



**Business Services
Contracts Office**

5735 47th Avenue • Sacramento, CA 95824
(916) 643-2464

*Rose Ramos, Chief Business Officer
Robert Aldama, Interim Purchasing Manager*

ADDENDUM NO. 6

Date: January 23, 2023 (Prior to 10 AM)

Issued by: Sacramento City Unified School District

**Project: Project #: 0262-461-CBW-D-M
Clayton B. Wire Deferred Maintenance Project**

This addenda shall supersede the original Information, attachments, and specifications regarding Project No. **0262-461-CBW-D-M** where it adds to, deletes from, clarifies or otherwise modifies them. All other conditions and any previous addenda shall remain unchanged.

Part A – Bidding and Contract Requirements

AD6.01 Refer to Project Manual, Book 1, Document 00 01 10, Table of Contents:

REPLACE Document 00 01 10, Table of Contents in its entirety. (See Attachment 6.10)

- Adds the below to the Conditions of the Contract:
 - Exhibit I - Finish Schedule
 - Exhibit J - Signage Details
- Adds the below to the Technical Specifications:
 - Division 09 09 65 00 Resilient Flooring
 - Division 09 09 65 13 Resilient Base and Accessories
 - Division 10 10 44 16 Fire Extinguishers
- Deletes the below from the Technical Specifications:
 - Division 08 08 71 00 Door Hardware
 - Division 09 09 65 16 Resilient Flooring – Sheet Vinyl

AD6.02 Refer to Project Manual, Book 2, Document 00 01 10, Table of Contents:

REPLACE Document 00 01 10, Table of Contents in its entirety. (See Attachment 6.11)

- Adds the below to the Technical Specifications:
 - Division 09 09 65 00 Resilient Flooring
 - Division 09 09 65 13 Resilient Base and Accessories
 - Division 10 10 44 16 Fire Extinguishers
- Deletes the below from the Technical Specifications:
 - Division 08 08 71 00 Door Hardware
 - Division 09 09 65 16 Resilient Flooring – Sheet Vinyl

Project No: 0262-461-CBW-D-M
Clayton B. Wire Deferred Maintenance Project
ADDENDUM NO. 6

AD6.03 Refer to Project Manual, Book 1, Document 00 52 13 Agreement, Item 4, Time for Completion:

REVISE Item 4 to read as follow:

4. Time for Completion: It is hereby understood and agreed that the Work under this Contract shall be completed within **Ninety-Two (92)** consecutive calendar days (“Contract Time”) from the date specified in the District’s Notice to Proceed

- Start of Construction has been moved up to 02/20/2023 increasing calendar days from seventy-five (75) to ninety-two (92).

AD6.04 Refer to Project Manual, Book 1, Exhibit D – Roof Scope:

REPLACE Exhibit D – Roof Scope in its entirety. (See Attachment 6.12)

- Square Footage Notes on all Buildings Identified for New Roofs have been revised.
 - Please Note: Roofing Square Footage has increased on all buildings
- Building P10 (CR C011 & C010) has been added to Page 1 & 2 as Receiving New Roof
- Portable RR has been added to the Header on Page 2.
 - The Portable Restroom was identified on the Page 1 graphic for receiving a new roof in the original bid docs, but not included on the list on Page 2.
- Classroom Numbers have been added for convenience.

AD6.05 Refer to Project Manual, Book 1, Exhibit E – Exterior Scope, Note 6:

ADD to Note 6 “See New Exhibit I - Finish Schedule for Paint Exterior Paint Colors

AD6.06 Refer to Project Manual, Book 1:

ADD New Exhibit I - Finish Schedule (See Attachment 6.13)

ADD New Exhibit J – Signage Details (See Attachment 6.14)

AD6.07 Refer to Project Manual, Book 1, Document 01 11 00, Summary of Work:

REPLACE Document 01 11 00, Summary of Work in its entirety. (See Attachment 6.15)

- Revises Part 1.02 Summary of Work Covered by Contract Documents, Paragraph A, Also Included:
 - Adds Note 3a: Final Cleaning includes ALL rooms on campus, not just rooms included in deferred maintenance scope. Typical: closets, small custodial rooms and storage rooms
 - Revises Note 9: Finish Details added via Addendum 6, Exhibit I - Finish Schedule
 - a. Color Selections are included
 - Adds Note 10: Signage Attachment Details added via Addendum 6, Exhibit J – Signage Details.
- Revises Part 1.04 Work by Others, Paragraph B, Work on Project that will be performed by others concurrent with the Work of this Contract:
 - Adds Item 2: “Non-Hazardous Demo being performed by JM Environmental under Clayton B. Wire HAZMAT Remediation Project scheduled to be completed by 3/03/2023”

Project No: 0262-461-CBW-D-M
Clayton B. Wire Deferred Maintenance Project
ADDENDUM NO. 6

AD6.08 Refer to Project Manual, Book 1, Document 01 32 13, Scheduling of Work:

REPLACE Document 01 32 13, Scheduling of Work in its entirety. (See Attachment 6.16)

- Revises Part 1.03 Construction Schedule, Paragraph C. Milestone Schedule:
 - Mobilization and Start of Construction has been revised to 02/20/2023
 - Dates for completion of HAZMAT Remediation and Non-Hazardous Demo have been updated to indicate the NIC Demo Work will be Non-Hazardous in nature only after Work covered in this contract starts.

Part B – TECHNICAL REQUIREMENTS

AD6.09 Refer to Project Manual, Book 2:

REPLACE 09 51 00 Acoustical Ceilings in its entirety (See Attachment 6.17)

ADD 09 65 00 Resilient Flooring (See Attachment 6.18)

ADD 09 65 13 Resilient Base and Accessories (See Attachment 6.19)

DELETE 09 65 16 Resilient Flooring – Sheet Vinyl in its entirety

REPLACE 09 68 00 Carpet in its entirety (See Attachment 6.20)

REPLACE 09 91 00 Painting in its entirety (See Attachment 6.21)

REPLACE 10 21 13 Toilet Compartments & Cubicles in its entirety (See Attachment 6.22)

ADD 10 44 16 Fire Extinguishers (See Attachment 6.23)

Part C - DRAWINGS

(Not Used)

Part D- BIDDERS QUESTIONS

(Not Used)

List of Attachments:

AD6.10 Book 1, Document 00 01 10, Table of Contents (2 pages)

AD6.11 Book 2, Document 00 01 10, Table of Contents (1 page)

AD6.12 Exhibit D – Roof Scope (3 pages)

AD6.13 Exhibit I - Finish Schedule (1 page)

AD6.14 Exhibit J – Signage Details (4 pages)

AD6.15 Document 01 11 00, Summary of Work (5 pages)

AD6.16 Document 01 32 13, Scheduling of Work (14 pages)

AD6.17 Technical Section 09 51 00 Acoustical Ceilings (11 pages)

AD6.18 Technical Section 09 65 00 Resilient Flooring (10 pages)

AD6.19 Technical Section 09 65 13 Resilient Base and Accessories (6 pages)

AD6.20 Technical Section 09 68 00 Carpet in its entirety (13 pages)

AD6.21 Technical Section 09 91 00 Painting (14 page)

AD6.22 Technical Section 10 21 13 Toilet Compartments & Cubicles (8 pages)

AD6.23 Technical Section Fire Extinguishers (4 pages)

Project No: 0262-461-CBW-D-M
Clayton B. Wire Deferred Maintenance Project
ADDENDUM NO. 6

END OF ADDENDUM NO. 6

Contractor to sign as acknowledgment of receipt and return with Bid:

Signature: _____ Date: _____

Company Name (please print) _____

Attachment 6.10
(3 Pages)

DOCUMENT 00 01 10

TABLE OF CONTENTS FOR BOTH BOOK 1 AND 2

Procurement and Contracting Requirements

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 01 01	Project Title Page
	00 01 10	Table of Contents

Solicitation

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 11 16	Notice to Bidders

Instructions for Procurement

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 21 13	Instructions to Bidders

Available Information

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 31 19	Existing Conditions

Procurement Forms and Supplements

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 41 13	Bid Form and Proposal
	00 43 13	Bid Bond
	00 43 36	Designated Subcontractors List
	00 45 01	Site Visit Certification
	00 45 19	Non-Collusion Declaration
	00 45 19.01	Iran Contracting Act Certification
	00 45 26	Workers' Compensation Certification
	00 45 46.01	Prevailing Wage and Related Labor Requirements Certification
	00 45 46.02	Disabled Veteran Business Enterprise Participation Certification
	00 45 46.03	Drug-Free Workplace Certification
	00 45 46.04	Tobacco-Free Environment Certification
	00 45 46.05	Hazardous Materials Certification
	00 45 46.06	Lead-Based Materials Certification
	00 45 46.08	Criminal Background Investigation/Fingerprinting Certification
	00 45 46.10	Roofing Project Certification
	00 45 49	Registered Subcontractors List
	00 45 90	Post Bid Interview

Contracting Forms and Supplements

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 52 13	Agreement Form – Stipulated Sum (Single-Prime Contract)
	00 56 00	Escrow Bid Documentation
	00 57 00	Escrow Agreement in Lieu of Retention

Project Forms

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 61 13.13	Performance Bond

00 61 13.16	Payment Bond
00 63 40	Allowance Expenditure Directive Form
00 63 47	Daily Force Account Report
00 63 57	Proposed Change Order Form
00 63 63	Change Order Form
00 65 19.26	Agreement and Release of Any and All Claims
00 65 36	Guarantee Form

Conditions of the Contract

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	00 72 13	General Conditions – Stipulated Sum (Single-Prime Contract)
	00 73 13	Special Conditions
	00 73 56	Hazardous Materials Procedures and Requirements

Exhibit A	Site Logistics Plan
Exhibit B	Report of Limited Hazardous Materials Surveys (Book 2 of 2)
Exhibit C	Asphalt Scope
Exhibit D	Roof Scope
Exhibit E	Exterior Scope
Exhibit F	Assessment Sheets
Exhibit G	Technology Demolition Scope
Exhibit H	Project Labor Agreement
Exhibit I	Finish Schedule
Exhibit J	Signage

General Requirements

<u>Division 1</u>	<u>Section</u>	<u>Title</u>
	01 11 00	Summary of Work

Price and Payment Procedures

<u>Division 1</u>	<u>Section</u>	<u>Title</u>
	01 21 00	Allowance
	01 25 13	Product Options and Substitutions
	01 26 00	Changes in the Work
	01 29 00	Application for Payment and Conditional and Unconditional Waiver and Release Forms

Administrative Requirements

<u>Division 1</u>	<u>Section</u>	<u>Title</u>
	01 31 19	Project Meetings
	01 32 13	Scheduling of Work
	01 33 00	Submittals
	01 35 13.23	Site Standards

Quality Requirements

<u>Division 1</u>	<u>Section</u>	<u>Title</u>
	01 41 00	Regulatory Requirements
	01 42 13	Abbreviations and Acronyms
	01 42 16	Definitions
	01 42 19	References
	01 43 00	Materials and Equipment
	01 45 00	Quality Control

Temporary Facilities and Controls

<u>Division 1</u>	<u>Section</u>	<u>Title</u>
	01 50 00	Temporary Facilities and Controls

01 50 13 Construction Waste Management and Disposal

Product Requirements

<u>Division 1</u>	<u>Section</u>	<u>Title</u>
	01 64 00	Owner-Furnished Products
	01 66 00	Product Delivery, Storage and Handling

Execution and Closeout Requirements

<u>Division 1</u>	<u>Section</u>	<u>Title</u>
	01 73 29	Cutting and Patching
	01 76 00	Alteration Project Procedures
	01 77 00	Contract Closeout and Final Cleaning
	01 78 23	Operation and Maintenance Data
	01 78 36	Warranties
	01 78 39	Record Documents

Technical Specifications – See Book 2 of 2

Division 07	07 54 19	Polyvinyl Chloride Roofing
Division 07	07 31 13	Shingle Roof
Division 08	08 11 00	Metal Doors and Frames
Division 09	09 51 00	Acoustical Ceilings
Division 09	09 65 00	Resilient Flooring
Division 09	09 65 16	Resilient Base and Accessories
Division 09	09 68 00	Carpet
Division 09	09 91 00	Painting
Division 10	10 21 13	Toilet Compartments and Cubicles
Division 10	10 44 16	Fire Extinguishers
Division 26	26 50 00	Lighting
Division 32	32 12 00	Asphalt Paving

Document 00 01 10

TABLE OF CONTENTS – BOOK 2 OF 2

Conditions of the Contract

<u>Division 0</u>	<u>Section</u>	<u>Title</u>
	Exhibit B	Report of Limited Hazardous Materials Surveys (Book 2 of 2)

Technical Specifications – See Book 2 of 2

Division 07	07 54 19	Polyvinyl Chloride Roofing
Division 07	07 31 13	Shingle Roof
Division 08	08 11 00	Metal Doors and Frames
Division 09	09 51 00	Acoustical Ceilings
Division 09	09 65 00	Resilient Flooring
Division 09	09 65 16	Resilient Base and Accessories
Division 09	09 68 00	Carpet
Division 09	09 91 00	Painting
Division 10	10 21 13	Toilet Compartments and Cubicles
Division 10	10 44 16	Fire Extinguishers
Division 26	26 50 00	Lighting
Division 32	32 12 00	Asphalt Paving

Exhibit D - Roofing Scope
(3 Pages)

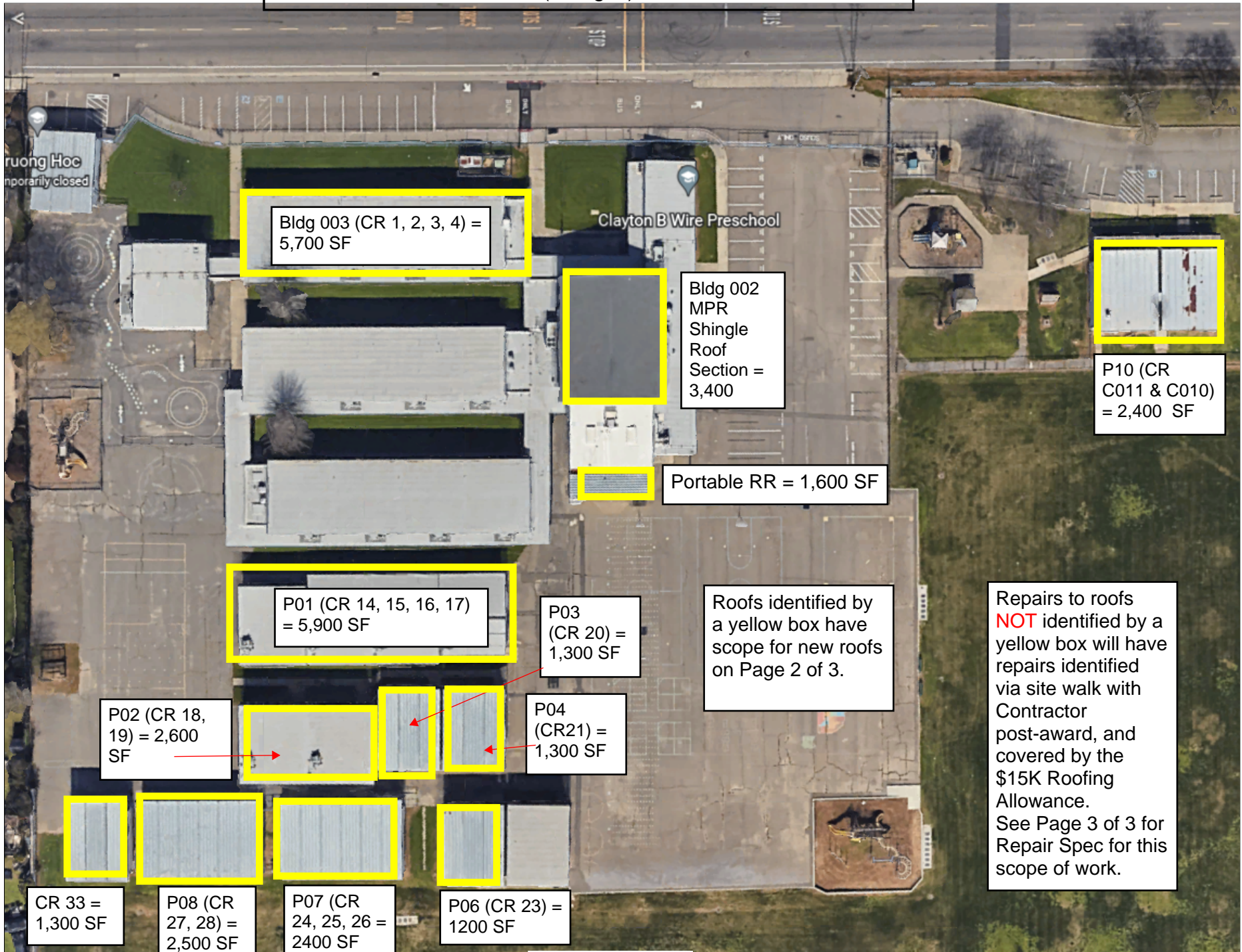


Exhibit D – New Roofing Scope for

Buildings 003, P01, P02, P03, P04, P06, P07, P08, P10, Portable RR & Rm 33

PART 1 - GENERAL

1.1 SUMMARY:

- A. Replace existing roofs per scopes of work below.

1.2 SCOPE OF WORK:

- A. Remove existing BUR or metal roof systems to plywood deck.
- B. Gutters and downspouts will be left in place.
 - 1. Exception is P06/CR23. Metal Roof has been torn off in storm
 - a. Replace 30' of gutter on North side. Downspout is intact.
- C. Mechanically fasten one layer of ¼" coverboard.
- D. Install mechanically fastened 60-Mil TPA roof system including all associated components and flashings.
- E. New coated metal drip edge will have 4" face and be installed with a continuous cleat.
- F. Install T patches where sheets intersect.
- G. Refer to District Standard for additional installation instructions.
- H. *** NOTE: Restroom roof will not be removed. Fill flutes with flute filler insulation and install wood nailers around the entire perimeter prior to installing new roof per scope above. ***

END OF SECTION

Exhibit D -

Roofing Repairs For Buildings P09, K-1, 002 (Portion not identified as being replaced), 004, 005, P05, & P10)

PART 1 - GENERAL

1.1 SUMMARY:

- A. Repair existing roofs per scopes of work below.

1.2 SCOPE OF WORK:

A. Splits at perimeter and field of roof:

1. Thoroughly clean area to be repaired and prime with asphaltic primer.
2. Embed one 4" wide ply of fiberglass mesh into elastomeric mastic to completely cover split.
3. Embed 6" ply of fiberglass mesh into additional layer of elastomeric mastic.
4. Surface repair with white ceramic roofing granules.

B. Fasteners backing out at perimeter or in field of roof.

1. Pull fastener and replace with new heavier gauge nail.
2. Prime area with asphaltic primer.
3. Embed one 4" wide ply of fiberglass mesh into elastomeric mastic to completely cover nail(s) that were replaced.
4. Embed 6" ply of fiberglass mesh into additional layer of elastomeric mastic.
5. Surface repair with white ceramic roofing granules.

C. Open curb corners

1. Thoroughly clean area to be addressed and prime with asphaltic primer.
2. Embed one 4" wide ply of fiberglass mesh into elastomeric mastic to completely cover split.
3. Embed 6" ply of fiberglass mesh into additional layer of elastomeric mastic.
4. Surface repair with white ceramic roofing granules.

D. Pipe penetrations:

1. Thoroughly clean area around base of pipe and prime with asphaltic primer.
2. Apply elastomeric mastic around entire pipe base, extending 3" onto the roof.
3. Surface repair with white ceramic roofing granules.

E. Misc repairs:

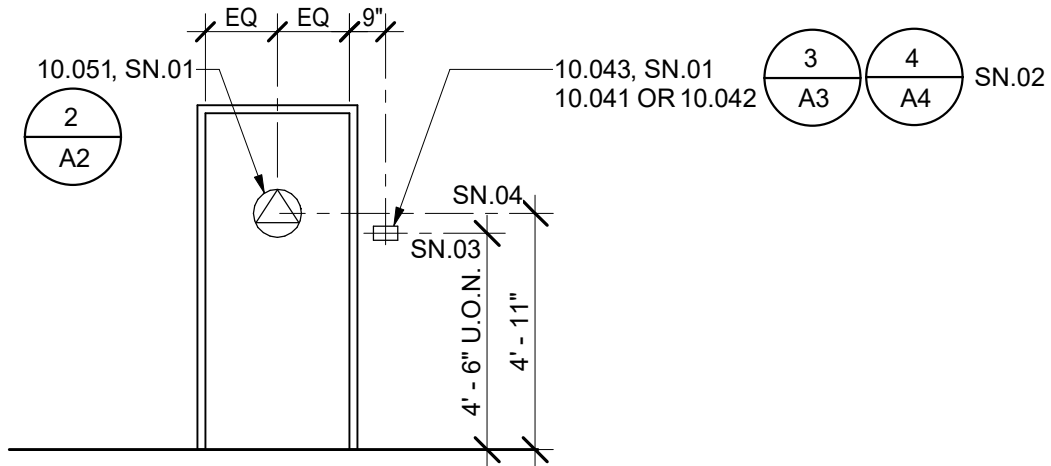
1. Consult with construction manager for direction on other roof repairs that are not covered in the scopes above.

END OF SECTION

Exhibit I - Finish Schedule

Clayton B. Wire Deferred Maintenance Project			
Sacramento City Unified School District			
1/20/2023			
Item/Location	Manufacturer/Product	Color Number	Color Name
Interior Finishes and Colors			
Paint Color 1 (Main)	Kelly Moore	KMW22	Cream Cheese Frosting
Paint Color 2 (Doors & Frames)	Kelly Moore	KM4589	Mama Raccoon
Carpet: Broadloom 6'	Tandus/Tarkett; Aftermath II	23508	Fleece
Carpet: Modular Tile 24" x 24"	Tandus/Tarkett; Aftermath II	23508	Fleece
Carpet: Walk-Off Mat	Tandus/Tarkett; Abrasive Action II	19103	Winter Gray
Resilient Flooring: Sheet Vinyl	Tarkett; iQ Optima	3242-872	Silver Bell
Rubber Base - 6"	Roppe	100	Black
Integral Base - 6"	To Match F4		
Suspended Ceiling Grid	Armstrong; Prelude XL	N/A	White
Acoustical Ceiling Panel - Type 1 (Square Edge - 2'x4'x3/4")	Armstrong; Fine Fissured High NRC #1811	N/A	White
Existing Ceilings - Painted	Paint Color 2		
Toilet Partition/Urinal Screen	Bobrick; Sierra Series	SC04	Forest Green
Exterior Finishes			
Exterior Paint 1 (Main)	Kelly Moore	KM4647	Pony Tail
Exterior Paint 2 (Trim, Doors & Frames)	Kelly Moore	KM4589	Mama Raccoon
Exterior Paint 3 (Metal Fencings)	Kelly Moore	KMA88	Japanese Sable

Attachment 6.14
Exhibit J - Signage Details



SIGNAGE MOUNTING

1 TYPICAL MOUNTING HEIGHTS
1/4" = 1'-0"

SHEET NOTES

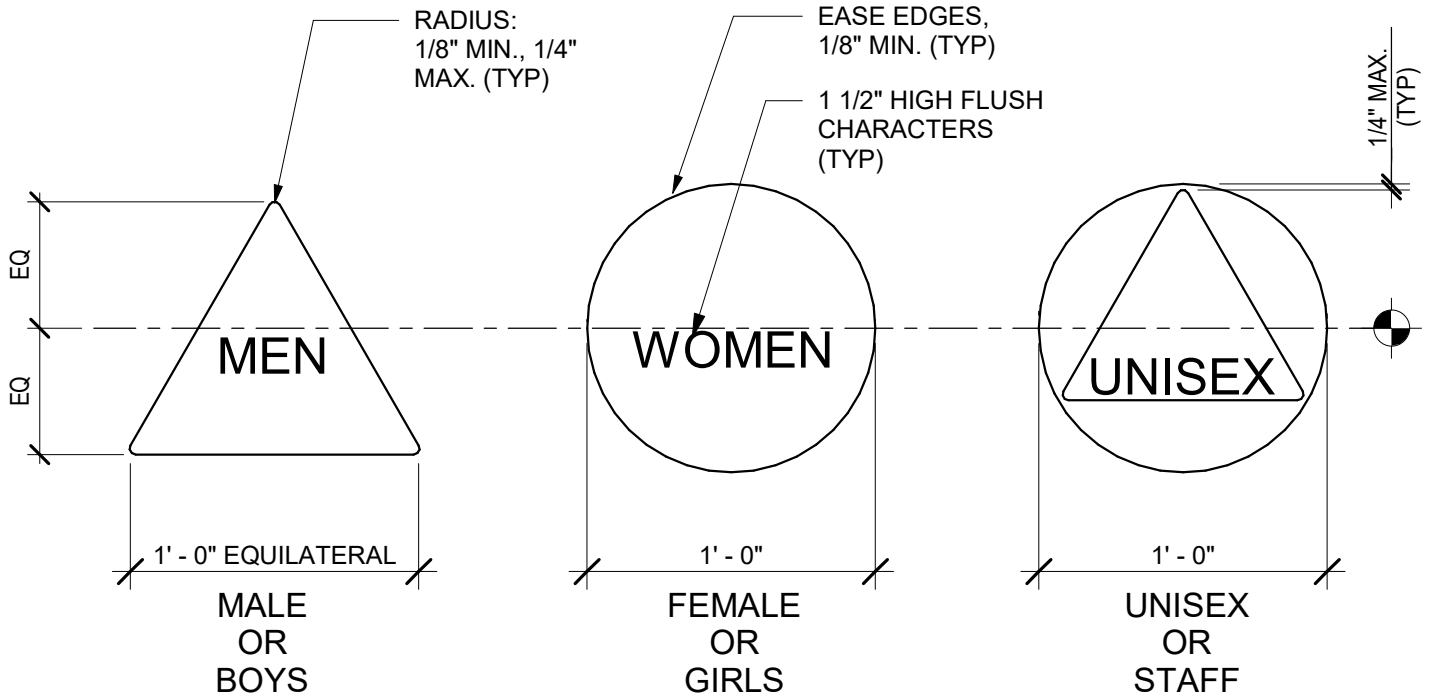
- SN.01 PROVIDE AT ALL TOILET ROOM DOORS
- SN.02 FOR SIGNS MOUNTED BACK-TO-BACK ON WINDOW GLAZING, SEE SPECIFICATIONS FOR REQUIREMENTS
- SN.03 CENTERLINE OF SIGN
- SN.04 CENTERLINE OF SYMBOL

KEYNOTES

- 10.041 SIGNAGE: ROOM IDENTIFICATION
- 10.042 SIGNAGE: TACTILE EXIT
- 10.043 SIGNAGE: TOILET ROOM IDENTIFICATION
- 10.051 SIGNAGE: TOILET ROOM DOOR SYMBOL

1/20/2023 7:46:06 AM

TYPICAL MOUNTING HEIGHTS		DATE: 0
Clayton B. Wire Deferred Maintenance Project		PROJECT NO.:
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT		SHEET:
		A1

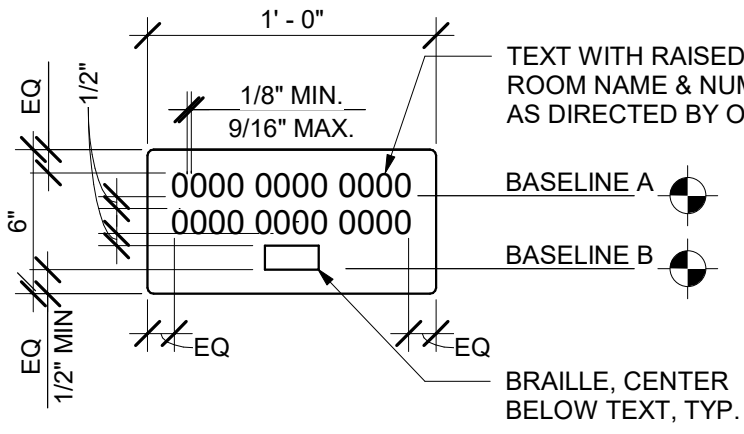
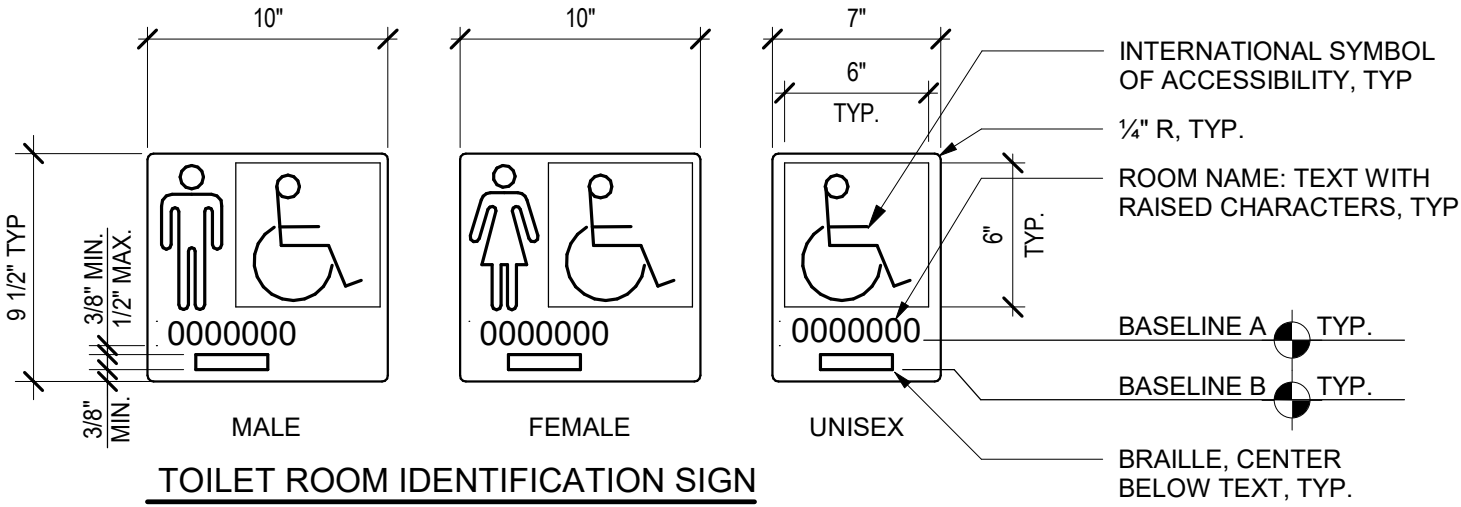


2 TOILET ROOM DOOR SYMBOLS

1 1/2" = 1'-0"

1/20/2023 7:46:06 AM

TOILET ROOM DOOR SYMBOLS		DATE: 0
Clayton B. Wire Deferred Maintenance Project		PROJECT NO.:
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT		SHEET:
		A2



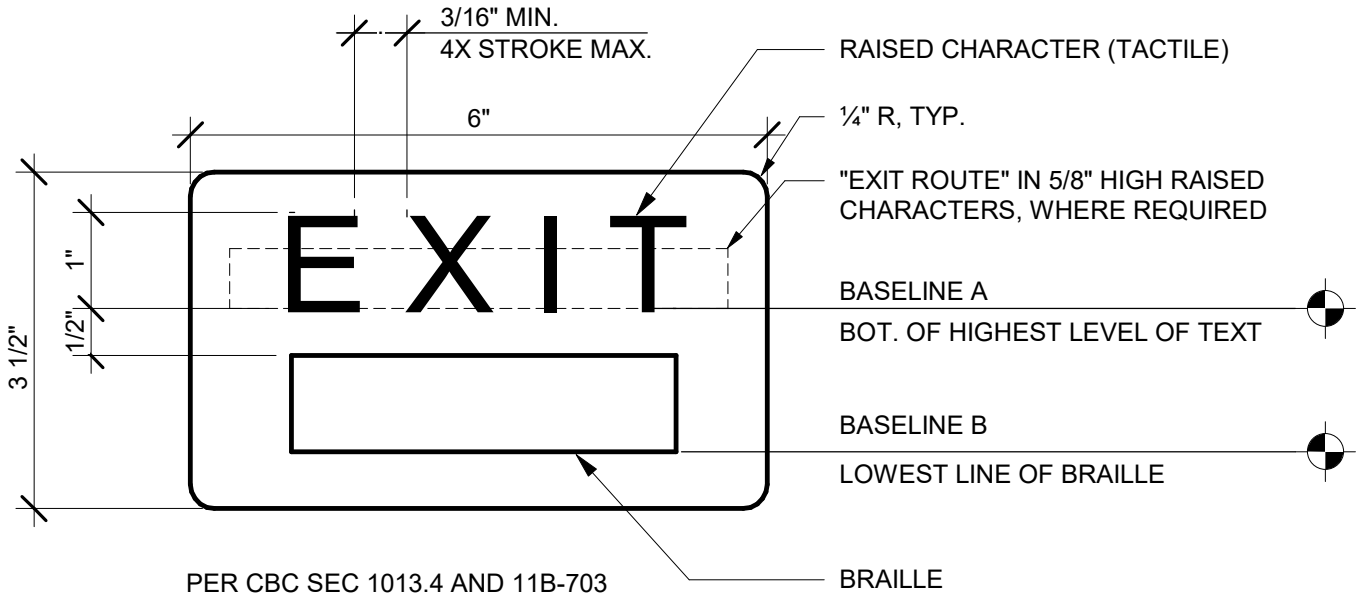
- NOTES:** (COMPLY W/ CBC 11B-703)
1. CHARACTERS TO BE 1" HIGH.
 2. VERIFY ROOM NAME BEFORE FABRICATION.
 3. **BASELINE A (BOT. OF HIGHEST LEVEL OF TEXT) = 59" A.F.F MAX., BASELINE B (LOWEST LINE OF BRAILLE) = 49" A.F.F MIN. (REFER TO 1/A1 FOR ACTUAL HEIGHT AND LOCATION).**

3 IDENTIFICATION SIGNS

1 1/2" = 1'-0"

1/20/2023 7:46:06 AM

IDENTIFICATION SIGNS		DATE: 0
Clayton B. Wire Deferred Maintenance Project		PROJECT NO.:
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT		SHEET:
		A3



PER CBC SEC 1013.4 AND 11B-703

NOTES:

1. **BASELINE A = 59" A.F.F. MAX, BASELINE B = 49" A.F.F. MIN. (REFER TO 1/A1 FOR ACTUAL HEIGHT AND LOCATION).**
2. EACH GRADE - LEVEL EXTERIOR EXIT DOOR, WITH ILLUMINATED EXIT SIGN, SHALL BE IDENTIFIED BY "EXIT".
3. EACH EXIT DOOR FROM AN INTERIOR ROOM, WITH ILLUMINATED EXIT SIGN, SHALL BE IDENTIFIED BY "EXIT ROUTE".
4. EXIT DOORS LEADING TO EXIT BY MEANS OF AN EXIT ENCLOSURE, EXIT PASSAGEWAY OR EXTERIOR BALCONY SHALL BE IDENTIFIED BY "EXIT ROUTE"
5. INCREASE SIZE OF SIGN TO ACCOMMODATE ADDITIONAL TEXT AS NEEDED. CHARACTER HEIGHT, WHEN NOT INDICATED, SHALL BE 5/8" MIN.

4 TACTILE EXIT SIGNAGE

6" = 1'-0"

1/20/2023 7:46:06 AM

TACTILE EXIT SIGNAGE		DATE:
Clayton B. Wire Deferred Maintenance Project		PROJECT NO.:
SACRAMENTO CITY UNIFIED SCHOOL DISTRICT		SHEET:
		A4

Attachment 6.15
(5 Pages)

DOCUMENT 01 11 00

SUMMARY OF WORK

PART 1 - GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions, including, without limitation, Site Access Conditions and Requirements;
- B. Special Conditions.

1.02 SUMMARY OF WORK COVERED BY CONTRACT DOCUMENTS

- A. The Work of this Contract consists of the following:

Selective deferred maintenance necessary to an elementary school campus including scope indicated below as well as Exhibits C, D, E, F, and G. Generally the categories of work include, but are not limited to: asphalt, new roofing and repairs, technology demo, painting (exterior and interior), flooring (carpet & vinyl), acoustical ceiling repairs, door replacement, signage, dry rot repair, drinking fountain conversion to OFCI bottle fillers, ornamental fence, and play equipment refresh.

Included:

- 1. Furnish all labor, material and equipment for all Work shown and/or specified in accordance with the Contract Documents except as excluded below.
- 2. Information provided under "Also Included" points out some items which may be considered less obvious or "unconventional", but which are included in the Scope of Work.
- 3. This Bid Package Description is intended to clarify scope to the Contractor, but is in no way intended to limit scope that is reasonable inferable as being required by the Work included in this description. Work required under the Bid Package may be shown as specified anywhere in the Contract Documents.

Also Included:

- 1. Weather protection during the course of construction
- 2. Temporary barricades, signs as needed.
- 3. Daily and Final Clean-up.
 - a. Final Cleaning includes ALL rooms on campus, not just rooms included in deferred maintenance scope. This mostly entails closets, small custodial and storage rooms
- 4. A full-time superintendent shall be provided.

5. All demolition and removal and/or replacement of Work associated with this Bid Package.
6. Assume all paint contains lead and provide properly trained and certified workers as required.
7. Painting of all Building exteriors with the exception of brick surface.
8. Remove and Reinstall of all mini-blinds for painting
9. Finish Details added via Addendum 6, Exhibit I - Finish Schedule
 - a. Color Selections are included
10. Signage Attachment Details added via Addendum 6, Exhibit J - Signage Details

Excluded:

1. **HAZMAT Remediation identified in Exhibit B – HAZMAT Survey**
(This scope is anticipated to be complete prior to start of this project.)

1.03 CONTRACTS

- A. Perform the Work under a single, fixed-price Contract.

1.04 WORK BY OTHERS

- A. Work on the Project that will be performed and completed prior to the start of the Work of this Contract:
 - (1) HAZMAT Remediation associated with Exhibit B – HAZMAT Survey being performed by JM Environmental under Clayton B. Wire HAZMAT Remediation Project.
- B. Work on the Project that will be performed by others concurrent with the Work of this Contract:
 - (1) Clayton B. Wire Technology Project could have soft start prior to completion of the scope included in this project.
 - (2) Non-Hazardous soft demo being performed by JM Environmental under Clayton B. Wire HAZMAT Remediation Project scheduled to be completed by 3/03/2023.

1.05 CODES, REGULATIONS, AND STANDARDS

- A. The codes, regulations, and standards adopted by the state and federal agencies having jurisdiction shall govern minimum requirements for this Project. Where codes, regulations, and standards conflict with the Contract Documents, these conflicts shall be brought to the immediate attention of the District and the Architect.
- B. Codes, regulations, and standards shall be as published effective as of date of bid opening, unless otherwise specified or indicated.

1.06 PROJECT RECORD DOCUMENTS

- A. Contractor shall maintain on Site one set of the following record documents; Contractor shall record actual revisions to the Work:
 - (1) Specifications.
 - (2) Addenda.
 - (3) Change Orders and other modifications to the Contract.
 - (4) Reviewed shop drawings, product data, and samples.
 - (5) Manufacturer's certificates.
- B. Contractor shall store Record Documents separate from documents used for construction. Provide files, racks, and secure storage for Record Documents and samples.
- C. Contractor shall record information concurrent with construction progress.
- D. Specifications: Contractor shall legibly mark and record at each product section of the Specifications the description of the actual product(s) installed, including the following:
 - (1) Manufacturer's name and product model and number.
 - (2) Product substitutions or alternates utilized.
 - (3) Changes made by Addenda and Change Orders and written directives.

1.07 EXAMINATION OF EXISTING CONDITIONS

- A. Contractor shall be held to have examined the Project Site and acquainted itself with the conditions of the Site and of the streets or roads approaching the Site.
- B. Prior to commencement of Work, Contractor shall survey the Site and existing buildings and improvements to observe existing damage and defects such as cracks, sags, broken, missing or damaged glazing, other building elements and Site improvements, and other damage.
- C. Should Contractor observe cracks, sags, and other damage to and defects of the Site and adjacent buildings, paving, and other items not indicated in the Contract Documents, Contractor shall immediately report same to the District and the Architect.

1.08 CONTRACTOR'S USE OF PREMISES

- A. If unoccupied and only with District's prior written approval, Contractor may use the building(s) at the Project Site without limitation for its operations, storage, and office facilities for the performance of the Work. If the District

chooses to beneficially occupy any building(s), Contractor must obtain the District's written approval for Contractor's use of spaces and types of operations to be performed within the building(s) while so occupied. Contractor's access to the building(s) shall be limited to the areas indicated.

- B. If the space at the Project Site is not sufficient for Contractor's operations, storage, office facilities and/or parking, Contractor shall arrange and pay for any additional facilities needed by Contractor.
- C. Contractor shall not interfere with use of or access to occupied portions of the building(s) or adjacent property.
- D. Contractor shall maintain corridors, stairs, halls, and other exit-ways of building clear and free of debris and obstructions at all times.
- E. No one other than those directly involved in the demolition and construction, or specifically designated by the District or the Architect shall be permitted in the areas of work during demolition and construction activities.
- F. The Contractor shall install the construction fence and maintain that it will be locked when not in use. Keys to this fencing will be provided to the District.

1.09 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

- A. The Drawings show above-grade and below-grade structures, utility lines, and other installations that are known or believed to exist in the area of the Work. Contractor shall locate these existing installations before proceeding with excavation and other operations that could damage same; maintain them in service, where appropriate; and repair damage to them caused by the performance of the Work. Should damage occur to these existing installations, the costs of repair shall be at the Contractor's expense and made to the District's satisfaction.
- B. Contractor shall be alert to the possibility of the existence of additional structures and utilities. If Contractor encounters additional structures and utilities, Contractor will immediately report to the District for disposition of same as indicated in the General Conditions.

1.10 UTILITY SHUTDOWNS AND INTERRUPTIONS

- A. Contractor shall give the District a minimum of three (3) days written notice in advance of any need to shut off existing utility services or to effect equipment interruptions. The District will set exact time and duration for shutdown, and will assist Contractor with shutdown. Work required to re-establish utility services shall be performed by the Contractor.
- B. Contractor shall obtain District's written approval as indicated in the General Conditions in advance of deliveries of material or equipment or other activities that may conflict with District's use of the building(s) or adjacent facilities.

1.11 STRUCTURAL INTEGRITY

- A. Contractor shall be responsible for and supervise each operation and work that could affect structural integrity of various building elements, both permanent and temporary.
- B. Contractor shall include structural connections and fastenings as indicated or required for complete performance of the Work.

PART 2 – PRODUCTS Not Used.

PART 3 – EXECUTION Not Used.

END OF DOCUMENT

SCHEDULING OF WORK

PART 1 – GENERAL

1.01 RELATED DOCUMENTS AND PROVISIONS

All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:

- A. General Conditions;
- B. Special Conditions;
- C. Summary of Work; and
- D. Submittals.

1.02 SECTION INCLUDES

- A. Scheduling of Work under this Contract shall be performed by Contractor in accordance with requirements of this Section.
 - (1) Development of schedule, cost and resource loading of the schedule, monthly payment requests, and project status reporting requirements of the Contract shall employ computerized Critical Path Method ("CPM") scheduling ("CPM Schedule").
 - (2) CPM Schedule shall be cost loaded based on Schedule of Values as approved by District.
 - (3) Submit schedules and reports as specified in the General Conditions.
- B. Upon Award of Contract, Contractor shall immediately commence development of Initial and Original CPM Schedules to ensure compliance with CPM Schedule submittal requirements.

1.03 CONSTRUCTION SCHEDULE

- A. Within ten (10) days of issuance of the Notice to Proceed and before request for first progress payment, the Contractor shall prepare and submit to the Project Manager a construction progress schedule conforming to the Milestone Schedule below.
- B. The Construction Schedule shall be continuously updated, and an updated schedule shall be submitted with each application for progress payment. Each revised schedule shall indicate the work actually accomplished during the previous period and the schedule for completion of the remaining work.

C. Milestone Schedule:

Preliminary Construction Schedule

Anticipated Notice of Intent to Award (NOITA)	01/31/2023
Anticipated Board Approval of Construction Contract	02/16/2023
Anticipated Notice to Proceed (NTP)	02/17/2023

Site Construction Schedule

Anticipated completion of HAZMAT Remediation (NIC)	02/17/2023
Anticipated completion of Non-Hazardous Demo (NIC)	03/03/2023
Mobilization and Start of Construction	02/20/2023
Construction	02/20/2023 – 05/05/2023
Close-Out Phase	05/06/2023 – 05/19/2023
Project Time of Completion	05/19/2023

1.04 QUALIFICATIONS

- A. Contractor shall employ experienced scheduling personnel qualified to use the latest version of [i.e., Primavera Project Planner]. Experience level required is set forth below. Contractor may employ such personnel directly or may employ a consultant for this purpose.
- (1) The written statement shall identify the individual who will perform CPM scheduling.
 - (2) Capability and experience shall be verified by description of construction projects on which individual has successfully applied computerized CPM.
 - (3) Required level of experience shall include at least two (2) projects of similar nature and scope with value not less than three fourths ($\frac{3}{4}$) of the Total Bid Price of this Project. The written statement shall provide contact persons for referenced projects with current telephone and address information.
- B. District reserves the right to approve or reject Contractor's scheduler or consultant at any time. District reserves the right to refuse replacing of Contractor's scheduler or consultant, if District believes replacement will negatively affect the scheduling of Work under this Contract.

1.05 GENERAL

- A. Progress Schedule shall be based on and incorporate milestone and completion dates specified in Contract Documents.
- B. Overall time of completion and time of completion for each milestone shown on Progress Schedule shall adhere to times in the Contract, unless an earlier

(advanced) time of completion is requested by Contractor and agreed to by District. Any such agreement shall be formalized by a Change Order.

- (1) District is not required to accept an early completion schedule, i.e., one that shows an earlier completion date than the Contract Time.
 - (2) Contractor shall not be entitled to extra compensation in event agreement is reached on an earlier completion schedule and Contractor completes its Work, for whatever reason, beyond completion date shown in its early completion schedule but within the Contract Time.
 - (3) A schedule showing the work completed in less than the Contract Time, and that has been accepted by District, shall be considered to have Project Float. The Project Float is the time between the scheduled completion of the work and the Completion Date. Project Float is a resource available to both District and the Contractor.
- C. Ownership Project Float: Neither the District nor Contractor owns Project Float. The Project owns the Project Float. As such, liability for delay of the Completion Date rests with the party whose actions, last in time, actually cause delay to the Completion Date.
- (1) For example, if Party A uses some, but not all of the Project Float and Party B later uses remainder of the Project Float as well as additional time beyond the Project Float, Party B shall be liable for the time that represents a delay to the Completion Date.
 - (2) Party A would not be responsible for the time since it did not consume the entire Project Float and additional Project Float remained; therefore, the Completion Date was unaffected by Party A.
- D. Progress Schedule shall be the basis for evaluating job progress, payment requests, and time extension requests. Responsibility for developing Contract CPM Schedule and monitoring actual progress as compared to Progress Schedule rests with Contractor.
- E. Failure of Progress Schedule to include any element of the Work, or any inaccuracy in Progress Schedule, will not relieve Contractor from responsibility for accomplishing the Work in accordance with the Contract. District's acceptance of schedule shall be for its use in monitoring and evaluating job progress, payment requests, and time extension requests and shall not, in any manner, impose a duty of care upon District, or act to relieve Contractor of its responsibility for means and methods of construction.
- F. Software: Use District Preferred Project Planning Software. Such software shall be compatible with Windows operating system. Contractor shall transmit contract file to District on compact disk at times requested by District.
- G. Transmit each item under the form approved by District.
- (1) Identify Project with District Contract number and name of Contractor.

- (2) Provide space for Contractor's approval stamp and District's review stamps.
- (3) Submittals received from sources other than Contractor will be returned to the Contractor without District's review.

1.06 INITIAL CPM SCHEDULE

- A. Initial CPM Schedule submitted for review at the pre-construction conference shall serve as Contractor's schedule for up to ninety (90) calendar days after the Notice to Proceed.
- B. Indicate detailed plan for the Work to be completed in first ninety (90) days of the Contract; details of planned mobilization of plant and equipment; sequence of early operations; procurement of materials and equipment. Show Work beyond ninety (90) calendar days in summary form.
- C. Initial CPM Schedule shall be time scaled.
- D. Initial CPM Schedule shall be cost and resource loaded. Accepted cost and resource loaded schedule will be used as basis for monthly progress payments until acceptance of the Original CPM Schedule. Use of Initial CPM Schedule for progress payments shall not exceed ninety (90) calendar days.
- E. District and Contractor shall meet to review and discuss the Initial CPM Schedule within seven (7) calendar days after it has been submitted to District.
 - (1) District's review and comment on the schedule shall be limited to Contract conformance (with sequencing, coordination, and milestone requirements).
 - (2) Contractor shall make corrections to schedule necessary to comply with Contract requirements and shall adjust schedule to incorporate any missing information requested by District. Contractor shall resubmit Initial CPM Schedule if requested by District.
- F. If, during the first ninety (90) days after Notice to Proceed, the Contractor is of the opinion that any of the Work included on its Initial CPM Schedule has been impacted, the Contractor shall submit to District a written Time Impact Evaluation ("TIE") in accordance with Article 1.12 of this Section. The TIE shall be based on the most current update of the Initial CPM Schedule.

1.07 ORIGINAL CPM SCHEDULE

- A. Submit a detailed proposed Original CPM Schedule presenting an orderly and realistic plan for completion of the Work in conformance with requirements as specified herein.
- B. Progress Schedule shall include or comply with following requirements:

- (1) Time scaled, cost and resource (labor and major equipment) loaded CPM schedule.
- (2) No activity on schedule shall have duration longer than fifteen (15) work days, with exception of submittal, approval, fabrication and procurement activities, unless otherwise approved by District.
 - (a) Activity durations shall be total number of actual work days required to perform that activity.
- (3) The start and completion dates of all items of Work, their major components, and milestone completion dates, if any.
- (4) District furnished materials and equipment, if any, identified as separate activities.
- (5) Activities for maintaining Project Record Documents.
- (6) Dependencies (or relationships) between activities.
- (7) Processing/approval of submittals and shop drawings for all material and equipment required per the Contract. Activities that are dependent on submittal acceptance or material delivery shall not be scheduled to start earlier than expected acceptance or delivery dates.
 - (a) Include time for submittals, re-submittals and reviews by District. Coordinate with accepted schedule for submission of Shop Drawings, samples, and other submittals.
 - (b) Contractor shall be responsible for all impacts resulting from re-submittal of Shop Drawings and submittals.
- (8) Procurement of major equipment, through receipt and inspection at jobsite, identified as separate activity.
 - (a) Include time for fabrication and delivery of manufactured products for the Work.
 - (b) Show dependencies between procurement and construction.
- (9) Activity description; what Work is to be accomplished and where.
- (10) The total cost of performing each activity shall be total of labor, material, and equipment, excluding overhead and profit of Contractor. Overhead and profit of the General Contractor shall be shown as a separate activity in the schedule. Sum of cost for all activities shall equal total Contract value.
- (11) Resources required (labor and major equipment) to perform each activity.

- (12) Responsibility code for each activity corresponding to Contractor or Subcontractor responsible for performing the Work.
- (13) Identify the activities which constitute the controlling operations or critical path. No more than twenty-five (25%) of the activities shall be critical or near critical. Near critical is defined as float in the range of one (1) to (10) days.
- (14) Twenty (20) workdays for developing punch list(s), completion of punch-list items, and final clean up for the Work or any designated portion thereof. No other activities shall be scheduled during this period.
- (15) Interface with the work of other contractors, District, and agencies such as, but not limited to, utility companies.
- (16) Show detailed Subcontractor Work activities. In addition, furnish copies of Subcontractor schedules upon which CPM was built.
 - (a) Also furnish for each Subcontractor, as determined by District, submitted on Subcontractor letterhead, a statement certifying that Subcontractor concurs with Contractor's Original CPM Schedule and that Subcontractor's related schedules have been incorporated, including activity duration, cost and resource loading.
 - (b) Subcontractor schedules shall be independently derived and not a copy of Contractor's schedule.
 - (c) In addition to Contractor's schedule and resource loading, obtain from electrical, mechanical, and plumbing Subcontractors, and other Subcontractors as required by District, productivity calculations common to their trades, such as units per person day, feet of pipe per day per person, feet of wiring per day per person, and similar information.
 - (d) Furnish schedule for Contractor/Subcontractor CPM schedule meetings which shall be held prior to submission of Original CPM schedule to District. District shall be permitted to attend scheduled meetings as an observer.
- (17) Activity durations shall be in Work days.
- (18) Submit with the schedule a list of anticipated non-Work days, such as weekends and holidays. The Progress Schedule shall exclude in its Work day calendar all non-Work days on which Contractor anticipates critical Work will not be performed.

C. Original CPM Schedule Review Meeting: Contractor shall, within sixty (60) days from the Notice to Proceed date, meet with District to review the Original CPM Schedule submittal.

- (1) Contractor shall have its Project Manager, Project Superintendent, Project Scheduler, and key Subcontractor representatives, as required by District, in attendance. The meeting will take place over a continuous one (1) day period.
- (2) District's review will be limited to submittal's conformance to Contract requirements including, but not limited to, coordination requirements. However, review may also include:
 - (a) Clarifications of Contract Requirements.
 - (b) Directions to include activities and information missing from submittal.
 - (c) Requests to Contractor to clarify its schedule.
- (3) Within five (5) days of the Schedule Review Meeting, Contractor shall respond in writing to all questions and comments expressed by District at the Meeting.

1.08 ADJUSTMENTS TO CPM SCHEDULE

- A. Adjustments to Original CPM Schedule: Contractor shall have adjusted the Original CPM Schedule submittal to address all review comments from original CPM Schedule review meeting and resubmit network diagrams and reports for District's review.
- (1) District, within ten (10) days from date that Contractor submitted the revised schedule, will either:
 - (a) Accept schedule and cost and resource loaded activities as submitted, or
 - (b) Advise Contractor in writing to review any part or parts of schedule which either do not meet Contract requirements or are unsatisfactory for District to monitor Project's progress, resources, and status or evaluate monthly payment request by Contractor.
 - (2) District may accept schedule with conditions that the first monthly CPM Schedule update be revised to correct deficiencies identified.
 - (3) When schedule is accepted, it shall be considered the "Original CPM Schedule" which will then be immediately updated to reflect the current status of the work.
 - (4) District reserves right to require Contractor to adjust, add to, or clarify any portion of schedule which may later be discovered to be insufficient for monitoring of Work or approval of partial payment requests. No additional compensation will be provided for such adjustments, additions, or clarifications.

- B. Acceptance of Contractor's schedule by District will be based solely upon schedule's compliance with Contract requirements.
 - (1) By way of Contractor assigning activity durations and proposing sequence of Work, Contractor agrees to utilize sufficient and necessary management and other resources to perform work in accordance with the schedule.
 - (2) Upon submittal of schedule update, updated schedule shall be considered "current" CPM Schedule.
 - (3) Submission of Contractor's schedule to District shall not relieve Contractor of total responsibility for scheduling, sequencing, and pursuing Work to comply with requirements of Contract Documents, including adverse effects such as delays resulting from ill-timed Work.
- C. Submittal of Original CPM Schedule, and subsequent schedule updates, shall be understood to be Contractor's representation that the Schedule meets requirements of Contract Documents and that Work shall be executed in sequence indicated on the schedule.
- D. Contractor shall distribute Original CPM Schedule to Subcontractors for review and written acceptance, which shall be noted on Subcontractors' letterheads to Contractor and transmitted to District for the record.

1.09 MONTHLY CPM SCHEDULE UPDATE SUBMITTALS

- A. Following acceptance of Contractor's Original CPM Schedule, Contractor shall monitor progress of Work and adjust schedule each month to reflect actual progress and any anticipated changes to planned activities.
 - (1) Each schedule update submitted shall be complete, including all information requested for the Original CPM Schedule submittal.
 - (2) Each update shall continue to show all Work activities including those already completed. These completed activities shall accurately reflect "as built" information by indicating when activities were actually started and completed.
- B. A meeting will be held on approximately the twenty-fifth (25th) of each month to review the schedule update submittal and progress payment application.
 - (1) At this meeting, at a minimum, the following items will be reviewed: Percent (%) complete of each activity; Time Impact Evaluations for Change Orders and Time Extension Request; actual and anticipated activity sequence changes; actual and anticipated duration changes; and actual and anticipated Contractor delays.
 - (2) These meetings are considered a critical component of overall monthly schedule update submittal and Contractor shall have appropriate

personnel attend. At a minimum, these meetings shall be attended by Contractor's General Superintendent and Scheduler.

- (3) Contractor shall plan on the meeting taking no less than four (4) hours.
- C. Within five (5) working days after monthly schedule update meeting, Contractor shall submit the updated CPM Schedule update.
- D. Within five (5) work days of receipt of above noted revised submittals, District will either accept or reject monthly schedule update submittal.
 - (1) If accepted, percent (%) complete shown in monthly update will be basis for Application for Payment by the Contractor. The schedule update shall be submitted as part of the Contractor's Application for Payment.
 - (2) If rejected, update shall be corrected and resubmitted by Contractor before the Application for Payment is submitted.
- E. Neither updating, changing or revising of any report, curve, schedule, or narrative submitted to District by Contractor under this Contract, nor District's review or acceptance of any such report, curve, schedule or narrative shall have the effect of amending or modifying in any way the Completion Date or milestone dates or of modifying or limiting in any way Contractor's obligations under this Contract.

1.10 SCHEDULE REVISIONS

- A. Updating the Schedule to reflect actual progress shall not be considered revisions to the Schedule. Since scheduling is a dynamic process, revisions to activity durations and sequences are expected on a monthly basis.
- B. To reflect revisions to the Schedule, the Contractor shall provide District with a written narrative with a full description and reasons for each Work activity revised. For revisions affecting the sequence of work, the Contractor shall provide a schedule diagram which compares the original sequence to the revised sequence of work. The Contractor shall provide the written narrative and schedule diagram for revisions two (2) working days in advance of the monthly schedule update meeting.
- C. Schedule revisions shall not be incorporated into any schedule update until the revisions have been reviewed by District. District may request further information and justification for schedule revisions and Contractor shall, within three (3) days, provide District with a complete written narrative response to District's request.
- D. If the Contractor's revision is still not accepted by District, and the Contractor disagrees with District's position, the Contractor has seven (7) calendar days from receipt of District's letter rejecting the revision to provide a written narrative providing full justification and explanation for the revision. The Contractor's failure to respond in writing within seven (7) calendar days of

District's written rejection of a schedule revision shall be contractually interpreted as acceptance of District's position, and the Contractor waives its rights to subsequently dispute or file a claim regarding District's position.

- E. At District's discretion, the Contractor can be required to provide Subcontractor certifications of performance regarding proposed schedule revisions affecting said Subcontractors.

1.11 RECOVERY SCHEDULE

- A. If the Schedule Update shows a completion date twenty-one (21) calendar days beyond the Contract Completion Date, or individual milestone completion dates, the Contractor shall submit to District the proposed revisions to recover the lost time within seven (7) calendar days. As part of this submittal, the Contractor shall provide a written narrative for each revision made to recapture the lost time. If the revisions include sequence changes, the Contractor shall provide a schedule diagram comparing the original sequence to the revised sequence of work.
- B. The revisions shall not be incorporated into any schedule update until the revisions have been reviewed by District.
- C. If the Contractor's revisions are not accepted by District, District and the Contractor shall follow the procedures in paragraph 1.09.C, 1.09.D and 1.09.E above.
- D. At District's discretion, the Contractor can be required to provide Subcontractor certifications for revisions affecting said Subcontractors.

1.12 TIME IMPACT EVALUATION ("TIE") FOR CHANGE ORDERS, AND OTHER DELAYS

- A. When Contractor is directed to proceed with changed Work, the Contractor shall prepare and submit within fourteen (14) calendar days from the Notice to Proceed a TIE which includes both a written narrative and a schedule diagram depicting how the changed Work affects other schedule activities. The schedule diagram shall show how the Contractor proposes to incorporate the changed Work in the schedule and how it impacts the current schedule-update critical path. The Contractor is also responsible for requesting time extensions based on the TIE's impact on the critical path. The diagram must be tied to the main sequence of schedule activities to enable District to evaluate the impact of changed Work to the scheduled critical path.
- B. Contractor shall be required to comply with the requirements of Paragraph 1.09.A for all types of delays such as, but not limited to, Contractor/Subcontractor delays, adverse weather delays, strikes, procurement delays, fabrication delays, etc.
- C. Contractor shall be responsible for all costs associated with the preparation of TIEs, and the process of incorporating them into the current schedule update. The Contractor shall provide District with four (4) copies of each TIE.

- D. Once agreement has been reached on a TIE, the Contract Time will be adjusted accordingly. If agreement is not reached on a TIE, the Contract Time may be extended in an amount District allows, and the Contractor may submit a claim for additional time claimed by contractor.

1.13 TIME EXTENSIONS

- A. The Contractor is responsible for requesting time extensions for time impacts that, in the opinion of the Contractor, impact the critical path of the current schedule update. Notice of time impacts shall be given in accord with the General Conditions.
- B. Where an event for which District is responsible impacts the projected Completion Date, the Contractor shall provide a written mitigation plan, including a schedule diagram, which explains how (e.g., increase crew size, overtime, etc.) the impact can be mitigated. The Contractor shall also include a detailed cost breakdown of the labor, equipment, and material the Contractor would expend to mitigate District-caused time impact. The Contractor shall submit its mitigation plan to District within fourteen (14) calendar days from the date of discovery of the impact. The Contractor is responsible for the cost to prepare the mitigation plan.
- C. Failure to request time, provide TIE, or provide the required mitigation plan will result in Contractor waiving its right to a time extension and cost to mitigate the delay.
- D. No time will be granted under this Contract for cumulative effect of changes.
- E. District will not be obligated to consider any time extension request unless the Contractor complies with the requirements of Contract Documents.
- F. Failure of the Contractor to perform in accordance with the current schedule update shall not be excused by submittal of time extension requests.
- G. If the Contractor does not submit a TIE within the required fourteen (14) calendar days for any issue, it is mutually agreed that the Contractor does not require a time extension for said issue.

1.14 SCHEDULE REPORTS

- A. Submit four (4) copies of the following reports with the Initial CPM Schedule, the Original CPM Schedule, and each monthly update.
- B. Required Reports:
 - (1) Two activity listing reports: one sorted by activity number and one by total Project Float. These reports shall also include each activity's early/late and actual start and finish dates, original and remaining duration, Project Float, responsibility code, and the logic relationship of activities.

- (2) Cost report sorted by activity number including each activity's associated cost, percentage of Work accomplished, earned value- to date, previous payments, and amount earned for current update period.
- (3) Schedule plots presenting time-scaled network diagram showing activities and their relationships with the controlling operations or critical path clearly highlighted.
- (4) Cash flow report calculated by early start, late start, and indicating actual progress. Provide an exhibit depicting this information in graphic form.
- (5) Planned versus actual resource (i.e., labor) histogram calculated by early start and late start.

C. Other Reports:

In addition to above reports, District may request, from month to month, any two of the following reports. Submit four (4) copies of all reports.

- (1) Activities by early start.
- (2) Activities by late start.
- (3) Activities grouped by Subcontractors or selected trades.
- (4) Activities with scheduled early start dates in a given time frame, such as fifteen (15) or thirty (30) day outlook.

D. Furnish District with report files on compact disks containing all schedule files for each report generated.

1.15 PROJECT STATUS REPORTING

- A. In addition to submittal requirements for CPM scheduling identified in this Section, Contractor shall provide a monthly project status report (i.e., written narrative report) to be submitted in conjunction with each CPM Schedule as specified herein. Status reporting shall be in form specified below.
- B. Contractor shall prepare monthly written narrative reports of status of Project for submission to District. Written status reports shall include:
 - (1) Status of major Project components (percent (%) complete, amount of time ahead or behind schedule) and an explanation of how Project will be brought back on schedule if delays have occurred.
 - (2) Progress made on critical activities indicated on CPM Schedule.
 - (3) Explanations for any lack of work on critical path activities planned to be performed during last month.

- (4) Explanations for any schedule changes, including changes to logic or to activity durations.
- (5) List of critical activities scheduled to be performed next month.
- (6) Status of major material and equipment procurement.
- (7) Any delays encountered during reporting period.
- (8) Contractor shall provide printed report indicating actual versus planned resource loading for each trade and each activity. This report shall be provided on weekly and monthly basis.
 - (a) Actual resource shall be accumulated in field by Contractor, and shall be as noted on Contractor's daily reports. These reports will be basis for information provided in computer-generated monthly and weekly printed reports.
 - (b) Contractor shall explain all variances and mitigation measures.
- (9) Contractor may include any other information pertinent to status of Project. Contractor shall include additional status information requested by District at no additional cost.
- (10) Status reports, and the information contained therein, shall not be construed as claims, notice of claims, notice of delay, or requests for changes or compensation.

1.16 WEEKLY SCHEDULE REPORT

At the Weekly Progress Meeting, the Contractor shall provide and present a time-scaled three (3) week look-ahead schedule that is based and correlated by activity number to the current schedule (i.e., Initial, Original CPM, or Schedule Update).

1.17 DAILY CONSTRUCTION REPORTS

On a daily basis, Contractor shall submit a daily activity report to District for each workday, including weekends and holidays when worked. Contractor shall develop the daily construction reports on a computer-generated database capable of sorting daily Work, manpower, and man-hours by Contractor, Subcontractor, area, sub-area, and Change Order Work. Upon request of District, furnish computer disk of this data base. Obtain District's written approval of daily construction report data base format prior to implementation. Include in report:

- A. Project name and Project number.
- B. Contractor's name and address.
- C. Weather, temperature, and any unusual site conditions.

- D. Brief description and location of the day's scheduled activities and any special problems and accidents, including Work of Subcontractors. Descriptions shall be referenced to CPM scheduled activities.
- E. Worker quantities for its own Work force and for Subcontractors of any tier.
- F. Equipment, other than hand tools, utilized by Contractor and Subcontractors.

PART 2 – PRODUCTS Not Used.

PART 3 - EXECUTION Not Used.

END OF DOCUMENT

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Suspended acoustical ceiling panels.
 - 2. Ceiling suspension system.

1.2 REFERENCES AND STANDARDS

- A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CAL Green), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).
- C. DSA Interpretation of Regulations:
 - 1. IR A-5: Acceptance of Products, Materials, and Evaluation Reports.
 - 2. IR 25-2.13: Metal Suspension Systems for Lay-in Panel Ceiling: 2013 CBC.
- D. ASTM International (ASTM):
 - 1. A 568: Standard Specification for Steel, Sheet, Carbon, Structural, and High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled.
 - 2. A 641: Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
 - 3. C 423: Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - 4. C 635: Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
 - 5. C 636: Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.
 - 6. C 1414: Standard Practice for the Separation of Americium from Plutonium by Ion Exchange.
 - 7. D 3273: Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
 - 8. E 84: Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 9. E 119: Standard Test Methods for Fire Tests of Building Construction and Materials.
 - 10. E 580: Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions.
 - 11. E 1111: Standard Test Method for Measuring the Interzone Attenuation of Open Office Components
 - 12. E 1264: Standard Classification for Acoustical Ceiling Products.

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- 13. E 1477: Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
- E. American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE):
 - 1. 62.1: Ventilation for Acceptable Indoor Air Quality.
- F. International Code Council-Evaluation Services (ICC-ES):
 - 1. AC 156: Acceptance Criteria for Seismic Qualification Testing of Non-structural Components.
 - 2. ESR-1308: Fire- and Nonfire-Resistance-Rated Suspended Ceiling Framing Systems Evaluation Report.
- G. American Society of Civil Engineers (ASCE) and Structural Engineering Institute (SEI):
 - 1. ASCE/SEI 7: Minimum Design Loads for Buildings and Other Structures.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as id repeated herein.
- B. Coordination:
 - 1. Develop and coordinate locations of work supported by or penetrating through ceiling with the other Sections involved prior to making shop drawing submittal. In particular, note partitions that are to be installed prior to ceiling installation.
 - 2. Coordinate work with items specified under other Sections.

1.4 ACTION SUBMITTALS

- A. Shop Drawings: Dimensioned reflected ceiling plans indicating location of light fixtures, mechanical air-supply and return outlets and other items which affect ceiling. Indicate related Work of other sections which is installed in, attached to, or penetrates ceiling areas, such as air distribution and electrical devices.
 - 1. Indicate complete plan layouts and installation details.
 - 2. Show parts, connections and anchorages and suspension system details including:
 - a. Trapeze details.
 - b. Seismic control details.
- B. Product Data: Submit list and complete descriptive data of products proposed for use. Include manufacturer's specifications, published warranty or guarantee, installation instructions, and maintenance instructions.
- C. Samples:
 - 1. Each type of grid member (12-inch long sample), grid accessory and ceiling panel (6-inch x 6-inch minimum sample) to Architect for review.
 - 2. Manufacturer's full range of colors for Architect's selection.

- D. Delegated Design:
 - 1. Seismic and structural design engineering calculations prepared by the engineer in responsible charge retained by the Contractor shall be submitted to demonstrate compliance with the CBC, Seismic Categories D, E, and F, and adequacy of suspension system to withstand specified seismic and structural loading.
 - 2. Engineer shall be a California licensed civil or structural engineer.

1.5 INFORMATIONAL SUBMITTALS

- A. Test Reports: Test Report on load capacities.
 - 1. Prior to installation of the suspended ceiling system, a copy of an acceptable substantiating test report and certifications shall be submitted to the Architect.
 - 2. The test shall show that the axial tension and compression ultimate load capacity of the runners and cross runners and their splices, intersection connections and expansion devices complying with these specification requirements.
 - 3. Evaluation of test results shall be made on the basis of the mean values resulting from tests of not fewer than three identical specimens, provided the deviation of any individual test result from the mean value does not exceed plus or minus 10 percent.
 - 4. Tests shall be made by an approved testing agency.
- B. Sustainable Design:
 - 1. General:
 - a. Submit information necessary to establish and document compliance with the California Green Building Standards Code.
 - b. Sustainable design submittals are in addition to other submittals.
 - 2. The following information shall be provided:
 - a. Adhesives and Sealants: Evidence of compliance that products meet maximum VOC content limits specified in Section 01 6116.
- C. Sample of Manufacturer's warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Warranty/Guarantee: Submit executed warranty and Subcontractor's guarantee.
- B. Specified maintenance materials.

1.7 MAINTENANCE MATERIAL SUBMITTALS

- A. Deliver open partially used boxes of acoustical panels to Owner for replacement stock. Supplement with full boxes to assure submitted amount is not less than one percent of the amount installed of each type of acoustical panel installed under this Contract, but not less than eight of each specified size, style and color.

1.8 QUALITY ASSURANCE

- A. Submitted system shall comply with design and performance criteria.

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- B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- C. Single-Source Responsibility: Provide acoustical panel units and grid components by a single manufacturer.
- D. Materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.
- E. Qualifications of Installer: Minimum five (5) years' experience in installing acoustical ceiling systems of the types specified.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.
- B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work.
- C. Transport, store and handle in strict accord with the manufacturer's written recommendations.

1.10 FIELD CONDITIONS

- A. Installer shall be responsible for checking Drawings and job conditions, conforming to code requirements, and for providing additional channels and hangers as required for support of electrical and mechanical work for type and extent of work. Coordinate layout with other work which penetrates or is supported by ceiling suspension system.
- B. Ceiling products and suspension systems shall be installed and maintained in accordance with manufacturer's written installation instructions for that product in effect at the time of installation and best industry practice.
- C. Ambient Conditions:
 - 1. Do not install ceiling system when building is excessively cold and damp or hot and dry. Prior to installation, the ceiling product shall be kept clean and dry, in an environment that is between 32 degrees Fahrenheit and 120 degrees Fahrenheit and not subject to abnormal conditions. Abnormal conditions include exposure to chemical fumes, vibrations, moisture from conditions such as building leaks or condensation, excessive humidity, or excessive dirt or dust buildup.
 - 2. Heating system shall be installed and operating when necessary to maintain temperature. Roof and exterior doors shall be completed and made watertight.
- D. Existing Conditions:
 - 1. Make and be responsible for field dimensions necessary for proper fitting and completion of work. Report any discrepancies to Architect before proceeding.
 - 2. Do not install acoustical ceilings until work above ceilings is completed, including testing and approval of Mechanical work.

3. Plastering, drywall and concrete installation shall be complete and fully cured. Windows shall be in place and glazed.
4. Protect adjacent surfaces from damage during work of this Section.
5. Notify Architect, in writing, of any conditions preventing proper application of acoustical ceilings.

1.11 WARRANTY

- A. Manufacturer: In addition to the Contractor's and Subcontractor's Guarantee, furnish Owner with manufacturer's fully executed written warranty agreeing to repair or replace acoustical panels and ceiling grid that fails within the warranty period.
 1. Failures include, but are not limited to:
 - a. Acoustical Panels: Sagging and warping of standard panels as a result of defects in materials or factory workmanship. In addition, acoustical panels that are designed to resist the growth of micro-organisms and installed with manufacturer's suspension system and which exhibit any visible sag and fail to resist the growth of mold/mildew and gram positive and gram negative odor and stain causing bacteria.
 - b. Grid System: Rusting and manufacturer's defect.
 2. Warranty Periods:
 - a. Acoustical Panels: Ten years.
 - b. Grid: Ten years.
 - c. Installer shall provide a two (2) year fabrication and installation warranty.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers: As follows, or equal.
 1. Armstrong World Industries, 717-397-0611, www.armstrongceilings.com.
 2. CertainTeed – Saint Gobain, 800-233-8990, www.certainteed.com.
 3. USG, 800-950-3839, www.usg.com.
- B. Substitutions: Any substitution to be considered equal shall be similar in texture and pattern, provide similar color options, meet physical characteristics of specified material, and be submitted for approval in accordance with Section 01 3300, Submittal Procedures.

2.2 DESIGN AND PERFORMANCE CRITERIA

- A. Provide completely designed system complying with requirements of CBC Section 808, ASTM C 635, ASTM C 636 and DSA Interpretation Regulation 25-2.13.
- B. Seismic Requirements:
 1. Provide acoustical ceiling system that has been evaluated by an independent party and found to be compliant with the California Building Code, current edition,

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Seismic Categories D, E, and F. Refer to requirements for delegated design in Article "Action Submittals."

2. System shall be tested in accordance with International Code Council - Evaluation Services - AC 156 Acceptance Criteria for Seismic Qualification Testing of Non-structural Components as evidenced by International Code Council Evaluation Report.
- C. Fire Performance Characteristics: As follows, tested in accordance with ASTM E 84 and complying with ASTM E 1264 for Class A products.
1. Flame Spread: 25 or less.
 2. Smoke Developed: 50 or less.
- D. Fire-rated ceilings shall be rated in accordance with American Society for Testing and Materials ASTM E 119 and bear an Underwriters Laboratories Inc. (UL) Time Design number applicable to the proposed installation.
1. Identify acoustical ceiling components with appropriate markings of applicable testing and inspecting organization.
 2. Provide copy of Underwriters' Laboratories, Inc. certification for tested, labeled and listed steel grid members and acoustical panels to meet time-design fire endurance rating of one hour, or more as indicated on Drawings, for combined suspended acoustical ceiling and floor or roof assemblies shown.
 3. Assembly shall have been approved by State Fire Marshal.
- E. Sustainable Design:
1. VOC emissions for field-applied adhesives, sealants, and sealant primers must comply with limits specified in Section 01 6116.

2.3 SUSPENDED CEILING SYSTEM

- A. Suspended Ceiling System: 15/16 inch exposed tee; "Prelude XL" Armstrong World Industries as specified and the basis of design, or equal.
- B. Main beams and cross tees shall be in accordance with CBC Section 803 for Category D, E and F as described in ESR-1308.
1. Structural Classification: ASTM C 635, ASTM C 636, and the DSA IR for Heavy Duty systems.
 2. Material, Finish and Color: Suspension system members to be galvanized coated. Exposed material to be factory finished in low sheen satin white unless noted otherwise.
- C. Attachment Devices: In accordance with the Drawings and these Specifications.
- D. Wire for Hangers and Ties: In accordance with the Drawings and these Specifications.
1. Wire shall be galvanized with Class 1 zinc coating, carbon steel conforming to ASTM A 641 of gauge certified by load test data as capable of carrying 5 times

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design load but in no case less than size No. 12, with soft temper and minimum tensile strength of 70 ksi.

- E. Ceiling Grid Components: In accordance with the Drawings and these Specifications.
 - 1. Wall Molding: Nominal 7/8 inch x 7/8 inch x 144 inches hemmed, pre-finished angle molding; Armstrong #7800, or equal.
 - 2. HD Main Beam: 15/16 inch x 1-11/16 inches x 144 inches; Part #7301.
 - 3. Cross Tee:
 - a. 2 feet Tee: 15/16 inch x 1-3/8 inches x 24 inches; Part #XL7328.
 - b. 4 feet Tee: 15/16 inch x 1-1/2 inches x 48 inches; Part #XL7342.
 - 4. Main Beam Splice: Manufacturer's standard.
 - 5. Expansion Joint: Manufacturer's standard in accordance with ASTM E 580.
- F. Accessories:
 - 1. Beam End Retaining Clip: 2 inches, 0.034 inch thick, hot-dipped galvanized cold-rolled steel in accordance with ASTM A 568; Item # BERC2 by Armstrong World Industries, or equal.
 - a. Use to join main beam or cross tee to wall molding at attached wall and unattached wall condition.
 - b. Pop rivets are not acceptable.
 - 2. Seismic Joint Clip: 5 inches x 1-3/4 inches, hot-dipped galvanized cold-rolled steel in accordance with ASTM A 568; Item # SJC by Armstrong World Industries or equal.
 - a. The 2 piece unit is designed to accommodate a seismic separation joint for cross runner support at main runner.
- G. Other materials, not specifically described but required for a complete and proper installation of ceiling systems, including necessary clips, wires, and accessories to complete the suspension system.

2.4 ACOUSTICAL CEILING PANELS

- A. Manufacturer: Armstrong World Industries, Inc. as specified and the basis of design, or equal. Products specified are by Armstrong, unless otherwise noted.
- B. Acoustical Ceiling Panel - Type 1: Fine Fissured High NRC, No. 1811.
 - 1. Surface Texture: Medium.
 - 2. Composition: Mineral Fiber.
 - 3. Color: White.
 - 4. Size: 2 feet x 4 feet x 3/4 inch.
 - 5. Edge Profile: Square Lay-In for interface with specified suspended ceiling system.
 - 6. Performance Characteristics:
 - a. Noise Reduction Coefficient (NRC): ASTM C 423; Classified with UL label on product carton, 0.70.

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- b. Ceiling Attenuation Class (CAC): ASTM C 1414; Classified with UL label on product carton, 40.
- c. Articulation Class (AC): ASTM E 1111; Classified with UL label on product carton N/A.
- d. Emissions Testing: Protocol specified in Section 01 3543, Environmental Procedures; less than 13.5 ppb of formaldehyde when used under typical conditions required by ASHRAE Standard 62.1-2004, "Ventilation for Acceptable Indoor Air Quality."
- e. Flame Spread: ASTM E 1264 Classification.
 - 1) Type III, Form 2, Pattern C E.
 - 2) Class A (UL).
- f. Light Reflectance (LR): ASTM E 1477; White Panel: Light Reflectance: 0.82.
- g. Dimensional Stability: Panels shall be resistant to humidity and sag at temperature is between 32°F and 120°F and can be installed under conditions where the area is not enclosed or the HVAC systems is not functioning; "HumiGuard Plus."
- h. Antimicrobial Protection: Paint finish shall contain a special biocide to inhibit or retard the growth of mold or mildew in accordance with ASTM D 3273, and provides resistance against gram positive and gram negative odor and stain causing bacteria; "BioBlock Plus."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation of the work of this Section, carefully examine and verify that installed work of other trades is complete to the point where this installation may properly commence.
 - 1. Wet work, including plastering and concrete, shall be complete and cured prior to installation of the acoustical ceilings.
- B. Verify that suspended acoustical ceiling may be installed in accordance with the original design, codes and regulations, and the reviewed shop drawings.
 - 1. In event of discrepancy, immediately notify Architect.
 - 2. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.2 INSTALLATION OF SUSPENDED CEILING SYSTEM AND PANELS

- A. Suspended Ceiling System: Install in accordance with manufacturer's printed instructions, the Drawings, ASTM C 636, ASTM E 580, and the DSA IR. Fabrication and erection methods and workmanship shall result in completed installation that is neat and uniform, free from defects and irregularities. Suspended ceiling system member lengths shall be as long as is practical.
 - 1. Install wall molding at perimeter securely fastened at all, straight, level and in true alignment with plane of grid.

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2. Hang main runners in a flat, true, level plane, spaced 4 feet on-center and supported by hanger wires spaced not more than 4 feet on-center. Cross tees shall be placed on 2 foot intervals and locked to main runners in true alignment and to provide a continuous cross tie right angle to main runner. At two adjacent walls main runners and cross tees shall be securely interlocked to wall angles in accordance with the Drawings. Secure wall moldings to walls as shown..
 3. Expansion Joints and Penetrations
 - a. Expansion joints shall be provided where require by the DSA IR and in accordance with ASTM E 580.
 - b. Sprinkler heads and other similar devices that are not integrally tied to the ceiling system in the lateral direction shall have a 2 inch oversized ring, sleeve or adaptor through the ceiling tile to allow free movement of one inch in horizontal directions. A flexible sprinkler hose fitting that can accommodate 1 inch of ceiling movement may be provided in lieu of the oversized ring, sleeve or adaptor.
 4. Hanger wires shall be provided for main runners and cross runners within 8" of ceiling perimeters or as indicated otherwise in Drawings. Install hanger wires as plumb as possible throughout. Secure to main runners at lower end. Hanger wires to be no more than 1 in 6 out of plumb. Attachment of hanger wires shall be in accordance with ASTM C 636, Part 2, and as shown.
 5. Separate ceiling hanger and bracing wires at least six inches from unbraced ducts, pipes, conduits, etc.
 6. Provide field testing of drilled in concrete anchors or power actuated anchors as shown. power actuated anchors in concrete are not permitted for bracing wires. If any anchor fails, remaining anchors shall be tested at no expense to the Owner.
 7. Frame around light fixtures, grilles, registers, etc. Light fixtures shall be attached to the ceiling grid to resist a horizontal force equal to the weight of the light fixture. Light fixtures 4 feet x 4feet shall have #12 gauge slack safety wires at each corner.
 8. Flush or recessed light fixtures, mechanical terminals, and flexible sprinkler hose fittings, or services weighing less than 56 pounds may be supported on heavy duty grid but shall have two #12 gauge slack safety wires from diagonal corners to the structure above.
 9. Flush or recessed light fixtures and air terminals or services mounted in heavy duty suspension systems and weighing 56 pounds or more shall be independently supported by not less than four taut 12 gauge wires each attached to the fixture and to the structure above. The four taut 12 gauge wires including their attachment to the fixture shall be capable of supporting four times the weight of the item being supported.
 10. Projection screens suspended from runners shall utilize T-bar support clip, Caddy Clip "IDS" Series clips over grid with additional hanger wire and four splay wires.
- B. Lateral Bracing:
1. A set of 4 bracing wires, splayed at 45 degrees, shall be provided at 12'-0" on center each way. Wires shall be taut without causing ceiling to lift. There shall be a brace assembly a distance of not more than 6'-0" from each surrounding wall, expansion joint and at the edges of any ceiling vertical offsets. A minimum of one set of bracing wires is required between any two adjacent expansion cut-outs on runners being braced.

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- a. Lateral Force Brace Assembly Spacing: When the Design Spectral Acceleration Parameter (Sds) indicated on the Structural Drawings, exceeds 1.15, the spacing for the lateral bracing assembly shall be reduced as follows:
 - 1) Sds greater than 1.15 and less than 1.73:
 - a) For z/h greater than 0.5: 8 feet x 12 feet.
 - b) For z/h less than or equal to 0.5: 12 feet x 12 feet.
 - 2) Sds greater than 1.73:
 - a) For z/h greater than 0.5: 8 feet x 8 feet.
 - b) For z/h less than or equal to 0.5: 8 feet x 12 feet.
 - 2. Method of Attachment: Secure lateral bracing to structural members as shown on the plans. Secure at right angles to the direction of the partition and four ways in large ceiling areas.
 - 3. Attachment of bracing wires shall be in accordance with ASTM C 636, Part 2, and as shown; no splicing is allowed.
- C. Compression Struts: Install in accordance with Drawings at bracing wire lateral force bracing. Compression strut shall resist vertical component of force induced by the bracing wires. Fasten strut to main runner and extend to and fasten to the structural members supporting the floor or roof above.
- 1. Strut and diagonal bracing shall be designed and constructed in compliance with the DSA IR, and shall not be more than 1 horizontal in 6 vertical out of plumb.
 - 2. Provide solid blocking wherever necessary for proper installation and connection at strut to floor or roof framing.
- D. Acoustical Ceiling Panels:
- 1. Install acoustical panels in coordination with suspended system, with edges resting on flanges of main runner and cross tees. Cut and fit panels neatly against abutting surfaces. Support edges by wall moldings.
 - 2. For panels with a directional pattern, install with grain in same direction unless otherwise approved by Architect.
 - 3. Cut and rabbet edges of tegular edge acoustical panels, at border areas and vertical surfaces to exactly match factory cut tegular edge.
- E. Demolition of Existing Suspended Ceiling System and Panels:
- 1. Where existing suspended acoustical ceilings are indicated to be removed, unless otherwise noted, this includes the acoustical panels, ceiling grid, accessories and trim, hanger wires, bracing wire, compression struts, and any other components that are a part of the existing ceiling system. Components for the specified ceiling system are to be new.

3.3 CLEANING

- A. Upon completion, clean soiled and discolored surfaces so that installation is free from defects. Remove and replace damaged or improperly applied material, as directed.

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- B. Acoustical ceiling panels and suspended ceiling system shall be free of scratches, stains, smudges, fingerprints, discolorations, breaks, chips or other damage. Finished ceilings shall be uniform in appearance, including uniform color and texture.
- C. If cleaning is required, comply with manufacturer's instructions for cleaning and touch-up of minor finish damage. Remove and replace work which cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

3.4 PROTECTION

- A. Protect work and suspended acoustical ceiling materials prior to and during installation, and protect the installed work and materials of other trades.
- B. In the event of damage, make repairs and replacements necessary to the approval of the Owner at no additional cost.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Resilient sheet flooring.
2. Metal edge protection.

1.2 RELATED REQUIREMENTS

1.3 REFERENCES AND STANDARDS

- A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CALGreen), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).
- C. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities; Final Rule; Federal Register, July 26, 1991; updated 2010.
- D. ASTM International:
 - 1. D4258, Standard Practice for Surface Cleaning Concrete for Coating.
 - 2. D4259, Standard Practice for Preparation of Concrete by Abrasion Prior to Coating Application.
 - 3. E303: Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
 - 4. E648, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 - 5. E662, Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
 - 6. E2180, Standard Test Method for Determining the Activity of Incorporated Antimicrobial Agent(s) In Polymeric or Hydrophobic Materials.
 - 7. F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
 - 8. F1303, Standard Specification for Sheet Vinyl Floor Covering with Backing.
 - 9. F1913, Standard Specification for Vinyl Sheet Floor Covering Without Backing.
 - 10. G21, Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi.
- E. National Fire Protection Association (NFPA):
 - 1. NFPA 253, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
 - 2. NFPA 258, Recommended Practice for Determining Smoke Generation of Solid Materials.

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1.4 ADMINISTRATIVE REQUIREMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as id repeated herein.
- B. Pre-Installation Meeting: Conduct at Project site between applicator, Contractor, and the Architect to review surface preparation, application procedures and layout, protection, coordination with other work, and manufacturer’s warranty requirements.

1.5 ACTION SUBMITTALS

- A. Shop Drawings: For each type of resilient flooring.
 - 1. Include fully dimensioned flooring layouts, edges, columns, doorways, enclosing partitions, built-in furniture, cabinets, and cutouts.
 - 2. Show locations of seams.
 - 3. Show details of special patterns.
 - 4. Indicate adjacent materials where applicable.
- B. Product Data: Manufacturer’s descriptive literature for resilient flooring products and installation accessories verifying compliance with specified attributes, including slip resistance.
- C. Samples: The following samples are required.
 - 1. Submit sample for each type of resilient flooring for Architect’s review.
 - a. Resilient Sheet: Minimum 2 inches x 5 inches.
 - 2. Submit manufacturer's full range of colors for Owner's selection. Owner may select more than one color.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
 - 1. Installer's Experience Qualifications: Submit list of not less than five (5) projects, extending over period of not less than five (5) years, indicating installer’s experience record. Submit letter from manufacturer indicating manufacturer's approval for installer of the products.
- B. Sample of manufacturer’s warranty.
- C. Record of Pre-Installation Meeting.
- D. Sustainable Design:
 - 1. General:
 - a. Submit information necessary to establish and document compliance with the California Green Building Standards Code.
 - b. Sustainable design submittals are in addition to other submittals.
 - 2. The following information shall be provided:

- a. Adhesives and Sealants: Evidence of compliance that products meet maximum VOC content limits specified in Section 01 6116.
- b. Resilient Flooring: Documentation or Certification that products meet the pollutant emission limits from one of the sources specified in Section 01 6116.

1.7 CLOSEOUT SUBMITTALS

- A. Warranty/Guarantee: Submit executed warranty and Subcontractor's guarantee.
- B. Maintenance Data: For resilient flooring, to include in maintenance manuals for each type of material installed.
- C. Specified maintenance materials.

1.8 MAINTENANCE MATERIAL SUBMITTALS

- A. General:
 1. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 2. Tag with manufacturer's label describing product by name, color, and pattern.
- B. Resilient Sheet: Furnish rolled 72-inch long x roll width for each color and pattern.

1.9 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for resilient flooring installation and seaming method indicated.
 1. Minimum five (5) years' experience in successfully installing the specified products or similar flooring materials.
- B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- C. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.
- D. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.
- E. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 1. Size: Minimum 100 square feet for each type, color, and pattern in locations directed by Architect.
 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

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3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.10 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to Project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.
- B. Transport and handle in strict accordance with the manufacturer's written recommendations.
- C. Store resilient products and installation materials off of ground in clean, dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer.

1.11 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 70 degrees F or more than 95 degrees F in spaces to receive resilient products during the following time periods:
 1. 48 hours before installation.
 2. During installation.
 3. 48 hours after installation.
- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 degrees F or more than 95 degrees F.
- C. Do not apply materials on wet or damp surfaces.
- D. Install resilient products after other finishing operations, including painting, have been completed.
- E. Close spaces to traffic during resilient flooring installation and for 48 hours afterwards.

1.12 WARRANTY

- A. Manufacturer: In addition to the Contractor's and Subcontractor's Guarantee, furnish Owner with the following manufacturer's fully executed written warranties against defects in materials and workmanship:
 1. Tarkett Sheet Vinyl: 20 years.
 2. Adhesive: Covering replacement of finished flooring materials, primers and adhesives for installations over concrete slab-on-grade subfloors for a period of 5 years, unless otherwise noted.
 3. Installer shall provide a 2 year fabrication and installation warranty.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

A. Dry or Wet Slip Resistance:

1. Flooring shall have a Pendulum Test Value (PTV) of 35 or greater under dry and wet conditions using ASTM E303. Alternative test methods, such as use of a BOT-3000E digital tribometer, shall provide equivalent results for both wet and dry conditions.
2. Flooring, after application of a site-applied finish, shall be tested to verify compliance with slip resistance requirements as specified in Article FIELD QUALITY CONTROL.

B. Fire Resistance:

1. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) in accordance with ASTM E648 and NFPA 253.
2. Smoke Density: 450 or less in accordance with ASTM E662 and NFPA 258.

C. Sustainable Design:

1. VOC emissions for field-applied adhesives, sealants, and sealant primers must comply with limits.
2. Resilient flooring material must comply with certification and compliance programs.

2.2 PRODUCT DESCRIPTIONS

A. Homogenous Sheet Vinyl: ASTM F1913, Class A, Without Backing.

1. Manufacturer and Product: "iQ Oprima" by Tarkett as specified and the basis of design, or equal.
 - a. Total Thickness: 0.080 inch.
 - b. Wear layer Thickness: 0.080 inch.
 - c. Roll Width: 72 inches.
 - d. Roll Length: Up to 82 feet.
 - e. Construction: Homogeneous
 - f. Color: #3242-872 'Silver Bell'
 - g. Installation Method: Full spread adhesive with welded seams.

2.3 WALL BASE MATERIALS

A. Coved Base: Integral flash self-coving wall base.

B. Rubber Wall Base: As specified in Section 09 6513, Resilient Base and Accessories.

2.4 ADDITIONAL MATERIALS AND ACCESSORIES

A. Adhesives:

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1. Provide adhesive system as recommended by product manufacturer for substrate condition, to effect its product warranty.
 2. Adhesives shall be high moisture type tolerant up to 99 percent relative humidity of substrate.
- B. Crack Filler and Leveling Compound: Cementitious type, Durabond's Webcrete No. 95, Ardex SD-F or equal, as recommended by flooring manufacturer.
- C. Concrete Primer: Non-staining type recommended by manufacturer of resilient sheet vinyl flooring.
- D. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of flooring, and in maximum available lengths to minimize running joints; Schlüter Systems, or equal.
- E. Resilient Molding Accessories: In accordance with Section 09 6513, Resilient Base and Accessories, unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor coverings.
1. Verify that surfaces are smooth and level with no more than 1/8 inch in 10 feet variation from level.
- C. Concrete Slab-On-Grade and Above-Grade Concrete Subfloor Testing:
1. Test new and old concrete slabs for adequate dryness. Testing shall conform to ASTM F1869, and the following. Minimum testing requirements are three calcium chloride tests for the first 1,000 square feet of floor area, and one for each additional 1,000 square feet or fraction thereof. Unless more stringent requirements are recommended by flooring manufacturer, maximum allowable moisture release at time of flooring installation shall be three pounds per 24 hours per 1,000 square feet. Provide report of test as specified above. For each test, perform the following steps:
 - a. Weigh the sealed dish of crystals immediately prior to exposure. Record starting weight, date, and time.
 - b. Open kit and set crystal dish on clean concrete surface. Immediately install plastic dome over the dish. Confirm the dome is gasketed to the concrete and is airtight.
 - c. Leave test to absorb moisture for 60 to 72 hours. Maintain room temperature above 55 degrees F for duration of test.

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- d. After exposure, remove and discard housing. Replace dish lid and tape shut. Weigh the sample within one hour of removal from floor.
 - e. Compute the vapor emission in pounds, indicate location of test and vapor emission on report.
 - f. Delay application of flooring until sub-floors are sufficiently dry, or perform remedial measures as recommended by flooring materials manufacturer.
- D. Priming: Prime concrete floor slabs installed directly on grade and other slabs if recommended by flooring manufacturer.
- E. In the event of discrepancy, immediately notify the Owner. Do not proceed with installation of flooring in areas of discrepancy until all such discrepancies have been resolved and all unsatisfactory conditions have been corrected.
- F. Start of installation indicates Installer's acceptance of substrate surfaces and conditions.

3.2 PREPARATION

- A. Condition of Existing Surfaces: Prepare existing concrete subfloors to receive new resilient flooring.
- 1. Using only mechanical or physical means, remove existing flooring, dirt, paint, old adhesive, curing agents or any other material that would inhibit the penetration of the primer into the concrete. Do not acid etch or use chemicals of any kind to clean concrete.
 - 2. Complete preparation with cleaning of subfloors, patching of cracks and other imperfections, and leveling of depressions or holes.
 - 3. Patch and level cracks, holes and depressions with proper patching and leveling compounds compatible with flooring adhesive system.
- B. If abatement is required, prepare floor substrates in accordance with ASTM D4259. Where asbestos abatement has occurred to ensure there is no chemical residue remaining on floor surface that might interfere with adhesion of floor coverings.
- C. Leveling: Check subfloors for level, and make floor slabs true to level and plane within a tolerance of 1/8 inch in 10 feet. Test floor areas both ways with a 10-foot straightedge and repair high and low areas exceeding allowable tolerance. Pop ups shall be hammered out and floor filled with a cementitious leveling compound. Remove high areas by power sanding, stone rubbing or grinding, chipping off and filling with leveling compound, or equivalent method. Fill low areas with leveling compound. Repair and level the surfaces having abrupt changes in plane, such as trowel marks or ridges, whether or not within the allowable tolerance. Clean areas where repairs are performed.
- D. Cleaning: After leveling, if required, clean substrates of deleterious substances and foreign matter.
- E. Cracks or Depressions: Fill voids with cementitious leveling compound of the type recommended by flooring manufacturer for the specific conditions.
- F. Sweep and vacuum clean substrates to be covered by floor coverings immediately before installation.

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3.3 INSTALLATION

A. General:

1. Do not install resilient products until they are the same temperature as the space where they are to be installed.
 - a. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.
2. Extend flooring installation under open-bottomed obstructions, and under removable flanges, or obstructions.
3. Extend flooring into closets and alcoves of rooms, unless another floor finish is indicated for such spaces.
4. Extend floor products under all moveable furniture, disabled accessible cabinets and equipment unless otherwise indicated.
5. Scribe, cut, fit and cove to permanent fixtures, built-in furniture and cabinets, pipes and outlets, and permanent columns, walls and partitions as shown on the Drawings.

B. Adhesive Application:

1. Install flooring adhesive using manufacturer's approved materials and installation methods.
2. Follow adhesive manufacturer's directions for mixing and applying. Cover surface evenly. Do not exceed working area or time limits recommended by manufacturer.
3. Install with minimum number of seams.
4. Adhere floor covering securely to substrate with adhesive. Heat weld all seams.
 - a. Adhesive and Seam-Sealing Treatment for Sheet Vinyl: Adhesives shall be suitable for on-, above-, and below-grade installation.
5. Loose floor covering, open seams, voids under covering, raising and puckering at joints or seams, or telegraphing of adhesive spreader marks through floor covering is not acceptable.
6. Roll floor covering with heavy roller until tight and secure bond to subfloor is obtained; eliminate trapped air from underside.
7. Run pieces in the same or opposing direction in accordance with manufacturer's recommended layout and as approved by Architect.
 - a. Provide layout in strict accordance with submitted and approved layout.
 - b. Keep cross seams necessitated by roll size to a minimum number and located in low traffic areas, away from doors and potential high foot traffic areas.
 - c. Cross seams will not be allowed in single rooms of 1000 square feet or less.
8. Coved Base:
 - a. Where indicated, install solid coved backing strip continuously at juncture of wall and floor and secure to floor as recommended by flooring manufacturer.
 - b. When laying floor covering, cove or "flash" flooring up wall 6 inches or to dimension indicated on drawings, and cover exposed edge of flooring material with extruded aluminum edge molding secured to solid backing, or as indicated on Drawings.

9. Cut in game stripping where indicated on plans. Verify exact layout and colors prior to start of work.
- C. Installation at Floor Drains: Mechanically fasten and clamp sheet vinyl or safety flooring to drain outlets to ensure a permanent, watertight installation.
1. Existing Floor Drains: When existing drains are to be re-used, provide mechanically fastened stainless steel drain rings over all round drain outlets. Fit rings over sheet vinyl or safety flooring and permit inside diameter that will allow clean-out plate to be removed after installation. Drill into concrete to accommodate lead or plastic anchors. Screw drain rings to create a tight seal with beveled head stainless steel screws.
- D. Installation of Reducers, Adaptors, and Transitions: Provide at all unprotected edges of floor covering or where floor covering transitions. Thickness to match adjacent material. Where edge strips occur at door openings, center directly below door in closed position.

3.4 FIELD QUALITY CONTROL

- A. Dry or Wet Slip Resistance:
1. Flooring, after application of any site-applied finishes, shall be tested using ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
 - a. Pendulum Test Value (PTV) shall be 45 or greater under dry and wet conditions.
 - b. Individual tests shall be made for each concrete substrate texture.
 - c. Test results shall be reported in writing.
 2. Alternative test method, such as use of a BOT-3000E digital tribometer, if proposed, shall provide results for both wet and dry conditions.

3.5 CLEANING AND PROTECTION

- A. General:
1. Remove excess adhesive from walls and floors.
 2. Clean up debris and remove from site.
- B. Sheet Vinyl Floor Finish: Thoroughly clean floor with neutral cleaner. Finish sheet vinyl flooring with two (2) coats of floor finish installed in accordance with manufacturers instruction. Do not buff unless specifically required. Provide the manufacturers recommended drying time for each coat.
- C. Initial Cleaning: Wait 72 hours after installation before performing initial cleaning.
- D. Protect installed resilient flooring until Substantial Completion.
1. Provide a temporary non-staining paper pathway in all traffic areas.
 2. No traffic for 24 hours after installation.
 3. No heavy traffic, rolling loads or furniture placement for 72 hours after installation.

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SECTION 09 6500

- E. In the event of damage, make all repairs and replacements necessary to the approval of the Architect at no additional cost to the Owner.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Resilient base.
 - 2. Resilient molding accessories.

1.2 REFERENCES AND STANDARDS

- A. California Building Code (CBC), edition as noted on Drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CALGreen), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).
- C. ASTM International:
 - 1. D412: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers—Tension.
 - 2. D2240: Standard Test Method for Rubber Property-Durometer Hardness.
 - 3. D3389: Standard Test Method for Coated Fabrics Abrasion Resistance (Rotary Platform Abrader).
 - 4. D4259: Standard Practice for Preparation of Concrete by Abrasion Prior to Coating Application.
 - 5. E84: Standard Test Method for Surface Burning Characteristics of Building Materials.
 - 6. E648: Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 - 7. E662: Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
 - 8. F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.
 - 9. F1861: Standard Specification for Resilient Wall Base.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as id repeated herein.
- B. Pre-Installation Meeting: Conduct at Project site in accordance with associated flooring product specifications.

1.4 ACTION SUBMITTALS

- A. Shop Drawings: For resilient base and floor transitions at locations and conditions not shown or indicated on the Drawings.

RESILIENT BASE AND ACCESSORIES
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1. Include fully dimensioned flooring layouts for transitions indicating adjacent materials where applicable.
 2. Show elevations of surfaces to receive base and including columns, enclosing partitions, built-in furniture, and casework. Note base height and profile.
- B. Product Data: Manufacturer's descriptive literature for each type of product to be provided to demonstrate compliance with specified attributes.
1. Include manufacturer's standard color charts showing full range of colors and patterns available for each type of product required.
 2. Where color has been specified, clearly mark the color to be provided.
 3. Identify each product using same designations indicated on Drawings.
- C. Samples:
1. Resilient Products:
 - a. Base: 12 inches long.
 - b. Resilient Molding Accessories: 12 inches long.
 2. Unless color is specified, submit manufacturer's full range of colors for each type of resilient product for Architect's selection. Architect may select more than one color.

1.5 INFORMATIONAL SUBMITTALS

- A. Sample of manufacturer's warranty.
- B. Record of Pre-Installation Meeting.
- C. Sustainable Design:
 1. General:
 - a. Submit information necessary to establish and document compliance with the California Green Building Standards Code.
 - b. Sustainable design submittals are in addition to other submittals.
 2. The following information shall be provided:
 - a. Adhesives and Sealants: Evidence of compliance that products meet maximum VOC content limits.
 - b. Resilient Materials: Documentation or Certification that products meet the pollutant emission limits from one of the sources specified

1.6 CLOSEOUT SUBMITTALS

- A. Warranty/Guarantee: Submit executed warranty and Subcontractor's guarantee.
- B. Maintenance Data: To include in maintenance manuals.
- C. Specified maintenance materials.

1.7 MAINTENANCE MATERIALS SUBMITTAL

- A. Resilient Base: Furnish 2 percent additional rubber base from same lot of each color utilized, 10 linear feet minimum.
 - 1. Mark boxes with manufacturer's name and color pattern.
- B. Molding Accessories: Furnish not less than 10 linear feet for every 500 linear feet or fraction thereof, of each type, color, pattern, and size of resilient product installed.
 - 1. Tag with manufacturer's name and color pattern and deliver to Owner as directed.

1.8 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are competent in techniques required by manufacturer for resilient product installation indicated.
- B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- C. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.
- D. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.
- E. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Coordinate mockups in this Section with mockups specified in other Sections.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.
- B. Store materials in protected, clean, dry conditions off of ground and in areas so as to not interfere with the progress of the Work.
- C. Transport, store and handle in strict accordance with manufacturer's written recommendations.

1.10 FIELD CONDITIONS

- A. Maintain ambient temperatures within range recommended by manufacturer, but not less than 65 degrees F or more than 85 degrees F, in spaces to receive resilient products during the following time periods:
 - 1. 48 hours before installation.
 - 2. During installation.
 - 3. 48 hours after installation.

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- B. After installation and until Substantial Completion, maintain ambient temperatures within range recommended by manufacturer, but not less than 55 degrees F or more than 85 degrees F.
- C. Do not apply materials on wet or damp surfaces.
- D. Install resilient products after other finishing operations, including painting, have been completed.
- E. Close spaces to traffic during resilient flooring installation and for 48 hours afterwards.

1.11 WARRANTY

- A. Manufacturer: In addition to the Contractor's and Subcontractor's Guarantee, furnish Owner with manufacturer's fully executed written warranty for the following types of resilient material against defects in material and workmanship.
 - 1. Base and Accessories: 2 years.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

- A. Fire Resistance:
 - 1. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) in accordance with ASTM E648 and NFPA 253.
 - 2. Smoke Density: 450 or less per ASTM E662 and NFPA 258.
- B. Sustainable Design:
 - 1. VOC emissions for field-applied adhesives, sealants, and sealant primers must comply with limits specified in Section 01 6116.
 - 2. Resilient flooring material must comply with one of the certification and compliance programs specified in Section 01 6116.

2.2 RESILIENT BASE

- A. Vulcanized Thermoset Rubber Base: PVC free complying with ASTM F1861, Type TS, Group 1; "Pinnacle Rubber Wall Base" by Roppe Corporation as specified and the basis of design, or equal.
 - 1. Profile: Standard Cove.
 - 2. Gauge: 1/8 inch.
 - 3. Height: 6 inches.
 - 4. Length: 120 foot coils.
 - 5. Colors: As selected by Architect from manufacturer's full range.
 - 6. Flammability: Class B when tested in accordance with ASTM E84, NFPA 255.
- B. Corners: Job-formed. Cope inside corners and wrap outside corners.

1. Factory pre-formed corners are not acceptable.

2.3 RESILIENT MOLDING ACCESSORIES

- A. Reducers, Adaptors, and Transitions: Rubber edge guard, threshold, adapters & transitions, cove caps.
 1. Manufacturer and color to match manufacturer and color of wall base.
 2. Rubber material and thickness to match adjacent material; tapered or bullnose edge.

2.4 ADDITIONAL MATERIALS

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by resilient-product manufacturer for applications indicated.
- B. Adhesives: VOC compliant, water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- C. In the event of discrepancy, immediately notify the Owner. Do not proceed with installation of flooring in areas of discrepancy until all such discrepancies have been resolved and all unsatisfactory conditions have been corrected.
- D. Start of installation indicates Installer's acceptance of substrate surfaces and conditions.

3.2 INSTALLATION, GENERAL

- A. Do not install resilient products until they are the same temperature as the space where they are to be installed.
 1. At least 48 hours in advance of installation, move resilient products and installation materials into spaces where they will be installed.
- B. Comply with manufacturer's installation instructions.

3.3 RESILIENT BASE INSTALLATION

- A. Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

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- B. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
 - 1. Minimum piece length 24 inches.
- C. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- D. Do not stretch resilient base during installation.
- E. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
- F. At gypsum board and fiberboard walls, fill voids at wall/floor intersection fully before installing base to provide complete backing of base. Do not install base with gap; this will result in deformation by furniture and will require removal and replacement of base.
- G. Coped Inside Corners: Cut first piece square to the corner. Undercut and scribe the adjacent piece to the corner, attach in accordance with manufacturer's instructions.
- H. Wrapped Outside Corners: With top set gauge, remove portion of back side of base to the bend. Make two relief cuts, one on each side of the bend at the bottom of the base. Remove a tapered piece from the bottom of the toe. Attach per manufacturer's instructions.

3.4 RESILIENT MOLDING ACCESSORIES INSTALLATION

- A. Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.
- B. Where edge strips occur at door openings, center directly below door in closed position.

3.5 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protecting resilient products.
- B. Perform the following operations immediately after completing resilient-product installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
- D. In the event of damage, make all repairs and replacements necessary to the approval of the Owner at no additional cost.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Tufted sheet carpet, adhered.
 - 2. Tufted carpet tiles, adhered.
 - 3. Walk-off mats, adhered.

1.2 RELATED REQUIREMENTS

- A. Section 09 6513, Resilient Base and Accessories, for rubber wall base.

1.3 REFERENCES AND STANDARDS

- A. California Building Code (CBC), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CALGreen), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).
- C. 36 CFR 1191 - Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities; Final Rule; Federal Register, July 26, 1991; updated 2010.
- D. NSF International/American National Standards Institute:
 - 1. NSF/ANSI 140, Sustainability Assessment for Carpet.
- E. ASTM International (ASTM):
 - 1. D4258, Standard Practice for Surface Cleaning Concrete for Coating.
 - 2. D4259, Standard Practice for Preparation of Concrete by Abrasion Prior to Coating Application.
 - 3. E303, Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.
 - 4. E648, Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source.
 - 5. E662, Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials.
 - 6. E2471, Standard Test Method for Using Seeded-Agar for the Screening Assessment of Antimicrobial Activity in Carpets.
- F. American Association of Textile Chemists and Colorists (AATCC):
 - 1. AATCC 16E, Colorfastness to Light: Water-Cooled Xenon-Arc Lamp, Continuous Light.
 - 2. AATCC 134, Electrostatic Propensity of Carpets.

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- G. Carpet and Rug Institute (CRI): Carpet Installation Standard, current edition.
- H. National Fire Protection Association (NFPA):
 - 1. NFPA 253, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
- I. US Consumer Product Safety Commission (CPSC):
 - 1. CPSC FF 1-70 Test Method (Methenamine Pill Test).

1.4 ADMINISTRATIVE REQUIREMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as id repeated herein.
- B. Pre-Installation Meeting: Conduct at Project site.

1.5 ACTION SUBMITTALS

- A. Shop Drawings: For carpet installation, plans showing the following:
 - 1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet.
 - 2. Locations where dye lot changes occur.
 - 3. Seam locations, types, and methods.
 - 4. Pattern type, repeat size, location, direction, and starting point.
- B. Product Data: For each type of product indicated, demonstrate compliance with specified attributes, including slip resistance.
- C. Samples: The following samples are required.
 - 1. Submit sample for each type of carpet (approximately 18 inches x 18 inches) and edge strip (minimum 6 inch length) to Architect for review.
 - 2. Manufacturer's full range of colors for Owner's selection. Owner may select more than one color.

1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Manufacturer and Installer.
- B. Product Test Reports: Tests performed by a qualified testing agency for carpet.
- C. Sample of Joint Warranty.
- D. Record of Pre-installation Meeting.
- E. Sustainable Design:
 - 1. General:

- a. Submit information necessary to establish and document compliance with the California Green Building Standards Code.
- b. Sustainable design submittals are in addition to other submittals.
2. The following information shall be provided:
 - a. Adhesives and Sealants: Evidence of compliance that products meet maximum VOC content limits
 - b. Carpet: Evidence of compliance that products meet the testing and product requirements.
 - c. Carpet Cushion: Evidence of compliance that products meet the requirements of the Carpet and Rug Institute's Green Label program.
3. Existing Carpet Recycling Plan and Recycling Certification. Submit documentation describing the reclamation plan for existing carpet. Include appropriate contact information, overview of procedures, and limitations and conditions applicable to the project Carpet recycling options consist of:
 - a. Repurposing - reusing the product in another application such as facilitating the donation of used carpeting to charities and other nonprofit organizations.
 - b. Closed Loop Recycling - turning waste materials into new materials of the same value, such as vinyl backing into vinyl backing and nylon yarn into nylon carpet yarn.
 - c. Open Loop Recycling – creating other product types from reclaimed carpet. For example, turning nylon face fiber into automotive parts or carpet padding, including nylon face fiber in recycled backings
 - d. Waste-to-Energy - using carpet for waste-to-energy. In the case of waste-to-energy, manufacturer shall justify why carpet cannot be recycled as this method should be a last resort.
 - e. Landfill or incineration – are not approved disposal methods
 - f. At the completion of the project, a certificate shall be furnished verifying the reclamation of the carpet and the pounds of material diverted from the landfill.

1.7 CLOSEOUT SUBMITTALS

- A. Warranty: Submit executed joint warranty and Subcontractor's guarantee.
- B. Maintenance Data: For carpet, to include in maintenance manuals.
- C. Specified maintenance materials.

1.8 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
- B. Tag with manufacturer's name and color pattern.
 1. Sheet & Tile Carpet: Provide a minimum of 4 square yards of each color and type installed. In addition, provide all usable scraps one sq. yd. or larger in size. Remnants shall be packaged, identified and delivered to the Owners

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Representative, who will retain any he chooses for future repairs before they are removed from the job site.

1.9 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** An entity manufacturing commercial/contract carpeting continuously for a period of 25 years minimum.
- B. **Installer Qualifications:** An entity that employs installers and supervisors with a minimum of 5 years of experience in techniques required by manufacturer for carpet installation and seaming method indicated.
 - 1. Floor covering installer must be factory trained and certified for the installation of the specific products being installed.
 - 2. Installer to provide project inspector proof of certification prior to starting work.
 - 3. Certified installer must be present on job site while work is in progress.
- C. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- D. **Single-Source Responsibility:** Use materials and products of one manufacturer whenever possible.
- E. Materials, components, assemblies, workmanship and installation are to be observed by the Project Inspector. Work not so inspected is subject to uncovering and replacement.
- F. **Pre-Floor Covering Installation Meeting:**
 - 1. Contactor to notify Construction Manager with a minimum of 5-days' notice when anticipated to be ready for pre-floor covering installation meeting. (After subfloor preparation is complete and ready for floor covering installation.)
 - 2. Contractor, installer, and manufacturer representative are required to attend pre-floor covering meeting. Contractor is responsible for coordinating and scheduling their attendance.
 - 3. Construction Manager will schedule meeting with Contractor team, Project Inspector, and Architect.
 - a. Manufacturer representative to attend the "Pre-Flooring" meeting.
 - 4. Purpose of Meeting: To review subfloor preparation, verification of readiness for floor covering installation and use of correct products, verification of the acclamation of correct finish materials and review installation requirements.
- G. **Mockups:** Install mockups to verify selections made under sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Size: Minimum 100 sq. ft. for each type, color, and pattern in locations directed by Architect.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.10 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to Project site in original factory wrappings and containers, labeled with identification of manufacturer, brand name, and lot number.
- B. Transport and handle in strict accord with the manufacturer's written recommendations.
- C. Store carpet products and installation materials off of ground in dry, clean spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer.

1.11 FIELD CONDITIONS

- A. Do not install materials unless ambient temperature of 65 degrees F and 65 percent relative humidity is maintained 72 hours prior to and during laying and until all materials have been stored at site for 48 hours between 60 degrees F and 80 degrees F and a relative humidity below 65 percent.
 1. Do not apply materials on wet or damp surfaces.

1.12 CONCRETE SUBFLOOR TESTING

- A. Testing for internal relative humidity of concrete slabs must be conducted in accordance with the current version of ASTM F2170, not to exceed manufacturer's requirements (ASTM F2170 – Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In-Situ Probes).
- B. The Flooring Contractor shall verify in writing to the Owner, a minimum of thirty (30) days prior to scheduled carpet installation, the following substrate conditions:
 1. Moisture: Initial emission rate, as tested with in-situ probes, per ASTM F 2170.
 2. Alkalinity: pH level. Testing the pH at the surface of a concrete slab must be conducted in accordance with the current version of ASTM F710, not to exceed manufacturer's requirements (ASTM F710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.)
- C. High Moisture and /or Alkalinity Readings:
 1. Modernization Construction (Existing Concrete Slab)
 - a. If the Contractor's test results indicate that the slab relative humidity (RH) readings are below those of flooring manufacturer's requirement, then the Owner's representative will initiate independent testing to confirm results.
 - 1) If the independent test results do not substantiate the Contractor's findings, then the Contractor will be directed to proceed with the Vapor Retarder installation and the retesting cost will be back charged to the contractor.

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- D. Comply with manufacturer's written requisites for field conditions including but not limited to testing for moisture, confirmation of vapor retarder, floor prep, bond test, photo documentation, etc.

1.13 WARRANTY AND GUARANTEE

- A. Manufacturer's Warranty: Twenty (20) year minimum manufacturer warranty commencing on recordation date of the Notice of Completion.

- 1. Should carpet, tend to creep, bulge, be defective in manufacturing, or show a substantial amount of wear - carpet shall be replaced with new carpeting at no cost to the Owner. Manufacturer to submit written warranty covering the following:

- a. 20 Year minimum, non-prorated Guarantee shall also include:
 - 1) No resiliency loss of backing.
 - 2) No zippering.
 - 3) Static protection (will not lose static property—will not give static discharge above 3.5KV).
 - 4) No edge ravel or zippering.
 - 5) Delamination.
 - 6) Surface wear (maintains at least 90% surface pile weight).
 - 7) No staining.
 - 8) Dimensional Stability.
 - 9) Moisture Resistance.

- B. Special Joint Warranty: In addition to its standard Guarantee under the Contract, furnish Owner a written Limited Lifetime joint Installer / Manufacturer labor and material guarantee, signed by Contractor and Manufacturer, agreeing to replace carpet on this specific project that fails to perform as required within guarantee period as a result of failure of materials or installation workmanship at no additional cost to the Owner.

- 1. Warranty does not include deterioration or failure of carpet due to unusual traffic, failure of substrate, vandalism, or abuse. Failures include, but are not limited to, more than 15 percent loss of face fiber, edge raveling, snags, zippering, runs, delamination, and backing resiliency loss in normal use.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

- A. ADA Compliance:
 - 1. Dry or Wet Slip Resistance:
 - a. Although carpet is considered inherently slip resistance, verification of compliance with a Pendulum Test Value (PTV) of 35 or greater under dry and wet conditions is required when tested using ASTM E303 Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester.

- b. If manufacturer of selected carpeting does not have test data to substantiate compliance with the above testing methods and value, provide alternative testing to verify compliance as acceptable to governing authorities.
 - c. Laboratory tests shall be made on a minimum of three samples of each carpet material proposed for use.
2. Pile Height: 1/2 inch maximum.
- B. Fire Resistance:
1. Surface Flammability: Pass CPSC FF 1-70 testing for carpet and large rugs.
 2. Smoke Generation: Less than 450 in accordance with ASTM E662.
- C. Sustainable Design:
1. VOC emissions for field-applied adhesives, sealants, and sealant primers must comply with limits specified in Section 01 6116.
 2. Carpet must comply with one of the certification and compliance programs specified in Section 01 6116.
 3. Carpet cushion must comply with the labeling program specified in Section 01 6116.

2.2 SHEET CARPET

- A. Sheet Carpet: Tandus Centiva "Infinity Powerbond Cushion RS Roll" by Tarkett, Inc. as specified and the basis of design, or equal.
1. Color: #23508 'Fleece'
 2. Construction:
 - a. Roll Width: 6 feet.
 - b. Type: Patterned loop.
 - c. Gauge: 5/64.
 - d. Pile Thickness: 0.080 inch.
 - e. Average Pile Height: 0.185 inch
 - f. Face Weight: 17 ounces per square yard.
 - g. Primary Backing: Non-woven synthetic fiber.
 - h. Fiber System: Dynex SD Nylon / Dynex Nylon
 - i. Dye Method: Solution dyed and yarn dyed.
 3. Physical Properties:
 - a. Electrostatic Propensity: 3.0 kV in accordance with AATCC 134 test method; Permanent Conductive Fiber.
 - b. Colorfastness to Light: Greater than 4 after 60 hours in accordance with AATCC 16E test method.
 - c. Soil and Stain Protection: "Ensure" (proprietary).
 - d. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) in accordance with ASTM E648 and NFPA 253.
 4. Environmental Requirements:
 - a. Backing to be impermeable to moisture and airflow.

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- b. Recycled content claims to be certified by independent third party; SCS Global Services, or equal.
- c. Material Composition: Non PVC.
- d. NSF/ANSI 140 Rating: Platinum.
- e. Antimicrobial Chemicals: None in accordance with ASTM E2471 testing.
- f. CRI Green Label Plus Certified.

2.3 CARPET TILES

- A. Carpet Tiles: Tandus Centiva "Infinity ER3 Modular RS Tile" by Tarkett, Inc. as specified and the basis of design, or equal.
 - 1. Color: #23508 'Fleece'
 - 2. Construction:
 - a. Tile Size: 24 inches x 24 inches.
 - b. Type: Patterned Loop.
 - c. Gauge: 5/64.
 - d. Pile Thickness: 0.080 inch.
 - e. Average Pile Height: 0.185 inch
 - f. Face Weight: 17 ounces per square yard.
 - g. Primary Backing: Non-woven synthetic fiber.
 - h. Fiber System: Dynex SD Nylon / Dynex Nylon
 - i. Dye Method: Solution dyed and yarn dyed.
 - 3. Physical Properties:
 - a. Electrostatic Propensity: 3.0 kV in accordance with AATCC 134 test method; Permanent Conductive Fiber.
 - b. Colorfastness to Light: Greater than 4 after 60 hours in accordance with AATCC 16E test method.
 - c. Soil and Stain Protection: "Ensure" (proprietary).
 - d. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) in accordance with ASTM E648 and NFPA 253.
 - 4. Environmental Requirements:
 - a. Backing to be impermeable to moisture and airflow.
 - b. Recycled content claims to be certified by independent third party; SCS Global Services, or equal.
 - c. Material Composition: Non PVC.
 - d. NSF/ANSI 140 Rating: Platinum.
 - e. Antimicrobial Chemicals: None in accordance with ASTM E2471 testing.
 - f. CRI Green Label Plus Certified.

2.4 WALK-OFF MATS

- A. Walk-Off Mats: Tandus Centiva "Abrasive Action II Powerbond Cushion RS Roll" by Tarkett, Inc. as specified and the basis of design, or equal.
 - 1. Color: #19103 'Winter Gray'

2. Construction:
 - a. Roll Width: 6 feet.
 - b. Tile Size: 24 inches x 24 inches.
 - c. Type: "Accuweave" patterned loop.
 - d. Total Product Thickness: 0.384 inches.
 - e. Gauge: 1/12.
 - f. Stitch Rate: 8.0 per inch.
 - g. Pile Height Average: 0.187 inch.
 - h. Face Weight: 24 ounces per square yard.
 - i. Primary Backing: Non-woven synthetic fiber.
 - j. Fiber System: "TDX" nylon.
 - k. Dye Method: 100 percent solution dyed.
3. Physical Properties:
 - a. Electrostatic Propensity: 1.5 kV in accordance with AATCC 134 test method; Permanent Conductive Fiber.
 - b. Colorfastness to Light: Greater than 4 after 60 hours in accordance with AATCC 16E test method.
 - c. Soil and Stain Protection: "Ensure" (proprietary).
 - d. Critical Radiant Flux: Class 1 (minimum 0.45 watt per square centimeter) in accordance with ASTM E648 and NFPA 253.
4. Environmental Requirements:
 - a. Backing to be Impermeable to moisture and airflow.
 - b. Recycled content claims to be certified by independent third party; SCS Global Services, or equal.
 - c. Total Recycled Content: 8.9 percent (0 percent pre-consumer, 8.9 percent post-consumer).
 - d. Material Composition: Non PVC.
 - e. NSF/ANSI 140 Rating: Gold.

2.5 AUXILIARY MATERIALS

- A. Adhesives: Provide adhesive system as recommended by product manufacturer and complying with Section 01 6116.
- B. Seam Weld: Tandus "C-54 Seam Weld" by Royal Adhesives & Sealants, LLC or Tarkett "C-XL" water based universal seam sealer as supplied by Tarkett, or equal acceptable to flooring manufacturer.
- C. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation as specified in Section 03 5416, Hydraulic Cement Underlayment or approved by carpet manufacturer for applications indicated.
- D. Wall Base, Carpet Edge, and Transition Strips: As specified in Section 09 6513, Resilient Base and Accessories.

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PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of floor coverings.
 - 1. Verify that surfaces are smooth and level with no more than 1/8 inch in 10 feet variation from level.
 - 2. In the event of discrepancy, immediately notify the Owner.
 - 3. Do not proceed with installation of carpet in areas of discrepancy until all such discrepancies have been resolved and unsatisfactory conditions have been corrected.
- C. Concrete Sub Floor Testing:
 - 1. Perform alkalinity testing.
 - 2. Perform moisture vapor emission rate (MVER) and relative humidity (RH) testing when required by carpet manufacturer to affect its installation warranty and where free liquids and/or moisture stained concrete are observed.
 - a. If specified carpet, as the basis of design, is provided with "Powerbond Cushion RS Roll" backing and welded seams, MVER and RH testing is not required.
 - 3. If test results are not within limits recommended by carpet manufacturer and adhesive materials manufacturer, promptly notify Architect and submit test results in writing.

3.2 PREPARATION

- A. Concrete Slab-On-Grade and Above-Grade Concrete Subfloor:
 - 1. If concrete substrate test results are within limits recommended by carpet manufacturer and adhesive materials manufacturer, proceed with preparation of substrate in accordance with ASTM D4258 and as recommended by carpet and adhesive manufacturers.
 - 2. If concrete test results are not within limits recommended by carpet manufacturer and adhesive materials manufacturer, prepare floor substrates for installation of carpet in accordance with ASTM D4259.
- B. Condition of Existing Surfaces: Prepare existing concrete subfloors to receive new carpet installation.
 - 1. Using only mechanical or physical means, remove existing flooring, dirt, paint, old adhesive, curing agents or any other material that would inhibit the penetration of the primer into the concrete. Do not acid etch or use chemicals of any kind to clean concrete.

2. Complete preparation with cleaning of subfloors, patching of cracks and other imperfections, and leveling of depressions or holes.
 3. Patch and level cracks, holes and depressions with proper patching and leveling compounds compatible with carpet adhesive system.
- C. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
1. Concrete floors with curing, hardening and breaking compounds shall be abraded with mechanical methods to remove compounds.
- D. If abatement is required, prepare floor substrates in accordance with ASTM D4259. Where asbestos abatement has occurred to ensure there is no chemical residue remaining on floor surface that might interfere with adhesion of carpet.
- E. Sweep and vacuum clean substrates to be covered by carpet immediately before installation.

3.3 INSTALLATION

- A. General:
1. Extend carpet installation under open-bottomed obstructions, and under removable flanges, or obstructions.
 2. Extend carpet into closets and alcoves of rooms, unless another floor finish is indicated for such spaces.
 3. Extend carpet under all moveable furniture, disabled accessible cabinets and equipment unless otherwise indicated.
 4. Extend carpet below or within trim rings for electrical floor outlet boxes.
 5. Cut and fit carpet to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet manufacturer.
 6. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on carpet as marked on subfloor. Use nonpermanent, nonstaining marking device.
 7. Completed carpet is to be smooth and free of bubbles, puckers and other defects.
 8. Transition Strips or Reducers: Provide wherever carpeting abuts other types of floors or floor covering. Install straight and true. Fasten to floor using adhesive or mechanical fasteners in accordance with manufacturer's directions. Where carpet terminates at door openings, center strips under doors.
- B. Adhesive Application:
1. Install flooring adhesive using manufacturer's approved materials and installation methods.
 2. Follow adhesive manufacturer's directions for mixing and applying. Cover surface evenly. Do not exceed working area or time limits recommended by manufacturer.
- C. Sheet Carpet Installation:

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1. Comply with CRI's "CRI Carpet Installation Standard" and carpet manufacturer's written installation instructions.
2. Installation Method: Install carpet with self-adhering' pressure-sensitive adhesive]
3. Comply with carpet manufacturer's written instructions and shop drawings for seam locations and direction of carpet; maintain uniformity of carpet direction and lay of pile.
 - a. At doorways, center seams under the door in closed position.
 - b. Carpet shall be laid with minimum number of seams, in strict accordance with approved layout.
 - c. Keep cross seams that are necessitated by roll size to a minimum number and located in low traffic areas, away from doors and pivot points.
 - d. Cross seams are not allowed in single rooms of 1000 square feet or less.
4. Install pattern parallel to walls and borders.
5. Install borders with mitered corner seams.
6. Do not bridge building expansion joints with carpet.
7. Weld seams with specified seam weld in accordance with manufacturer's requirements.

D. Carpet Tile Installation:

1. Comply with CRI's "CRI Carpet Installation Standard," Section 18, "Modular Carpet" and with carpet tile manufacturer's written installation instructions.
2. Installation Method: Install carpet tiles with self-adhering pressure-sensitive adhesive.
3. Maintain dye-lot integrity. Do not mix dye lots in same area.
4. Install carpet tiles in quarter-turned pattern in accordance with manufacturer's recommendations.
5. Install pattern parallel to walls and borders.

3.4 DEFECTIVE WORK

- A. Repair damaged and defective work and eliminate functional and visual defects. Where repair is not possible replace work. Adjust joints for uniform appearance.

3.5 CLEANING AND PROTECTION

A. General:

1. Remove excess adhesive from walls and floors.
2. Clean up debris and remove from site.

B. Perform the following operations immediately after completing carpet installation:

1. Remove excess adhesive and other surface blemishes using cleaner recommended by carpet manufacturer.
2. Remove yarns that protrude from carpet surface.
3. Vacuum carpet using commercial machine with face-beater element.

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- C. Protect installed carpet to comply with CRI's "Carpet Installation Standard."
- D. Protect carpet against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.
 - 1. Provide a temporary non-staining paper pathway in all traffic areas.

END OF SECTION

SECTION 09 91 00

PAINTING

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Surface preparation.
2. Products and application.
3. Surface finish schedule.

B. Related Sections:

1. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.
2. 05 50 00 – Metal Fabrications.
3. 07 60 00 – Flashings and Sheet Metal.
4. 07 71 23 – Gutters and Related Flashings.
5. 08 11 00 – Metal Doors and Frames.
6. 08 14 00 – Wood Doors and Frames.
7. 08 31 00 – Access Doors and Panels.
8. 09 29 00 - Gypsum Board.
9. 09 51 00 – Acoustical Ceilings.
10. Division 21 – Fire Protection.
11. Division 22 – Plumbing.
12. Division 23 – Mechanical.

1.02 REFERENCES

- A. ASTM D16 – Standard Terminology for Paint, Related Coatings, Materials, and Applications.

1.03 DEFINITIONS

- A. Conform to ASTM D16 for interpretation of terms used in this Section.

1.04 SYSTEM DESCRIPTION

- A. Preparation of all surfaces to receive final finish.
- B. Painting and finishing work of this section using coating systems of materials including primers, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

- C. Surface preparation, priming, and finish coats specified in this Section are in addition to shop-priming and surface treatment specified under other Sections.
- D. Painting and finishing all exterior and interior surfaces of materials including structural, mechanical, and electrical work on site, in building spaces, and above or on the roof.
- E. Paint exposed surfaces except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces.

1.05 SUBMITTALS

- A. Submit product data under provisions of Section 01 33 00.
- B. Provide manufacturer's technical information and instructions for application of each material proposed for use by catalog number.
- C. List each material by catalog number and cross-reference specific coating with specified finish system.
- D. Provide manufacturer's certificate that products proposed meet or exceed specified materials.
- E. Submit samples under provisions of Section 01 33 00.
- F. Submit two (2) samples 8-1/2 x 11 inch in size of each paint color and texture applied to cardboard. Resubmit samples until acceptable color, sheen and texture is obtained.
- G. On same species and quality of wood to be installed, submit two (2) 4 x 8-inch samples showing system to be used.

1.06 QUALITY ASSURANCE

- A. Product Manufacturer: Company specializing in manufacturing quality paint and finish products with five (5) years' experience.
- B. Applicator: Company specializing in commercial painting and finishing with five (5) years documented experience.
- C. Regulatory Requirements
 - 1. Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this specification, comply with the more stringent provisions.
 - 2. Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).

3. Coats: The number of coats specified is the minimum number acceptable. If full coverage is not obtained with the specified number of coats, apply such additional coats as are necessary to produce the required finish.
4. Employ coats and undercoats for all types of finishes in strict accordance with the recommendations of the paint manufacturer.
5. Provide primers and undercoat paint produced by the same manufacturer as the finish coat.

D. Field Samples

1. Provide field samples under provisions of Section 01 33 00.
2. On wall surfaces and other exterior and interior components, duplicate specified finishes on at least 100 sq. ft. of surface area.
3. Provide full-coat finishes until required coverage, sheen; color and texture are obtained.
4. Simulate finished lighting conditions for review of field samples.
5. After finishes are accepted, the accepted surface may remain as part of the work and will be used to evaluate subsequent coating systems applications of a similar nature.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver products to site and store and protect under provisions of Section 01 66 00.
- B. Deliver products to site in sealed and labelled containers; inspect-to verify acceptance.
- C. Full unopened 1 GAL can (new) - Container labelling to include paint Formula, manufacturer's name, type of paint, brand name, brand code, coverage, surface preparation, drying time, cleanup, color designation, and instructions for mixing and reducing. Paint containers not displaying product identification will not be acceptable.
- D. Store paint materials at minimum ambient temperature of 50 degrees F and a maximum of 90 degrees F, in well-ventilated area, unless required otherwise by manufacturer's instructions.
- E. Take precautionary measures to prevent fire hazards and spontaneous combustion.

1.08 PROJECT CONDITIONS

A. Environmental Requirements

1. Provide continuous ventilation and heating facilities to maintain interior surface and ambient temperatures above 50 degrees F with a maximum humidity level of 50 percent for 24 hours before, during, and 48 hours after application of finishes, unless required otherwise by manufacturer's instructions.
2. Do not apply exterior coatings during rain or snow, or when relative humidity is above 50 percent, unless required otherwise by manufacturer's instructions.
3. Minimum Application Temperatures for Latex Paints: 50 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.
4. Minimum Application Temperature for Varnish and Urethane Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.

5. Provide lighting level of 80 feet candles measured mid-height at substrate surface.

1.09 OWNER'S INSTRUCTIONS

A. Extra Material

1. If product used was SCUSD Paint shop's #1 choice listed in these technical specs, please provide 1-quart only unopened container of each color and surface texture to Owner along with physical draw down and formula; however, if any other product other than our first choice is used, do not provide any attic stock and instead only provide physical draws with formula for each color used.
 - a. Separate draw downs and formula are required for each paint product, color, and sheen used.
2. Label each container with paint mixture formula, color, texture, and room locations in addition to the manufacturer's label.

1.12 WARRANTY

- A. All "Deep Tone" colors shall be warranted for 10-year color retention with a delta loss of no more than 75 cie lab units.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

- A. Unless specifically identified otherwise, product designations included at end of section are those of the Dunn Edwards, www.dunnedwards.com and shall serve as the standard for kind, quality, and function.
- B. Subject to compliance with requirements, other manufacturers offering equivalent products are:
 1. Dunn Edwards, www.dunnedwards.com.
 2. Kelly Moore, <https://kellymoore.com/professional/contractors/>
 3. Sherwin Williams, <https://www.sherwin-williams.com/painting-contractors/project-solutions/commercial>
- C. Substitutions: Under provisions of Section 01 25 13.

2.02 MATERIALS

- A. Ready mixed, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating.
- B. Good flow and brushing properties; capable of drying or curing free of streaks or sags.

- C. "Deep Tone" colors to be composed of 100 percent acrylic pigments, factory ground, with a colored base.
- D. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.
- E. Chemical Components of Interior Paints and Coatings: Shall not exceed the limitations of Green Seal's Standard GS-11 for VOC content and the following restrictions:
 - 1. Flat Paints and Coatings: VOC content of not more than 50 g/L.
 - 2. Non-Flat Paints and Coatings: VOC content of not more than 150 g/L.
 - 3. Anticorrosive Coatings: VOC content of not more than 250 g/L.
- F. Varnishes and Sanding Sealers: VOC content of not more than 350 g/L.
- G. Stains: VOC content of not more than 250 g/L.
- H. Aromatic Compounds: Paints and coatings shall not contain more than 1.0 percent by weight of total aromatic compounds (hydrocarbon compounds containing one or more benzene rings).
- I. Restricted Components: Paints and coatings shall not contain any of the following:
 - 1. Acrolein.
 - 2. Acrylonitrile.
 - 3. Antimony.
 - 4. Benzene.
 - 5. Butyl benzyl phthalate.
 - 6. Cadmium.
 - 7. Di (2-ethylhexyl) phthalate.
 - 8. Di-n-butyl phthalate.
 - 9. Di-n-octyl phthalate.
 - 10. 1, 2-dichlorobenzene.
 - 11. Diethyl phthalate.
 - 12. Dimethyl phthalate.
 - 13. Ethylbenzene.
 - 14. Formaldehyde.
 - 15. Hexavalent chromium.
 - 16. Isophorone.
 - 17. Lead.
 - 18. Mercury.
 - 19. Methyl ethyl ketone.
 - 20. Methyl isobutyl ketone.
 - 21. Methylene chloride.
 - 22. Naphthalene.
 - 23. Toluene (methylbenzene).
 - 24. 1, 1, 1-trichloroethane.

25. Vinyl chloride.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- B. Examine surfaces to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- C. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:
 - 1. Plaster and Gypsum Wallboard 12 percent.
 - 2. Masonry, Concrete, and Concrete Unit Masonry 12 percent.
 - 3. Interior Located Wood 15 percent, measured in accordance with ASTM 02016.
 - 4. Exterior Located Wood 15 percent, measured in accordance with ASTM 02016.
 - a. Beginning of installation means acceptance of existing surfaces.

3.02 PREPARATION

- A. Work Not to Be Painted
 - 1. Painting is not required on surfaces in concealed and inaccessible areas such as furred spaces, foundation spaces, utility tunnels, pipe spaces and duct shafts.
 - 2. Do not paint metal surfaces such as stainless steel, chromium plate, brass, bronze, and similar finished metal surfaces.
 - 3. Do not paint anodized aluminum or other surfaces which are specified to be factory pre-finished.
 - 4. Do not paint sandblasted or architecturally finished concrete surfaces.
 - 5. Do not paint prefinished acoustic materials or acoustic suspension systems.
 - 6. Do not paint over Underwriters Laboratories, Factory Mutual or other code-required labels or identifications.
 - 7. Do not paint exterior hot-dipped galvanized materials/products as specified elsewhere.
- B. Surface Preparation
 - 1. See attached sheet for Lead paint and Asbestos awareness.
 - 2. Remove all tacks, stickers, staples adhesive glue, picture hangers, protruding nails, tape and adhesive glue, and all other foreign materials from surfaces prior to priming or painting. Mask off and protect existing room identification tags including Asbestos tags on door frames.
 - 3. All exterior surfaces to be painted will be pressure washed to remove all loose paint, blisters, bridged cracks, surface-chalk and loose debris at no less than 3200-PSI, or sand blasted.
 - 4. If prior is not possible, washing all surfaces with TSP made by Synco or Jasco, by hand means, scraping and sanding of all surfaces is required prior to pre-priming for proper patching and painting of surfaces.

5. Prior to any painting, any wood or metal deficiencies should be replaced including but not limited to, doors, facial boards, overhang wood, siding, trim etc.
6. All glossy surfaces WILL be sanded prior to any paint application. NO EXCEPTIONS.
7. Clean all roofing tar from facial boards and metal flashing etc.
8. All factory primed new material wood, metal etc, will be sanded prior to priming and painting.
9. All surfaces to be patched will be pre-primed with the proper material as per manufacture specifications for substrate.
10. Any efflorescence will be primed as per Dunn-Edwards EFF-Stop concrete and masonry filler manufactures specifications.
11. Wash all doors, casings and other surfaces with TSP made by Synco or Jasco to remove oily dirt, dust, smoke, and other residues that could prevent proper adhesion of any paint products.
12. For all fillers and patching compounds used, surfaces will be primed before, after application, and before finish paint being applied.
13. Do not paint over all murals until artist waiver is filled out and provided. Please check with the SCUSD Paint Shop Supervisor before project starts.
14. All prep work will be done like the SCUSD standard NO EXCEPTIONS. This includes patching, scraping, sanding, caulking, and removal of all drips, sags, runs and removal of all foreign matter on or in painted surface.
15. All interior window trim, door trim, cabinets, cubbyholes, pin-board, counter tops in addition, wall panel joints shall be caulked.

3.03 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.
- C. Apply prime coat to surfaces which are to be painted or finished.
- D. Apply each coat to uniform finish.
- E. Sand lightly between coats to achieve required finish.
- F. Allow applied coat to dry according to the Manufacturers Specifications before the next coat is applied.
- G. The number of coats specified is the minimum that shall be applied. Apply additional coats when undercoats, stains or other conditions show through final paint coat, until paint film is of uniform finish, color and appearance.
- H. Where clear finishes are required, tint fillers to match wood. Work fillers into the grain before set. Wipe excess from surface.
- I. Prime back surfaces of interior and exterior woodwork with primer paint.
- J. Prime back surfaces of interior woodwork scheduled to-receive stain or varnish finish with water-based Urethane varnish.

- K. Paint mill finished door seals to match door or frame.
- L. Paint primed steel glazing stops in doors to match door or frame.
- M. Cloudiness, spotting, lap marks, brush marks, runs, sags, spikes and other surface imperfections will not be acceptable.
- N. Where spray application is used, apply each coat of the required thickness. Do not double back to build up film thickness of two (2) coats in one pass.
- O. Where roller application is used, roll and redistribute paint to an even and fine texture. Leave no evidence of roller laps, irregularity of texture, skid marks, or other surface imperfections.
- P. Finishing Mechanical and Electrical Equipment:
 - 1. Refer to Division 23 and Division 26 for schedule of color coding and identification banding of equipment, ductwork, piping, and conduit.
 - 2. Paint shop primed equipment. Do not paint shop prefinished items.
 - 3. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
 - 4. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are prefinished.
 - 5. Replace identification markings on mechanical or electrical equipment when painted accidentally.
 - 6. Paint interior surfaces of air ducts, and connector and baseboard heating cabinets that are visible through grilles and louvers with one (1) coat of flat black paint, to limit of sight line. Paint dampers exposed behind louvers, grilles, and connector and baseboard cabinets to match face panels.
 - 7. Paint exposed conduit and electrical equipment occurring in finished areas with existing matching wall color.
 - 8. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
 - 9. Color code equipment, piping, conduit, and exposed ductwork in accordance with requirements indicated. Color band and identify with flow arrows, names, and numbering.
 - 10. Replace electrical plates, hardware, light fixture trim, and fittings removed prior to finishing.
 - 11. Paint grilles, registers, and diffusers which do not match color of adjacent surface.
 - 12. Paint all mechanical and electrical equipment, vents, fans, and the like occurring on roof.
 - 13. Do not paint moving parts of operating units; mechanical or electrical parts such as valve operators; linkages; sensing devices; and motor shafts.
 - 14. Do not paint over labels or equipment identification markings.
 - 15. Do not paint mechanical room specialties such as compressors, boilers, pumps, control panels, etc.
 - 16. Do not paint switch plates, light fixtures, and fixture lenses.

3.04 CONSTRUCTION

A. Priming:

1. All new or bare galvanized metal will first be etched and then primed with appropriate galvanized latex or oil base primer, use cleaner and primer measures as per manufactures specification.
2. All door and Casings may be sprayed. Doors may also be tight rolled with a 3/8th inch nap roller. All casings to be brushed or laid off with a brush. ABSOLUTELY NO EXCEPTIONS.
3. All holes and cracks are to be filled with the proper exterior patching compound and latex caulking with silicone.
4. All rusty ferrous and ferrous metal are to be primed with a rust-inhibitive red, gray or white oxide all galvanized metal will be primed with a galvanized primer.

B. Finish Coat

1. All existing walls and overhangs to be coated with 100% acrylic exterior eggshell exterior paint.
2. All fascia boards to be coated with 100% acrylic exterior semi-gloss paint.
3. All metal poles, ungalvanized OR painted handrails, and iron gates are to be finished in water-borne alkyd urethane semi-gloss finish paint.
4. All doors and casings to have water-borne alkyd urethane finish, including tops, bottoms, and proper edges of doors and casings according to trade standards. All doors can be sprayed or tight rolled with a 3/8th inch nap roller or sprayed. All Casings must have sprayed or brushed finishes. NO EXCEPTIONS.
5. All concrete pillars are to be done in water-borne alkyd urethane semi-gloss paint.
6. All trim finishes are to be done in water-borne alkyd urethane semi-gloss paint.
7. All colors and product material to be used are to be APPROVED by the SCUSD paint shop Supervisor before application NO EXCEPTIONS.
8. Interior lower walls below door header to be painted with water-borne alkyd urethane.
9. Interior doors, door trim and painted cabinets to be painted with water-borne alkyd urethane.
9. Interior kitchens and baths to be painted with water-borne alkyd urethane.

3.05 REPAIR/RESTORATION

A. PATCHING

1. After completion of painting in any one room or area, repair surfaces damaged by other trades.
2. Touch-up or re-finish as required to produce intended appearance.

3.06 FIELD QUALITY CONTROL

- A. Field inspection and testing will be performed under provisions of Section 01 45 00.
- B. The Owner reserves the right to invoke the following test procedure at any time and as often as the Owner deems necessary.
- C. The Owner will engage the services of an independent testing agency to sample paint material being used.

- D. Samples of material delivered to the Project will be taken, identified, sealed, and certified in the presence of the Contractor.
- E. The testing agency will perform appropriate quantitative materials analysis and other characteristic testing of materials as required by the Owner.
- F. If test results show materials being used and their installation do not comply with specified requirements or manufacturer's recommendations, the Contractor may be directed to stop painting, remove noncomplying paint, pay for testing and repaint surfaces to acceptable condition.

3.07 CLEANING

- A. As Work proceeds, promptly remove paint where spilled, splashed, or spattered.
- B. During progress of Work maintain premises free of unnecessary accumulation of tools, equipment, surplus materials, and debris.
- C. Collect cotton waste, cloths, and material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

3.08 PROTECTION OF COMPLETED WORK

- A. Protect finished installation under provisions of Division 01.
- B. Erect barriers and post warning signs. Maintain in place until coatings are fully dry.
- C. Confirm that no dust generating activities will occur following application of coatings.

3.09 SCHEDULES

- A. Color Schedule Guidelines
 - 1. Paint and finish colors shall be selected by the Architect from manufacturer's entire range to match District standard colors or compliment those colors with the approval of the SCUSD Paint Shop Supervisor.
 - 2. Access doors, registers, exposed piping, electrical conduit and mechanical/electrical panels: Generally, the same color as adjacent walls.
 - 3. Exterior and interior steel doors, frames and trim: Generally, a contrasting color to adjacent walls.
 - 4. Doors generally are all the same color, but of a contrasting color from frame and trim.
 - 5. Exterior and interior steel fabrications: Generally, a contrasting color to adjacent walls.
 - 6. Exposed interior mechanical/ductwork: Generally, a contrasting color to adjacent walls or ceiling.
 - 7. Ceilings are generally to be painted a different color than walls.
 - 8. Five (5) different color schemes for painting of walls.
 - 9. Approximately 20 percent of overall painting work will be required to be "Deep Tone" colors. This work will require one (1) additional coat of paint beyond that as specified.

10. All existing walls and overhangs to be painted should be colored as either the SCUSD (SPECIAL HEATHER) or to match existing body color.
11. All fascia boards should be painted using 1 of the 5 standard SCUSD trim colors. Please check with SCUSD Paint Shop Supervisor for correct formula.
12. Interior upper walls above door frame to be done in (SCUSD ALTAMONT) SHEEN TO MATCH.
13. Interior lower walls below door header to be done in (SCUSD (COLONY WHITE) SHEEN TO MATCH.
14. Exterior Body color to be (SCUSD SPECIAL HEATHER) some school colors to be determined. Check with SCUSD paint shop Supervisor. Exterior trim colors to be determined by SCUSD paint shop Supervisor and school site.
15. Interior kitchens and baths to be painted to match existing paint finish material.
16. All pin boards if not replaced or re-covered with appropriate material, shall be patched then painted with SCUSD approved pin board paint and color.

B. Exterior Painting Schedule

1. Concrete Substrates, Masonry, Clay, Stucco, Non-Traffic Surfaces:
 - a. Prime Coat: Primer, alkali resistant, waterbased, interior/exterior, Dunn-Edwards, Eff-Stop Premium, ESPR00.
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Topcoat: Latex, exterior, eggshell, Dunn-Edwards, Evershield, EVSH30, 100% acrylic, (Gloss Level 3).
Or
 - d. Topcoat: Latex, exterior, low sheen, Dunn-Edwards, Evershield, EVSH40, 100% acrylic, (Gloss Level 4).
Or
 - e. Topcoat: Waterborne urethane alkyd, interior/exterior, eggshell, Dunn-Edwards, Aristoshield ASHL30, (Gloss Level 3).
Or
 - f. Topcoat: Waterborne urethane alkyd, interior/exterior, low sheen, Dunn-Edwards, Aristoshield ASHL40, (Gloss Level 4).
Or
 - g. Topcoat: Waterborne urethane alkyd, interior/exterior, semi-gloss, Dunn-Edwards, Aristoshield ASHL50, (Gloss Level 5).
2. CMU Substrates:
 - a. Prime Coat: Block filler, latex, interior/exterior, Dunn-Edwards, Smooth BLOCFIL Select SBSL00 or Eff-Stop Premium ESPR00.
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Topcoat: Latex, exterior, eggshell, Dunn-Edwards, Evershield, EVSH30, 100% acrylic, (Gloss Level 3).
Or
 - d. Topcoat: Latex, exterior, low sheen, Dunn-Edwards, Evershield, EVSH40, 100% acrylic, (Gloss Level 4).
3. Wood Substrates:

- a. Prime Coat: Primer, waterbased, exterior, Dunn-Edwards, Ultra-Grip Premium UGPR00 or EZ-Prime Premium EZPR00
 - b. Intermediate Coat: Latex, exterior, matching topcoat.
 - c. Topcoat: Latex, exterior, eggshell, Dunn-Edwards, Evershield, EVSH30, 100% acrylic, (Gloss Level 3).
Or
 - d. Topcoat: Latex, exterior, low sheen, Dunn-Edwards, Evershield, EVSH40, 100% acrylic, (Gloss Level 4).
Or
 - e. Topcoat: Latex, exterior, semi-gloss, Dunn-Edwards, Evershield, EVSH50, 100% acrylic, (Gloss Level 5).
4. Ferrous Metal Substrates:
- a. Waterborne Urethane Alkyd Enamel System:
 - 1) Prime Coat: Primer, rust inhibitive, waterborne alkyd, interior/exterior, Dunn-Edwards, Bloc-Rust Premium BRPR00 Series or Enduraprime rust preventative primer ENPR00.
 - 2) Intermediate Coat: Waterborne urethane alkyd, interior/exterior matching topcoat.
 - 3) Topcoat: Waterborne urethane alkyd, interior/exterior, eggshell, Dunn-Edwards, Aristoshield ASHL30, (Gloss Level 3).
Or
 - 4) Topcoat: Waterborne urethane alkyd, interior/exterior, low sheen, Dunn-Edwards, Aristoshield ASHL40, (Gloss Level 4).
Or
 - 5) Topcoat: Waterborne urethane alkyd, interior/exterior, semi-gloss, Dunn-Edwards, Aristoshield ASHL50, (Gloss Level 5)
5. Non-Ferrous Metal Substrates:
- a. Waterborne Urethane Alkyd Enamel over a Latex Primer System:
 - 1) Prime Coat: Primer, waterbased, interior/exterior, Dunn-Edwards Ultrashield Galvanized Metal Primer ULGM00.
 - 2) Intermediate Coat: Waterborne urethane alkyd, interior/exterior, matching topcoat.
 - 3) Topcoat: Waterborne urethane alkyd, interior/exterior, eggshell, Dunn-Edwards, Aristoshield ASHL30, (Gloss Level 3).
Or
 - 4) Topcoat: Waterborne urethane alkyd, interior/exterior, low sheen, Dunn-Edwards, Aristoshield ASHL40, (Gloss Level 4).
Or
 - 5) Topcoat: Waterborne urethane alkyd, interior/exterior, semi-gloss, Dunn-Edwards, Aristoshield ASHL50, (Gloss Level 5)

C. Interior Painting Schedule

- 1. Gypsum Board Substrates:
 - a. Prime Coat: Primer sealer, latex, interior, Dunn-Edwards, Vinylastic Select VNLSL00.
 - b. Intermediate Coat: Latex, interior, matching topcoat
 - c. Topcoat: Latex, interior/exterior, eggshell, Dunn-Edwards, Evershield, EVSH30, (Gloss Level 3).

- Or
 - d. Topcoat: Waterborne urethane alkyd, interior/exterior, eggshell, Dunn-Edwards, Aristoshield ASHL30, (Gloss Level 3).
 - Or
 - e. Topcoat: Waterborne urethane alkyd, interior/exterior, low sheen, Dunn-Edwards, Aristoshield ASHL40, (Gloss Level 4).
 - Or
 - f. Topcoat: Waterborne urethane alkyd, interior/exterior, semi-gloss, Dunn-Edwards, Aristoshield ASHL50, (Gloss Level 5)
2. Wood Substrates:
- a. Prime Coat: Primer, acrylic, for interior wood, Dunn-Edwards, Ultra-Grip Select UGSL00 or Dunn-Edwards, Decoprime DCPR00.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Waterborne urethane alkyd, interior/exterior, eggshell, Dunn-Edwards, Aristoshield ASHL30, (Gloss Level 3)
 - Or
 - d. Topcoat: Waterborne urethane alkyd, interior/exterior, low sheen, Dunn-Edwards, Aristoshield ASHL40, (Gloss Level 4).
 - Or
 - e. Topcoat: Waterborne urethane alkyd, interior/exterior, semi-gloss, Dunn-Edwards, Aristoshield ASHL50, (Gloss Level 5)
3. Ferrous Metal Substrates:
- a. Ultra-Premium Low Odor / Zero VOC Latex over a Waterborne Alkyd Primer System:
 - 1) Prime Coat: Primer, alkyd, anti-corrosive, for metal, Dunn-Edwards, Bloc-Rust Premium BRPR00 Series or Enduraprime rust preventative primer ENPR00.
 - 2) Intermediate Coat: Latex, interior, matching topcoat.
 - 3) Topcoat: Waterborne urethane alkyd, interior/exterior, eggshell, Dunn-Edwards, Aristoshield ASHL30, (Gloss Level 3)
 - Or
 - 4) Topcoat: Waterborne urethane alkyd, interior/exterior, low sheen, Dunn-Edwards, Aristoshield ASHL40, (Gloss Level 4).
 - Or
 - 5) Topcoat: Waterborne urethane alkyd, interior/exterior, semi-gloss, Dunn-Edwards, Aristoshield ASHL50, (Gloss Level 5).
4. Non-Ferrous Metal Substrates:
- a. Pre-Treatment: Water based, Krud Kutter, Metal Clean & Etch SCME-01
 - b. Prime Coat: Primer, water based, Dunn-Edwards, Ultrashield Galvanized Metal Primer ULGM00.
 - c. Intermediate Coat: Latex, interior, matching topcoat.
 - d. Topcoat: Waterborne urethane alkyd, interior/exterior, eggshell, Dunn-Edwards, Aristoshield ASHL30, (Gloss Level 3)
 - Or
 - e. Topcoat: Waterborne urethane alkyd, interior/exterior, low sheen, Dunn-Edwards, Aristoshield ASHL40, (Gloss Level 4).

- Or
f. Topcoat: Waterborne urethane alkyd, interior/exterior, semi-gloss, Dunn-Edwards, Aristoshield ASHL50, (Gloss Level 5).

Cross-Over Chart			
Paint Type	Dunn-Edwards BOD	Kelly Moore	Sherwin Williams
100% Acrylic Eggshell Exterior Paint	EVSH30 Evershield 100% Acrylic	1294 Envy Exterior 100% Acrylic	KxxW000xx Series Emerald Exterior Acrylic Latex
100% Acrylic Low Sheen Exterior Paint	EVSH40 Evershield 100% Acrylic	1294 Envy Exterior 100% Acrylic	KxxW000xx Series Emerald Exterior Acrylic Latex
100% Acrylic Semi-Gloss Exterior Paint	EVSH50 Evershield 100% Acrylic	1298 Envy Exterior 100% Acrylic	KxxW000xx Series Emerald Exterior Acrylic Latex
Water-Borne Alkyd Urethane Eggshell Interior/Exterior Paint	ASHL30 Aristoshield Urethane Alkyd	1997 Epic Urethane Alkyd Enamel	KxxW0xxxx Series Emerald Urethane Trim Enamel
Water-Borne Alkyd Urethane Low Sheen Interior/Exterior Paint	ASHL40 Aristoshield Urethane Alkyd	1997 Epic Urethane Alkyd Enamel	KxxW0xxxx Series Emerald Urethane Trim Enamel
Water-Borne Alkyd Urethane Semi-Gloss Interior/Exterior Paint	ASHL50 Aristoshield Urethane Alkyd	1998 Epic Urethane Alkyd Enamel	KxxW0xxxx Series Emerald Urethane Trim Enamel

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Floor-supported and overhead braced solid color reinforced composite (SCRC) toilet partitions
 - 2. SCRC urinal screens.

1.2 REFERENCES AND STANDARDS

- A. California Building Code (CBC), edition as noted the on Drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CAL Green), edition as noted on the drawings, as adopted by the California Division of the State Architect (DSA).
- C. National Fire Protection Agency (NFPA)
 - 1. NFPA 286: Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth.
- D. ASTM International (ASTM):
 - 1. D 2197: Standard Test Method for Adhesion of Organic Coatings by Scrape Adhesion.
 - 2. D 2794: Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
 - 3. D 6578: Standard Practice for Determination of Graffiti Resistance.
 - 4. E 84: Standard Test Method for Surface Burning Characteristics of Building Material.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as id repeated herein.
- B. Scheduling and Coordination:
 - 1. Floor anchor plates for partitions shall be secured to structural subfloor prior to installation of mortar setting bed for tile floor.
 - 2. Coordinate with placement of support framing and anchors in walls.

1.4 ACTION SUBMITTALS

- A. Shop Drawings: Submit plan, interior elevations and details showing all parts, connections and anchorages, adjacent materials, fully dimensioned and noted. Include blocking layout for use in structural framing.

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- B. Product Data: Submit list and manufacturer's complete descriptive data of products proposed for use. Include manufacturer's installation and maintenance instructions.
- C. Samples:
 - 1. 6-inch-square or larger sample of panel corner in selected color, showing core, edge treatment, and corner treatment.
 - 2. Manufacturer's full range of colors for Architect's selection.
 - 3. Hardware samples, if requested by Architect.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer and installer.
- B. Certification: Submit certification showing independent testing that compartments comply with NFPA 286.
- C. Sample of manufacturer's warranty.

1.6 CLOSEOUT SUBMITTALS

- A. Warranty/Guarantee: Submit executed warranty and Subcontractor's guarantee.

1.7 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Manufacturer: Minimum 5 years' experience in manufacturing of composite toilet compartments with products in satisfactory use under similar service conditions.
 - 2. Installer: Minimum 5 years' experience in work of this Section.
- B. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.
- C. Single-Source Responsibility: Use materials and products of one manufacturer whenever possible.
- D. All materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.
- E. Mockups:
 - 1. First installed example of each type of toilet compartment and urinal screen shall serve as a mockup for review and approval by Architect of workmanship, visual effect, accessibility, and interface with adjacent construction.
 - 2. Toilet compartment shall be complete with hardware and with toilet accessories.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.

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- B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work.
- C. Transport, store and handle in strict accord with the manufacturer's written recommendations to avoid deformation.

1.9 FIELD MEASUREMENTS

- A. Make and be responsible for all field dimensions necessary for proper fitting and completion of work. Report discrepancies to Architect before proceeding.

1.10 WARRANTY

- A. Manufacturer: In addition to the Contractor's and Subcontractor's Guarantee, furnish Owner with manufacturer's fully executed written warranty for composite toilet partition system against materials and workmanship including breakage, warpage, corrosion or delamination of installed composite components, door latch and strike, integral hinge system and stainless steel shoes and wall brackets for a period of 10 years.
 - 1. Defective components shall be replaced.
 - 2. Labor for reinstallation shall be included.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

- A. Comply with accessibility requirements of CBC Section 11B-604, "Water closets and toilet compartments," and ADA "Standards for Accessible Design." Comply with the most stringent where there is a conflict.
- B. Performance Characteristics of Partition Material:
 - 1. Graffiti resistance when tested in accordance with ASTM D 6578, Section 9, "Graffiti Removal Procedure Using Manual Solvent Rubs:"
 - a. Five required staining agents shall be cleaned off material.
 - 2. Scratch Resistance when tested in accordance with ASTM D 2197 Gardner Stock #PA-2197/ST pointed stylus attachment on scrape tester:
 - a. Maximum Load Value shall exceed 10 kilograms.
 - 3. Impact resistance when tested in accordance with ASTM D 2794 using 0.625 inch hemispherical indenter with 2-pound impact weight:
 - a. Maximum Impact Force value shall exceed 30 inch-lbs.
- C. Fire Resistance when Tested in accordance with ASTM E 84:
 - 1. Smoke Developed Index: Not to exceed 450.
 - 2. Flame Spread Index: Not to exceed 75.
 - 3. Material Fire Ratings:
 - a. NFPA: Class B.
 - b. International Code Council (ICC): Class B.

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2.2 TOILET COMPARTMENTS

- A. Manufacturer and System: "SierraSeries" 1090 by Bobrick Washroom Equipment, Inc. with gapless sightlines as specified and the basis of design, or equal meeting requirements specified and indicated on the Drawings.

2.3 MOUNTING CONFIGURATIONS

- A. Toilet Partitions: Floor-supported, overhead-braced, 1092.67 Series.
- B. Urinal Screens: Post-to-ceiling supported flat panel, 1093 Series.

2.4 MATERIALS AND COMPONENTS

- A. Panels, Pilasters, and Doors:
 - 1. Material: Solid color reinforced composite (SCRC) composed of dyed organic fibrous material reinforced with polycarbonate and phenolic resins between clear melamine layers; integrally bonded under pressure to form a solid, homogeneous panel.
 - a. Edges of material shall be the same color as the surface.
 - b. Surface Treatment: Non-ghosting, graffiti resistant surface integrally bonded to core through a manufacturing steps requiring thermal and mechanical pressure.
 - 2. Minimum Finished Thickness:
 - a. Panels and Urinal Screens: 1/2 inch.
 - b. Stiles: 3/4 inch.
 - c. Doors: 3/4 inch.
 - 3. Door Width:
 - a. Typical: 24 inch minimum.
 - b. Accessible Stalls: Sized to provide minimum 36 inch clear opening.
 - 4. Door and Panel Height: 58 inches, mounted 12 inches above finish floor.
 - 5. Urinal Screens:
 - a. Height: 48 inches mounted 12 inches above floor.
 - b. Depth: 24 inches.
 - 6. Stiles shall be routed from the edge to allow for overlap to prevent line-of-sight into the toilet compartment. Privacy strips fastened or adhered onto the partition material are not acceptable.
- B. Leveling Device: 7-gauge (0.0874 inch) hot rolled steel bar; chromate-treated and zinc-plated; through-bolted to base of solid color reinforced composite stile.
- C. Stile Shoes: Type-304, 22-gauge (0.030 inch) stainless steel with satin finish.
 - 1. Top shall have 90 degree return to stile.
 - 2. Shoe shall be one-piece and capable of being securing fastened to stiles.
- D. Headrails: 1-inch x 1-5/8-inch minimum, heavy-duty tubular stainless steel or extruded anodized aluminum, satin finish, anti-grip profile.

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- E. Floor to Ceiling Posts: 1-1/4 inch square x 18 gauge stainless steel with satin finish, full height, at all urinal screens.

2.5 HARDWARE AND FITTINGS

A. General:

- 1. Hardware shall be ADA and accessibility compliant.
- 2. All hardware to be 18-8, type-304 stainless steel with satin finish.
- 3. Hardware of chrome-plated "Zamak," aluminum, or plastic is unacceptable.
- 4. All hardware to be vandal-resistant, Institutional Grade.
- 5. Each through-bolted fasteners and threaded brass insert shall withstand direct pull force exceeding 1,500 pounds.
- 6. Emergency Access: Hinges and door latch shall allow door to be lifted over keeper from outside compartment on inswing doors.

B. Mounting Brackets:

- 1. Panels: 18-gauge (0.048 inches) stainless steel, full height of panel.
 - a. U-channels shall be furnished to secure panels to stiles.
 - b. Angle brackets shall be furnished to secure stiles to walls and panels to walls.
 - c. Fasteners at locations connecting panels-to-stiles shall utilize through bolted, stainless steel, pin-in-head Torx sex bolt fasteners.
- 2. Urinal Screen: 11 gauge (0.120 inches) stainless steel, full height of panel.

C. Hinges and Stops:

- 1. Hinges: Self-closing, 16-gauge (0.060 inch) continuous piano hinge.
 - a. Continuous piano hinge shall be attached to door and stile by theft-resistant, pin-in-head Torx stainless steel machine screws into factory-installed, threaded brass inserts. Fasteners secured directly into the core are not acceptable.
 - b. Fasteners secured directly into the core are not acceptable
- 2. Stops: Two 11-gauge (0.120 inch) stainless steel door stop plates with attached rubber bumpers to resist door from being kicked in/out beyond stile.
- 3. Door stops and hinges shall be secured with stainless steel, pin-in-head Torx machine screws into threaded brass inserts.

D. Latch, Strike, and Keeper:

- 1. Door latch shall be 16 gauge and shall slide into a 14 gauge keeper.
 - a. Sliding door latch shall require less than 5-pound force to operate. Twisting latch operation is not acceptable.
 - b. Latch track shall be attached to door by machine screws into factory-installed threaded brass inserts.
- 2. Through bolted, stainless steel, pin-in-head Torx sex bolt fasteners shall be used at attach keeper-to-stile.

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3. Mount lock at 42-inches above the finished floor in accessible stalls.
 4. Track of door latch shall prevent inswing doors from swinging out beyond stile.
 5. On outswing doors, door keeper shall prevents door from swinging in beyond stile.
- E. Locking: Door locked from inside by sliding door latch into keeper.
- F. Coat Hook/Bumper:
1. Combination type.
 2. Equip outswing doors at accessible stalls with second door pull and door stop.
 3. Mount hook at 48-inches above the finished floor in center of door on the inside of the stall.
- G. Door Pulls:
1. Provide door pull and wall stop for outswinging doors.
 2. Equip doors to accessible stall with both inside and outside pulls.
 3. Pulls shall be "U" shaped.

2.6 COLORS AND FINISHES

- A. Solid Color Reinforced Composite (SCRC):
1. Color: #SC04 'Forest Green'
- B. Stainless Steel: No. 4 satin finish.
- C. Aluminum: Clear Anodized.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation, carefully inspect and verify that the installed work of other trades is complete to the point where this installation may properly commence.
- B. Verify that toilet partitions may be installed in complete accordance with the original design. Verify solid blocking has been provided in walls and ceilings at all partition locations. Do not install if blocking is missing.
- C. In the event of discrepancy, immediately notify the Owner. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.2 INSTALLATION

- A. General:
1. Install all toilet partitions and screens where indicated and reviewed shop drawings, anchoring into solid blocking in compliance with manufacturer's installation instructions.
 2. Install partitions and screens rigid, straight, plumb and level.

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- B. Provide clearances of not more than 3/8 inch between pilasters and panels, and not more than 1/2 inch between panels and walls and not more than 3/16 inch between vertical edge of doors and pilasters.
- C. Secure panels to walls with full length, continuous wall brackets using stainless steel fasteners spaced maximum 12 inches on center.
- D. Stile shoes shall be anchored to floor with 1-1/2 inch, #14 stainless steel screws and metal anchors. Secure pilaster within shoe with theft resistant sex bolt.
- E. Attach panels and pilasters to continuous brackets with theft resistant sex bolts.
- F. Secure overhead brace to face sheets with not less than 2 fasteners per face.
- G. Set tops of doors to be parallel with top of pilasters and overhead brace when doors are in closed position.
- H. Urinal Screens: Provide floor to ceiling post and wall brackets.

3.3 ERECTION TOLERANCES

- A. Maximum Variation From True Position: 1/4 inch.
- B. Maximum Variation From Plumb: 1/8 inch.

3.4 ADJUSTING

- A. Make final adjustments to leveling devices.
- B. Adjust and lubricate hardware for proper operation after installation.
 - 1. Set hinges on in-swing doors to hold doors open approximately 30 degrees from closed position when unlatched.
 - 2. Set hinges on out-swing doors to return to fully closed position.
- C. Replace damaged parts, surfaces which are not free from imperfections. Field touch-up of scratches or damaged finish will not be permitted. Replace damaged or scratched materials with new materials.

3.5 CLEANING

- A. Upon completion, and as a condition of acceptance, visually inspect the entire work of this Section. Surfaces shall be free of imperfections, scratch marks, blemishes or color variations.
- B. Upon completion, thoroughly wash surfaces, remove foreign material, and polish surfaces.
- C. Leave entire work in neat, orderly, clean, acceptable condition as approved.

TOILET COMPARTMENTS & CUBICLES
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3.6 PROTECTION

- A. Protect work and materials of this Section prior to and during installation, and protect the installed work and materials of other trades.
- B. In the event of damage, make all repairs and replacements necessary to the approval of the Architect at no additional cost to the Owner.
- C. Adequately protect products during and after installation against damage of every nature. Exposed finishes shall be free from scratches, dents, permanent discolorations and other defects in workmanship or materials.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fire extinguishers

1.2 RELATED REQUIREMENTS

- A. Section 09 9100, Paint.

1.3 REFERENCES AND STANDARDS

- A. California Building Code (CBC), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).
- B. California Green Building Standards Code (CAL Green), edition as noted on the Drawings, as adopted by the California Division of the State Architect (DSA).

1.4 ADMINISTRATIVE REQUIREMENTS

- 1. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as id repeated herein.

1.5 ACTION SUBMITTALS

- A. Shop Drawings: Submit showing all parts, connections and anchorages, adjacent materials, fully dimensioned and noted. Include in-wall blocking requirements.
- B. Product Data: Submit list and complete descriptive data of all products proposed for use. Include manufacturer's specifications and installation instructions.

1.6 INFORMATIONAL SUBMITTALS

- A. Statement that all extinguishers and cabinets comply with the current applicable UL and NFPA classifications and ratings.
- B. Sample of manufacturer's warranty.

1.7 CLOSEOUT SUBMITTALS

- A. Written instructions to Owner's personnel in the operation, maintenance and charging of the fire extinguishers furnished.
- B. Warranty/Guarantee: Submit executed warranty and subcontractor's guarantee.

1.8 QUALITY ASSURANCE

- A. Use only new materials and products, unless existing materials or products are specifically shown otherwise on the Drawings to be salvaged and re-used.

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- B. Single-Source Responsibility: Use materials and products of one manufacturer.
- C. Materials, components, assemblies, workmanship and installation are to be observed by the Owner's Project Inspector. Work not so inspected is subject to uncovering and replacement.
- D. Equipment shall be approved by Underwriters' Laboratories, Inc., bear UL Label and be approved by the State Fire Marshal.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Deliver undamaged products to job in manufacturer's sealed containers and/or original bundles with tags and labels intact.
- B. Store materials in protected, dry conditions off of ground and in areas so as to not interfere with the progress of the work.
- C. Transport, store and handle in strict accord with the manufacturer's written recommendations.

1.10 FIELD MEASUREMENTS

- A. Make and be responsible for all field dimensions necessary for proper fitting and completion of work. Report discrepancies to Architect before proceeding.

1.11 WARRANTY

- A. Manufacturer: In addition to the Contractor's and Subcontractor's Standard Guarantee, furnish Owner with manufacturer's fully executed written warranty for fire extinguishers against defects in materials and workmanship for a period of not less than 5 years.

PART 2 - PRODUCTS

2.1 DESIGN AND PERFORMANCE CRITERIA

- A. Conform to all applicable standards of the National Fire Protection Association (NFPA) and California State Fire Marshal (CSFM) for fire extinguisher cabinets and locations.

2.2 FIRE EXTINGUISHERS

- A. Manufacturer: By same manufacturer as fire extinguisher cabinets.
- B. Types:
 - 1. Fire extinguishers - General Use: UL Rating 3A-40BC extinguishers shall be 5-pound nominal capacity multi-purpose dry chemical type, bearing U.L. Label; finish shall be red enameled steel.
 - 2. Fire Extinguishers - Service Kitchen without Ansul system: Provide UL Rating 4A-80BC extinguishers with 10-pound nominal capacity, multi-purpose dry chemical type.

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3. Fire Extinguisher – Computer Equipment/Server Rooms: Halocarbon type with Dupont “FE-36,” also known as “CleanGuard” or “Halotron I” as standard with extinguisher manufacturer and meeting governing regulations, UL Rating 2B:C.
- C. Tamperseals on each extinguisher shall be of the breakable metal type, indicating accidental or unauthorized partial discharge.
- D. Pressure gauges on each extinguisher shall be of the dial type.
- E. Mounting Brackets:
 1. Manufacturer: Provide brackets from same manufacturer as fire extinguisher.
 2. Brackets shall be of quick release design, not subject to release by bumping.
 3. Bracket attachments shall be furnished with each bracket, suitable for the surface to which attachment is to be made.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to installation of work of this Section, carefully inspect and verify that the installed work of all other trades is complete to the point where this installation may properly commence.
- B. Verify that specified items may be installed in accordance with the approved design.
- C. In the event of discrepancy, immediately notify Owner. Do not proceed in discrepant areas until discrepancies have been fully resolved.

3.2 PROTECTION

- A. Protect work and materials of this Section and other Sections prior to and during installation, and protect the installed work and materials of other trades.
- B. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Owner and at no additional cost.

3.3 INSTALLATION

- A. Install extinguishers as required by the local Fire Authority.
- B. Install so that handle of extinguisher meets accessibility requirements.

3.4 INSTALLATION OF FIRE EXTINGUISHERS

- A. Determine approximate completion date of work and then inspect, charge, and tag fire extinguishers not more than 10 calendar days before nor less than one day before actual completion of work.
- B. The installation of the specified fire extinguishers in no way relieves the Contractor from providing adequate fire protection during the course of this work.

**FIRE EXTINGUISHERS
SECTION 10 4416**

END OF SECTION