

ADDENDUM #3

FOR

**APPLIED ARTS & SCIENCES
ROOF SCREEN PROJECT**

AT

WEST VALLEY COLLEGE

Owner

West Valley-Mission Community College District
Saratoga, California

Bid #25-1617

06-30-2017

WEST VALLEY-MISSION COMMUNITY COLLEGE DISTRICT
14000 Fruitvale Avenue
Saratoga, CA 95070

Bid #25-1617
APPLIED ARTS & SCIENCES – ROOF SCREEN PROJECT
WEST VALLEY COLLEGE

BID ADDENDUM #3
CONSISTS OF THE
FOLLOWING

1. ACKNOWLEDGEMENT
2. DESCRIPTION OF CHANGES

Bidders sign and return one copy of this addendum with your bid.
Failure to do so may subject bidder to disqualification.

The Bid Addendum #3 supersedes and modifies portions of the bid and contract documents issued by the District for Bids listed above for Applied Arts & Sciences Roof Screen Project at West Valley College.

- Description of Change: See Bid Addendum No. 3 - Issued by LPA dated June 30, 2017 with narrative and answers to Pre-bid RFI's #01-21.

Mina Hernandez
Director, General Services
(408) 741-2187

Date: _____
Company Name: _____
Signed By: _____
Printed Name: _____
Phone/Fax: _____
Email: _____



ADDENDUM NO. 03

June 30, 2017

**TO THE CONTRACT DOCUMENTS FOR
WEST VALLEY APPLIED ARTS & SCIENCES ROOF SCREEN
1400 Fruitvale Blvd, Saratoga CA 95070
FOR THE
WEST VALLEY MISSION COMMUNITY COLLEGE DISTRICT
DSA A# 01-116396 – FILE NO. 43-C3**

NOTICE TO BIDDERS

This Addendum forms a part of the Contract and modifies the original bidding documents dated March 28, 2017. It is intended that all work affected by the following modifications shall conform to related provisions and general conditions of the Contract of the original drawings and specifications. Modify the following items wherever appearing in any drawings or sections of the specifications. Acknowledge receipt of Addendum No. 03 in the space provided on the Bid Form. Failure to do so may subject to disqualification.

CHANGES TO SPECIFICATIONS

- ITEM NO. 01** Spec section 011100 – Summary of Work
- Point of contact for Gilbane modified to *Tina Martinez Plamenco*
- ITEM NO. 02** Spec section 013315 – Deferred approval submittal procedures
- Section removed in its entirety.
- ITEM NO. 03** Spec Section 017910 – Operating and Maintenance Data
- Section removed in its entirety. Refer to 017030 Operating and Maintenance Data instead.
- ITEM NO. 04** Spec Section 099600 – High-Performance Coatings
- Entire section added.
- ITEM NO. 05** Specification Table of Contents
- Updated TOC provided to reflect items 01-05 above.

END OF ADDENDUM NO. 03

Number	Discipline	Sheet or spec #	Comment received	Response	ADDENDUM Issued formal response
1	Structural		How does the unistrut cross member get attached to the vertical members?	Unistrut 90 degree U-shape fasteners; clevis wing.	3
2	Struct/Arch		Will there be any closure strips on the vertical or cross members?	Closure strips to be provided on any up-facing members that will not shed water.	3
3	Structural		Is there a cross member between the kicker channels?	No, there are no cross members documented at kickers	3
4	Architectural		What gage metal is the aluminum zee?	Aluminum Z's to be 12 Ga typ.	3
5	Architectural		Do you have a vendor who can supply the aluminum zee? Is the color a standard color?	No vendor has been selected. Bidders to select and propose vendor. Color is to match (e) tile shingles brown & aluminum window frames. Color: Duranar: Chocolate Bronze	3
6	Struct/Arch		What material is the 1/8" thick 6" wide vertical fastener plate?	Hot dip galvanized steel strapping.	3
7	Struct/Arch		Please specify post cap?	Provide Unistrut post caps at unistrut members. Provide steel caps welded all around at tube steel members.	3
8	Architectural		Please specify closure strip?	Closure strip manufactured by Unistrut to coordinate with unistrut members.	3
9	Struct/Arch	A8.01	On page A8.01 Detail 16, shows (2) screws at mid post. Is this what is wanted? Is it #8 or #10 screws?	Use #10 SS self tapping screws typ.	3
10	Architectural		Are we using pre-galvanized zinc or hot dip galvanized for the strut, brackets and bolts?	Use Hot Dip Galvanized. All finishes must be galvanized.	3
11	Architectural		Are we painting any of the unistrut?	Unistrut must be galvanized finish.	3
12	Struct/Arch		Where pipes are going through the aluminum Z, how will the cut ends be supported?	In conditions where hydronic pipes run perpendicular through the aluminum Z's, reduce the total number of Z's to leave clearance at the low side of kickers. Align with top of Z's continuous.	3
13	Architectural		Please provide additional information on Neoprene shim tape, such as size, thickness, manufacturer, attachment, etc.	3-M or equal designed for exterior, high temperature conditions. Coverage is required to provide protection from galvanic action between dissimilar metals. Run width of unistrut by height Z's.	3
14	Architectural	072216; 075100	Please clarify roofing sections 072216 and 075100. They are showing different scopes in each section. Which one do you want use. My roofing contractor would prefer to use section 075100 built-up bituminous.	Delete section 072216 is for Roof Board Insulation. Section 0751000 for Built Up Bituminous Roofing covers related roof board insulation.	3
15	Architectural	07 6200	Please confirm if aluminum roof screen custom broke 'Z' panels are to be prefinished per Section 76200 Part 2 item 2.0.A and what is the custom color. Or if not please provide specified paint and color	See response to RFI #5 for color. Refer to detail 04/A8.01 Zee are to be pre-finished high performance paint. Spec section 099600 High Performance Coating has been added to this Addendum #3.	3
16	Structural	03 0100	Spec section 030100 Maintenance of Concrete is part of the project. There are no areas shown for work. Are we to assume this is only for our attachments to the existing concrete structure in the event of damage? Also, we would not be able to comply with the cleaning process "gentle vs. less gentle" as the building is occupied.	See 0301000: 1.01 E Scope of work: Existing concrete damaged during construction. This section is to clarify any adjacent site concrete, building concrete that is visually exposed is to be protected, and repaired.	3
17	Architectural		What is the thickness of the break shape for the roof screen material?	See response to RFI 4#.	3

18	Architectural	07 5100	As you pointed out in your office note A705 calls for coating entire roof with elastomeric coating. Spec section 075100 built-up bituminous roofing is a asphalt BUR spec. <u>No</u> reference to coating, what type of coating, etc. Need to know what is expected in regards to elastomeric coating?	Keynote A705 to be revised. 'BUR system to match existing GAF Cool Roof system, per manufacturers recommendations. Clean all roof surfaces upon completion of work.'	3
19	Architectural	07 5100	Also, 075100 1.09C calls for manufacturer's 20 year warranty. Can't provide that on an existing roof system?	Contractor to document (e) roof conditions through a certified GAF inspector, prior to start of roof work. All re-roof and repair work to be installed by a certified GAF installer to maintain existing roof warranty.	3
20	Architectural	07 5100	075100 2.03H references walk pads. no walk pads references on plans? I am not figuring any walk pads.	Maintain any existing walk pads. No new pads added in scope.	3
21	Architectural	072216 / 075100	Both roof sections 072216 and 075100 are showing different scopes of work. What section do you want us to bid in regards to insulation?	See RFI #14 response.	3

Sections in **BLUE BOLD** have been modified or added, and are included with this Addendum.
Sections with a ~~STRIKEOUT~~ have been removed in its entirety.

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

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NOT USED

SECTION 011100
SUMMARY OF WORK

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 SUMMARY

- A. This Section includes:
 - 1. Work covered by the Contract Documents.
 - 2. Type of Contract.
 - 3. Work phases.
 - 4. Work under other contracts.
 - 5. Products ordered in advance.
 - 6. Owner-furnished products.
 - 7. Use of premises.
 - 8. Owner's occupancy requirements.
 - 9. Work restrictions.
- B. Related Sections include:
 - 1. Section 012750 "Allowances" for descriptions and procedures on the use of allowances.
 - 2. Section 015000 "Temporary Facilities and Controls" for limitations and procedures governing temporary use of Owner's facilities.

1.03 PROJECT INFORMATION

- A. Project Identification:
 - Applied Arts & Sciences Renovation
 - 14000 Fruitvale Avenue
 - Saratoga, CA 95070
- B. Owner:
 - West Valley-Mission Community College District
 - 14000 Fruitvale Avenue
 - Saratoga, CA 95070
- C. Architect:
 - LPA Inc.
 - 431 I Street Suite 107
 - Sacramento, CA 95814
- D. Construction Manager:
 - Gilbane Building Company***
 - Contact: Tina Martinez-Plamenco***
 - 14000 Fruitvale Avenue***
 - Saratoga, CA 95070***
 - Email: tmartinezplamenco@gilbaneco.com***
 - 1. The Construction Manager has been engaged for this project to serve as an advisor to Owner and to provide assistance in administering the Contract for Construction between Owner and Contractor, according to a separate contract between Owner and Construction Manager.

1.04 WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work consists and includes but is not limited to:
 - 1. Furnish all labor, materials, equipment and services as required to satisfactorily complete all Work required for the construction and completion of the Applied Arts & Sciences Roof Screen project as defined below and in accordance with the Drawings and Specifications provided for This Contract.

2. The **West Valley College Applied Arts and Sciences Roof Screen Project** consists of adding a light gage roof top mechanical screen system around the +/-60,000 square foot roof structure perimeter, patching and repair of built-up roof system to maintain warranty and adding one split system unit to the electrical room 121C, and extending mechanical supply to roof 140B.
- B. Specific Work Scope
 1. Install roof screen system and kickers, coordinating attachment locations back to structure to minimize impact to existing roof top utility pathways, mechanical systems, curbs, rooftop units, piping and conduit.
 2. Install one split system unit to supply electrical room 121C.
 3. Extend mechanical supply duct into room 140B.
 4. Patch and repair of existing built up roofing system, B.U. roof, and rigid insulation.
- C. Milestone Dates
 1. None

1.05 TYPE OF CONTRACT

- A. Project will be constructed under a single-prime contract arrangement.

1.06 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with Owner's separate contractors so work on those contracts may be carried out smoothly, without interfering or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.
 1. Various other Projects on the West Valley College Campus

1.07 OWNER-FURNISHED PRODUCTS

- A. None.

1.08 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as directed by the Owner.
- B. Use of Site: Limit use of premises to areas within Contract limits. Do not disturb portions of Project site beyond areas in which the "Allowed Work Areas" are indicated.
- C. Provide for emergency vehicles at all times.
- D. This Contractor shall utilize chain link fencing, traffic control and signage around all site work during construction at ALL TIMES for the safety of WVC staff and students. Contractor shall assume that Campus access roads must remain open and operating at all times during This Contractor's Work activities.
- E. Limits: Allow for Owner occupancy of Project site.
 1. Access Roads, Driveways, Entrances, and Pedestrian pathways: Keep driveways, parking areas, loading areas, entrances, and pedestrian pathways serving premises as clear as construction operations will allow. Remove temporary fencing and clean work areas as soon as work areas are completed.
 2. Temporary storage of materials will be allowed on a case-by-case basis. Contractor will be allocated a designated area on Campus for site utilization, storage, and parking.
 - a. Schedule deliveries to minimize use of driveways and entrances.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- F. Do not unreasonably encumber site with materials or equipment. Confine stockpiling of materials and location of storage areas to areas as directed by Owner.
- G. Smoking or open fires are prohibited on campus.

1.09 OWNER'S OCCUPANCY REQUIREMENTS

- A. Partial Owner Occupancy: Owner will occupy the campus during entire construction period, with the exception of areas under construction. Cooperate with Owner during construction

operations to minimize conflicts and facilitate Owner usage. Perform Work so as not to interfere with Owner's operations. Maintain existing exits, vehicular routes, and pedestrian paths, unless otherwise indicated.

1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
 2. Provide not less than five working days notice to Owner of activities that will affect Owner's operations. Coordinate with Construction Manager for advance notice of construction and impediments to the Campus operations.
- B. Owner Occupancy of Completed Areas of Construction: Owner reserves the right to occupy and use the completed areas of site, before Substantial Completion, provided such occupancy does not interfere with completion of the Work. Such placement of equipment and partial occupancy shall not constitute acceptance of the total Work.
1. Engineer will prepare a Certificate of Substantial Completion for each specific portion of the Work to be occupied before Owner occupancy.
 2. Obtain a Certificate of Occupancy from authorities having jurisdiction before Owner occupancy.
 3. Before partial Owner occupancy, utility, mechanical and electrical systems shall be fully operational, and required tests and inspections shall be successfully completed. On occupancy, Owner will operate and maintain mechanical and electrical systems serving occupied portions of the campus.
 4. On occupancy, Owner will assume responsibility for maintenance and custodial service for occupied portions of the campus.

1.10 WORK RESTRICTIONS

- A. On-Site Work Hours: The construction hours / days of Work at the Site are 7:30 am to 6:00 pm Monday through Friday. Saturday construction hours are 9:00 am to 5:00 pm and special circumstances Saturday work must be pre-approved by the District in writing coordinated with and by the Construction Manager. Work is prohibited on Sundays and weekday holidays.
- B. Owner's academic calendar is available on-line and reflects the critical dates for campus activities such as the start of each session and the final exam dates. Contractor shall note that at the start of each session, the number of students and vehicles are at the peak.
- C. During the academic school year, the Owner has programs other than the academic session. Some of these programs include, but are not limited to: The Farmers Market; Dance Recitals, Theater Programs, Sports Camps, and Sports Programs.
- D. Contractor shall cooperate and coordinate with Construction Manager to minimize the impact of construction on the campus with school and other program activities.
- E. Do not perform the following types of work until written agreement as to allowable times has been obtained from Owner:
 1. Work involving utility shutdowns.
 2. Core drilling or other noisy activity.
- F. Construction Notifications shall be given as follows. Contractor shall not proceed with the work or with shutdowns or interruptions until authorized by the Construction Manager in writing:
 1. This Work is anticipated to involve daily operations in and around Campus access roadways and pedestrian pathways. Contractor shall be required to update Construction Manager no less than each (3) days for areas of work so that proper Construction Notices may be posted for District and Campus staff and students in advance of construction activities.
 2. For electrical power shutdowns anticipated to be less than 1 hour, provide written notice to the Construction Manager a minimum of three (3) work days in advance.
 3. For electrical power shutdowns anticipated to be in excess of 1 hour, provide written notice to the Construction Manager a minimum of fourteen (14) work days in advance.
 4. For domestic water and and gas shut-offs, provide written notice to the Construction Manager a minimum of three (3) work days in advance.

5. For interruptions of low voltage systems such as fire alarm, communication, clock, signal, data and energy management systems, provide written notice to the Construction Manager a minimum of three (3) work days in advance.
6. For high impact activities including but not limited to crane operations, concrete pours, large special deliveries; traffic and road impacts, provide written notice to the Construction Manager a minimum of three (3) work days in advance.

1.11 PRODUCTS (NOT USED)

PART 2 EXECUTION

2.01 SCHEDULE OF OWNER-FURNISHED PRODUCTS

- A. None.

END OF SECTION 011100

**SECTION 013315
DEFERRED APPROVAL SUBMITTAL PROCEDURES**

SECTION REMOVED IN ITS ENTIRETY.

**SECTION 017910
OPERATING AND MAINTENANCE DATA**

SECTION REMOVED IN ITS ENTIRETY.

SECTION 099600
HIGH-PERFORMANCE COATINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. High performance coatings for metals exposed to the environment. Items generally include:
 - 1. Exterior exposed structural steel.
 - 2. Steel gates and fences.
 - 3. Exterior supports.
 - 4. Miscellaneous metal fabrications.
 - 5. Exposed galvanized sheet metal work no totherwise prefinished.

1.02 RELATED REQUIREMENTS

- A. Section 013300 - Submittal Procedures
- B. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions.
- C. Section 018010 - General Commissioning Requirements
- D. Section 055000 - Metal Fabrications
- E. Section 099000 - Painting and Coating.

1.03 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2015a.
- B. ASTM D6386-10 - Practice for preparation of Zinc (Hot-Dip Galvanized) Coated Iron and Steel Product and Hardware Surfaces for Painting
- C. SSPC V1 (PM1) - Good Painting Practice: Painting Manual, Volume 1; Fourth Edition.
- D. SSPC V2 (PM2) - Systems and Specifications: Steel Structures Painting Manual, Volume 2; Fourth Edition.
- E. SSPC V2 (PM2) Systems and Specifications, 7th Edition, including Specifications, Guides, Procedures, and Supplements:
 - 1. SP-2 - Hand Tool Cleaning
 - 2. SP-3 - Power Tool Cleaning
 - 3. SP-6 - Commercial Blast Cleaning (NACE 3)
 - 4. SP-11 - Power Tool Cleaning to Bare Metal

1.04 SUBMITTALS

- A. General: Make submittals in accordance with provisions of Section 013300 - Submittal Procedures
- B. Product Data: Provide complete list of all products to be used, with the following information for each:
 - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
 - 2. MPI product number (e.g. MPI #47).
 - 3. Cross-reference to specified coating system(s) product is to be used in; include description of each system.
 - 4. Manufacturer's installation instructions.
- C. Samples: Submit two samples 8.5 x 11 inch on hardboard in size illustrating colors and textures available for selection.
 - 1. Coatings shall be custom-tinted to match the colors and sheens selected by the Architect
 - 2. Provide samples of each color on 8-1/2 inch by 11-inch hardboard
- D. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- E. Maintenance Data: Include cleaning procedures and repair and patching techniques.

- F. Substrate Condition Field Report - Furnish report from installer confirming that surfaces, alignments, and tolerances to which materials of this Section will be applied are in a suitable and acceptable condition to receive finish materials specified in this Section.
- G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. Extra Coating Materials: 1 gallon of each type and color.
 - 2. Label each container with manufacturer's name, product number, color number, and room names and numbers where used.

1.05 LEED SUBMITTALS

- A. Material & Resources Submittals:
 - 1. Letter Template for MR Credit 2.1 and Credit 2.2: Letter template, signed by Contractor, tabulating total waste material, quantities diverted and means by which it is diverted, and statement that requirements for the credit have been met.
 - a. Comply with Division 1 for Construction Waste Management.
 - 2. Product Data and Certification Letter for MR Credit 4.1: Indicate percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content. Include statement indicating costs for each product having recycled content.
 - 3. Product Data for MR Credit 5.1: For regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

1.06 CLOSEOUT SUBMITTALS:

- A. Warranty Documentation: Submit copies of written warranty, as signed by the applicator, agreeing to repair or replace defective coating work during the warranty period.

1.07 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum 10 years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section approved by manufacturer.
- C. Certifications: Provide services of manufacturer's representative to certify that surface preparation and primer have been applied in accordance with the requirements of this Section.
 - 1. Certify dry-film thicknesses of applied coatings.
- D. Field Samples: Prior to installation work, prepare sample panel as required to secure the Architect's acceptance prior to ordering materials. Upon acceptance of the Architect, sample panel may be an actual portion of the application required for this work.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Handling: Comply with manufacturer's Material Safety Data Sheets to prevent hazardous or unsafe conditions.

1.09 FIELD CONDITIONS

- A. Do not install materials when temperature is below 55 degrees F or above 90 degrees F.
- B. Maintain this temperature range, 24 hours before, during, and 72 hours after installation of coating.
- C. Restrict traffic from area where coating is being applied or is curing.

1.10 WARRANTY

- A. See Section 017710 - Closeout Procedures.
- B. Correct defective Work within a two year period after Date of Substantial Completion.

1.11 REGULATORY REQUIREMENTS

- A. Regulatory Requirements: Comply with relevant codes and regulations of cognizant governmental agencies having jurisdiction, including those having jurisdiction over airborne emissions and industrial waste disposal.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Acceptable Manufacturers: Design is based on the use of products manufactured by the following manufacturers, and designated by manufacturer number, as follows:
 1. Tnemec Company, Inc, Kansas City, MO (816) 483-3400, represented by TPC Consultants, Inc., Compton, CA (310) 637-2363
 2. Pittsburgh Paints, PPG Industries, Inc., Pittsburgh, PA (800) 441-9695.
 3. The Sherwin-Williams Company, Cleveland, OH, www.protective.sherwin-williams.com/industries
 4. Substitutions: Section 016000 - Product Requirements and Substitutions.

2.02 HIGH-PERFORMANCE COATINGS

- A. Provide coating systems that meet the following minimum performance criteria, unless more stringent criteria are specified:
 1. Surface Burning Characteristics: Flame spread/Smoke developed index of 0/0, maximum, when tested in accordance with ASTM E84.
 2. Impact Resistance: Excellent, when tested in accordance with ASTM.
 3. Adhesion: Excellent, when tested in accordance with ASTM.
 4. Lead Content: None.
 5. Scrubbability: Excellent, when tested in accordance with ASTM.
 6. Gloss and Color Retention: Excellent, when tested in accordance with ASTM.
- B. Legend: The number code in each System reference indicates the manufacturer number of the products specified, as listed in Paragraph 2.01-A. The letter code in each System reference indicates the type of substrate material. Primers and finish coats shall be the products of a single manufacturer.
 1. Contractor's shall use the products of a single coating manufacturer for work of this Section.
- C. Like materials shall be the products of one manufacturer and shall be either the ones upon which the design is based or materials of a manufacturer accepted in advance in accordance with "Substitution Procedures".

2.03 REGULATORY REQUIREMENTS

- A. Regulations: Comply with relevant codes and regulations of cognizant governmental agencies having jurisdiction over airborne emissions and industrial waste disposal.
- B. Waste Management: Comply with CALGreen Section 5.408 Construction Waste Reduction, Disposal and Recycling. Establish a construction waste management plan for the diverted material
 1. Recycle or salvage for reuse a minimum of 50 percent of the non-hazardous construction and demolition waste in accordance with CALGreen 5.408.1.3.
 - a. Include carpet, wood, aggregate, paint, shingles, wallboard, and other materials that have recyclable value.
- C. Comply with CALGreen 5.504.4.3 Paintings and Coatings:
 1. Architectural paints and coatings shall comply with VOC limits in Table 5.504.4.3
 2. Aerosol paints and coatings shall comply with CALGreen 5.504.3.1

2.04 SUSTAINABLE REQUIREMENTS

- A. LEED Goals for Materials & Resources:
 1. MR Credit 2.1 and MR Credit 2.2 Construction Waste Management: Recycle and/or salvage at least 75 percent of non-hazardous construction and demolition debris.

2. MR Credit 4.1 - Recycled Content: Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes 10 percent of the total value of the materials in the project.
3. MR Credit 5.1 - Regional Materials: Use building materials or products that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10 percent of the total materials value.
4. EQ Credit 4.2: Paints and coatings used on the interior shall comply with criteria laid out in the LEED Reference Guide.

2.05 MATERIALS - BASIS OF DESIGN

- A. Coatings - General: Provide complete multi-coat systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated; number of coats specified does not include primer or filler coat.
- B. Type A Substrates (Applied over Standard Shop Primer)
 1. System A-1:
 - a. Field Primer: Tnemec Series 135 Chembuild two-part catalyzed epoxy coating.
 - b. Finish: Tnemec Series E185 Low VOC Acrylic Polyurethane semi-gloss enamel.
 2. System A-2:
 - a. Field Primer: PPG Pitt-Tech Plus DTM 100% Acrylic Formula 90-912 Series Industrial Primer.
 - b. Finish: PPG Pitthane High Build Semi-Gloss Urethane Enamel 95-8800 Series.
 3. System A-3:
 - a. Field Primer: Sherwin Williams Maxropoxy 646-100, B58W620
 - b. Finish: Sherwin-Williams Acrolon 100 Water Based Urethane, B65W Series Semi-Gloss
- C. Type B Substrates (Applied Over Ferrous Metals):
 1. System B-1:
 - a. Primer: Tnemec Series 90-97 Tneme-Zinc (shop-applied) two-part moisture-cured zinc-rich urethane coating.
 - b. Spot Prime (field-applied, if required): Tnemec Series 94 H20 Hydro-Zinc two-part moisture-cured zinc-rich urethane coating.
 - c. Intermediate Coat: Tnemec Hi-Build Epoxoline II Series L69 two-part catalyzed epoxy.
 - d. Solid Color Finish Coat: Tnemec Endura-Shield II Series 1080 waterborne polyurethane coating.
 - e. Clear Coat: Tnemec Series 750 UVX.
 2. System B-2:
 - a. Primer: PPG Moisture Cure Urethane Zinc Rich Primer UC 65147.
 - b. Intermediate Coat: PPG Polyamide Epoxy 97-130/139 Series.
 - c. Finish: PPG Pitthane High Build Semi-Gloss Urethane Enamel 95- 8800 Series
 3. System B-3: Equal product by Carboline for application.
 - a. Primer: Sherwin-Williams Corthane I Galva Pack Primer 100 2K, B65G10
 - b. Intermediate COat: Sherwin-Williams Macropoxy 646-100, B58W620
 - c. Finish: Sherwin-Williams Acrolon 100 Water Based Urethane, B65W Series Semi-gloss
 - d. Clear Coat: TBD
- D. Type C Substrates (Applied Over Galvanized Or Aluminum Materials):
 1. System C-1:
 - a. Primer: Tnemec Hi-Build Epoxoline II Series L69 (field-applied) two-part catalyzed epoxy coating.
 - b. Finish: Tnemec Series 1E85 Low VOC Acrylic Polyurethane semi-gloss enamel
 - 1) Where eggshell finish is specified, provide Tnemec Endura-Shield Series 175 aliphatic acrylic polyurethane enamel.
 2. System C-2:

- a. Primer (Option 1): PPG Aquapon High Build Semi-Gloss Polyamide Epoxy Coating 97-130/139 Series.
 - b. Primer (Option 2): PPG Pitt-Guard D-T-R Epoxy Mastic Coating 97-148 Series.
 - c. Finish: PPG Pitthane High Build Semi-Gloss Urethane Enamel 95- 8800 Series.
3. System C-3:
- a. Primer: Sherwin-Williams DTM Wash Primer B71Y1
 - b. Finish: Serwin-Williams Acrolon 100 Water Based Urethane, B65W Series Semi-Gloss
- E. Reflectivity: Provide semi-gloss finish, unless noted otherwise.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Do not begin application of coatings until substrates have been properly prepared.
- C. Verify that substrate surfaces are ready to receive work as instructed by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.
- D. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.

3.02 PREPARATION

- A. General: Clean surfaces of loose foreign matter.
- B. Remove finish hardware, fixture covers, and accessories and store.
- C. Protect adjacent surfaces and materials not receiving coating from spatter and overspray; mask if necessary to provide adequate protection. Repair damage.
 1. Take specific precautions to avoid the effect of wind drift in the application of liquid materials.
- D. Construction Indoor Air Quality Management: If building is enclosed at time of application, temporarily seal penetrations and cover roof openings to the building interior to protect indoor air quality by blocking entry of externally -applied coatings with VOC pollutants in accordance with Division 1 Requirements or General Conditions.
- E. Surface Preparation:
 1. System A Over Standard Shop Primer: SSPC SP-1 Solvent Cleaning to remove soluble contaminants. Remove insoluble contaminants by SSPC SP-2 (Hand Tool Cleaning) or SP-3 (Power Tool Cleaning). Check adhesion and compatibility of the shop primer and the Field primer prior to application.
 2. System B for Ferrous Metals: Spot prime as indicated for System. Remove loose rust, loose mill scale, and other foreign substances using power tools according to SSPC-SP 3. Clean to base metal all welds and damaged shop prime coat using SSPC SP11.
 - a. Refer to Section specifying metal material for shop primer preparation.
 - b. Ferrous Metals, Shop: Minimum preparation shall be in accordance with SP-6 (Commercial Blast Cleaning) to achieve a uniform anchor profile of 1-2 mils.
 - c. Ferrous Metals, Field: Shop prepare in accordance with SSPC SP-11 (Hand and Power Tool Cleaning to Bare Metal)
 3. System C for Galvanized and Aluminum Materials: Remove dirt, grease, oil, salt, and other contaminants with Rust-Oleum Surfa-Etch 108 etching solution, or equal. Rinse thoroughly with fresh water and remove soluble and insoluble contaminants and corrosion. Chemically Treat in accordance with ASTM D 6386 Sweep abrasive blast to achieve a uniform anchor profile of 1-2 mils.
- F. Field Preparation : Spot clean to base metal all welds and damaged shop prime coat in accordance with SP-11 - Power Tool Cleaning to Bare Metal

3.03 COATING APPLICATION

- A. Apply coatings in accordance with manufacturer's instructions, to thicknesses specified as accepted by the Architect. Use system appropriate for substrate material and location of application. Coordinate system with preparation and primer requirements of Section 055000. Refer to Part 2 - Products for primer and finish materials.
- B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.
- C. Type A Substrates:
 - 1. System A-1 over Shop Primer:
 - a. 1st Coat: Apply primer coating material to a dry-film thickness of 4 mils.
 - b. 2nd Coat: Apply finish coating material to a dry-film thickness of 4 mils.
 - 2. System A-2 over Shop Primer:
 - a. 1st Coat: Apply primer coating material to a dry-film thickness of 5 to 7 mils.
 - b. 2nd Coat: Apply finish coating material to a dry-film thickness of 2 to 5 mils.
 - 3. System A-3 over Shop Primer: In accordance with manufacturer's published standard application directions.
 - a. 1st Coat: Apply primer coating material to a dry-film thickness of 3 to 6 mils.
 - b. 2nd Coat: Apply finish coating material to a dry-film thickness of 2 to 4 mils.
- D. Type B Substrates:
 - 1. System B-1 at Ferrous Metals:
 - a. 1st Coat: Apply primer coating material to a dry-film thickness of 2.5 to 3.5 mils.
 - b. 2nd Coat: Apply intermediate coat to a dry film thickness of 2.5 to 3.5 mils.
 - c. 3rd Coat: Apply finish coating material to a dry-film thickness of 2 to 3 mils.
 - d. Clear Coat: Apply finish coating material to a dry-film thickness of 1.5 to 2 mils.
 - 2. System B-2 at Ferrous Metals:
 - a. 1st Coat (Option 1): Apply primer coating material to a dry-film thickness of 3 to 4 mils.
 - b. 2nd Coat: Apply intermediate coat to a dry film thickness of 3 to 5 mils.
 - c. 3rd Coat: Apply finish coating material to a dry-film thickness of 3 to 6 mils.
 - 3. System B-3 at Ferrous Metals: In accordance with manufacturer's published standard application directions.
 - a. 1st Coat (Option 1): Apply primer coating material to a dry-film thickness of 3 to 4 mils.
 - b. 2nd Coat: Apply intermediate coat to a dry film thickness of 3 to 5 mils.
 - c. 3rd Coat: Apply finish coating material to a dry-film thickness of 2 to 4 mils.
- E. Type C Substrates:
 - 1. System C-1 at Galvanized or Aluminum:
 - a. 1st Coat: Apply primer coating material to a dry-film thickness of 2 to 3 mils.
 - b. 2nd Coat: Apply finish coating material to a dry-film thickness of 2.5 to 4 mils.
 - 2. System C-2 at Galvanized or Aluminum:
 - a. 1st Coat (Option 1): Apply primer coating material to a dry-film thickness of 4 to 6 mils.
 - b. 1st Coat (Option 2): Apply primer coating material to a dry-film thickness of 5 to 7 mils.
 - c. 2nd Coat: Apply finish coating material to a dry-film thickness of 2 to 5 mils.
 - 3. System C-3 at Galvanized or Aluminum: In accordance with manufacturer's published standard application directions.
- F. Apply with air atomized spray equipment in accordance with manufacturer's instructions.

3.04 CLEANING

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

- B. Clean surfaces immediately of overspray, splatter, and excess material.
- C. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

3.05 ADJUSTING

- A. Areas defaced or scratched during construction operations shall be touched up with same material and color in a manner recommended by manufacturer of coating systems to look like new.

3.06 PROTECTION

- A. Protect finished work from damage.

3.07 SCHEDULE

- A. Colors: As selected by Architect..

END OF SECTION 099600

