SHERWIN WILLIAMS

PAINTING SPECIFICATIONS

FILTER BUILDING

CITY OF HOLLYWOOD
WASTEWATER TREATMENT PLANT

FOR THE CITY OF HOLLYWOOD

2600 Hollywood Boulevard
Hollywood, FL 33020-4807

Date: April 29, 2014

Mr. Hubert Barnes, PE, MBA
City of Hollywood
1621 N 14th Ave,
Hollywood, FL 33022

Re: **Filter Building**

Dear: Mr. Barnes

Thank you for considering Sherwin-Williams products for your project.

I have looked at the areas to be painted on the Filter Building. The areas that are to be painted have been examined and a painting specification that best suits the needs of this project has been created.

Upon completion of the entire project, and with these specifications strictly adhered to, you will be eligible to receive a **10 Year Warranty** from Sherwin-Williams on all properly prepared exterior vertical masonry surfaces. Sherwin-Williams will also present a document of the facility's colors, products used and location of original purchases for maintenance and re-orders.

Thank you for the business opportunities you have afforded the Sherwin-Williams Paint Company. We appreciate your confidence in our products and their performance in the field. If I may be of any assistance in this or any other matter, I await your request.

Sincerely

Randy Guidry
Professional Coatings Representative
The Sherwin-Williams Company
Email rguidry1@bellsouth.net
Phone # 954 868-4949

FILTER BUILDING

SCOPE OF WORK:

This specification covers the pressure cleaning, surface preparation, repair, caulking, sealing and conventional repainting of the exterior of the Filter Building**.** It includes all normally painted exterior surfaces of the buildings, the top and exterior (only) of the kneewall of the Diesel Storage Tanks 1-3, Secondary Containment Wall, all entry doors and frames, rollup door and frame, bollards, and exterior currently painted piping associated with this building, etc. Existing non-painted railings are to be cleaned, but not painted. The contractor must get with the owner to determine any items to be omitted. Please note that it is the intent of the Owner to paint all previously painted exterior surfaces. **Completely read these specifications prior to bidding.** The following is a guide, but not limited – there may be additional items. (Numbered items below will be used as reference numbers). Expansion joints are not part of this scope.

1. Pressure clean, seal and repaint the building, as below.
2. Prepare all metals, prime and paint all metals in contact with the building. This will include abrasive blasting of the metals.
3. Hinged doors will need to be abrasive blasted, defects filled (where necessary), pre-primed, primed and painted on all six sides.
5. All painted brackets in contact with the building will be prepared and painted as below.
6. All openings caused by intrusions of piping, or gaps left in wall or floor surfaces need to be filled prior to painting.
7. All concrete cracks, voids, spalls, and hollow areas, etc. will be properly prepared and reconstructed.
8. All railing bases will be properly cleaned, prepared, and then filled in, sloping from the base of the railing away to the surrounding surfaces. All railings are to be secured.

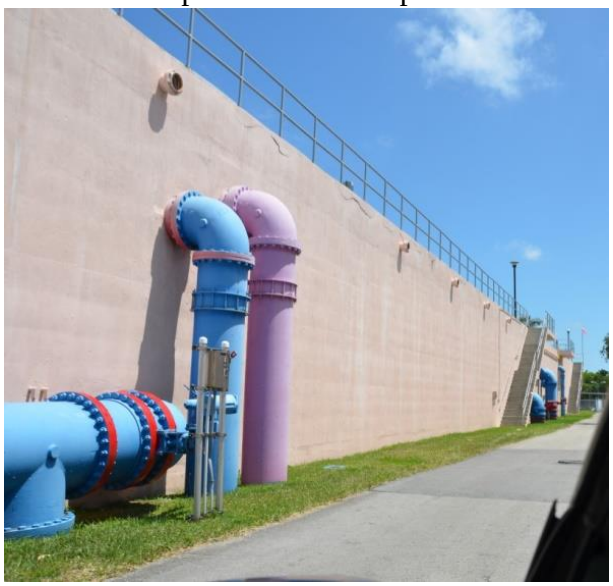
INCLUSIONS FOR MASONRY WALLS REPAINT (BUILDING ONLY):

1.) The Contractor is to chemically clean with a proper solution of All Purpose Cleaner, then pressure clean the exterior stucco and other surfaces to be painted.
2.) Seal the entire exterior stucco surface with Loxon^{tm} Pigmented or Clear Acrylic Sealer. Do not reduce
3.) Repair damaged stucco by patching, and derust and repair any spalling.
4.) Caulk, where necessary, with Sherwin-Williams Stampede™ 1 Polyurethane Sealant.
5.) Apply Sherwin-Williams Resilience Exterior Acrylic Satin, (K43 Series), to all masonry surfaces, except as noted.
6.) Colors are to be selected by Owner.
7.) Sherwin-Williams warrants vertical stucco surfaces with Resilience® for **Ten years**. See written warranty for details.

GENERAL CONDITIONS

CONTRACTOR RESPONSIBILITIES:

A. The Contractor shall supply all necessary labor, materials and equipment necessary for the total completion of the required work as per the Sherwin-Williams Specifications. The Contractor shall be responsible for and use care in the protection of the Owners' property and shall protect other areas not in this scope of work from paint and/or damage. If such damage occurs, the Contractor shall be solely responsible for the restoration of such damages as the result of the Contractor's or any employees of the contractor, except as noted below. The Contractor shall work with the manager to arrange for all automobiles and other vehicles to be removed from the work area to safeguard against possible damage.



B. It is necessary to have an English speaking foreman on the job at all times. All work shall be performed in a workmanlike manner by skilled mechanics and shall be carried out in such a way as to minimize any inconvenience to the occupants. The Contractor shall maintain a full work force from the start to the completion of the project, providing a qualified foreman on the jobsite at all times. The Contractor shall ensure that all such mechanics shall be fully and properly clothed, in identifiable uniforms, while working on the premises or entering any part of the work area.

C. All ladders, lifts, stages and all other equipment and materials shall be secured at the end of each workday to designated storage areas. Upon completion of the work, the Contractor shall promptly remove all debris, material, and equipment, etc., and shall leave the premises of the jobsite clean and orderly.

D. The Contractor shall deliver, or have delivered, necessary materials in unopened containers with the original labels and batch numbers clearly visible. All materials shall be used in strict adherence to the manufacturer's written specifications and/or recommendations. Follow all label directions.

SAFETY AND PUBLIC CONVEYANCE:

The Contractor shall rope off and erect warning signs in areas where overspray, dripping or any chance of damage or injury could occur. The contractor shall be responsible for job safety administration, (including tools, equipment, and work methods), and must be in compliance with applicable OSHA safety regulations.

SURFACE PREPARATION:

Proper surface preparation is the responsibility of the Contractor. Surfaces shall be prepared in accordance with methods accepted as industry standards. The following is a set of recommendations necessary to achieve the proper surface of the substrate to allow for the long-term adhesion of the specified coatings. Test applications of each coating are the responsibility of the contractor, to ensure compatibility with the substrate, adhesion and other characteristics of the new coating, as well as any previous coatings. As new coatings dry, the surface tension created by the curing process can cause peeling if there is insufficient adhesion of any of the underlying paint films. Certain colors and/or materials may require more than one coat to properly cover the existing substrate color, and allowances must be made for this and coverage determined prior to the beginning of the job. **Adhesion tests should be performed by the Contractor prior to submitting the bid in order to anticipate poor adhesion of underlying paint films.**

Maintenance painting will frequently not permit or require complete removal of all old coatings prior to repainting. However, all surface contamination such as oil, grease, loose paint, mill scale dirt, foreign matter, rust, mold, mildew, mortar, efflorescence, and sealers must be removed to assure sound bonding to the tightly adhering old paint. Glossy surfaces of old paint films must be clean and dull before repainting. **Recognize that any surface preparation short of total removal of the old coating may compromise the service length of the system**.

Glossy surfaces should be dulled by manual or mechanical means, prior to the application of any of the methods listed below. The use of chemicals to dull existing gloss is discouraged. If they are used, compatibility testing must be done by the Contractor to ensure against failures of the new coating related to such use. After the surface has been sufficiently dulled, completely clean the surface of all contaminates.

Coating performance is affected by proper surface preparation and application. Coating integrity and service life will be reduced because of improperly prepared surfaces. As high as 80% of all coatings failures can be directly attributed to inadequate surface preparation that affects coating adhesion. Selection and implementation of proper surface preparation ensures coating adhesion to the substrate and prolongs the service life of the coating system. No exterior painting should be done immediately after a rain, during foggy weather, when rain is predicted, or when the temperature is below 50°F.

Always check color for proper match. If the color does not match, do not continue. Minor shade variations may occur from batch to batch (refer to the batch number on the bucket). Avoid installing separate batches side-by-side to insure the best color matching. Sherwin-Williams will not be responsible for shade or color variation from batch to batch, if within product standards.

Many times as works progresses situations arise that are unforeseen or problems are uncovered that are outside of the scope of the Contractor's work. When such situations arise, the Contractor shall stop work on this area and the Owner and Contractor should come to some mutual agreement prior to the resumption of work. At no time is the Contractor to continue such new work without written agreement from the Owner if any additional charges are to be billed beyond the original contract amount.

NATIONAL STANDARDS

SSPC-SP COM, Surface Preparation Commentary for Steel and Concrete Substrates

November 1, 2004

This Surface Preparation Commentary is intended to be an aid in selecting the proper surface preparation method, materials, and specification for steel, other metals, and concrete. This Commentary is not part of any actual standard, but is included to provide a better understanding of the SSPC Surface Preparation (SP) and Abrasive (AB) standards, and other surface preparation documents

SSPC-SP COM is one of the complete collection of SSPC standards, guides, and specifications that can be viewed in the latest edition of Systems and Specifications, SSPC Painting Manual, Volume 2, available through the SSPC.

SSPC-SP 1, Solvent Cleaning

November 1, 1982
Editorial Revisions November 1, 2004

This specification covers the requirements for the solvent cleaning of steel surfaces.

Solvent cleaning is a method for removing all visible oil, grease, soil, drawing and cutting compounds, and other soluble contaminants from steel surfaces.

It is intended that solvent cleaning be used prior to the application of paint, and in conjunction with surface preparation methods specified for the removal of rust, mill scale, or paint.

SSPC-SP 2, Hand Tool Cleaning

November 1, 1982
Editorial Revisions November 1, 2004

This standard covers the requirements for hand tool cleaning steel surfaces.

Hand tool cleaning is a method of preparing steel surfaces by the use of non-power hand tools.

Hand tool cleaning removes all loose mill scale, loose rust, loose paint, and other loose detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust, and paint are considered adherent if they cannot be removed by lifting with a dull putty knife.

SSPC-SP 3, Power Tool Cleaning

November 1, 1982
Editorial Revisions November 1, 2004

This specification covers the requirements for power tool cleaning of steel surfaces.

Power tool cleaning is a method of preparing steel surfaces by the use of power assisted hand tools.

Power tool cleaning removes all loose mill scale, loose rust, loose paint, and other loose detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust, and paint are considered adherent if they cannot be removed by lifting with a dull putty knife.

SSPC-SP6 / NACE 3 Commercial Blast Cleaning

When viewed without magnification, the surface shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products and other foreign matter of at least 66-2/3% of unit area, which shall be a square 3 in. x 3 in. (9 sq. in.). Light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coating in less than 33-1/3% of the unit area is acceptable.

SSPC-SP 11, Power Tool Cleaning to Bare Metal

November 1, 1987
Editorial Revisions November 1, 2004

This standard covers the requirements for power tool cleaning to produce a bare metal surface and to retain or produce a minimum 25 micrometer (1.0 mil) surface profile.

This standard is suitable where a roughened, clean, bare metal surface is required, but where abrasive blasting is not feasible or permissible.

This standard differs from SSPC-SP 3, Power Tool Cleaning, in that SSPC-SP 3 requires only the removal of loosely adherent materials, and does not require producing or retaining a surface profile.

This standard differs from SSPC-SP 15, Commercial Grade Power Tool Cleaning, in that SSPC-SP 15 allows stains of rust, paint, or mill scale to remain on the surface. SSPC-SP 11 only allows materials to remain at the bottom of pits.

SSPC-SP 13/NACE No. 6, Surface Preparation of Concrete

Approved 1997
Reaffirmed March 17, 2003

This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems.

The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces.

An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems.

When required, a minimum concrete surface strength, maximum surface moisture content, and surface profile range should be specified in the procurement documents (project specifications).

SSPC-SP 15, Commercial Grade Power Tool Cleaning

May 1, 2002
Editorial Revisions November 1, 2004

This standard covers the requirements for power tool cleaning to provide a commercial grade power tool cleaned steel surface, and to retain or produce a minimum 25 micrometer (1.0 mil) surface profile.

A commercial grade power tool cleaned steel surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, rust, coating, oxides, mill scale, corrosion products, and other foreign matter, except as noted.

Random staining shall be limited to no more than 33 percent of each unit area of surface as defined. Staining may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coating. Slight residues of rust and paint may also be left in the bottoms of pits if the original surface is pitted.

This standard differs from SSPC-SP 3, Power Tool Cleaning, in that a higher degree of surface cleanliness is required, and a minimum surface profile of 25 micrometers (1.0 mil) will be retained or produced.

PRESSURE CLEANING:

Do not start pressure cleaning unless sealing will follow within two or three weeks. Any longer delay will require additional pressure cleaning. The Contractor is to chemically clean with a solution of 2 - 4 ounces of Great Lakes No Rinse Cleaner to 1 gallon of warm water and pressure clean with a minimum 3000 psi pressure washer using a 15-25 degree spray tip to remove all mildew, peeling, blistering and flaking paint, excessive chalk residue, efflorescence, salt and other foreign matter, and by means of wire brushing or hand tool scraping.

EXTERIOR MASONRY SEALER:

The Contractor is to apply a uniform coat of Sherwin-Williams Loxon® Conditioner, (A24-100 Series), Clear or Guide Coat, to all masonry surfaces prior to painting, caulking, or repairing. Application is to be made to all pressure cleaned exterior surfaces to be painted. Do not reduce. Follow package directions. Note: Masonry sealers are intended to seal light chalk and promote adhesion of the top coat. The best adhesion will result from total removal of all chalk, followed by proper adhesion of the specified sealer.

SEALANTS/CAULKING:

All perimeter joints are to be inspected. All deteriorating caulking shall be removed as well as any dirt or foreign matter, and then properly. In areas where existing caulking/sealants show evidence of failing (i.e. cracking, or loss of adhesion to surrounding surfaces), the Contractor is to remove and replace sealants/caulking around (but not limited to) windows, doors, expansion joints, where dissimilar materials meet, around areas of water intrusion, and other areas deemed necessary by the Owner. ALL PENETRATION IN WALL SURACES MUST BE CAULKED.

Follow all installation requirements and suggestions as listed on the sealant manufacturer's written Product Data Sheets. The following publications listed below form a part of these specifications and will be referred to as the benchmark for the application of all sealants:

A. TT-S-00230C: Sealing Compound, Elastomeric Type, Multi-Component (for Caulking, Sealing, and Glazing in Buildings and Other Structures), Rev C, 1970.

B. ASTM D1056-85: Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber.

Follow sealant manufacturer's instructions for temperature and humidity limits when caulking and sealants are applied. Materials shall be delivered to the job in the manufacturers' original unopened containers.

The containers shall include the following information on the label: supplier, name/type of material, formula or specification number, lot number, color, date of manufacture, mixing instructions, shelf life, and curing time when applicable at the standard conditions for laboratory tests. All materials shall be carefully handled and stored to prevent inclusion of foreign materials, or exposure to temperatures exceeding 90 degrees F. Caulking compound or components outdated as indicated by shelf life shall not be used. (Sealant tape shall be handled and stored in a manner that will not deform the tape as received from the manufacturer.) Use only primers provided by the caulking/sealant manufacturer.

The following materials will be used when determining product applications for the substrates to be recaulked/resealed. Sonneborn products may be substituted with written acceptance by this specification writer.

EXTERIOR STUCCO-MASONRY SURFACES

All loose or broken masonry must be removed. After mildewcide, and pressure cleaning, apply sealer prior to repairing cracks. Repair all hairline cracks as required using Sherwin-Williams Vertical Wall Patch, (7331366 or 7331457). Cracks less than 1/16" shall be filled with brush grade sealants, and have the edges feathered to insure a uniform surface with the surrounding surfaces. All masonry cracks greater than 1/16" shall be tooled out to form a 'v' shape. Completely fill all cracks with brush grade sealant over the patch to cover it to a depth of 1/16" then feathered to blend in with the surrounding stucco surface and texture as closely as possible.

For static cracks (those cracks that are not moving or are moving very little)

For cracks greater than ½" in depth –

The Contractor shall place a bond breaker (either a closed cell backer rod or an adhesive backed polyethylene tape) to prevent three-sided adhesion at the bottom of the crack. Clean, dry sand could also be used to fill the crack ½" from the top surface. (Depth of the sealant should not exceed ½" in most cases).

1. Clean crack and apply the bond-breaker at the bottom of the crack.
2. **Option 1:**
   Apply Stampede 1 or Stampede 2 Urethane Sealant into the crack and allow to cure 24 hours.
3. **Option 2**:
   Use JF311 Flexible Polyurea Crack Filler, fill cracks or saw cuts flush with concrete surface. This product will initially cure in 30-45 minutes and allow for coatings to be applied.

For dynamic cracks wider than ½"

1. It is recommended to V-cut cracks as they are moving and need the wider space to compensate for the movement.
2. Apply SherCrete Flexible Concrete Waterproofer 3" on each side of the crack. While still wet, embed SherCrete Repair Mesh into the Waterproofer.
3. Apply an additional coat of SherCrete Flexible Concrete Waterproofer over the mesh to complete the repair.

This system of crack repair is successful on cracks that will allow for minor movement. For control joints or Expansion joints, we recommend honoring the joints to allow them to do what they were intended to do, (allow for expansion and contraction)

For large cracks and repair of damaged control or expansion joints, it may be necessary to re-establish the joint with SherCrete Repair Mortars to their original size and width.

Crack repair materials shall be used only when the surface and substrate temperatures are 40 degrees F and rising. Ambient temperatures will affect pot life: hot temperatures will shorten it, cold temperatures will extend it. Application of crack repair materials shall conform to the manufacturer's written instructions.

Sealant Types:

Conforming to TT-S-00230C (ASTM C-920) –

a. Sherwin Williams, Stampede®-2NS Polyurethane Sealant – Two Component.
b. Sherwin Williams, Stampede®-2SL Polyurethane Sealant – Two Component.
c. Sherwin Williams, Stampede®-1 Polyurethane Sealant – One Component.

Each container brought to the jobsite with a different sealant formulation shall be marked for the intended use. For each intended use, the color shall be one of the manufacturer's standard colors as matching the adjacent surfaces as closely as possible, and as approved by the Owner.

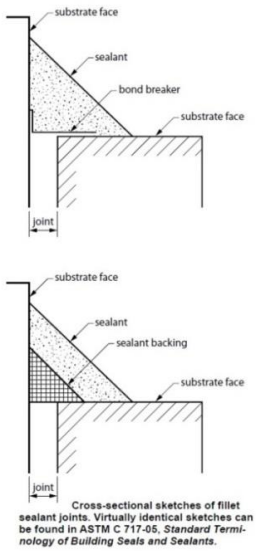
Components of each formula shall be used only with that formula. Intermixing of components of different formulas will not be permitted. Thinners or other additives shall not be used to modify the formula. Mixing shall be in accordance with instructions provided by the manufacturer of the sealants. Mixing equipment shall be thoroughly cleaned before mixing each batch. For multi-component sealants, the entire portion of the accelerator or smaller unit shall be added to the entire portion of the compound or larger unit. The container shall have sufficient space at the top to allow for addition of the accelerator and for mixing.

The primers for all caulking products shall be as recommended by the caulking manufacturer. The backup material shall be as recommended by sealant manufacturer, conforming to ASTM D1056.

a. Closed-cell backer rod of appropriate size, approximately 25% larger than the joint size. For use above-grade or below-grade.
b. Open-cell backer rod of the appropriate size, approximately 25% larger than the joint size. For use above-grade ONLY.

Bond-preventive materials are requires and shall be as specified by the sealant manufacturer

Prepare all surfaces to be resealed/recaulked as per the surface and applications standards of SSPC-SP1. The surfaces of joints to be sealed shall be clean and dry. Oil, grease, dirt, chalk, particles of mortar, dust, loose rust, loose mill scale, and other foreign substances shall be removed from all joint surfaces to be sealed. Oil or grease shall be removed with either a detergent mix or with the same solvent specified by the manufacturer and surfaces shall be wiped with clean cloths.



Cross-sectional sketches of fillet sealant joints. Virtually identical sketches can be found in ASTM C 717-05, *Standard Terminology of Building Seals and Sealants*.

A. Concrete and Masonry Surfaces: Remove laitance, efflorescence, and loose mortar from the joint cavity. Where surfaces have been treated with curing compounds, oil, or other such materials, remove these by, wire brushing, scraping, grinding, or other suitable method. Debris produced thereby to determine requirements for handling and disposal.

B. Steel surfaces to be in contact with sealant shall be prepared to the standards of SSPC-SP 3, Power Tool Cleaning, and the metal shall be scraped and wire brushed to remove loose mill scale. Protective coatings on steel surfaces shall be removed by a solvent that leaves no residue, or by the standard above.

C. Aluminum surfaces of windows and door frames in contact with sealants shall be cleaned of loose, non-adhering coatings. When masking tape is used for a protective cover, the tape and any residual adhesive shall be removed just prior to applying the sealant. Solvents used to remove protective coatings shall be as recommended by the manufacturer of the aluminum work, as well as approved by the sealant manufacturer, and shall be nonstaining.

Primer shall be used on concrete masonry units, wood, or other porous surfaces in accordance with instructions furnished with the sealant. Primer shall be applied to the joint surfaces to be sealed according to manufacturer's instructions. Surfaces adjacent to joints shall not receive primer.

Apply bond breakers as required. Areas where bond breaker tape, or backer rod, is required (but are not limited to), are windows and door frames and other areas where the tape or backer rod is needed to prevent three sided adhesion. **No sealant should be applied with anything but two sided adhesion to prevent adhesion failure in the future.**

The surfaces adjoining the caulked and sealed joints shall be cleaned of smears and other soiling resulting from the caulking and sealing application as work progresses.

CONCRETE AND MASONRY:

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI No. 310.2, CSP 2-4.

Follow the standard methods listed below when applicable:
ASTM D4258 Standard Practice for Cleaning Concrete.
ASTM D4259 Standard Practice for Abrading Concrete.
ASTM D4260 Standard Practice for Etching Concrete.
SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
ICRI No. 310.2 Concrete Surface Preparation.

CONCRETE RESTORATION:

PREPARATION & USE BONDING AGENT

Remove loose and deteriorated materials by shot- or sandblasting, or other mechanical means to obtain a fractured aggregate surface. Make sure surfaces are sound, clean, and free of all bond-inhibiting materials including oil, dust, dirt, laitance and standing water. Apply Sherwin-Williams Sher-Crete Rebar Coating and Bonding Agent at 20 mils wet film thickness to all surfaces to be bonded. Follow the data page for mixing and use instructions.

Apply only to sound and clean, dry, properly prepared surfaces. Dampen the area to be repaired so that the pores of the concrete are filled with water. Remove any ponding or glistening water on the surface (saturated surface dry/SSD). Apply in one 20 mil (0.5 mm) coat with a hopper gun, pattern pistol-type spray equipment, or with a stiff-bristle brush. Place Sher-Crete® Vertical/Overhead Mortar With CI while the Sher-Crete Rebar Coating and Bonding Agent is still wet or within 24 hours. As a bonding agent only, one 20 mil coat is required.

ANTI-CORROSION AGENT

Remove rust or active corrosion using sandblasting or mechanical wire brushing to produce a white metal finish. Make sure surfaces are clean, dry and free of all bond inhibiting materials including oil, dust and dirt. Sher-Crete Rebar Coating and Bonding Agent must be applied immediately after cleaning of reinforcing steel to avoid new corrosion on reinforced steel. Apply Sherwin-Williams Sher-Crete Rebar Coating and Bonding Agent at 20 mils wet film thickness to all rebar surfaces to be protected from corrosion. Follow the data page for mixing and use instructions.

Brush on two 10 mil coats allowing 30-45 minutes between coats. Place fresh mortar or concrete after the Sher-Crete Rebar Coating and Bonding Agent has dried to the touch or within 24 hours. The two coats must be a minimum of 20 mils.

MIXING

Use both components at a preconditioned temperature of 70 ± 5° F. Use 1 gallon jug of Component A per 28-pound bag of Component B. Alternatively, batch mix in 1/4 units. Mixing must be achieved mechanically using a slow-speed 3/4-inch (19 mm) drill and mixing paddle. Shake jug containing Component A. Pour all of liquid Component A into a clean, dry 5-gallon mixing bucket. Mix while slowly adding the Component B powder, one third at a time. Continue mixing until all of the powder has been added. Mix thoroughly until Components A and B are evenly blended to a uniform color. Never add water to the mixture. Mix only sufficient material that can be used within its 90 minute pot life.

MORTAR PREPARATION & USE

Remove loose and deteriorated concrete by mechanical chipping or sandblasting to obtain a fractured aggregate surface. Detail the edge of the patch to a 90° angle and 1/4" deep to eliminate feather edging. Make sure surfaces are sound, clean, and free of all bond-inhibiting materials including oil, dirt, dust, laitance and standing water.

MIXING

Use Sher-Crete Vertical/Overhead Mortar at a preconditioned temperature of 70 ± 5° F. Use 6.0 to 6.5 pints of water per 50-pound bag. Mixing must be achieved mechanically using a slow-speed, 3/4 inch drill and mixing paddle. Pour 6.0 pints of water into a clean 5 gallon mixing bucket. Mix while slowly adding the powder, one-third at a time. If more water is needed, up to one-half pint may be added.

Mix up to 4 minutes, to a uniform, lump-free consistency. Avoid overmixing which could entrap air. Once mixed, the working time is 25-45 minutes, depending upon material, ambient and surface conditions.

Apply only to sound and clean, properly prepared, surfaces. Dampen the area to be repaired so that the pores of the concrete are filled with water. Remove any ponding or glistening water on the surface (saturated surface dry/SSD). IMPORTANT: Work a scrub coat of the mixed material into the substrate to ensure intimate contact and establish bond. Complete the repair while the scrub coat is still wet and trowel to the desired finish. Sher-Crete Vertical/Overhead Mortar with CI can be applied to a thickness of 2 inches in one lift. For application depths greater than 2 inches apply Concrete Vertical/Overhead Mortar with CI in successive lifts. For additional lifts, scarify the first lift and allow it to set until hardened sufficiently to accept the next lift, about 30 minutes at 75° F. Trowel the final lift to the desired finish. Applications made during temperatures below 50° F or above 85° F should follow appropriate application guidelines.

Direct sun or wind may cause unwanted rapid surface drying. Curing may be accomplished by continuous water fogging for 48 hours or cover with damp burlap or burlene curing blankets. Do not use solvent-based curing compounds. If a coating or sealer will be applied, use water fogging or blanket curing methods and prep finished surface per manufacturer's recommendations.

NOTE: All areas of repair must be primed with Sherwin-Williams Loxon® Concrete & Masonry Primer, (A24W8300), applied at a wet film thickness of 8.0 mils to dry to 3.2 mils dry film thickness, prior to the application of the sealer/conditioner. Follow data page instructions.

COATINGS AND APPLICATIONS:

EXTERIOR MASONRY SURFACES:

Apply Resilience® Exterior Acrylic Satin, (K43 Series), at a wet film thickness of 4.0 mils to dry to 1.52 mils dry film thickness to all properly prepared and sealed masonry surfaces.

FERROUS OR GALVANIZED METAL PRE-PRIMING AND PRIMING:

When pre-priming or priming is referenced, ensure that all edges, bolts, interior and exterior corners and seams are stripe coated, prior to providing a full coat of primer. All of these edges, bolts, interior and exterior corners and seams must have a minimum of two coats of primer.

DOORS, BOLLARDS AND OTHER METALS (NOT PIPING):

Preparation:

The previously listed SSPC standards must be followed and all rust must be remediated per those standards. Pre-Prime those areas that have been abrasive blasted, as well as all areas where there is existing, rust that cannot be properly prepared (i.e. between the brackets and piping, or areas where the exhaust sections fit together).

All entry and roll-up doors must be pre-primed before priming. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. For better performance, use Commercial Blast cleaning per SSPC-SP6/NACE 3, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Apply Sherwin-Williams MacroPoxy® 920 Pre-Prime Penetrating Epoxy Pre-Primer, (B58T101/B58V19), at a wet film thickness of 1.5 – 2.0 mils to dry to 1.5 – 2.0 mils dry film thickness. Prime any bare steel within 4 hours or before flash rusting occurs. Carefully ensure that any existing rust is prepared as above, prior to pre-priming.

Entry Doors and Bollards:
Entry doors are prepared per Solvent Cleaning per SSPC-SP1. Then prepare rusted areas (only) by Commercial Blast cleaning per SSPC-SP6/NACE 3. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Pre-prime any bare steel within 4 hours or before flash rusting occurs. Carefully ensure that any existing rust is prepared as above, prior to pre-priming. **Entry doors are to be prepared, primed and painted on all six sides.**

After pre-priming, apply Sherwin-Williams MacroPoxy® 646 Fast Cure Epoxy, (B58W600 Series), at a wet film thickness of 7.0 – 13.5 mils to dry to 5.0 - 10.0 mils dry film thickness, stripe coating all rusting areas, and all edges, corners and all interior and exterior corners as well as all boltheads. Then apply a complete prime coat of Sherwin-Williams MacroPoxy® 646 Fast Cure Epoxy, (B58W600 Series), at a wet film thickness of 7.0 – 13.5 mils to dry to 5.0 - 10.0 mils dry film thickness. After 12 hours, topcoat with **two coats** of Sherwin-Williams Water Based Acrolon 100® Water Based Polyurethane, (B65-700 Series), applied at a wet film thickness of 4.0 – 8.0 mils to dry to 2.0 - 4.0 mils dry film thickness, per coat. Apply the second coat 8 hours after the first coat.

Roll-up Doors:
Roll-up doors shall be aggressively pressure cleaned (including the use of a zero degree spinning tip) and prepared per the SSPC standards, as above, specifically (but not limited to) SSPC-SP6 / NACE 3 Commercial Blast Cleaning. This applies only to previously rusting areas (primarily the bottom plate/bolts). It is **NOT** necessary to blast clean the entire door. Apply Sherwin-Williams MacroPoxy® 920 Pre-Prime Penetrating Epoxy Pre-Primer, (B58T101/B58V19), at a wet film thickness of 1.5 – 2.0 mils to dry to 1.5 – 2.0 mils dry film thickness to the blasted areas **as well as** the entire door and frame surfaces. Then apply a complete prime coat of Sherwin-Williams MacroPoxy® 646 Fast Cure Epoxy, (B58W600 Series), at a wet film thickness of 7.0 – 13.5 mils to dry to 5.0 - 10.0 mils dry film thickness. After 12 hours, topcoat with **two coats** of Sherwin-Williams Water Based Acrolon 100® Water Based Polyurethane, (B65-700 Series), applied at a wet film thickness of 4.0 – 8.0 mils to dry to 2.0 - 4.0 mils dry film thickness, per coat. Apply the second coat 8 hours after the first coat.

STAIRCASE AND WALL TOPS:

The tops of all walls are to be prepared with as elsewhere listed under ***Exterior Stucco-Masonry Surfaces***. To the top masonry walls, apply **two separate** coats of coats of Sherwin-Williams Sher-Crete® Flexible Concrete Waterproofer - Textured, (A5 Series), at a wet mil thickness of 14 – 18 mils. Cover the top and down the walls on the inside and outside by the width of the face. These coats shall be applied with at least 8 hours drying time between coats. These coats are to be applied after pressure cleaning and sealing and patching, but before the application of the topcoat. Topcoat as above, for walls.

If any railing bases are not flush with the surrounding wall surfaces, they must be filled with 22 ounce cartridges of Adhesives Technology Polyurea Joint Filler (590-8066). Apply the above system, after sealing, but before the application of the Sherwin-Williams Sher-Crete® Flexible Concrete Waterproofer.

PIPING:

1. Pressure clean, pre-prime, prime and repaint the piping, as below.
2. Clean all surfaces to be painted to SSPC-SP1.
3. **All** surfaces exhibiting rust currently must be abrasive blasted per the **SSPC-SP6 / NACE 3 Commercial Blast Cleaning standard. All flanges, bolts, and associated surfaces WILL BE abrasive blasted. This is not an option.**
4. Apply Sherwin-Williams MacroPoxy® 920 Pre-Prime Penetrating Epoxy Pre-Primer, (B58T101/B58V19) to abrasive blasted areas approved by Owner. **At no time shall surfaces that have been blasted be left exposed for more than three hours without being pre-primed.**
5. Prime all surfaces blasted, then pre-primed, with Sherwin-Williams MacroPoxy® 646 Fast Cure Epoxy, (B58W600 Series). This includes striping all nuts, and inside and outside corners. All flanges with bolts will receive an extra
6. Prime all complete flanges, nuts, etc. with Sherwin-Williams MacroPoxy® 646 Fast Cure Epoxy, (B58W600 Series).
7. Topcoat all cleaned piping, and primed surfaces with two coats of Sherwin-Williams Water Based Acrolon 100® Water Based Polyurethane, (B65-700 Series).

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ABRASIVE BLASTING:

All surfaces exhibiting rust currently, must be abrasive blasted per the **SSPC-SP6 / NACE 3 Commercial Blast Cleaning standard. All rusting flanges, bolts, and associated surfaces must be abrasive blasted. This is not an option.** **Blasting shall be approved by the Owner, prior to pre-priming.**

COATINGS AND APPLICATIONS:

FERROUS METAL PRE-PRIMING AND PRIMING:

When pre-priming, or priming, is referenced, ensure that all edges, bolts, interior and exterior corners and seams are stripe coated, prior to providing a full coat of primer. All of these edges, bolts, interior and exterior corners and seams must have a minimum of two coats of primer. Work in and around these areas with a brush. The rest of the surfaces may be sprayed or rolled, but these area must have thes materials applied by brush.

PIPING AND ASSOCIATED METALS:

Preparation:

The previously listed SSPC standards must be followed and all rust must be remediated per those standards. Pre-Prime those areas that have been abrasive blasted within three hours after blasting the surface. If rain occurs prior to the application of the Pre-Prime, then these areas should be sweep blasted, and all surfaces should be dry prior to the application of the Pre-Prime.

Pre-Priming:

After abrasive blasting has been approved, and within three hours of blasting, apply Sherwin-Williams MacroPoxy® 920 Pre-Prime Penetrating Epoxy Pre-Primer, (B58T101/B58V19), at a wet film thickness of 1.5 – 2.0 mils to dry to 1.5 – 2.0 mils dry film thickness. Work this material around bolts, flange edges, (both inside and outside), and into flange gaps with a brush.

Priming:

After properly Pre-Priming, as above, stripe all inside and outside corners, flange gaps, and all bolt heads with Sherwin-Williams MacroPoxy® 646 Fast Cure Epoxy, (B58W600 Series), at a wet film thickness of 7.0 – 13.5 mils to dry to 5.0 - 10.0 mils dry film thickness. Work into all crevices and around bolt heads with a brush.

After a minimum of six hours, apply a full coat to these areas of Sherwin-Williams MacroPoxy® 646 Fast Cure Epoxy, (B58W600 Series), at a wet film thickness of 7.0 – 13.5 mils to dry to 5.0 - 10.0 mils dry film thickness.

Topcoating:

After a minimum of six hours, apply **two separate coats** of Sherwin-Williams Water Based Acrolon 100® Water Based Polyurethane, (B65-700 Series), at a wet film thickness of 4.0 – 8.0 mils to dry to 2.0 - 4.0 mils dry film thickness, per coat. The first coat shall be at 50% tint strength. Work both coats into all crevices and around bolt heads with a brush.

SUBMITTALS:

Upon completion of the entire project, and with these specifications strictly adhered to, Sherwin-Williams will provide a Ten Year Limited Warranty for the Sherwin-Williams Resilience® coating on all properly prepared exterior vertical masonry surfaces only. Proper application is the responsibility of the Owner. Field visits by Sherwin-Williams personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

Owner is to be supplied with applicable Sherwin-Williams Color Answer Color Decks, if necessary. The Contractor is responsible for obtaining and following all instructions and specifications on the appropriate Sherwin-Williams Data, and Product Information Pages, as well as the Sherwin-Williams Application Bulletins for each product used. No deviation from these published standards will be allowed, unless approved in writing from an authorized Sherwin-Williams representative. All manufacturers' data specification sheets for materials used on the job shall be provided to the Owner's representative, as well as a sample warranty and general maintenance information, if requested.