PROJECT MANUAL

UNLV TONOPAH RESIDENCE HALL
UNLV PROJECT # TON1603 / PC-5629

February 4, 2016

4505 MARYLAND PARKWAY
LAS VEGAS, Nevada

SH Architecture
7250 Peak Drive, #216
Las Vegas, Nevada 89128

TABLE OF CONTENTS

SECTION 00 2113

INSTRUCTIONS TO BIDDERS

1.01 THE INSTRUCTIONS IN THIS DOCUMENT AMEND OR SUPPLEMENT THE INSTRUCTIONS TO BIDDERS AND OTHER PROVISIONS OF THE BIDDING AND CONTRACT DOCUMENTS.

BID DOCUMENTS AND CONTRACT DOCUMENTS

2.01 AVAILABILITY

A. Bid Documents are only available to general contract bidders.

B. Bid Documents may be obtained at the office of Owner .

C. Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.

2.02 EXAMINATION

A. Upon receipt of Bid Documents verify that documents are complete. Notify Architect should the documents be incomplete.

B. Immediately notify Architect upon finding discrepancies or omissions in the Bid Documents.

2.03 INQUIRIES/ADDENDA

A. Direct questions to Flavien Sawadogo, email: fsawadogo@s-architecture.com.

B. Addenda may be issued during the bidding period. All Addenda become part of the Contract Documents. Include resultant costs in the Bid Amount.

C. Verbal answers are not binding on any party.

D. Clarifications requested by bidders must be in writing not less than 7 days before date set for receipt of bids. The reply may be in the form of an Addendum, a copy of which will be forwarded to known plan holders .

2.04 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

A. Where the Bid Documents stipulate a particular product, pre-bid substitutions will be considered up to 10 days before receipt of bids.

B. Submit substitution requests by completing CSI/CSC Form 1.5C - Substitution Request.
   1. Attach a description of changes to the Contract Documents that the proposed substitution will require for proper installation. Include product description, specifications, drawings, photographs, and performance data.

C. When a request to substitute a product is made, Architect may approve the substitution and will issue an Addendum to known bidders.

QUALIFICATIONS

BID ENCLOSURES/REQUIREMENTS

4.01 ADDITIONAL BID INFORMATION

A. Submit the following Supplements concurrent with bid submission:
   1. Document 00 4322 - Unit Prices Form: Include a listing of unit prices specifically requested by the Contract Documents.

END OF SECTION

SECTION 00 3100

AVAILABLE PROJECT INFORMATION

PART 1 GENERAL

1.01 EXISTING CONDITIONS

A. Certain information relating to existing surface and subsurface conditions and structures is available to bidders but will not be part of the Contract Documents, as follows:

B. Lead Survey: Entitled Limited Bulk Sample Collection, Tonopah Building, Projectd No. 15-0274-26, dated January 27, 2016.
   1. Copy is attached.
   2. This survey identifies quantities of Lead in exsiting paint.

C. Hazardous Materials Survey: from Hazard Management Services, Inc., dated October 12, 2005 including a cover letter, a Functional Space Notes and a Homogeneous Material Record.
   1. Original copy is available for inspection at Owner's offices during normal business hours.
   2. This survey identifies Asbestos Containing Materials (ACM) to be abated by Owner.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

Infinity
Environmental
Services, LLC

Project No. 15-0274-26

January 27, 2016

Mr. George L. Fratus
Risk Management & Safety
University of Nevada Las Vegas
4505 South Maryland Parkway
Las Vegas, NV 89154-1048

Subject: Lead Consulting Services
Limited Bulk Sample Collection
Tonopah Building
University of Nevada Las Vegas
4505 South Maryland Parkway
Las Vegas, NV 89154-1048

Dear Mr. Fratus:

In accordance with your request and authorization of services, Infinity Environmental Services, LLC (Infinity) of Las Vegas, Nevada with the assistance of RiskNomics collected six paint chip samples of suspect lean containing paint from the subject building located in Las Vegas, Nevada. On January 14, 2016 Mr. Steven Havens, the owner of Infinity and a Nevada licensed asbestos abatement consultant (building inspector), and Ms. Teri Lopeman an EPA certified Lead Base Paint Risk Assessor conducted the limited sampling survey. The results of our survey and the laboratory analyses are summarized in the following pages of the report.

EXECUTIVE SUMMARY

RiskNomics, LLC (RiskNomics) has contracted with Infinity Environmental Services (Client) to conduct a limited scope Lead Based Paint (LBP) inspection of the Tonopah North Dormitory Building located on the University of Nevada Las Vegas (UNLV) campus at 4505 South Maryland Parkway in Las Vegas, Nevada prior to painting operations on exterior portions of the structure. Inspection activities were limited to accessible areas of the exterior building components that are likely to be impacted during upcoming painting operations. The objective of the survey was to provide documentation to the Client consisting of a listing of the findings of lead bearing components that may impact site activities. Inspection activities were performed on January 14, 2016 by Teri Lopeman, an EPA certified Lead Based Paint Risk Assessor (Certification No. NV-R-I147303-1).

LEAD BASED PAINT FINDINGS

The LBP testing was conducted to determine the presence of LBP on various exterior components of the subject building. The LBP testing was performed through paint chip sampling in general accordance with the United States Department of Housing and Urban Development's (HUD's) guidance document, "Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing," 2012 Revision. Samples were submitted to a laboratory accredited by Environmental Lead Laboratory Accreditation Program (ELLAP) for lead analysis by atomic absorption spectrometry (AAS or Flame AA) using EPA Method 3050B/7420.

The US Department of Housing and Urban Development (HUD) and EPA define lead-based paint (LBP) as containing greater than one half percent (>0.5%) lead by weight. Paint and coatings that tested above 0.5% by weight have been identified as lead-containing materials and components in this report. The test results indicated that none of the building components tested contain lead in concentrations above regulated concentrations within the inspected spaces.

Components showing lead concentrations >0.5% by weight

Positive Components UNLV Tonopah North Dormitory Building 4505 S. Maryland Parkway, Las Vegas, Nevada						
Sample	Room/ Location	Component	Substrate	Color	Lead (% by weight)	Results
LBP was not identified in any of the Sampled Building Components.						

Removal or disturbance of material with any detectable amount of lead paint must be handled in accordance with OSHA regulation 29 CFR 1926.62. Lead was detected in some of the paint chip samples at levels below 0.5% lead by weight. While HUD and EPA do not consider paint with less than 0.5% lead by weight to be LBP, worker protection during removal of materials with lead amounts less than 0.5% may be regulated by OSHA.

LEAD-BASED PAINT INSPECTION SCREEN

INTRODUCTION

Teri Lopeman, an EPA certified Lead Based Paint Risk Assessor representing RiskNomics, performed a limited scope Lead Based Paint (LBP) inspection of the Tonopah North Dormitory Building located on UNLV's campus at 4505 South Maryland Parkway in Las Vegas, Nevada prior to painting operations on exterior portions of the structure. The LBP testing was conducted to determine the presence of lead on select exterior building components, prior to painting activities. Representative painted and/or finished components were tested in general accordance with the protocols for LBP testing in the United States Housing and Urban Development (HUD) Guidelines Chapter 7 (revised 2012) and any applicable Federal, State, and Local regulations.

The following painted components were tested for LBP:

Positive Components UNLV Tonopah North Dormitory Building 4505 S. Maryland Parkway, Las Vegas, Nevada						
Sample	Room/ Location	Component	Substrate	Color	Lead (% by weight)	Result
1044T-1/14-P1	Exterior – North Side	Exterior Walls	Stucco	Tan	Below the laboratory reporting limit of 0.006	Negative
1044T-1/14-P2	Exterior – South Side	Exterior Walls	Stucco	Tan	Below the laboratory reporting limit of 0.006	Negative
1044T-1/14-P2	Exterior – North Side	Exterior Walls	Brick	Tan	0.021	Negative*
1044T-1/14-P2	Exterior – West Side	Exterior Walls	Brick	Tan	0.007	Negative*
1044T-1/14-P2	Exterior – North Side	Exterior Walls	Metal	Brown	0.15	Negative*
1044T-1/14-P2	Exterior – South Side	Foundation Walls	Concrete	Brown	0.008	Negative*

*Sample is not considered LBP, but did have detectable levels of lead.

METHODOLOGIES

Visual Inspection & Paint Chip Sampling

Accessible components likely to be impacted during paint operations of the exterior of the structure were visually inspected for the presence of paint. There was no demolition of components in order to access hidden painted materials, and not all areas of the buildings could be visually inspected for paint. RiskNomics makes no warranty as to the possible existence or absence of lead in inaccessible locations.

Paint chip samples were taken from accessible painted components likely to be impacted during upcoming paint operations. Paint chip samples were submitted to a laboratory accredited by Environmental Lead Laboratory Accreditation Program (ELLAP) for lead analysis by atomic absorption spectrometry (AAS or Flame AA) using EPA Method 3050B/7420.

FINDINGS

The US Department of Housing and Urban Development (HUD) and EPA define lead-based paint (LBP) as containing greater than one half percent (>0.5%) lead by weight. Therefore, paint and coatings that tested at >0.5% lead by weight have been identified as lead-containing materials and components in this report.

No lead-based paint (greater than 0.5% by weight) was identified during this inspection. Lead was detected in some of the paint chip samples at levels below 0.5% lead by weight. While HUD and EPA do not consider paint with less than 0.5% lead by weight to be LBP, worker protection during removal of materials with lead amounts less than 0.5% may be regulated by OSHA. Removal or disturbance of material with any detectable amount of lead paint must be handled in accordance with OSHA regulation 29 CFR 1926.62.

Lead containing waste must be disposed of in accordance with all applicable federal, state, county or local regulations and guidelines. It is the sole responsibility of the Contractor to assure compliance with all laws and regulations relating to the disposal.

DISCLAIMER

The content presented in this report is based on data collected during the site inspection and survey, review of pertinent regulations, requirements, guidelines and commonly followed industry standards, and information provided by the Client, their clients, agents, and representatives.

The work has been conducted in an objective and unbiased manner and in accordance with generally accepted professional practice for this type of work. RiskNomics believes the data and analysis to be accurate and relevant, but cannot accept responsibility for the accuracy or completeness of available documentation or possible withholding of information of other parties.

This hazardous materials survey report is designed to aid the property owner, architect, construction manager, general contractor, and lead abatement contractor in locating lead. This report is not intended for, and may not be utilized as a bidding document or as an abatement project specification document.

RiskNomics, LLC

Teri Lopeman
Southwest Regional Manager
EPA Risk Assessor Certification No. NV-R-I147303-1

Forensic Analytical Laboratories, Inc.

Analysis Request Form (COC)

Client Name & Address:
RiskNomics LLC
8777 E. Via de Ventura, Suite 188
Scottsdale, AZ 85258

PO / Job#: 16 RN1044T Date: 1-14-16

Turn Around Time: Same Day / 1Day / 2Day / (3Day) / 4Day / 5Day

☐ PCM: ☐ NIOSH 7400A / ☐ NIOSH 7400B ☐ Rotometer

☐ PLM: ☐ Standard / ☐ Point Count 400 1000 / ☐ CARB 435

Contact: Teri Lopeman

Phone: (702) 285-2521 Fax:

E-mail: tlopeman@risknomicsllc.com

☐ TEM Air: ☐ AHERA / ☐ Yamate2 / ☐ NIOSH 7402
☐ TEM Bulk: ☐ Quantitative / ☐ Qualitative / ☐ Chatfield
☐ TEM Water: ☐ Potable / ☐ Non-Potable / ☐ Weight %
☐ TEM Microvac: ☐ Qual(+/-) / ☐ D5755(str/area) / ☐ D5756(str/mass)

☐ IAQ Particle Identification (PLM LAB) ☐ PLM Opaques/Soot
☐ Particle Identification (TEM LAB) ☐ Special Project

Site: Infinity Environmental

Site Location: UNLV-Tonopah Bldg.

☒ Metals Analysis: Method: Lead Paint Chip
Matrix: Flame AA
Analytes:

Comments:

Report Via: ☐ Fax ☒ E-Mail ☐ Verbal

Sample ID	Date / Time	Sample Location / Description (Exterior Components Paint Chip Samples)	FOR AIR SAMPLES ONLY: Type (A P C)	Time On/Off	Avg. LPM	Total Time	Sample Area / Air Volume
1044T-1/14-P1	1-14-16 10am	Tan Stucco - N. Side					
-P2		Tan Stucco - S. Side					
-P3		Tan Brick - N. Side					
-P4		Tan Brick - W. Side					
-P5		Brown Metal - N. Side					
-P6		Brown Concrete - S. Side					

Sampled By: T. Lopeman Date: 1-14-16 Time: 10am

Shipped Via: ☐ Fed Ex ☐ DHL ☐ UPS ☐ US Mail ☐ Courier ☒ Drop Off ☐ Other:

Relinquished By:	Relinquished By:	Relinquished By:
Date / Time: 1-14-16 11:30am	Date / Time: 1/14/16 1130am	Date / Time:
Received By: C. Williams	Received By: Courtney FE	Received By:
Date / Time: 1/14/16 1130am	Date / Time: 01/15/16 10:20AM	Date / Time:
Condition Acceptable? ☒ Yes ☐ No	Condition Acceptable? ☒ Yes ☐ No	Condition Acceptable? ☐ Yes ☐ No

San Francisco Office: 3777 Depot Road, Suite 409, Hayward, California 94545-2761 / Ph: (510)887-8828 * (800)827-3274 / Fax: (510)887-4218
Los Angeles Office: 2959 Pacific Commerce Drive, Rancho Dominguez, California 90221 / Ph: (310)763-2374 * (888)813-9417 / Fax: (310)763-4450
Las Vegas Office: 6765 S. Eastern Avenue, Suite 3, Las Vegas, Nevada 89119 / Ph: (702)784-0040 / Fax: (702)784-0030

Forensic Analytical LABORATORIES

Final Report

Metals Analysis of Paints

RiskNomics, LLC
Teri Lopeman-Cortese
8777 E. Via De Ventura
Suite 385
Scottsdale, AZ 85258

Client ID: L1464
Report Number: M168314
Date Received: 01/15/16
Date Analyzed: 01/19/16
Date Printed: 01/19/16
First Reported: 01/19/16

Job ID / Site: 16RN1044T; Infinity Environmental, UNLV - Tonopah Bldg.
Date(s) Collected: 01/14/16

FALI Job ID: L1464
Total Samples Submitted: 6
Total Samples Analyzed: 6

Sample Number	Lab Number	Analyte	Result	Result Units	Reporting Limit*	Method Reference
1044T-1/14-P1	LM119638	Pb	< 0.006	wt%	0.006	EPA 3050B/7420
1044T-1/14-P2	LM119639	Pb	< 0.006	wt%	0.006	EPA 3050B/7420
1044T-1/14-P3	LM119640	Pb	0.021	wt%	0.006	EPA 3050B/7420
1044T-1/14-P4	LM119641	Pb	0.007	wt%	0.006	EPA 3050B/7420
1044T-1/14-P5	LM119642	Pb	0.15	wt%	0.01	EPA 3050B/7420
1044T-1/14-P6	LM119643	Pb	0.008	wt%	0.006	EPA 3050B/7420

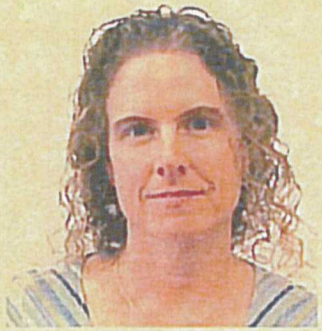
* The Reporting Limit represents the lowest amount of analyte that the laboratory can confidently detect in the sample, and is not a regulatory level. The Units for the Reporting Limit are the same as the Units for the Final Results.

Beatriz Hinojosa, Laboratory Supervisor, Rancho Dominguez Laboratory

2959 Pacific Commerce Drive, Rancho Dominguez, CA 90221 / Telephone: (310) 763-2374 (888) 813-9417 / Fax: (310) 763-8684

United States Environmental Protection Agency

This is to certify that



Theresa Lynn Lopeman-Cortese

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

In the Jurisdiction of:

Nevada

This certification is valid from the date of issuance and expires October 28, 2017

NV-R-I147303-1

Certification #

October 14, 2014

Issued On

Adrienne Priselac, Manager, Toxics Office

Land Division

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

October 14, 2014

Theresa Lopeman-Cortese
Forensic Analytical Consulting Services
6571 Mercutio Ct
Las Vegas, NV 89141

Dear Theresa Lopeman-Cortese:

Thank you for applying to the U.S. Environmental Protection Agency (EPA) for certification to conduct Lead-based Paint Activities in target housing and child-occupied facilities. I am pleased to inform you that, pursuant to 40 CFR Part 745, Subpart L, you are certified as an EPA **Risk Assessor in Nevada**. Your certificate is enclosed.

This certification **expires on October 28, 2017 and is valid in Nevada**. However, if the jurisdiction noted above obtains program authorization at any time during the term of your certification, your certification will no longer be valid in the newly-authorized jurisdiction.

EPA certification is specific and limited to the jurisdiction and discipline described above. If you wish to obtain certification in other EPA-administered States or Indian Tribes or in other lead-based paint activity disciplines, you will need to apply separately for this certification.

Your EPA individual certification is subject to the following:

1) Certification pertains only to the specific discipline, jurisdiction, and individual listed above that performs or offers to perform the associated lead-based paint activities within the scope of the discipline described in 40 CFR §745.223 and 40 CFR §745.227 pursuant to Section 402 of the Toxic Substances Control Act (TSCA)(15 U.S.C. 2682).

2) EPA certification does not mean that a State, Territory or Indian Tribe with its own certification program must accept or recognize an EPA certification. Individual States, Territories, and Indian Tribes, whether authorized or not, have the right to accept or reject any certification under their own authority. Please be aware that your EPA certification does not relieve you of any obligations that you may otherwise have to any authorized or unauthorized State, Territory, or Indian Tribe to obtain licensure or certification from that State or Indian Tribe under its statutory or regulatory requirements relating to lead-based paint activities.

3) The EPA may conduct audits and/or inspections to ensure continued compliance with its regulatory standards.

If you have questions or need assistance, please contact the Regional Lead Coordinator, Nancy Kain, of the EPA Region 9 staff at 415-947-4280 and refer to **Application ID number I354395**. Congratulations, and thank you for your interest in being certified to conduct lead-based paint services.

Sincerely,

Adrienne Priselac, Manager, Toxics Office
Land Division

Enclosures

SECTION 00 4322

UNIT PRICES FORM

PARTICULARS

1.01 THE FOLLOWING IS THE LIST OF UNIT PRICES REFERENCED IN THE BID SUBMITTED BY:

1.02 (BIDDER) _____

1.03 DATED _____ AND WHICH IS AN INTEGRAL PART OF THE BID FORM.

UNIT PRICE LIST

	ITEM DESCRIPTION	UNIT QUANTITY	UNIT VALUE	TOTAL
2.02	GYPSUM WALL BOARD REPLACEMENT	3,200 SF	_____	_____
2.03	CONCRETE FLOOR SURFACE REPAIR	4,500 SF	_____	_____

END OF UNIT PRICES FORM

SECTION 00 5000

CONTRACTING FORMS AND SUPPLEMENTS

PART 1 GENERAL

1.01 CONTRACTOR IS RESPONSIBLE FOR OBTAINING A VALID LICENSE TO USE ALL COPYRIGHTED DOCUMENTS SPECIFIED BUT NOT INCLUDED IN THE PROJECT MANUAL.

1.02 FORMS

A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in the Contract Documents.

B. Post-Award Certificates and Other Forms:
   1. Affidavit of Payment Form: AIA G706.
   2. Stored Material Form: CSI Form 2.5A.

C. Clarification and Modification Forms:
   1. Request for Interpretation Form: CSI form 13.2a, AIA G716 or other standard form approved by Architect.
   2. Substitution Request Form (During Construction): CSI Form 13.1A.
   3. Request for Proposal Form: AIA Form G709 Work Changes Proposal Request.
   4. Proposal Worksheet Summary Form: CSI Form 13.6D.
   5. Proposal Worksheet Detail Form: CSI Form 13.6C.
   6. Change Order Request Form (Proposal): CSI Form 13.6A.
   7. Nonconforming Work Notice: CSI Form 9.8A.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 1000

SUMMARY

PART 1 GENERAL

1.01 ENVIRONMENTAL GOALS

A. General: The Architect has incorporated Sustainable design principles into the project and the contract documents as specified and as follows:
   1. Enhancing indoor environmental quality. As specified and as follows:
      a. Low-Emitting Materials, Adhesives & Sealants.
      b. Low-Emitting Materials, Paints & Coatings.
      c. Low-Emitting Materials, Flooring Systems.
      d. Construction IAQ Management Plan, During Construction.
   2. Reducing the environmental impact of materials. As specified and as follows:
      a. Construction Waste Management.
      b. Optimize Use of Indoor Air Quality Compliant Products.
      c. Recycled Content Products.
      d. Regional Materials.

1.02 INDEPENDENT ENVIROMENTAL VERIFICATION

A. No independent verification is required. The Architect has incorporated Sustainable design principles into the project and the contract documents as specified. The Contractor is required to comply with these requirements through selection and installation of products (materials and equipment) and as specified in the contract documents.

1.03 WORK BY OWNER

A. Owner will award a contract for the removal of Asbestos Containing Materials.

1.04 OWNER OCCUPANCY

A. Owner intends to continue to occupy portions of the existing building during the entire construction period.

B. Owner intends to occupy the Project upon Substantial Completion.

C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.

D. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

A. Arrange use of site and premises to allow:
   1. Owner occupancy.
   2. Work by Owner.

B. Provide access to and from site as required by law and by Owner:
   1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
   2. Do not obstruct roadways, sidewalks, or other public ways without permission.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2000

PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Procedures for preparation and submittal of applications for progress payments.

B. Change procedures.

1.02 RELATED REQUIREMENTS

A. Section 00 5000 - Contracting Forms and Supplements: Forms to be used.

1.03 SCHEDULE OF VALUES

A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect for approval.

B. Forms filled out by hand will not be accepted.

C. Submit Schedule of Values in duplicate within 15 days after date established in Notice to Proceed.

D. Format: Utilize the Table of Contents of this Project Manual. Identify each line item with number and title of the specification Section.

E. Include separately from each line item, a direct proportional amount of Contractor's overhead and profit.

F. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

A. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect for approval.

B. Forms filled out by hand will not be accepted.

C. Execute certification by signature of authorized officer.

D. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.

E. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of Work.

F. Include the following with the application:
   1. Construction progress schedule, revised and current as specified in Section 01 3000.
   2. Conditional lien release upon payment Subcontractors and vendors.
   3. Unconditional lien release for previous payments.
   4. Affidavits attesting to off-site stored products.

1.05 MODIFICATION PROCEDURES

A. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect will issue instructions directly to Contractor.

B. For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
   1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
   2. Promptly execute the change.

C. For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change . Contractor shall prepare and submit a fixed price quotation within 14 days.

D. Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for

the change, and the effect on the Contract Sum and Contract Time with full documentation . Document any requested substitutions in accordance with Section 01 6000.

1. Provide a substantiation of cost utilizing CSI form 13.6a, Change Order Request (Proposal).
2. Provide a proposal worksheet summary utilizing CSI Form 13.6d, Proposal Worksheet Summary.
3. Provide a detailed worksheet utilizing CSI Form 13.6c, Proposal Worksheet Detail.

E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.

F. Execution of Change Orders: Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.

G. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.

H. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.

I. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.

B. Application for Final Payment will not be considered until the following have been accomplished:

1. All closeout procedures specified in Section 01 7000.
2. Final Inspections have been completed and all punch list items are complete..

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 2200

UNIT PRICES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. List of unit prices, for use in preparing Bids.

B. Measurement and payment criteria applicable to Work performed under a unit price payment method.

C. Defect assessment and non-payment for rejected work.

1.02 COSTS INCLUDED

A. Unit Prices included on the Bid Form shall include full compensation for all required labor, products, tools, equipment, plant, transportation, services and incidentals; erection, application or installation of an item of the Work; overhead and profit.

1.03 UNIT QUANTITIES SPECIFIED

A. Quantities indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements of actual Work will determine the payment amount.

1.04 MEASUREMENT OF QUANTITIES

A. Take all measurements and compute quantities. Measurements and quantities will be verified by Owner.

B. Assist by providing necessary equipment, workers, and survey personnel as required.

C. Measurement by Area: Measured by square dimension using mean length and width or radius.

D. Linear Measurement: Measured by linear dimension, at the item centerline or mean chord.

E. Stipulated Price Measurement: Items measured by weight, volume, area, or linear means or combination, as appropriate, as a completed item or unit of the Work.

1.05 PAYMENT

A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Architect, multiplied by the unit price.

B. Payment will not be made for any of the following:
   1. Products wasted or disposed of in a manner that is not acceptable.
   2. Products determined as unacceptable before or after placement.
   3. Products not completely unloaded from the transporting vehicle.
   4. Products placed beyond the lines and levels of the required Work.
   5. Products remaining on hand after completion of the Work.
   6. Loading, hauling, and disposing of rejected Products.

1.06 DEFECT ASSESSMENT

A. Replace Work, or portions of the Work, not conforming to specified requirements.

B. If, in the opinion of Owner, it is not practical to remove and replace the Work, Owner will direct one of the following remedies:
   1. The defective Work may remain, but the unit price will be adjusted to a new unit price at the discretion of Owner.
   2. The defective Work will be partially repaired to the instructions of the Owner, and the unit price will be adjusted to a new unit price at the discretion of Owner.

1.07 SCHEDULE OF UNIT PRICES

A. Item: Gypsum Wall Board Replacement; Section 09 2116 - Gypsum Board Assemblies.

B. Item: Concrete Floor Surface Repair; Section 03 0100 - Maintenance of Concrete.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 3000

ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Electronic document submittals.

B. Preconstruction meeting.

C. Site mobilization meeting.

D. Progress meetings.

E. Construction progress schedule.

F. Submittals for review, information, and project closeout.

G. Number of copies of submittals.

H. Submittal procedures.

1.02 RELATED REQUIREMENTS

A. Section 01 3117 - Request for Interpretation.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 ELECTRONIC DOCUMENT SUBMITTALS

A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format and transmitted via email or uploaded to the Architect via Newforma® Project Center.

1. Besides submittals for review, information, and closeout, this procedure applies to requests for information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, and any other document any participant wishes to make part of the project record.
2. It is Contractor's responsibility to submit documents in PDF format.
3. Users of Newforma® Project Center need an email address, Internet access, and PDF review software (such as Adobe Acrobat, www.adobe.com, or Bluebeam PDF Revu, www.bluebeam.com).
4. Paper document transmittals will not be reviewed.
5. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.

3.02 PRECONSTRUCTION MEETING

A. Schedule meeting after Notice of Award.

B. Attendance Required:

1. Owner.
2. Architect.
3. Contractor.

C. Agenda:

1. Execution of Owner-Contractor Agreement.
2. Submission of executed bonds and insurance certificates.
3. Distribution of Contract Documents.
4. Submission of schedule of values, and progress schedule.
5. Designation of personnel representing the parties to Contract and Architect.
6. Communication and Correspondence requirements.
7. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
8. Scheduling.

9. Claims for delays.

D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.03 SITE MOBILIZATION MEETING

A. Schedule meeting at the Project site prior to Contractor occupancy.

B. Site Mobilization Meeting may be combined with the Preconstruction Meeting.

C. Attendance Required:
1. Contractor.
2. Owner.
3. Architect.
4. Contractor's Superintendent.
5. Major Subcontractors.

D. Agenda:
1. Use of premises by Owner and Contractor.
2. Owner's requirements and occupancy prior to completion.
3. Construction facilities and controls provided by Owner.
4. Temporary utilities provided by Owner.
5. Survey and building layout.
6. Security and housekeeping procedures.
7. Schedules.
8. Application for payment procedures.
9. Procedures for testing.
10. Procedures for maintaining record documents.
11. Requirements for start-up of equipment.
12. Inspection and acceptance of equipment put into service during construction period.

E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.04 PROGRESS MEETINGS

A. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

B. Attendance Required:
1. Contractor.
2. Owner.
3. Architect.
4. Contractor's Superintendent.
5. Major Subcontractors.

C. Agenda:
1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems that impede, or will impede, planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Other business relating to Work.

D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.05 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 01 3216

A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of Work, with a general outline for remainder of Work.

B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.

C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
   1. Include written certification that major contractors have reviewed and accepted proposed schedule.

D. Within 10 days after joint review, submit complete schedule.

E. Submit updated schedule with each Application for Payment.

3.06 SUBMITTALS FOR REVIEW

A. When the following are specified in individual sections, submit them for review:
   1. Product data.
   2. Shop drawings.
   3. Samples for selection.
   4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Samples will be reviewed only for aesthetic, color, or finish selection.

D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below .

3.07 SUBMITTALS FOR INFORMATION

A. When the following are specified in individual sections, submit them for information:
   1. Design data.
   2. Certificates.
   3. Test reports.
   4. Inspection reports.
   5. Manufacturer's instructions.
   6. Manufacturer's field reports.
   7. Other types indicated.

B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT

A. Submit Correction Punch List for Substantial Completion.

B. Submit Final Correction Punch List for Substantial Completion.

C. When the following are specified in individual sections, submit them at project closeout:
   1. Project record documents.
   2. Operation and maintenance data.
   3. Warranties.
   4. Bonds.
   5. IAQ Management Plan.
   6. Final Summary Of Solid Waste Disposal And Diversion.
   7. Other types as indicated.

D. Submit for Owner's benefit during and after project completion.

3.09 NUMBER OF COPIES OF SUBMITTALS

A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.

B. Samples: Submit the number specified in individual specifications sections; samples will be returned to Contractor.
   1. Contractor to maintain one record copy of returned samples on-site.

3.10 SUBMITTAL PROCEDURES

A. Shop Drawing Procedures:
   1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.
   2. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.

B. Transmit each submittal with a copy of approved submittal form.

C. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

D. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.

E. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

F. Schedule submittals to expedite the Project, and coordinate submission of related items.

G. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

H. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

I. Provide space for Contractor and Architect review stamps.

J. When revised for resubmission, identify all changes made since previous submission.

K. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

L. Submittals not requested will not be recognized or processed.

END OF SECTION

SECTION 01 3117

CONTRACTOR REQUEST FOR INTERPRETATION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Administrative requirements for Request for Interpretation.

1.02 RELATED SECTIONS

A. Section 01 3000 Administrative Requirements:

1.03 DEFINITIONS

A. Request for interpretation: A document submitted by the Contractor requesting Interpretation or clarification of a portion of the Contract Documents that is required to properly perform the work, hereinafter referred to as RFI.
   1. Request shall clearly and concisely set forth the issue for which clarification or interpretation is sought and why a response is needed from the Architect. In the RFI form the Contractor shall set forth their own interpretation or understanding of the requirement along with reasons why they have reached such an understanding. The Architect will review all RFI's to determine whether the RFI is within the meaning of this term.

B. Proper RFI's:
   1. A properly prepared Request for Interpretation shall include a detailed written statement that indicates the specific drawing or specification section in need of clarification and the nature of the clarification requested.
      a. Drawing(s) shall be identified by drawing number and location on the drawing sheet.
      b. Specification shall be identified by section number, page and paragraph.

C. Improper RFI's:
   1. RFI's that are not properly prepared.
   2. Improper RFI's will incur additional processing expenses to the Architect.

D. Frivolous RFI's:
   1. Frivolous RFI's are RFI's that request interpretation that is clearly shown on the Contract Documents.
   2. Frivolous RFI's may be returned unanswered or may be processed by the Architect at standard hourly rates.

1.04 ADDITIONAL SERVICES

A. Improper RFI's and Frivolous RFI's: The Architect may charge the Owner for additional services at the Architect's standard hourly rate for the additional processing expenses incurred from Improper and Frivolous RFI's. Such cost will be deducted from monies still due the Contractor.
   1. The Contractor will be notified in writting by the Architect prior to the processing of Improper and Frivolous RFI's.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTRACTOR'S REQUEST FOR INTERPRETATION

A. When the Contractor is unable to determine from the Contract Documents the material or system to be installed, the Architect shall be requested to make a clarification of the indeterminate item.
   1. Wherever possible, such clarification shall be requested at the next appropriate project meeting, with the response entered into the meeting minutes. When clarification at the meeting is not possible, either because of the urgency of the need, or the complexity of the item, Contractor shall prepare and submit an RFI to the Architect.

2. If clarification of an item is required of a document known to have been prepared by a consultant the Architect, the Contractor may NOT direct the RFI directly to the consultant. Each RFI shall be processed through the Architect.

B. RFI's shall be submitted electronically on CSI form 13.2a - Request for Interpretation or similar form approved by Architect.
   1. Forms shall be completely filled in, and if prepared by hand, shall be fully legible after photo copying or transmission by email.
   2. RFI's shall be submitted in numerical order with no breaks in the consecutive numbering.
   3. Each page or attachments to RFI's shall bear the RFI number and shall be consecutively numbered in chronological order.

C. RFI's shall be originated by the Contractor.
   1. RFI's from subcontractor's or material suppliers shall be submitted through, reviewed by, and signed by the Contractor prior to submittal to the Architect utilizing the proper form.
      a. Pass through RFI's from subcontractors will be considered an Improper RFI.
   2. RFI's sent by a subcontractor or material supplier directly to the Owner, Owner's Representative, Architect or the Architect's consultants shall not be accepted and will be returned unanswered.

D. RFI's issued to request clarification of coordination issues, clearances, specific locations of work shown diagrammatically, and similar items, the Contractor shall fully lay out a suggested solution using drawings or sketches drawn to scale and submit same with the RFI. RFI's which fail to include a suggested solution will be returned unanswered with a requirement that the Contractor submit a complete request.

E. RFI's shall not be used for the following purposes:
   1. To request approval of products.
   2. To request approval of substitutions.
   3. To request changes which entail additional cost or credits to the contract sum.
   4. To request methods of performing work.

F. The Contractor shall prepare and maintain a log of RFI's for review at Progress Meetings. The Contractor shall note unanswered RFI's in the log.

3.02 ARCHITECT'S RESPONSE TO RFI'S

A. Contractor shall allow time for the Architect's review and response for RFI's as stated in the Conditions of the Contract, after receipt at Architect's office, however, the Architect will endeavor to respond in a timely manner. If additional time is required beyond the days stated in the Conditions of the Contract, the Architect shall notify the Contractor in writting.
   1. RFI's shall NOT state requested or required date/time for response, however, the RFI should be identified as urgent if the critical path schedule is affected.
   2. The Contractor shall endeavor to foresee and coordinate all future work activities to avoid schedule delays as a result of RFI processing.
   3. Lack of foresight or coordination resulting in urgent RFI's will not be grounds for changes in Contract Time.

B. Architect will respond to properly prepared RFI's in one of the following manners:
   1. Directly upon the RFI form or attachments;
   2. or Supplemental Information Form;
   3. or Sketches.

C. The Architect may opt to retain RFI's for discussion during regularly scheduled project meetings for inclusion of responses in meeting minutes in lieu of responding in written form. Responses shall be recorded in the meeting minutes and reflected in the Contractor's RFI log.

D. Responses from the Architect will not change any requirement of the Contract Documents unless so noted by the Architect in the response to the RFI. In the event the Contractor believes that a response to a RFI will cause a change to the requirements of the Contract Documents, the Contractor shall immediately give written notice to the Architect within 14 days of Architect's response stating that the Contractor considers the response to be a Change Order. Failure to give complete written notice shall waive the Contractor's right to seek additional time or cost.

END OF SECTION

SECTION 01 3216

CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preliminary schedule.

B. Construction progress schedule, with network analysis diagrams and reports.

C. Recovery Schedules.

1.02 RECOVERY SCHEDULES

A. If a Monthly Schedule Update indicates the progress of the work is deemed unsatisfactory in accordance with the Conditions of the Contract, the Contractor shall prepare a Proposed Recovery Schedule demonstrating Contractor's plan to regain the time lost. The Recovery Schedule shall be submitted either in advance of or concurrent with the Monthly Schedule Update and Contractor's progress request. Both the Monthly Schedule Update and the Proposed Recovery Schedule shall be based on the same percentages of completion and actual completion date accepted by the Owner.

B. The Proposed Recovery Schedule shall be based on a copy of the Monthly Schedule Update for the calendar month during which the progress is deemed unsatisfactory.

C. The Proposed Recovery Schedule shall include a narrative that identifies the causes of the delay on the critical path and provides Contractor’s proposed corrective action to ensure timely completion of all Milestones and the Substantial Completion Date. Contractor’s corrective actions shall include but are not limited to increasing concurrent operations, increasing labor, adding multiple shifts in a 24-hour period, and adding overtime.

D. Contractor’s progress payment may not be processed until the Owner accepts the Proposed Recovery Schedule. Following such an acceptance, the Proposed Recovery Schedule will be known as the Recovery Schedule and future Work will be performed by the Contractor in accordance with it.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

A. Prepare preliminary schedule in the form of a preliminary network diagram.

3.02 CONTENT

A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.

B. Identify each item by specification section number.

C. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.

D. Provide separate schedule of submittal dates for shop drawings, product data, and samples, and dates reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes. Include scheduled for owner-furnished products and products identified under Allowances, if any.

E. Indicate delivery dates for owner-furnished products and products identified under Allowances, if any.

F. Coordinate content with schedule of values specified in Section 01 2000 - Price and Payment Procedures.

G. Provide legend for symbols and abbreviations used.

3.03 NETWORK ANALYSIS

A. Prepare network analysis diagrams and supporting mathematical analyses using the Critical Path Method.

B. Illustrate order and interdependence of activities and sequence of work; how start of a given activity depends on completion of preceding activities, and how completion of the activity may restrain start of subsequent activities.

C. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates, and identify for each activity:
   1. Preceding and following event numbers.
   2. Activity description.
   3. Estimated duration of activity, in maximum 15 day intervals.
   4. Earliest start date.
   5. Earliest finish date.
   6. Actual start date.
   7. Actual finish date.
   8. Latest start date.
   9. Latest finish date.
   10. Total and free float; float time shall accrue to Owner and to Owner's benefit.
   11. Monetary value of activity, keyed to Schedule of Values.
   12. Percentage of activity completed.
   13. Responsibility.

D. Analysis Program: Capable of compiling monetary value of completed and partially completed activities, accepting revised completion dates, and recomputation of all dates and float.

E. Required Reports: List activities in sorts or groups:
   1. By preceding work item or event number from lowest to highest.
   2. By amount of float, then in order of early start.

3.04 REVIEW AND EVALUATION OF SCHEDULE

A. Participate in joint review and evaluation of schedule with Architect at each submittal.

B. Evaluate project status to determine work behind schedule and work ahead of schedule.

C. After review, revise as necessary as result of review, and resubmit within 10 days.

3.05 UPDATING SCHEDULE

A. Maintain schedules to record actual start and finish dates of completed activities.

B. Indicate progress of each activity to date of revision, with projected completion date of each activity.

C. Annotate diagrams to graphically depict current status of Work.

D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.

E. Indicate changes required to maintain Date of Substantial Completion.

F. Submit reports required to support recommended changes.

3.06 DISTRIBUTION OF SCHEDULE

A. Distribute copies of updated schedules to Contractor's project site file, to Subcontractors, suppliers, Architect, Owner, and other concerned parties.

B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

END OF SECTION

SECTION 01 3329.07

PROHIBITED CONTENT INSTALLER CERTIFICATION

PROJECT NAME: TONOPAH RESIDENCE HALL; NO.: 150121.

USE OF THIS FORM

BECAUSE INSTALLERS ARE ALLOWED AND DIRECTED TO CHOOSE ACCESSORY MATERIALS SUITABLE FOR THE APPLICABLE INSTALLATION, THERE IS A POSSIBILITY THAT SUCH ACCESSORY MATERIALS MIGHT CONTAIN VOC CONTENT IN EXCESS OF THAT PERMITTED, ESPECIALLY WHERE SUCH MATERIALS HAVE NOT BEEN EXPLICITLY SPECIFIED.

CONTRACTOR IS REQUIRED TO OBTAIN AND SUBMIT THIS FORM FROM EACH INSTALLER OF WORK ON THIS PROJECT.

FOR EACH PRODUCT CATEGORY LISTED, CIRCLE THE CORRECT WORDS IN BRACKETS: EITHER [HAS] OR [HAS NOT].

IF ANY OF THESE ACCESSORY MATERIALS HAS BEEN USED, ATTACH TO THIS FORM PRODUCT DATA AND MSDS SHEET FOR EACH SUCH PRODUCT.

VOC CONTENT RESTRICTIONS ARE SPECIFIED IN SECTION 01 6116.

PRODUCT CERTIFICATION

I CERTIFY THAT THE INSTALLATION WORK OF MY FIRM ON THIS PROJECT:

A. [HAS] [HAS NOT] required the use of ADHESIVES.

B. [HAS] [HAS NOT] required the use of JOINT SEALANTS.

C. [HAS] [HAS NOT] required the use of PAINTS OR COATINGS.

___ LIST OF PRODUCTS OF THESE TYPES THAT WERE USED IS ATTACHED, WITH MANUFACTURER AND BRAND NAME.

___ PRODUCT DATA AND MSDS SHEETS FOR THESE PRODUCTS:

A. ___ Are attached.

B. ___ Were submitted as normal submittals.

C. ___ Were submitted as sustainable design submittals using the Material Content Form.

CERTIFIED BY: (INSTALLER/MANUFACTURER/SUPPLIER FIRM)

FIRM NAME: _____

PRINT NAME: _____

SIGNATURE: _____

TITLE: _____ **(OFFICER OF COMPANY)**

DATE: _____

SECTION 01 4000

QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Submittals.

B. References and standards.

C. Control of installation.

D. Tolerances.

E. Defect Assessment.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.

C. Test Reports: After each test/inspection, promptly submit two copies of report to Architect and to Contractor.
   1. Include:
      a. Date issued.
      b. Project title and number.
      c. Name of inspector.
      d. Date and time of sampling or inspection.
      e. Identification of product and specifications section.
      f. Location in the Project.
      g. Type of test/inspection.
      h. Date of test/inspection.
      i. Results of test/inspection.
      j. Conformance with Contract Documents.
      k. When requested by Architect, provide interpretation of results.
   2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.

D. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
   1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.

E. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

F. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
   1. Submit report within 30 days of observation to Architect for information.
   2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.

1.03 REFERENCES AND STANDARDS

A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the

standard, except when more rigid requirements are specified or are required by applicable codes.

B. Conform to reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.

C. Obtain copies of standards where required by product specification sections.

D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.

E. Should specified reference standards conflict with Contract Documents, request clarification from Architect before proceeding.

F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect shall be altered from the Contract Documents by mention or inference otherwise in any reference document.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 CONTROL OF INSTALLATION

A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.

B. Comply with manufacturers' instructions, including each step in sequence.

C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.

D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.

E. Have Work performed by persons qualified to produce required and specified quality.

F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.

G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

3.02 TOLERANCES

A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.

B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Architect before proceeding.

C. Adjust products to appropriate dimensions; position before securing products in place.

3.03 DEFECT ASSESSMENT

A. Replace Work or portions of the Work not conforming to specified requirements.

B. If, in the opinion of Owner, it is not practical to remove and replace the Work, Owner will direct an appropriate remedy or adjust payment.

END OF SECTION

SECTION 01 5000

TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Temporary utilities.

B. Temporary sanitary facilities.

C. Security requirements.

D. Vehicular access and parking.

E. Waste removal facilities and services.

F. Project identification sign.

G. Field offices.

1.02 TEMPORARY UTILITIES

A. Owner will provide the following:

1. Electrical power and metering, consisting of connection to existing facilities.
2. Water supply, consisting of connection to existing facilities.

B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.

B. Use of existing facilities is not permitted.

C. Maintain daily in clean and sanitary condition.

1.04 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public and to protect existing facilities and adjacent properties from damage from construction operations .

B. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 FENCING

A. Construction: Commercial grade chain link fence.

B. Provide 6 foot (1.8 m) high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.06 SECURITY

A. Provide security and facilities to protect Work, and Owner's operations from unauthorized entry, vandalism, or theft.

B. Coordinate with Owner's security program.

1.07 VEHICULAR ACCESS AND PARKING

A. Coordinate access and haul routes with Owner.

B. Provide and maintain access to fire hydrants, free of obstructions.

C. Designated existing on-site roads may be used for construction traffic.

D. Coordinate temporary and use of existing parking areas to accommodate construction personnel with Owner. When site space is not adequate, coordinate additional space locations with Owner.

1.08 WASTE REMOVAL

A. See Section 01 7419 - Construction Waste Management and Disposal, for additional requirements.

B. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.

C. Provide containers with lids. Remove trash from site periodically.

D. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.

E. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.09 PROJECT IDENTIFICATION

A. Contractor may provide and install one Contractor's identification sign, 48 s.f. maximum, at location approved by Architect/Owner.

B. Contractor shall install Architect's provided identification sign, 48 s.f., at location approved by Architect/Owner. Sign shall be removed upon substantial completion and returned to Architect.

C. No other signs are allowed without Owner permission except those required by law.

1.10 FIELD OFFICES

A. Contractor's Field Office: Use of an existing space within the building will be provided by Owner the Owner for the Contractor's use.

B. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 6000

PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. General product requirements.

B. Re-use of existing products.

C. Transportation, handling, storage and protection.

D. Product option requirements.

E. Substitution limitations and procedures.

F. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.

1.03 REFERENCE STANDARDS

A. EN 15804 - Sustainability of construction works - Environmental product declarations - Core rules for the product category of construction products; 2012.

B. GreenScreen (LIST) - GreenScreen for Safer Chemicals List Translator; Clean Production Action; www.greenscreenchemicals.org.

C. GreenScreen (METH) - GreenScreen for Safer Chemicals Method v1.2; Clean Production Action; www.greenscreenchemicals.org.

D. HPDC (Tool) - Create an HPD On-Line Tool; Health Product Declaration Collaborative; http://hpdcollaborative.org/manufacturers/.

E. ISO 14025 - Environmental labels and declarations -- Type III environmental declarations -- Principles and procedures; 2006.

F. ISO 14040 - Environmental management -- Life cycle assessment -- Principles and framework; 2006.

G. ISO 14044 - Environmental management -- Life cycle assessment -- Requirements and guidelines; 2006.

H. ISO 21930 - Sustainability in building construction -- Environmental declaration of building products; 2007.

1.04 SUBMITTALS

A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.

B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
   1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

1.05 QUALITY ASSURANCE

A. Environmental Product Declaration (EPD): Publicly available, critically reviewed life cycle analysis having at least a cradle-to-gate scope.
   1. Good: Product-specific; compliant with ISO 14044.

2. Better: Industry-wide, generic; compliant with ISO 21930, or with ISO 14044, ISO 14040, ISO 14025, and EN 15804; Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.
3. Best: Commercial-product-specific; compliant with ISO 21930, or with ISO 14044, ISO 14040, ISO 14025, and EN 15804; Type III third-party certification with external verification, in which the manufacturer is recognized as the program operator.
4. Where demonstration of impact reduction below industry average is required, submit both industry-wide and commercial-product-specific declarations; or submit at least 5 declarations for products of the same type by other manufacturers in the same industry.

B. GreenScreen Chemical Hazard Analysis: All ingredients of 100 parts-per-million or greater evaluated using GreenScreen for Safer Chemicals Method v1.2.
1. Good: GreenScreen List Translator evaluation to identify Benchmark 1 hazards; a Health Product Declaration includes this information.
2. Better: GreenScreen Full Assessment.
3. Best: GreenScreen Full Assessment by GreenScreen Licensed Profiler.
4. Acceptable Evidence: GreenScreen report.

C. Health Product Declarations (HPD): Complete, published declaration with full disclosure of known hazards, prepared using the Health Product Declaration Collaborative's "Create an HPD" on-line tool; HPD's with "unknown" listed for any hazard will not be considered acceptable.

PART 2 PRODUCTS

2.01 EXISTING PRODUCTS

A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.

B. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

2.02 NEW PRODUCTS

A. Provide new products unless specifically required or permitted by the Contract Documents.

B. Where all other criteria are met, Contractor shall give preference to products that:
1. If used on interior, have lower emissions, as defined in Section 01 6116.
2. If wet-applied, have lower VOC content, as defined in Section 01 6116.
3. Have a published Environmental Product Declaration (EPD).
4. Have a published Health Product Declaration (HPD).
5. Have a published GreenScreen Chemical Hazard Analysis.

2.03 PRODUCT OPTIONS

A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.

B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed unless otherwise indicated.

C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.04 MAINTENANCE MATERIALS

A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.

B. Deliver and place in location as directed; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION PROCEDURES

A. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.

B. A request for substitution constitutes a representation that the submitter:
   1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
   2. Agrees to provide the same warranty for the substitution as for the specified product.
   3. Agrees to coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
   4. Waives claims for additional costs or time extension that may subsequently become apparent.
   5. Agrees to reimburse Owner and Architect for review or redesign services associated with re-approval by authorities.

C. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.

3.02 TRANSPORTATION AND HANDLING

A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.

B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.

C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.

D. Transport and handle products in accordance with manufacturer's instructions.

E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.

F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.

G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.

H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.

B. Store and protect products in accordance with manufacturers' instructions.

C. Store with seals and labels intact and legible.

D. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.

E. For exterior storage of fabricated products, place on sloped supports above ground.

F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.

G. Comply with manufacturer's warranty conditions, if any.

H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.

I. Prevent contact with material that may cause corrosion, discoloration, or staining.

J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

SECTION 01 6116

VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Requirements for Indoor-Emissions-Restricted products.

B. Requirements for VOC-Content-Restricted products.

C. Requirement for installer certification that they did not use any non-compliant products.

1.02 RELATED REQUIREMENTS

A. Section 01 3000 - Administrative Requirements: Submittal procedures.

B. Section 01 3329.07 - Prohibited Content Installer Certification: Form for certifying that no non-compliant products were used.

1.03 DEFINITIONS

A. Indoor-Emissions-Restricted Products: All products in the following product categories, whether specified or not:
   1. Interior paints and coatings.
   2. Interior adhesives and sealants, including flooring adhesives.
   3. Flooring.
   4. Products making up wall and ceiling assemblies.
   5. Other products when specifically stated in the specifications.

B. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
   1. Interior paints and coatings.
   2. Interior adhesives and sealants, including flooring adhesives.

C. Interior of Building: Anywhere inside the exterior weather barrier.

D. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.

E. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

F. Inherently Non-Emitting Materials: Products composed wholly of minerals or metals, unless they include organic-based surface coatings, binders, or sealants; and specifically the following:
   1. Concrete.
   2. Clay brick.
   3. Metals that are plated, anodized, or powder-coated.
   4. Glass.
   5. Ceramics.
   6. Solid wood flooring that is unfinished and untreated.

1.04 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; current edition.

B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings; 2005 (Reapproved 2013).

C. CAL (CDPH SM) - Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions From Indoor Sources Using Environmental Chambers; California Department of Public Health; v1.1, 2010.

D. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2007.

E. CHPS (HPPD) - High Performance Products Database; Collaborative for High Performance Schools (CHPS); current edition at www.chps.net/.

F. CRI (GLP) - Green Label Plus Testing Program - Certified Products; Carpet and Rug Institute; Current Edition.

G. SCAQMD 1113 - South Coast Air Quality Management District Rule No.1113; current edition; www.aqmd.gov.

H. SCAQMD 1168 - South Coast Air Quality Management District Rule No.1168; current edition; www.aqmd.gov.

I. SCS (CPD) - SCS Certified Products; Scientific Certification Systems; current listings at www.scscertified.com.

J. UL (GGG) - GREENGUARD Gold Certified Products; UL Environment; current listings at http://http://productguide.ulenvironment.com/QuickSearch.aspx.

1.05 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

C. Installer Certifications Regarding Prohibited Content: Require each installer of any type of product (not just the products for which VOC restrictions are specified) to certify that either 1) no adhesives, joint sealants, paints, coatings, or composite wood or agrifiber products have been used in the installation of his products, or 2) that such products used comply with these requirements.

1.06 QUALITY ASSURANCE

A. Indoor Emissions Standard and Test Method: CAL (CDPH SM), using Standard Private Office exposure scenario and the allowable concentrations specified in the method, and range of total VOC's after 14 days.
   1. Wet-Applied Products: State amount applied in mass per surface area.
   2. Paints and Coatings: Test tinted products, not just tinting bases.
   3. Evidence of Compliance: Acceptable types of evidence are the following;
      a. Current UL (GGG) certification.
      b. Current SCS (CPD) Floorscore certification.
      c. Current SCS (CPD) Indoor Advantage Gold certification.
      d. Current listing in CHPS (HPPD) as a low-emitting product.
      e. Current CRI (GLP) certification.
      f. Test report showing compliance and stating exposure scenario used.
   4. Product data submittal showing VOC content is NOT acceptable evidence.
   5. Manufacturer's certification without test report by independent agency is NOT acceptable evidence.

B. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
   1. Evidence of Compliance: Acceptable types of evidence are:
      a. Report of laboratory testing performed in accordance with requirements.

C. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

PART 2 PRODUCTS

2.01 MATERIALS

A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.

B. Indoor-Emissions-Restricted Products: Comply with Indoor Emissions Standard and Test Method, except for:

1. Inherently Non-Emitting Materials.

C. VOC-Content-Restricted Products: VOC content not greater than required by the following:
   1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
   2. Joint Sealants: SCAQMD 1168 Rule.
   3. Paints and Coatings: Each color; most stringent of the following:
      a. 40 CFR 59, Subpart D.
      b. SCAQMD 1113 Rule.
      c. CARB (SCM).

PART 3 EXECUTION

3.01 FIELD QUALITY CONTROL

A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.

B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

END OF SECTION

SECTION 01 7000

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Examination, preparation, and general installation procedures.

B. Cutting and patching.

C. Cleaning and protection.

1.02 PROJECT CONDITIONS

A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.

B. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

C. Smoking Control: Provide methods and means to prevent smoking near or within facilities once the superstructure is in place and work on the building are upon completion of the superstructure and commencement of the exterior enclosure.

1.03 COORDINATION

A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.

B. Coordinate completion and clean-up of work of separate sections.

C. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

1.04 CLEANING REQUIREMENTS

A. Special cleaning requirements for specific construction elements are included in appropriate sections.

1.05 FINAL CLEANING REQUIREMENTS

A. Purpose: To employ processes that utilize equipment and products to ensure a clean environment for the building occupants while reducing contaminants to the extent technologically and economically feasible.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

A. New Materials: As specified in product sections; match existing products and work for patching and extending work.

B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.

B. Examine and verify specific conditions described in individual specification sections.

C. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.

D. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

A. Clean substrate surfaces prior to applying next material or substance.

B. Seal cracks or openings of substrate prior to applying next material or substance.

C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 GENERAL INSTALLATION REQUIREMENTS

A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.

B. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.

C. Make neat transitions between different surfaces, maintaining texture and appearance.

3.04 CUTTING AND PATCHING

A. Whenever possible, execute the work by methods that avoid cutting or patching.

B. Perform whatever cutting and patching is necessary to:
   1. Complete the work.
   2. Fit products together to integrate with other work.
   3. Provide openings for penetration of mechanical, electrical, and other services.
   4. Match work that has been cut to adjacent work.
   5. Repair areas adjacent to cuts to required condition.
   6. Repair new work damaged by subsequent work.
   7. Remove samples of installed work for testing when requested.
   8. Remove and replace defective and non-conforming work.

C. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.

D. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.

E. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

F. Restore work with new products in accordance with requirements of Contract Documents.

G. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

H. Patching:
   1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
   2. Match color, texture, and appearance.
   3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

3.05 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.06 PROTECTION OF INSTALLED WORK

A. Protect installed work from damage by construction operations.

B. Provide special protection where specified in individual specification sections.

C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.

D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

G. Prohibit traffic from landscaped areas.

H. Remove protective coverings when no longer needed; reuse or recycle plastic coverings if possible.

3.07 FINAL CLEANING

A. Execute final cleaning prior to Substantial Completion.

B. Cleaning Equipment:
   1. Vacuum cleaner must meet the requirements of the Carpet and Rug Institute Green Label Program and will be capable of capturing 96% of particulates 0.3 micron in size.
   2. Hot water extraction equipment for deep cleaning carpets will be capable of removing sufficient moisture so that the carpet will dry in less than 24 hours.
   3. Powered custodial equipment including floor buffers, burnishers and automatic scrubbers will be equipped with vacuum, guards and/or other devices for capturing fine particles.
   4. Use micro fiber dusting cloths and flat mops to capture dirt and remove it.

C. Use cleaning materials that are nonhazardous.
   1. Comply with Green Seal GS 37 for general purpose cleaning and bathroom cleaning. Use natural cleaning materials where feasible.

D. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.

E. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.

F. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.

G. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

END OF SECTION

SECTION 01 7419

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 GENERAL

1.01 WASTE MANAGEMENT REQUIREMENTS

A. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.

B. Required Recycling: The following may not be disposed of in landfills or by incineration:
   1. Glass.
   2. Carpet, carpet cushion, carpet tile, and carpet remnants, both new and removed: DuPont (http://flooring.dupont.com) and Interface (www.interfaceinc.com) conduct reclamation programs.

C. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION

3.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

A. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.

B. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

C. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
   1. Provide containers as required.
   2. Provide adequate space for pick-up and delivery and convenience to subcontractors.
   3. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.

D. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.

END OF SECTION

SECTION 02 4100
DEMOLITION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

A. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SCOPE

A. Remove existnig windows.

B. Remove existing flooring.

C. Remove other items indicated.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Protect existing elements that are not to be removed.

3.03 SELECTIVE DEMOLITION FOR ALTERATIONS

A. Drawings showing existing construction are based on casual field observation and existing record documents only.
   1. Verify that construction arrangements are as shown.
   2. Report discrepancies to Architect before disturbing existing installation.
   3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.

C. Remove existing work as indicated and as required to accomplish new work.
   1. Remove items indicated on drawings.

D. Protect existing work to remain.
   1. Perform cutting to accomplish removals neatly and as specified for cutting new work.
   2. Repair adjacent construction and finishes damaged during removal work.
   3. Patch as specified for patching new work.

3.04 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Remove from site all materials not to be reused on site; do not burn or bury.

C. Leave site in clean condition, ready for subsequent work.

D. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

SECTION 03 0100

MAINTENANCE OF CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Resurfacing of concrete surfaces having spalled areas and other damage.

B. Repair of deteriorated concrete.

1.02 RELATED REQUIREMENTS

A. Section 01 2200 - Unit Prices: Descriptions of unit price items, administrative requirements.

1.03 PRICE AND PAYMENT PROCEDURES

A. See Section 01 2200 - Unit Prices, for additional unit price requirements.

B. Concrete Floor Surface Repair: By the square foot (meter). Includes resurfacing of concrete surfaces having spalled areas and other damage, and repair of deteriorated concrete.

1.04 REFERENCE STANDARDS

A. ASTM C928/C928M - Standard Specification for Packaged, Dry, Rapid-Hardening Cementitious Material for Concrete Repairs; 2013.

PART 2 PRODUCTS

2.01 CEMENTITIOUS PATCHING AND REPAIR MATERIALS

A. Cementitious Repair Mortar, Trowel Grade: One- or two-component, factory-mixed, polymer-modified cementitious mortar.
   1. In-place material resistant to freeze/thaw conditions.
   2. Mixed with water or latex type bonding agent in proportions as recommended by manufacturer.

2.02 ACCESSORIES

A. Water: Clean and potable.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are ready to receive work.

B. Beginning of installation means acceptance of substrate.

3.02 CONCRETE SURFACE REPAIR USING CEMENTITIOUS MATERIALS

A. Clean concrete surfaces, cracks, and joints of dirt, laitance, corrosion, and other contamination using method(s) specified above and allow to dry.

B. Apply coating of bonding agent to entire concrete surface to be repaired.

C. Fill voids with cementitious mortar flush with surface.

D. Apply repair mortar by steel trowel to a minimum thickness of 1/4 inch (6 mm) over entire surface, terminating at a vertical change in plane on all sides.

E. Trowel finish to match adjacent concrete surfaces.

END OF SECTION

SECTION 05 5000

METAL FABRICATIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Shop fabricated steel items.

1.02 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.

1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing.

C. Plates: ASTM A283.

D. Bolts, Nuts, and Washers: ASTM A325 (ASTM A325M), Type 1, galvanized to ASTM A153/A153M where connecting galvanized components.

E. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.

F. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

A. Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

D. Exposed Mechanical Fastenings: Flush countersunk screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.

E. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FINISHES - STEEL

A. Prime paint steel items.

1. Exceptions: Do not prime surfaces in direct contact with concrete, where field welding is required, and items to be covered with sprayed fireproofing.

B. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.

C. Prime Painting: One coat.

2.04 FABRICATION TOLERANCES

A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.

B. Maximum Offset Between Faces: 1/16 inch (1.5 mm).

C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.5 mm).

D. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).

E. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Obtain approval prior to site cutting or making adjustments not scheduled.

3.04 TOLERANCES

A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch (6 mm).

C. Maximum Out-of-Position: 1/4 inch (6 mm).

END OF SECTION

SECTION 07 9200

JOINT SEALANTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Nonsag gunnable joint sealants.

B. Joint backings and accessories.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Nonsag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
   1. BASF Construction Chemicals-Building Systems: www.buildingsystems.basf.com.
   2. Bostik Inc: www.bostik-us.com.
   3. Dow Corning Corporation: www.dowcorning.com/construction.
   4. Pecora Corporation: www.pecora.com.
   5. Tremco Global Sealants: www.tremcosealants.com.
   6. Sika Corporation: www.usa-sika.com.
   7. W.R. Meadows, Inc: www.wrmeadows.com.

2.02 JOINT SEALANT APPLICATIONS

A. Scope:
   1. Exterior Joints: Seal open joints as a result of selective demolition (Windows), whether or not the joint is indicated on the drawings, unless specifically indicated not to be sealed.
   2. Interior Joints: Do not seal interior joints unless specifically indicated to be sealed. Interior joints to be sealed include, but are not limited to, the following items.
      a. Missing or failed joints between door, window, and other frames and adjacent construction.

B. Exterior Joints: Use nonsag non-staining silicone sealant, unless otherwise indicated.

C. Interior Joints: Use nonsag polyurethane sealant, unless otherwise indicated.
   1. Wall and Ceiling Joints in Non-Wet Areas: Acrylic emulsion latex sealant.

2.03 JOINT SEALANTS - GENERAL

A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in South Coast Air Quality Management District (SCAQMD); Rule 1168.

B. Color: Match adjacent finished surfaces unless otherwse indcated on drawings.

2.04 NONSAG JOINT SEALANTS

A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water immersion or traffic.
   1. Movement Capability: Plus and minus 50 percent, minimum.
   2. Non-Staining To Porous Stone: Non-staining to light-colored natural stone when tested in accordance with ASTM C1248.
   3. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.

B. Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; not expected to withstand continuous water immersion or traffic.
   1. Movement Capability: Plus and minus 25 percent, minimum.

C. Acrylic Emulsion Latex: Water-based; ASTM C834, single component, non-staining, non-bleeding, non-sagging; not intended for exterior use.

2.05 ACCESSORIES

A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.

B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.

C. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.

D. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.

E. Primers: Type recommended by sealant manufacturer to suit application; non-staining.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that joints are ready to receive work.

B. Verify that backing materials are compatible with sealants.

C. Verify that backer rods are of the correct size.

3.02 PREPARATION

A. Remove loose materials and foreign matter that could impair adhesion of sealant.

B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.

D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

3.03 INSTALLATION

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Perform installation in accordance with ASTM C1193.

C. Install bond breaker backing tape where backer rod cannot be used.

D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

E. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.

F. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

END OF SECTION

SECTION 08 5113

ALUMINUM WINDOWS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Extruded aluminum windows with operating sash and hardware and related components.

B. Factory glazing.

C. Operating hardware.

D. Insect screens.

1.02 REFERENCE STANDARDS

A. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; 2015.

B. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum; 2012.

C. ASTM B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes; 2013.

D. ASTM B221M - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes [Metric]; 2013.

E. ASTM E283 - Standard Test Method for Determining the Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen; 2004 (Reapproved 2012).

F. ASTM E331 - Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (Reapproved 2009).

1.03 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide component dimensions, information on glass and glazing, and descriptions of hardware and accessories.

C. Grade Substantiation: Prior to submitting shop drawings or starting fabrication, submit one of the following showing compliance with specified grade:
   1. Evidence of AAMA Certification.
   2. Evidence of WDMA Certification.
   3. Evidence of CSA Certification.

D. Test Reports: Prior to submitting shop drawings or starting fabrication, submit test report(s) by independent testing agency showing compliance with performance requirements in excess of those prescribed by specified grade.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of AAMA CW-10.

1.05 WARRANTY

A. Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.

PART 2 PRODUCTS

2.01 BASIS OF DESIGN - AW PERFORMANCE CLASS WINDOWS

A. Grade: AAMA/WDMA/CSA 101/I.S.2/A440 having Performance Class of AW, and Performance Grade at least as high as specified design pressure.

B. Horizontal Sliding:
   1. Basis of Design: Win Tech Series 250 Thermal C40 (71"x60").

C. Other Manufacturers: Provide either the product identified as "Basis of Design" or an equivalent product of another manufacturer.

D. Pre-Bid Substitution Procedures: Provide a sample window, 3'x2' single unit with test reports documenting compliance with requirements in accordance with Section 00 2113 - Instruction to Bidders..

2.02 WINDOWS

A. Aluminum Windows: Extruded aluminum frame and sash, factory fabricated, factory finished, with operating hardware, related flashings, and anchorage and attachment devices.
   1. Provide units factory glazed.
   2. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors; fasteners and attachments concealed from view; reinforced as required for operating hardware and imposed loads.
   3. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
   4. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
   5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.

B. Performance Requirements: Provide products that comply with the following:
   1. Design Pressure (DP): In accordance with applicable codes.
   2. Water Leakage: No uncontrolled leakage on interior face when tested in accordance with ASTM E331 at differential pressure of 12.11 psf (580 Pa).
   3. Air Leakage: Maximum of 0.1 cu ft/min sq ft (0.5 L/sec sq m) per unit area of outside frame dimension, with 6.27 psf (300 Pa) differential pressure when tested in accordance with ASTM E283.

C. Horizontal Sliding Type:
   1. Construction: Thermally broken.
   2. Provide screens.
   3. Glazing: Double; clear; low-e.
   4. Exterior Finish: Class I natural anodized.
   5. Interior Finish: Class I natural anodized.

2.03 COMPONENTS

A. Frames: Depth of frame shall not be less than 2-1/2 inches and minimum wall thickness of 0.062 inches. Thermally broken with interior portion of frame insultated from exterior portion.
   1. The perimeter frame, sash and intermediate rail thermal barrier shall be poured and debridged thermal barrier made of two-part polyurethane.
   2. At least the window frame sill extrusion shall have a mechanically staked system consisting of alternating aluminum cleats no more than one inch on center along the thermal barrier pocket. This is intended to minimize the effects of thermal barrier dry shrinkage.

B. Glazing:
   1. Space between lites filled with air.
   2. Outboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum.
      a. Tint: Green.
      b. Coating: Low-E (passive type), on #2 surface.
   3. Inboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum.
      a. Tint: Clear.
   4. Thermal Transmittance (U-Value), Summer - Center of Glass: 0.60, nominal.
   5. Solar Heat Gain Coefficient (SHGC): 0.25 percent, nominal.

C. Insect Screens: Half screens only. Extruded aluminum frame with mitered and reinforced corners; screen mesh taut and secure to frame; secured to window with adjustable hardware allowing screen removal without use of tools.
   1. Hardware: Spring loaded steel pins; four per screen unit.

2. Screen Mesh: Aluminum or fiberglass, window manufacturer's standard mesh.
3. Frame Finish: Same as frame and sash.

D. Operable Sash Weatherstripping: Wool or Nylon Pile; permanently resilient, profiled to achieve effective weather seal.

E. Fasteners: Stainless steel.

2.04 MATERIALS

A. Extruded Aluminum: ASTM B221 (ASTM B221M), 6063 alloy, T6 temper.

2.05 HARDWARE

A. Sweep latches will be white bronze.

B. Sash shall ride on bronze roller with Stainless Steel axle and raised track, so dirt will not interfere with normal operation.

2.06 FINISHES

A. Class I Natural Anodized Finish: AAMA 611 AA-M12C22A41 Clear anodic coating not less than 0.7 mils (0.018 mm) thick.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that wall openings are ready to receive aluminum windows.

3.02 INSTALLATION

A. Install windows in accordance with manufacturer's instructions.

B. Attach window frame to opening to accommodate construction tolerances and other irregularities.

C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

D. Install operating hardware not pre-installed by manufacturer.

3.03 ADJUSTING

A. Adjust hardware for smooth operation and secure weathertight closure.

3.04 CLEANING

A. Remove protective material from factory finished aluminum surfaces.

B. Wash surfaces by method recommended and acceptable to window manufacturer; rinse and wipe surfaces clean.

END OF SECTION

SECTION 09 0561

COMMON WORK RESULTS FOR FLOORING PREPARATION

PART 1 GENERAL

1.01 SECTION INCLUDES

A. This section applies to all floors identified in the contract documents as to receive the following types of floor coverings:

B. Preparation of existing concrete floor slabs for installation of floor coverings.

PART 2 PRODUCTS - SEE SECTION 03 0100 - MAINTENANCE OF CONCRETE

PART 3 EXECUTION

3.01 CONCRETE SLAB PREPARATION

A. Perform following operations in the order indicated:
   1. Preliminary cleaning.
   2. Specified remediation, if required.
   3. Patching, smoothing, and leveling, as required.
   4. Other preparation specified.
   5. Adhesive bond and compatibility test.
   6. Protection.

3.02 PRELIMINARY CLEANING

A. Clean floors of dust, solvents, paint, wax, oil, grease, asphalt, residual adhesive, adhesive removers, film-forming curing compounds, sealing compounds, alkaline salts, excessive laitance, mold, mildew, and other materials that might prevent adhesive bond.

B. Do not use solvents or other chemicals for cleaning.

3.03 PREPARATION

A. See individual floor covering section(s) for additional requirements.

B. Comply with requirements and recommendations of floor covering manufacturer.

C. Fill and smooth surface cracks, grooves, depressions, control joints and other non-moving joints, and other irregularities with patching compound.

D. Do not fill expansion joints, isolation joints, or other moving joints.

3.04 ADHESIVE BOND AND COMPATIBILITY TESTING

A. Comply with requirements and recommendations of floor covering manufacturer.

3.05 PROTECTION

A. Cover prepared floors with building paper or other durable covering.

END OF SECTION

SECTION 09 2116
GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Gypsum wallboard.

B. Joint treatment and accessories.

C. Textured finish system.

1.02 RELATED REQUIREMENTS

A. Section 01 2200 - Unit Prices: Descriptions of unit price items, administrative requirements.

1.03 REFERENCE STANDARDS

A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2015.

B. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2013.

C. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2015.

D. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2014.

E. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2014.

1.04 PRICE AND PAYMENT PROCEDURES

A. Unit Prices: See Section 01 2200 - Unit Prices, for additional unit price requirements.
   1. Provide gypsum wallboard replacement with the work under the unit price method.
   2. Measure wall and ceiling areas by the square foot (meter).

PART 2 PRODUCTS

2.01 BOARD MATERIALS

A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
   2. Thickness:
      a. Vertical Surfaces: 5/8 inch (16 mm).
      b. Ceilings: 5/8 inch (16 mm).

2.02 ACCESSORIES

A. Joint Materials: ASTM C475 and as recommended by gypsum board manufacturer for project conditions.
   1. Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise indicated.
   2. Ready-mixed vinyl-based joint compound.

B. Textured Finish Materials: Latex-based compound; plain.

C. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inch (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion resistant.

D. Screws for Fastening of Gypsum Panel Products to Steel Members from 0.033 to 0.112 inch (0.84 to 2.84 mm) in Thickness: ASTM C954; steel drill screws, corrosion resistant.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

3.02 BOARD INSTALLATION

A. Comply with ASTM C 840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Non-Rated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Installation on Metal Framing: Use screws for attachment of gypsum board.

3.03 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated.

B. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

3.04 TEXTURE FINISH

A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match existing conditions.

END OF SECTION

SECTION 09 6500

RESILIENT FLOORING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Resilient base.

1.02 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

B. Verification Samples: Submit two samples, illustrating color and pattern for each resilient flooring product specified.

C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Wall Base: 30 linear feet (9.15 linear meters) of each type and color.

1.03 DELIVERY, STORAGE, AND HANDLING

A. Store all materials off of the floor in an acclimatized, weather-tight space.

B. Protect roll materials from damage by storing on end.

1.04 FIELD CONDITIONS

A. Store materials for not less than 48 hours prior to installation in area of installation at a temperature of 70 degrees F (21 degrees C) to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F (13 degrees C).

PART 2 PRODUCTS

2.01 RESILIENT BASE

A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; top set Style A, Straight.
   1. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648 or NFPA 253.
   2. Height: 4 inch (100 mm).
   3. Thickness: 0.125 inch (3.2 mm) thick.
   4. Finish: Satin.
   5. Length: Roll.
   6. Color: As scheduled on drawings.
   7. Accessories: Premolded external corners and end stops.
   8. Manufacturers:
      a. Burke Flooring: www.burkemercer.com.
      b. Johnsonite, a Tarkett Company: www.johnsonite.com.
      c. Roppe Corp: www.roppe.com.
      d. Armstrong World Industries, Inc: www.armstrong.com..

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

3.02 PREPARATION

A. Clean substrate.

3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions.

3.04 RESILIENT BASE

A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches (45 mm) between joints.

B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.

C. Install base on solid backing. Bond tightly to wall and floor surfaces.

D. Scribe and fit to door frames and other interruptions.

3.05 CLEANING

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's instructions.

END OF SECTION

SECTION 09 6813

TILE CARPETING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Carpet tile, adhered.

B. Removal of existing carpet tile.

1.02 RELATED REQUIREMENTS

A. Section 03 0100 - Maintenance of Concrete: Cleaning, re-surfacing and repair of concrete slabs and flors.

1.03 REFERENCE STANDARDS

A. ASTM D2859 - Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials; 2006 (Reapproved 2011).

B. ASTM E648 - Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source; 2014c.

C. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.

D. CRI (GLP) - Green Label Plus Testing Program - Certified Products; Carpet and Rug Institute; Current Edition.

E. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; National Fire Protection Association; 2015.

1.04 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.
   1. VOC data:
      a. Adhesives:
         1) Submit manufacturer's product data for adhesives. Indicate VOC limits of the product. Submit MSDS highlighting VOC limits.
   2. Carpet: Submit independent, third party certification of compliance with Carpet and Rug Institute's Green Label Plus Indoor Air Quality program.

B. Samples: Submit two carpet tiles illustrating color and pattern design for each carpet color selected.

C. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

D. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed.

1.05 WEAR WARRANTY

A. Ten-Year Commercial Warranty against excessive wear, delamination, edge ravel, zippering, resiliency loss, and static.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: As indicated on drawings.

B. Other Acceptable Manufacturers:
   1. Tandus: www.tandus.com.
   2. Interface, Inc: www.interfaceinc.com.
   3. Lees Carpets: www.leescarpets.com.
   4. Mannington: www.mannington.com.

5. Milliken & Company: www.milliken.com.
6. Shaw: www.shaw.com.
7. Atlas Carpet Mills, Inc. : www.atlascarpetmills.com.

2.02 MATERIALS

A. Tile Carpeting: Tufted, manufactured in one color dye lot.
   1. Tile Size: 19.69 by 19.69 inch (500 by 500 mm), nominal.
   2. Pile Thickness: 0.066 inch (1.7 mm).
   3. Critical Radiant Flux: Minimum of 0.22 watts/sq cm, when tested in accordance with ASTM E648 or NFPA 253.
   4. Surface Flammability Ignition: Pass ASTM D2859 (the "pill test").
   5. VOC Content: Provide CRI (GLP) certified product.
   6. Maximum Electrostatic Charge: 3 Kv. at 20 percent relative humidity.
   7. Gage: 1/12 inch (2.1 mm).
   8. Stitches: 8 per inch (3.15 per cm).
   9. Tufted Yarn Weight: 14 oz/yd² (475 g/m²)
   10. Pile Weight: 7,636 oz/sq yd (283,141.2 gm/sq m).
   11. Pile Thickness: 0.066 inches (1.7 mm).
   12. Light Fastness: (AATCC 16 - E) ? 4.0 @ 60 AFU's.
   13. Primary Backing Material: Glass reinforced thermoplastic..

2.03 ACCESSORIES

A. Sub-Floor Filler: White premix latex; type recommended by flooring material manufacturer.

B. Transitions and Edge Strips: Rubber, color as selected by Architect.

C. Adhesives:
   1. Compatible with materials being adhered; maximum VOC content of 50 g/L; CRI (GLP) certified.

D. Carpet Tile Adhesive: Recommended by carpet tile manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that sub-floor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of adhesive materials to sub-floor surfaces.

C. Cementitious Sub-floor Surfaces: Verify that substrates are dry enough and ready for flooring installation by testing for moisture and pH.
   1. Test in accordance with ASTM F710.
   2. Obtain instructions if test results are not within limits recommended by flooring material manufacturer and adhesive materials manufacturer.

3.02 PREPARATION

A. Remove existing carpet.

B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

C. See Section 03 0100 - Maintenance of Concrete for cleaning, re-surfacing and repair of existing concrete

D. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler.

E. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Prohibit traffic until filler is cured.

F. Vacuum clean substrate.

3.03 INSTALLATION

A. Starting installation constitutes acceptance of sub-floor conditions.

B. Install carpet tile in accordance with manufacturer's instructions and CRI (CIS).

C. Blend carpet from different cartons to ensure minimal variation in color match.

D. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps.

E. Lay carpet tile in square pattern, with pile direction alternating to next unit, set parallel to building lines.

F. Trim carpet tile neatly at walls and around interruptions.

G. Complete installation of edge strips, concealing exposed edges.

3.04 INDOOR AIR QUALITY

A. Temporary ventilation: Provide temporary ventilation as specified in Section 01 5721 - Indoor Air Quality Controls, and as follows:

1. Ventilate products prior to installation. Remove from packaging and ventilate in a secure, dry, well-ventilated space free from strong contaminant sources and residues. Provide a temperature range of 60 degrees F minimum to 90 degree F maximum continuously for minimum 72 hours.

B. Immediately after installation, clean carpet thoroughly with a [high-efficiency particulate air (HEPA) filtration vacuum] [certified CRI Green Label vacuum cleaner].

3.05 WASTE MANAGMENT

A. As specified in Section 01 7419 - Construction Waste Management and Disposal.

B. Coordinate with manufacturer for take-back program. Set aside scrap to be returned to manufacturer for recycling into new product.

3.06 CLEANING

A. Remove excess adhesive without damage, from floor, base, and wall surfaces.

B. Clean and vacuum carpet surfaces.

END OF SECTION

SECTION 09 9113

EXTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.

D. Work under this Scope shall also include, but not necessarily be limited to:
   1. High pressure washing and abrasive blasting.
   2. Moisture testing of substrates.
   3. Surface preparation of substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking, and making good surfaces and areas to the limits defined under MPI Repainting Manual Preparation requirements.
   4. Specific pre-treatments noted herein or specified in the MPI Repainting Manual.
   5. Sealing / priming surfaces for repainting in accordance with MPI Repainting Manual requirements.

E. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
   5. Floors, unless specifically indicated.
   6. Glass.
   7. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating; 2005 (Reapproved 2012).

C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 2007.

D. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; current edition, www.paintinfo.com.

E. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; current edition, www.paintinfo.com.

F. SSPC-SP 1 - Solvent Cleaning; 2015.

G. SSPC-SP 2 - Hand Tool Cleaning; 1982 (Ed. 2004).

H. SSPC-SP 6 - Commercial Blast Cleaning; Society for Protective Coatings; 2007.

I. SSPC-SP 13 - Surface Preparation of Concrete; Society for Protective Coatings; 2003 (Reaffirmed 2015).

1.03 SUBMITTALS

A. Product Data: Provide complete list of 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 paint system(s) product is to be used in; include description of each system.

B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
1. Where sheen is specified, submit samples in only that sheen.
2. Where sheen is not specified, discuss sheen options with Architect before preparing samples, to eliminate sheens definitely not required.

C. Certification: By manufacturer that paints and finishes comply with VOC limits specified.

D. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. Extra Paint and Finish Materials: 5 gallons (20 L) of each color; from the same product run, store where directed.
2. Label each container with color in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

A. All materials, preparation and workmanship shall conform to the standards contained in the latest edition of the Master Painters Institute (MPI) Maintenance and Repainting Manual (herein referred to as the MPI Repainting Manual) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Minimum Application Temperatures for Latex Paints: 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.

D. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Paints:
1. Behr Process Corporation: www.behr.com.
2. Benjamin Moore & Co: www.benjaminmoore.com.
3. Glidden Professional, a product of PPG Architectural Coatings: www.gliddenprofessional.com.

4. PPG Paints: www.ppgpaints.com.
5. Pratt & Lambert Paints: www.prattandlambert.com.
6. Sherwin-Williams Company: www.sherwin-williams.com.
7. Valspar Corporation: www.valsparpaint.com.

C. Primer Sealers: Same manufacturer as top coats.

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as otherwise indicated.
2. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
3. Supply each paint material in quantity required to complete entire project's work from a single production run.
4. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Volatile Organic Compound (VOC) Content:
1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

2.03 PAINT SYSTEMS - EXTERIOR

A. Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete, concrete masonry units, brick, cement board, primed wood, and primed metal.
1. Two top coats and one coat primer.
2. Top Coat(s): Exterior Latex; MPI #214, MPI #119.
3. Top Coat Sheen:
a. Velvet: MPI gloss level 2; use this sheen at exterior wall surfaces inlcuding stucco, concrete or concrete masonry units..
b. Gloss: MPI gloss level 6; use this sheen at doors and door frames, railings and exposed steel structural members.
4. Primer: As recommended by top coat manufacturer for specific substrate.

2.04 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin application of paints and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. The degree of surface deterioration (DSD) shall be assessed using the assessment criteria indicated in the MPI Maintenance Repainting Manual. In general the MPI DSD ratings and descriptions are as follows:

1. DSD-0: Sound Surface (may include visual (aesthetic) defects that do not affect film's protective properties).
2. DSD-1: Slightly Deteriorated Surface (may show fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.) / Minor cosmetic defects (runs, sags, etc.).
3. DSD-2: Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).
4. DSD-3: Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).
5. DSD-4: Substrate Damage (repair or replacement of surface required by Owner).

E. Structural and DSD-4 substrate defects discovered prior to and after surface preparation or after first coat of paint shall be repaired by Owner, unless otherwise agreed to by the Owner.

F. No repainting work shall commence until all such DSD-4 adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Contractor. The Contractor shall not be responsible for the condition of the substrate or for correcting defects and deficiencies in the substrate, which may adversely affect the painting work except for minimal work normally performed by the Contractor and as, indicated herein. It shall always, however, be the responsibility of the Contractor to see that surfaces are properly prepared before any paint or coating is applied. It shall also be the Contractor's responsibility to paint the surface as specified providing that the owner accepts responsibility for uncorrected DSD-4 substrate conditions.

G. Test shop-applied primer for compatibility with subsequent cover materials.

H. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
1. Exterior Plaster and Stucco: 12 percent.
2. Fiber Cement Siding: 12 percent.
3. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
4. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

A. Prepare all exterior surfaces for repainting in accordance with MPI Repainting Manual requirements.

B. Clean surfaces thoroughly and correct defects prior to application.

C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.

E. Seal surfaces that might cause bleed through or staining of topcoat.

F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

G. Concrete:
1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
2. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi (10,350 to 27,580 kPa) at 6 to 12 inches (150 to 300 mm). Allow to dry.
3. Clean concrete according to ASTM D4258. Allow to dry.
4. Prepare surface as recommended by top coat manufacturer and according to SSPC-SP 13.

H. Masonry:
1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.

2. Prepare surface as recommended by top coat manufacturer.
3. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi (10,350 to 27,580 kPa) at 6 to 12 inches (150 to 300 mm). Allow to dry.

I. Fiber Cement Siding: Remove dirt, dust and other foreign matter with a stiff fiber brush. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.

J. Exterior Plaster: Fill hairline cracks, small holes, and imperfections with exterior patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

K. Galvanized Surfaces:
1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
2. Prepare surface according to SSPC-SP 2.

L. Ferrous Metal:
1. Solvent clean according to SSPC-SP1.
2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.
3. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

M. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. Back prime concealed surfaces before installation.

N. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.03 APPLICATION

A. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.

B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

D. Apply each coat to uniform appearance.

E. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply additional coats until complete hide is achieved.

F. Sand metal surfaces lightly between coats to achieve required finish.

G. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

H. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

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

END OF SECTION

SECTION 09 9123

INTERIOR PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
   1. Mechanical and Electrical:
      a. In finished areas, paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, mechanical equipment, and electrical equipment, unless otherwise indicated.
      b. In finished areas, paint shop-primed items.

D. Work under this Scope shall also include, but not necessarily be limited to:
   1. Surface preparation of substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking, and making good surfaces and areas to the limits defined under MPI Repainting Manual Preparation requirements.
      a. Condition of substrates, correction of DSD-4 defects and deficiencies in substrates which may adversely affect repainting work, except for minimal work performed by this trade and preparation of surfaces to receive paint and finishes under this section of work.
   2. Specific pre-treatments noted herein or specified in the MPI Repainting Manual.
   3. Sealing / priming surfaces for repainting in accordance with MPI Repainting Manual requirements.
   4. Provision of safe and adequate ventilation as required over and above temporary ventilation supplied by others, where toxic and/or volatile / flammable materials are being used.

E. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
   5. Stainless steel, anodized aluminum, bronze, terne coated stainless steel, and lead items.
   6. Marble, granite, slate, and other natural stones.
   7. Floors, unless specifically indicated.
   8. Ceramic and other tiles.
   9. Glass.
   10. Acoustical materials, unless specifically indicated.
   11. Concealed pipes, ducts, and conduits.

1.02 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. ASTM D4258 - Standard Practice for Surface Cleaning Concrete for Coating; 2005 (Reapproved 2012).

C. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Base Materials; 2007.

D. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; current edition, www.paintinfo.com.

E. SSPC-SP 1 - Solvent Cleaning; 2015.

F. SSPC-SP 6 - Commercial Blast Cleaning; Society for Protective Coatings; 2007.

G. SSPC-SP 13 - Surface Preparation of Concrete; Society for Protective Coatings; 2003 (Reaffirmed 2015).

1.03 SUBMITTALS

A. Product Data: Provide complete list of 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 paint system(s) product is to be used in; include description of each system.

B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
   1. Where sheen is specified, submit samples in only that sheen.

C. Certification: By manufacturer that paints and finishes comply with VOC limits specified.

D. Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Paint and Finish Materials: 5 gallons (20 L) of each color; from the same product run, store where directed.
   2. Label each container with color in addition to the manufacturer's label.

1.04 QUALITY ASSURANCE

A. All materials, preparation and workmanship shall conform to the standards contained in the latest edition of the Master Painters Institute (MPI) Maintenance and Repainting Manual (herein referred to as the MPI Repainting Manual) as issued by the local MPI Accredited Quality Assurance Association having jurisdiction.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.06 FIELD CONDITIONS

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply materials when relative humidity exceeds 85 percent; at temperatures less than 5 degrees F (3 degrees C) above the dew point; or to damp or wet surfaces.

D. Minimum Application Temperatures for Paints: 50 degrees F (10 degrees C) for interiors unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Paints:
1. Behr Process Corporation: www.behr.com.
2. Benjamin Moore & Co: www.benjaminmoore.com.
3. Cloverdale Paint, Brand Products of Rodda Paint Company: www.cloverdalepaint.com.
4. Glidden Professional, a product of PPG Architectural Coatings: www.gliddenprofessional.com.
5. PPG Paints: www.ppgpaints.com.
6. Pratt & Lambert Paints: www.prattandlambert.com.
7. Rodda Paint Co: www.roddapaint.com.
8. Sherwin-Williams Company: www.sherwin-williams.com.
9. Valspar Corporation: www.valsparpaint.com.

C. Primer Sealers: Same manufacturer as top coats.

2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
2. Supply each paint material in quantity required to complete entire project's work from a single production run.
3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Volatile Organic Compound (VOC) Content:
1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

2.03 PAINT SYSTEMS - INTERIOR

A. Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals and wood:
1. Medium duty applications include doors, door frames, railings, handrails, guardrails, and balustrades.
2. Two top coats and one coat primer.
3. Top Coat(s): Interior Light Industrial Coating, Water Based; MPE #153.
4. Top Coat Sheen:
a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations.
5. Primer: As recommended by top coat manufacturer for specific substrate.

B. Medium Duty Vertical and Overhead: Including gypsum board, plaster, concrete, concrete masonry units, uncoated steel, shop primed steel, galvanized steel, and aluminum.
1. Two top coats and one coat primer.
2. Top Coat(s): High Performance Architectural Interior Latex; MPI #139, 141.
3. Top Coat Sheen:
a. Eggshell: MPI gloss level 3; use this sheen at all locations.

b. Semi-Gloss: MPI gloss level 5; use this sheen at toilet rooms, mechanical rooms, electrical rooms, utility rooms, janitor rooms and similar high abuse areas.
c. Semi-Gloss: MPI gloss level 5; use this sheen for metal surfaces.

4. Primer: As recommended by top coat manufacturer for specific substrate.

2.04 ACCESSORY MATERIALS

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

PART 3 EXECUTION

3.01 EXAMINATION

A. Do not begin application of paints and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. The degree of surface deterioration (DSD) shall be assessed using the assessment criteria indicated in the MPI Maintenance Repainting Manual. In general the MPI DSD ratings and descriptions are as follows:
1. DSD-0: Sound Surface (may include visual (aesthetic) defects that do not affect film's protective properties).
2. DSD-1: Slightly Deteriorated Surface (may show fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.) / Minor cosmetic defects (runs, sags, etc.).
3. DSD-2: Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).
4. DSD-3: Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).
5. DSD-4: Substrate Damage (repair or replacement of surface required by Owner).

E. Structural and DSD-4 substrate defects discovered prior to and after surface preparation or after first coat of paint shall be repaired by Owner, unless otherwise agreed to by the Owner.

F. No repainting work shall commence until all such DSD-4 adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Contractor. The Contractor shall not be responsible for the condition of the substrate or for correcting defects and deficiencies in the substrate, which may adversely affect the painting work except for minimal work normally performed by the Contractor and as, indicated herein. It shall always, however, be the responsibility of the Contractor to see that surfaces are properly prepared before any paint or coating is applied. It shall also be the Contractor's responsibility to paint the surface as specified providing that the owner accepts responsibility for uncorrected DSD-4 substrate conditions.

G. Test shop-applied primer for compatibility with subsequent cover materials.

H. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
1. Gypsum Wallboard: 12 percent.
2. Plaster and Stucco: 12 percent.
3. Masonry, Concrete, and Concrete Masonry Units : 12 percent.
4. Interior Wood: 15 percent, measured in accordance with ASTM D4442.

3.02 PREPARATION

A. Prepare all interior surfaces for repainting in accordance with MPI Repainting Manual requirements.

B. Clean surfaces thoroughly and correct defects prior to application.

C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

D. Remove or repair existing paints or finishes that exhibit surface defects.

E. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

F. Seal surfaces that might cause bleed through or staining of topcoat.

G. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

H. Concrete:
   1. Remove release agents, curing compounds, efflorescence, and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces to be coated exceeds that permitted in manufacturer's written instructions.
   2. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi (10,350 to 27,580 kPa) at 6 to 12 inches (150 to 300 mm). Allow to dry.
   3. Clean concrete according to ASTM D4258. Allow to dry.
   4. Prepare surface as recommended by top coat manufacturer and according to SSPC-SP 13.

I. Masonry:
   1. Remove efflorescence and chalk. Do not coat surfaces if moisture content or alkalinity of surfaces or if alkalinity of mortar joints exceed that permitted in manufacturer's written instructions. Allow to dry.
   2. Prepare surface as recommended by top coat manufacturer.
   3. Clean surfaces with pressurized water. Use pressure range of 1500 to 4000 psi (10,350 to 27,580 kPa) at 6 to 12 inches (150 to 300 mm). Allow to dry.

J. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

K. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

L. Aluminum: Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.

M. Galvanized Surfaces:

N. Ferrous Metal:
   1. Solvent clean according to SSPC-SP1.
   2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
   3. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

O. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

3.03 APPLICATION

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

D. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

E. Sand metal surfaces lightly between coats to achieve required finish.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.04 CLEANING

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

END OF SECTION