
  - G. Finish elastomeric coating shall have no pinholes, spotting, holidays, laps, brush marks, runs, sags or other visible surface imperfections and shall fully coat the wall surface.
  - H. Minimum Coating Thickness: Apply paint materials no thinner than the manufacturer’s recommended spreading rate or 10 mils DFT, whichever is greater (two coats).
  - I. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or recoat work not complying with specified requirements.

#### 3.04 FIELD QUALITY CONTROL

- A. Perform a minimum of one adhesive test for every 2,500 sq ft in the presence of the manufacturer’s representative (as required) to ensure compliance with warranty.
- B. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary during the period when paint is being applied:
  1. The Owner may engage the services of an independent agency to sample the paint material being used. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
  2. The testing agency or Owner’s Engineer will perform appropriate tests for the characteristics as required by the Owner including by not limited to Dry Film Thickness and adhesion.

3. The Owner may direct the Contractor to stop painting if test results show material being used does not comply with the specified requirement. The Contractor shall remove non-complying paint from the site, pay for testing, and repaint surfaces previously coated with the rejected paint. If necessary, the Contractor may be required to remove rejected paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible

### 3.05 REJECTION

- A. Basis for rejection of coating applications include:
  1. Mismatched colors from different batches.
  2. Runs, drips, sags, orange peeling and other aesthetic coating defects.
  3. Pinholes, voids, skips and other performance-diminishing defects defined in Society of Protective Coatings/Painting and Decorating Contractors (SSPC/PDCA) documents.
  4. Coating failing paint adhesion and thickness tests.

### 3.06 CLEANING AND PROTECTION

- A. Cleanup: At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
  1. After completing coating work, clean spattered surfaces. Remove spattered coatings by washing, scraping, or other methods, being careful not to scratch or damage adjacent finished surfaces.
  2. Remove temporary coverings and protection.
- B. Protection
  1. Protect the work of other trades from damage, whether being coated or not. Correct damage by cleaning, repairing, replacing, and recoating as approved by the Project Engineer. Remove masking tape and other protection media and its residue after painting.
  2. Provide "Wet Paint" signs to protect newly coated finishes. Remove temporary protective wrappings provided by others to protect their work after completing coating operations.
  3. Touch up and restore damaged or defaced coated surfaces after Substantial Completion.

END OF SECTION 099600

SECTION 099601

HIGH-PERFORMANCE COATINGS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.02 WORK INCLUDED

- A. This Section includes surface preparation and field application of high-performance coating systems to the following items and surfaces scheduled:
  - 1. Hollow metal door frames.
  - 2. Metal window frames above hollow metal doors.
  - 3. Metal overhangs.
  - 4. Sheet metal copings.
  - 5. All other metal surfaces at the building.

1.03 DEFINITIONS

- A. Standard coating terms defined in ASTM D 16 apply to this Section.

1.04 SUBMITTALS

- A. Product Data: For each coating system indicated. Include primers.
  - 1. Manufacturer's Information: Manufacturer's technical information, including label analysis, safety data sheets, and instructions for handling, storing, and applying each material specified.
- B. Certification by the manufacturer that products supplied comply with local, state, and federal requirements that limit the amount of VOCs in coating products.
- C. Qualification Data: For firms and persons specified in the "Quality Assurance" Article to demonstrate their capabilities and experience. Include lists of completed projects in the past seven years with project names and addresses, names and addresses of Architect/Engineers and Owners, and other information specified.

- D. Samples: Submit the following samples:
1. Submit three painted samples, illustrating selected colors and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate for Owner's approval.
  2. Provide stepped Samples defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until the required sheen, color, and texture are achieved.

1.05 QUALITY ASSURANCE

- A. Applicator Qualifications: Engage an experienced applicator who has completed high-performance coating system applications similar in material and extent to those indicated for Project and whose work has a record of successful in-service performance.
- B. Mockups: Provide a full-coat mockup for approval at each substrate to receive coating.
1. Existing Metal Coatings Mockup
    - a. Construct 3 ft x 3 ft mockups of coating installation on each substrate before proceeding with the work. The location of the mockups will be selected or approved by the Engineer.
      - (1) Mockups to be done on each substrate to be painted with and without primer. Provide representative sections of the following substrates for a mockup:
        - (a) Hollow metal door frames.
        - (b) Metal window frames above hollow metal doors.
        - (c) Metal overhangs.
        - (d) Sheet Metal Copings.
    - b. Conduct adhesion tests of the paint coatings at each mockup location according to ASTM D-3359 X – Cut Tape Test Method in the presence of the Engineer, Contractor, and Manufacturer (representative).
      - (1) Manufacturer will determine whether adhesion of paint without primer is acceptable based on results of adhesion testing.

- (2) If adhesion without primer is acceptable to the Manufacturer, delete primer from the scope and issue credit to the Owner following written approval from the Manufacturer and Engineer.
- c. Do not proceed with the work until the mockup is approved by the Engineer.
- d. Coating manufacturer shall be present during evaluation of mockup.

1.06 REGULATORY REQUIREMENTS

- A. California Air Resources Board (CARB).
- B. Bay Area Air Quality Management District (BAAQMD).

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label with the following information:
  - 1. Name or title of material.
  - 2. Product description (generic classification or binder type).
  - 3. Manufacturer's stock number and date of manufacture.
  - 4. Contents by volume, for pigment and vehicle constituents.
  - 5. Thinning instructions.
  - 6. Application instructions.
  - 7. Color name and number.
  - 8. Handling instructions and precautions.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45°F. Maintain containers used in storage in a clean condition, free of foreign materials and residue.
  - 1. Protect materials from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and applying coatings.

- C. Chemical Treatment (as required): Observe manufacturer's instructions for safe handling of chemical treatment.
  - 1. Use acid-resisting (rubber, stainless steel, or plastic) buckets, troughs, or other suitable containers.
  - 2. Contain material runoff and dispose of in strict accordance with AHJ standards.
  - 3. Wear rubber gloves, aprons, and goggles to avoid contact with materials, per manufacturer's instructions.

#### 1.08 PROJECT CONDITIONS

- A. Apply coatings only when temperature of surfaces to be coated and surrounding air temperatures are between 50°F and 120°F or as required by manufacturer.
- B. Do not apply coatings in snow, rain, fog, or mist; when relative humidity exceeds 85%; at temperatures less than 5°F above the dewpoint; or to damp or wet surfaces.
  - 1. Allow wet surfaces to dry thoroughly and attain the temperature and conditions specified before proceeding with or continuing the coating operation.
  - 2. Provide temporary protection as required to the maintain environmental conditions in strict accordance with the above criteria and the manufacturer's installation instructions.

#### 1.09 EXTRA MATERIALS

- A. Furnish extra high-performance coating materials from the same production run as materials applied and in quantities described below. Package coating materials in unopened, factory-sealed containers for storage and identify with labels describing contents.
  - 1. Quantity: Furnish an additional 5%, but not less than 1 gal or 1 case, as appropriate, of each material and color applied.

#### 1.10 WARRANTY

- A. Provide manufacturer's material warranty for a minimum ten-year term from the date of substantial completion.
- B. Application contractor shall provide a five-year warranty including labor and material to repair coatings that peel, blister, chalk or otherwise fail to perform as intended.

## PART 2 – PRODUCTS

### 2.01 GENERAL

- A. Material Compatibility: Provide primers, undercoats, and finish-coat materials that are compatible with one another and substrates indicated under conditions of service and application, as demonstrated by the manufacturer primed on testing and field experience.

### 2.02 COLORS

- A. Colors: To match the color of DOWSIL ALLGUARD Silicone Elastomeric Coating slate color and as approved by the Owner.

### 2.03 EXTERIOR HIGH-PERFORMANCE COATING SYSTEMS

- A. The basis of design includes products listed below by Tnemec, except as otherwise specified. Proposed system alternatives must meet or exceed the full performance characteristics of the specified system as demonstrated by independent testing per the applicable ASTM standards references in this section, as well as approval by the Engineer.
- B. High-Performance Coating System:
  - a. Prime Coat: Series 115 Uni-Bond DF by Tnemec.
  - b. Finish Coat: Series 1029 Enduratone by Tnemec.
- C. Accessories
  - 1. Water: Potable.

## PART 3 – EXECUTION

### 3.01 EXAMINATION

- A. With Applicator present, examine substrates and conditions under which high-performance coatings will be applied, for compliance with coating application requirements.
- B. Apply coatings only after unsatisfactory conditions have been corrected and surfaces to receive coatings are thoroughly dry.
- C. Start of application shall indicate Applicator's acceptance of substrate.

### 3.02 PREPARATION

- A. General: Protect all surfaces not scheduled to be painted, including but not limited to roofing, walls, fixtures, and windows.
- B. Existing Metal: Before applying high-performance coatings, clean substrates of substances that could impair bond of coatings.
  - 1. Remove all dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
  - 2. SSPC-SP1 solvent clean prior to priming to remove visible and soluble surface contaminants. All surfaces must be clean and dry.
  - 3. Schedule cleaning and coating application so that dust and other contaminants from the cleaning process will not fall on wet, newly coated surfaces.

### 3.03 APPLICATION

- A. General: Apply high-performance coatings according to the manufacturer's written instructions.
  - 1. Use applicators and techniques best suited for the material being applied.
- B. Material Preparation: Carefully mix and prepare coating materials according to the manufacturer's written instructions.
  - 1. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.
  - 2. Stir materials before applying to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into the material. Remove film and, if necessary, strain coating material before using.
  - 3. Thinners: Use thinners only as recommended by the manufacturer.
- C. Scheduling Coating: Apply first coat to surfaces that have been cleaned and prepared for coating as soon as practicable after preparation and before subsequent surface deterioration.
  - 1. The number of coats and film thickness required is the same regardless of application method.
    - a. Do not apply succeeding coats until previous coat has cured as recommended by manufacturer.

- b. Where manufacturer's written instructions require sanding, sand between applications to produce a smooth, even surface.
  2. If undercoats or other conditions show through final coat, apply additional coats until cured film has a uniform coating finish, color, and appearance. Give special attention to edges, corners, welds, exposed fasteners, and similar surfaces to ensure that they receive adequate dry film thickness.
- D. Application Equipment and Procedures: If permitted by governing regulations, apply coatings by spray and backrolling used in strict accordance with the manufacturer's instructions.
  1. Use spray and roller equipment recommended by manufacturer for material and texture required for each coating.
  2. Apply each coat to provide the equivalent hiding of brush-applied coats.
  3. Do not double back with spray equipment building-up film thickness of two coats in one pass.
  4. If environmental restrictions do not allow spraying, apply coatings by roller.
  5. Refer to the manufacturer's literature for specific information regarding roller sizes and types for each coating.
  6. Brush Application: Use brushes only for small areas.
  7. Eliminate cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections. Paint film must make complete contact with substrate. Voids are not acceptable and grounds for rejection of work. Inadequately adhered coatings will have to be removed and reapplied at no cost to the Owner.
- E. Minimum Coating Thickness: Apply each material no thinner than the manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.
- F. Existing Metal Application:
  1. Prime Coat: Apply the prime coat.
    - a. Stripe paint corners, crevices, welds, and sharp edges.
    - b. Apply a full prime coat.

- (1) Apply 2 to 4 mils DFT per coat of Tnemec Series 115 Uni-Bond DF.
    - c. Observe manufacturer's maximum open time before applying finish coat. If maximum open time is exceeded, re-apply prime coat or abrade surfaces, per the manufacturer's recommendations.
  2. Finish Coat: Apply the finish coat.
    - a. Stripe paint corners, crevices, welds, and sharp edges.
      - (1) Apply 2 to 3 mils DFT per coat of Tnemec Series 1029 Enduratone.
- G. Completed Work: Match approved Samples for color, texture, and coverage. Remove, refinish, or recoat work that does not comply with specified requirements.

#### 3.04 FIELD QUALITY CONTROL

- A. Perform a minimum of one adhesion test for every 25 lf in the presence of the manufacturer's representative (as required) to ensure compliance with warranty.
  1. Conduct adhesion tests of metal coatings according to ASTM D-3359 X-Cut Tape Test Method or ASTM D-4541 Pull Off Test Method.
- B. Measure dry film thickness periodically during installation. Correct coating thickness to meet required mil thickness minimum.
- C. Manufacturer will provide periodic visits to observe coating and adhesion tests and provide a written report to the Engineer regarding the Contractor's application techniques, means, and methods.

#### 3.05 CLEANING

- A. Cleanup: At the end of each workday, remove rubbish, empty cans, rags, and other discarded materials from the Project site.
  1. After completing coating application, clean spattered surfaces. Remove spattered coatings by washing, or other methods.
  2. Do not scratch or damage adjacent finished surfaces.

3.06 PROTECTION

- A. Protect the work of other trades, whether being coated or not, against damage from coating operations. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect/Engineer, and leave in an undamaged condition.
1. Provide "Wet Paint" signs to protect newly coated finishes. After completing coating operations, remove temporary protective wrappings provided by others to protect their work.
  2. At completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces. Comply with procedures specified in PDCA P1.
    - a. Touch up surfaces, including the complete paint system.
    - b. Abrade adjacent surfaces prior to touch-up work, per manufacturer's recommendations.

END OF SECTION 099600